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LOOK, STICK AND MEET: THE DISTRIBUTORS WALL



It might sound like I am doing some marketing, and I might well be, but my intent this time is to remind you what INFODENT INTERNATIONAL is all about. Our contents focus on news, regulations and novelties in the international dental market; we make deep research, using many different sources, to give you thorough outlooks on the different markets for the import and export of your products around the world; previews and post-show reports on

international exhibitions as well as latest products highlights; company profiles of dental companies and more...

We help manufacturers to export around the world and we do our best to give our readers the most reliable information on the markets of export. We are, for this, a B2B magazine especially designed for the dental trade and industry, mailed to over 20,500 addresses of manufacturers, distributors, importers and suppliers, covering 162 countries around the world. We are specialized in a dental database of the industry and, on this regard, we might have the biggest one on the market as we have been operating in the sector for over 20 years.

Thanks to its wide circulation, Infodent International can give manufacturers and distributors worldwide visibility. Manufacturers looking for distributors and importers around the world choose Infodent International to expand their distribution network and enter new markets; distributors and importers use our magazine to find new products to distribute and new partners. To help our readers even further, we have been focusing our attention on what we have called the **“DISTRIBUTORS WALL”**, a service of commercial announcements made by distributors, importers, manufacturers and suppliers where each one is looking for new contacts to start or increase business. You will find, in each issue of our magazines, a section

full of announcements sent to us by manufacturers, distributors, importers and suppliers that are searching for one another. I invite you all to send us commercial announcements of any kind to publish in our magazine. You can let the market know of a product you are searching for or selling, second-hand products, new initiatives, markets you are looking at, exhibitions you are attending and more. Believe it or not, this is one of the mostly read sections by our readers!

Lastly, we have expanded the distributors wall service at all the international exhibitions we are attending with our own booths around the world! How? Our booths all have a dedicated wall to attach your announcements and where you can read all the others; with announcements of any kind, of distributors and manufacturers looking for new business and contacts. You can use the wall at our booths to copy or give us contacts throughout the exhibition, creating an Infodent meeting point! **Visit our booth at the FDI to find out more! Hall 7, booth A21-22.**

But Infodent International is not just a magazine. It is made up of a group of hard working people and consultants with a long-standing expertise capable of giving you information and tips on world markets, including tailored made services such as newsletters, mailings, consulting services to help you find partners worldwide. We work in close collaboration with the most important international trade exhibitions and offer you services within the exhibitions... Let us know what you are looking for, we can surely be of help!

Infodent International publishes special issues for the most important international exhibitions with scientific sections dedicated to dentists, come and collect a copy of “INews FDI” at the Infodent Booth: Hall 7, booth A21-22.

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Contents

We are excited to develop an innovation in our Infodent magazine.

Starting from the upcoming issue our focuses are changing, nevertheless remaining loyal to our articles on the economic and medical markets as well as worldwide industry news.



FOCUS ON EUROPEAN ORAL HEALTH

“Europe has witnessed incredible progress in the last decades in the prevention of caries in children and young adults; however, having damaged, missing or filled teeth is still the norm rather than the exception and oral diseases remain amongst the most important health burdens.”



FOCUS ON SPAIN

“The Spanish economy is the fifth-largest in Europe behind Germany, United Kingdom, Italy and France and the 14th largest in the world.”

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The Distributors Wall



AXELMED Dental Implant Manufacturing Company in Italy seeks new Distributors in selected areas worldwide.

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Come visit the 27 sqm exhibition's Distributors Lounge in FDI Madrid where you can relax, stop for one-to-one meetings with your partners and **place your own personal classified Adv** on the Distributors' Wall.

Don't let new opportunities pass by, this is your chance to be a protagonist of the international dental market: you just need to come over, browse the other enquiries and leave your personal announcements.

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Hall 7, A2-A3



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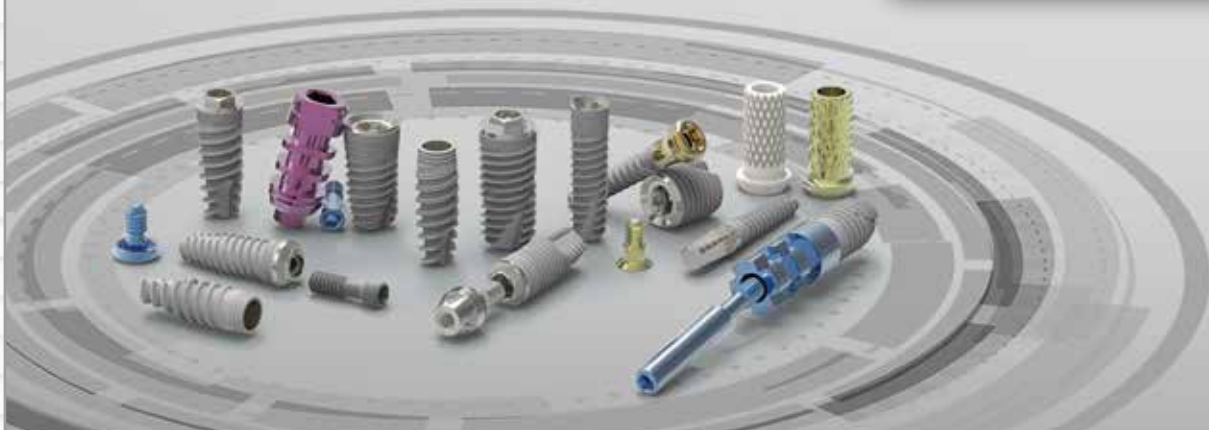
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05 - 07/10/17, Stand S6 - Hall 9



HIGHLIGHTS

Our Advertisers' Products

• ALAN & CO BELGIUM looking for importers/distributors



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HIGHLIGHTS

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• Axelmed presents Paradigma



Axelmed presents **Paradigma**. It is the result of a 4-year research project, whose aim was to develop a quality medical device, simple to use and with clinical features that are the results of the synthesis of the current state of art in implantology.

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- D. **A complete and intuitive surgical kit** with high quality instruments, drills with DLC coating made in Italy, to deal with all clinical situations;



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- platform switching, that contributes to reduce peri-implant bone resorption;
- microthread, that reduces stress and promotes new bone formation.



• ALL-in-ONE Axelmed:

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- A. The main vial contains the Axelmed Paradigma implant, its cover screw and healing cap.
- B. The vial with the blue cap contains the laboratory components (laboratory fixing screw, implant analog, castable abutment).
- C. The vial with the white cap contains the components to perform the prosthetic phase in the dental office (aesthetic abutment, single use plastic transfer for closed tray impression technique, definitive fixing screw).

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HIGHLIGHTS

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Has a pleasant taste liked by children, which motivates them for regular toothbrushing - an important aspect of forming healthy oral care habits.

It is hypoallergenic*, does not contain fluoride, flavorants, colorants, sodium lauryl sulfate or parabens.

*Confirmed by laboratory and clinical trials

**The formula is protected by patents

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*Confirmed during laboratory and clinical trials

**The toothpaste formula is protected by patents



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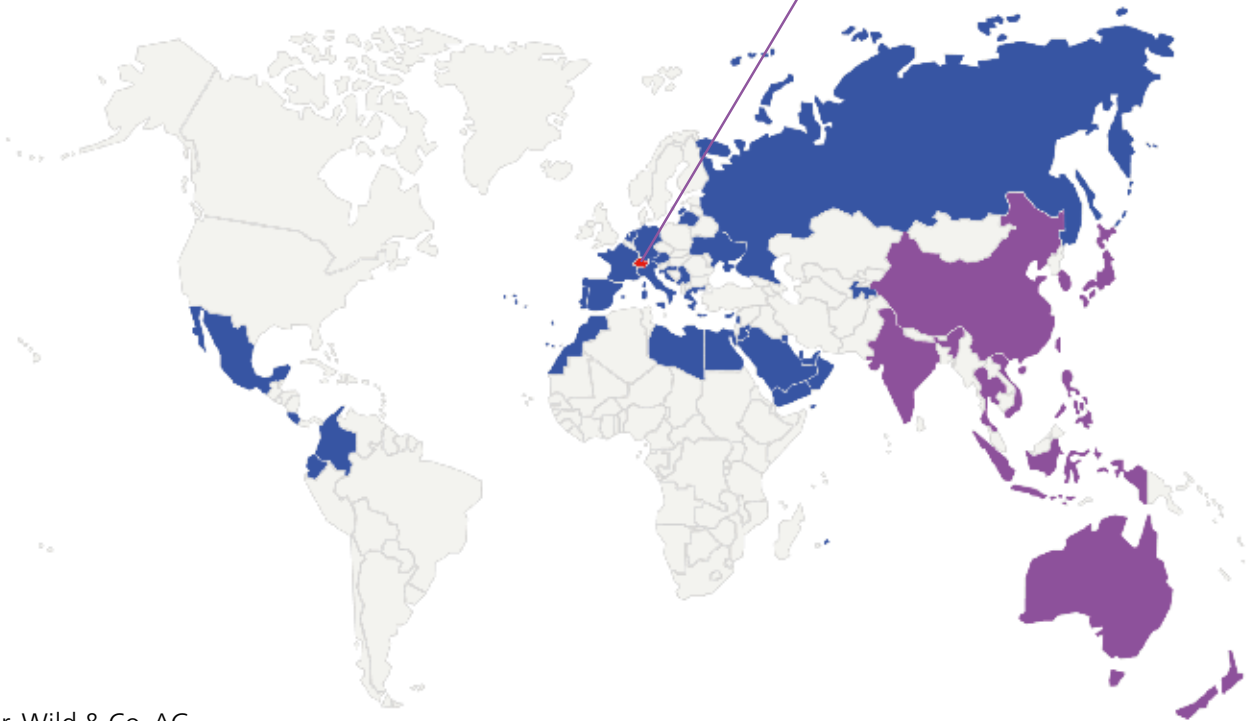
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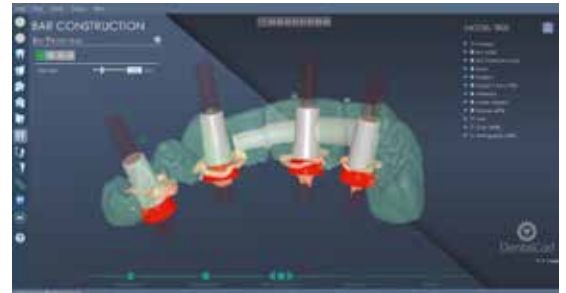
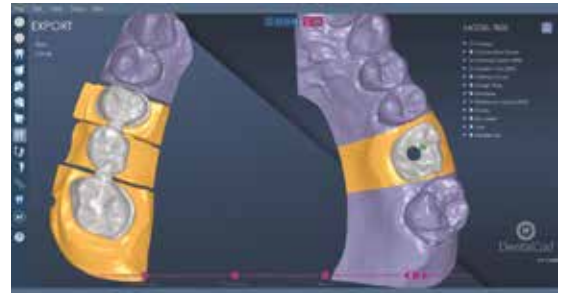
• **EGS Solutions**



Pioneer of digital dentistry's CAD modeling software, EGS has presented the upgrades brought by the new release of DentalCad 6, an open and customizable system that integrates a compatibility converter to make the import/export

of STL files with an automatic, simple and intuitive wizard. The latest version of the software provides even higher flexibility thanks to the new "library manager," which allows users to take advantage of a fully customizable dental library. Another feature that strikes a chord in the new DentalCad 6 is the implementation of "hybrid jobs," a novelty that allows the possibility to operate on different kind of dental jobs on the same restoration (single arch or double arch). The software features a range of modules designed to fit specific needs: the implant module for the design of abutments, the virtual articulator for check of dynamic occlusion, the bars module for the design of simple and advanced bars, and the provisional module for temporary crowns and bridges. EGS offers a perpetual license with no obligatory fees, while providing regular free-of-charge updates that grow the software's value over time. These capabilities, together with the CAM integration in a single graphic interface, make DentalCad 6 a customizable and comprehensive solution for 3D printing, milling and laser sintering that is suitable for all users, regardless of their level of digital expertise.

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Focus European Oral Health



Europe has witnessed incredible progress in the last decades in the prevention of caries in children and young adults; however, having damaged, missing or filled teeth is still the norm rather than the exception and oral diseases remain amongst the most important health burdens.

In fact, Europe still fails to realize that oral health is about much more than having good teeth. It is an integral part of general health, and it impacts not only on quality of life but also on society and health systems through the associated economic costs.

As the WHO has noted, oral diseases have several risk factors in common with the four main categories of chronic diseases (cardiovascular diseases, cancers, chronic respiratory diseases and diabetes), including poor nutrition, smoking and alcohol abuse. Inadequate oral hygiene is also a risk factor.

The economic cost of traditional curative dental care is substantial for many high-income countries, in which 5 to 10% of public health spending is devoted to oral health. That is why it is important to promote awareness raising campaigns and ensure that citizens in Europe and throughout the world adopt a preventative approach, indispensable for their health.

The State of Teeth in Europe

Dental Caries - there has been incredible progress in the last decades in the prevention of caries in children and young adults especially in Western Europe and some improvement in Eastern European Member States. Despite a global decline, the disease is still a problem for many groups of people in Eastern Europe, and for those from socio-economically deprived groups in all European Union Member States.

Current negative trends in periodontal health and oral cancer:

Periodontal health - Epidemiologic data are of very poor quality, and are absent from several European Member States. **There is a perception that periodontal health may be deteriorating within the population of the EU. It has been suggested that over 50% of the European population may suffer from periodontitis and over 10% have severe disease. Prevalence increases up to 70-85% of the population aged 60-65 years of age.** This is principally due to a larger number of people that are retaining some of their teeth in old age, and an increase in the prevalence of diabetes. Studies show that periodontal diseases are associated with individuals' income and socio-economic status.

Oral cancer - is the eighth most common cancer worldwide. **In the EU, lip and oral cavity cancer is the 12th most common cancer in men.** Highest

prevalence rates are found in Spain and Hungary. **Trends are now showing an increasing incidence in women, and young adults.** Mortality rates have continued to increase in several Eastern European Member States.

A survey published by Eurobarometer has revealed that **only a minority of Europeans still have all their natural teeth (41%) and while almost a third of those who have lost some of their natural teeth wear a removable denture, the vast majority of Europeans experience almost no difficulties or embarrassment concerning their teeth.** Nevertheless, beyond this European average, there are marked differences between the Member States. The respondents stating that they still have all their natural teeth live mainly in the Scandinavian countries (Sweden, Denmark and Finland), in Ireland and in the countries in the extreme south-east of the European Union (Cyprus, Malta and Greece). While inhabitants of eastern European Union countries (Hungary, Estonia, Poland, Slovakia and Latvia) seem the most disadvantaged in this respect (only between 19% and 29% have all their natural teeth). Fairly logically, the youngest respondents have the most natural teeth, with 84% of those in the 15-24 age groups, compared only to 13% of respondents aged 55 or over. The most advantaged socio-economic categories (those who studied the longest, as well as students and managers and other employees) are also categories in which respondents are more likely to have all their natural teeth.

Europeans as whole visit a dentist regularly, since 57% last went to see a dentist (for their teeth, denture or gums) less than one year ago; only a minority (9%) last visited their dentist five or more years ago and 2% have never visited a dentist. The respondents the most likely to have visited a dentist during the past twelve months tend to be inhabitants of northern European Union countries: the Netherlands (83%), Denmark (78%), Germany and Luxembourg (77%), followed by Slovakia (73%) and Sweden (71%). It should be borne in mind that in some of these countries, it is compulsory for inhabitants to go to their dentist once a year or even every six months to continue to benefit from medical insurance cover for their teeth. On the other hand, the inhabitants of several countries in the east of the European Union are the least likely to have visited a dentist during the past year: Romania (34%), Hungary (35%), Latvia (41%), Poland (44%), Estonia and Bulgaria (45%), Lithuania (46%) and Greece (49%). It is also the case of Spain.

Moreover, 79% of them prefer to go to a dental practice or a private clinic if they need dental care,

The economic cost of traditional curative dental care is substantial for many high-income countries, in which 5 to 10% of public health spending is devoted to oral health.



while 14% go to a clinic run by the city or government. The countries in which respondents traditionally opt for a dental practice or a private clinic include five of the six EU founding states: Germany (99%), Luxembourg (98%), the Netherlands and France (97%), followed by Belgium (94%). It is also the choice of the vast majority of respondents in Denmark (96%). On the other hand, only 31% of respondents in the United Kingdom, 46% in Finland, 50% in Hungary, 51% in Sweden and 60% in Poland chose that option. In these countries, citizens very often opt for a clinic managed by the city or government. These differences undoubtedly reflect specific national policies and how the healthcare systems are structured. The standard of living of the people interviewed does appear to have some influence on their choice: the most advantaged citizens, such as managers, as well as self-employed people and employees, are more likely than unemployed people, pensioners and house-persons to choose a dental practice or a private clinic.

Most Europeans seem to consult a dentist for preventative reasons and not for emergency treatment: 50% of the people interviewed say that the last time they visited a dentist was for a check-up, an examination or cleaning. A third went for routine treatment (33%) and only one in five went for emergency treatment (17%), mostly Cyprus (45%),

Bulgaria and Romania (40%) and Slovenia (33%). The fact of belonging to a more advantaged social category also plays a role: the Europeans who studied the longest are the most likely to have visited a dentist for a check-up. Similarly, senior executives, students, employees and self-employed people are more likely to visit a dentist for a check-up than the other categories (unemployed people, pensioners, house-persons and manual workers).

Finally, a relative majority of Europeans consider that if they do not go to see a dentist it is mainly because they do not have serious dental problems. However, apart from this most frequently mentioned reason, respondents who say that they do not go to see a dentist mention the high costs of consulting a dentist and dental treatment rather than problems of accessibility.

While men and women have a similar perception of the cost of visiting a dentist and dental treatment, the older the respondents are the more the cost of dental treatment seems to be a real obstacle to consulting a dentist. The least advantaged categories (unemployed people, manual workers, house-persons and pensioners) and those who studied the least are more likely to mention cost as their reason for not consulting a dentist. Logically, the same applies to the people who have difficulties in paying their bills 'most of the time' since they obviously must make a choice.

While men and women have a similar perception of the cost of visiting a dentist and dental treatment, the older the respondents are the more the cost of dental treatment seems to be a real obstacle to consulting a dentist.

What was the main reason you did not visit a dentist in the last two years?	
Your dental problem is not serious enough	33%
You have no teeth or you have false teeth	16%
It is too expensive	15%
You are afraid or you don't like dentists or dental hygienists	10%
You are too busy	7%
You don't want to spend money on dental care	3%
Dental office too far away	1%
Physical problems preventing you from going	1%



...the vast majority of Europeans (88%) consider that it would be possible for them to see a dentist when needed within a distance of 30 minutes from their home or place of work.

In fact, the vast majority of Europeans (88%) consider that it would be possible for them to see a dentist when needed within a distance of 30 minutes from their home or place of work. Similarly, the availability of dental professionals does not seem to be an issue for Europeans since 89% of inhabitants of small and medium-sized towns declared that they could find a dentist within thirty minutes of their home or place of work; this confidence is shared by 87% of inhabitants of rural villages and large cities.

These results suggest that territorial coverage in this area is equally satisfactory in both privileged areas and more disadvantaged areas. In the same way, the vast majority of Europeans (92%) have access to a dentist in case of need. Of course, the most privileged people are the most likely to answer in the affirmative. Thus, 95% of senior executives and 94% of employees say that they have access to a dental practice in case of need, compared with 89% of unemployed people. The area where the respondent lives does not seem to be discriminating.

Economic Impact of Oral Diseases in Europe

Oral health-related costs are still on the rise even if oral diseases are highly preventable, remaining a major public health issue for high-income countries, where expenditure on treatment often exceeds that for other diseases, including cancer, heart disease, stroke and dementia. This is disturbing, given that much of the oral disease burden in high-income countries is due to dental caries and its

complications and this is preventable through the use of fluoride and other cost-effective measures. There is strong evidence that the benefits of preventing tooth decay exceed the costs of treatment. For example, savings in dental expenditure have been demonstrated in Member States such as Denmark and Sweden, which have invested heavily in the provision of preventative oral health services, with a significant reduction in the prevalence of oral disease.

Furthermore, lack of economic and statistical data among the EU countries, the challenge in estimating the expenditure on the provision of oral healthcare as well as in quantifying out-of pocket and indirect costs lead to an underestimation of the true costs of oral healthcare provision, thus limiting the ability to assess the impact of existing public health measures and invest in the most effective initiatives:

- Studies have shown how in some industrialized countries the mouth is the most expensive part of the body to treat. In 2015, the EU spent around 84 billion Euro on oral health and if trends continue, this figure could be as high as Euro 93 billion in 2020.

- Delivering oral health services is costly, accounting for 5% of total health expenditure and 16% of private health expenditure across OECD countries (average estimates, varying year by year).

- Out-of-pocket expenditure is an important, and often underestimated, aspect of oral healthcare delivery, varying according to the structure of the oral healthcare system within the different EU Member States. There may be a significant impact on low income groups especially in Member States where oral health services are mainly provided by private practitioners such as Spain, where patients usually pay the total cost, creating access problems for low-income groups. In Denmark, oral healthcare is free of charge for all children under the age of eighteen and adults pay for treatment from private dental practitioners through a system of government subsidies. In Member States such as France and Germany, prevention and treatment are covered within the basic package of public health insurance, but a share of the cost is borne by patients.

- High indirect costs arise from the social burdens of poor oral health and its interaction with systemic diseases and conditions including diabetes, heart and circulatory diseases and the effects of poly-pharmacy on oral health and vice-versa.



EU Members	No. of dentists 2014	Dentists per 100 000 inhabitants	Graduates 2009	Graduates 2014
Belgium	8108	72	156	219
Bulgaria	7054	98	232	270
C. Repub.	7906	75	407	343
Denmark (2013)	4295	76	177	154
Germany	69089	85	1819	2314
Estonia	1215	92	29	25
Ireland (licensed to practice)	2758	60	72	81
Greece	13746	126	271	202 (2013)
Spain (licensed to practice)	33286	72	1289	1785
France	42281	64	717	1191 (2013)
Croatia	3327	79	119	134
Italy (professionally active)	39075	64	977	345
Cyprus	839	98	0	0
Latvia	1400	70	34	40
Lithuania	2669	91	147	170
Luxembourg (excluding stomatologists and maxillofacial surgeons)	476	86	0	0
Hungary	6203	63	219	378
Malta	201	47	6	4
Netherlands (professionally active)	8750	52	248	177
Austria	4893	57	134	106 (2013)
Poland	13088	34	941	915
Portugal (licensed to practice)	9125	88	755	642
Romania	14846	75	1060	1534
Slovenia	1365	66	35	53
Slovakia (professionally active)	2642	49	44	94
Finland (2012)	4234	78	72	130
Sweden (2013)	7747	81	196	242
UK	34638	54	1085	1195

EFTA Members	No. of dentists 2014	Dentists per 100 000 inhabitants	Graduates 2009	Graduates 2014
Iceland	274	84	6	6 (2013)
Liechtenstein	51	137	0	0
Norway	4450	87	130	118
Switzerland	4217	51	120	96

	No. of dentists 2014	Dentists per 100 000 inhabitants	Graduates 2009	Graduates 2014
Montenegro	25	4	-	-
FYR of Macedonia (professionally active)	1762	85	-	-
Albania	-	-	58	261 (2013)
Serbia (professionally active)	2310	32	518	386 (2013)
Turkey (professionally active)	22996	30	927	1567

Source:

http://ec.europa.eu/eurostat/statisticsexplained/images/0/0b/Practising_dentists%2C_pharmacists_and_physiotherapists%2C_2014.png

Note: For dentists, Eurostat collects data for three concepts:

- 'practicing', in other words, healthcare professionals providing services directly to patients; Dentists who are working in administration, research or other posts that exclude direct contact with the patients and clients are excluded from the definition of those who are practicing, as are those who are unemployed, retired, or working abroad.

- 'professionally active', in other words, 'practicing' professionals plus health care professionals for whom their medical education is a prerequisite for the execution of their job;

- 'licensed', in other words, health care professionals who are registered and entitled to practice as healthcare professionals.

In this Table preference is given to the concept of 'practicing' healthcare professionals. For some Member States data are not available for this concept and therefore data are presented for one of the alternative concepts instead (notes indicate these exceptions in each figure).

Number of registered dentists	442,027
Number of active* dentists (in the EU)	Between 345,000 - 360,000 (estimated)
Number of auxiliaries	681,850
Workforce total	1,123,877

*The difference between the number of registered dentists in a country and the "active dentists" should represent those dentists who are retired or no longer undertake any form of dentistry including administrative dentistry. Some countries are unable to assess how many of these dentists are "active", so accurate figures for the number of such dentists are difficult to assess.

Workforce in the European Union (EU)/European Economic Area (EEA)

Total dental workforce recorded - 1.12 million workers. Adding the workers not recorded, such as cleaners, managers and those working in the dental trade, it is more than likely that over 1.50 million people directly derive their employment from dentistry.

Dental Hygienists - 33,000 (estimates) - present in most countries. There are varying rules within the different countries relating to the degree of supervision and duties of hygienists. Many countries allow

their hygienists to diagnose and treatment plan.

Dental Technicians - 150,000 (estimates) - recognized in all countries. They normally provide services only to dentists, although in most countries they are permitted to repair dental appliances directly for patients, provided they do not take impressions or otherwise work in the mouth. Dental laboratories amount to over 50,000.

Clinical Dental Technicians/Denturists - only in 5 countries (Denmark, Finland, the Netherlands, the UK and Switzerland in some cantons) they can provide oral health services – specifically full (complete) or partial dentures - directly to the public. This means that they are trained to work inside the mouths of patients.

Dental Assistants - 400,000 (estimates) - the development is not as great in some countries (Belgium, Greece and Portugal) where most dentists work without the help of another person at the chair-side, and Cyprus, France, Lithuania and Poland less than half of dentists work with such help.



Dental Therapists - provide limited clinical conservation and exodontia services. They are recognized in few countries (Sweden, Switzerland and the United Kingdom) and *Orthodontic Auxiliaries* (Sweden and the UK). There are different rules about the duties they may perform and the degree of supervision they may need.

Dentists - Based on a sum of the available data from "Eurostat Statistics Explained", **there were just over 345 thousand practicing dentists in the EU in 2014. Greece had the highest number of dentists per 100 000 inhabitants at 126 (licensed to practice) per 100 000 inhabitants.** This was considerably higher than in any of the other EU Member States, as Bulgaria and Cyprus (both with 98) and Estonia (92) had the next highest ratios for practicing dentists. By contrast, there were fewer than 50 practicing dentists per 100 000 inhabitants in Slovakia (professionally active dentists), Malta and Poland.

The number of practicing dentists per 100 000 inhabitants remained relatively unchanged in most of the EU Member States between 2009 and 2014; there were, however, seven Member States where this ratio increased by at least 10 additional dentists per 100 000 inhabitants. The largest change (both in absolute and relative terms) was recorded in Lithuania, with an additional 21 dentists per 100 000 inhabitants (+ 30 %), while there were also relatively large gains in Romania (+ 29 %), Hungary (+ 28 %), Italy (+ 24 % of professionally active), Spain (+ 23 % of dentists licensed to practice) and Bulgaria (+ 13 %). By contrast, there were three Member States where the number of dentists per 100 000 inhabitants fell between 2009 and 2014. The biggest reductions (- 4 % in both cases) were recorded in Greece and Denmark. France also presented a 4 % reduction although a break in the time series needs to be considered.

Graduates - In 2014, there were close to 13,000 dentistry graduates in the EU-28. **The EU's most populated Member State, Germany, had the highest number of dentistry graduates (2,314) among the EU Member States in 2014, while there were more than 1,000 dentistry graduates in Spain, Romania, the United Kingdom and France (2013 data).**

Relative to population numbers, Romania recorded the highest number of dentistry graduates in 2014 at 7.7 graduates per 100 000 inhabitants. Portugal (6.2 graduates per 100 000 inhabitants) and Lithuania (5.8 graduates per 100 000 inhabitants) also recorded relatively high ratios and all three of these Member States also reported that their number of dentistry graduates per 100 000 inhabitants rose during the period 2004-14. The majority of the EU Member States for which data are available had between 1.5 and 3.5 dentistry graduates per

100 000 inhabitants, although Austria (2013 data), the Netherlands, Malta and Italy were below this range. In Cyprus, Luxembourg as well as in Liechtenstein there were no available degrees in dentistry.

According to EU statistics on income and living conditions some 5.4 % of the EU-28's population reported they had unmet needs for dental care due to financial reasons in 2014; this figure was slightly more than double the corresponding share of the population reporting they had finance-related unmet medical needs. This difference may, at least in part, be due to national social security systems covering less people or a lower proportion of the total cost of dental care, resulting in some individuals having to pay a relatively high share of their dental expenses out of their own pockets (or through private health insurance).

'Dental tourism' is an area that has seen particularly rapid growth in several EU Member States in recent years, for example, in Hungary, as relatively low prices, increased patient mobility and greater consumer confidence have led some to consider the option of having dental treatment abroad. This pattern may be expected to develop in the coming years: Directive 2011/24/EU of the European Parliament and of the Council, on the application of patients' rights in cross-border healthcare was implemented in 2013 and provides patients with increased rights and promotes cooperation among health systems.

An increasing number of health professionals are seeking jobs in other EU Member States. Aside from the expected benefits for the individuals concerned, their movement can help rectify labor market imbalances between countries. Directive 2005/36/EC on the recognition of professional qualifications provides a Europe-wide legal framework enabling Member States to recognize each other's qualifications. A range of health professionals — including dentists — enjoy automatic recognition, in other words, if they are a certified practitioner in their home country then they are automatically entitled to practice anywhere else in the EU. The directive also provides a set of minimum requirements for each professional activity, including: the need for a compulsory university degree to be a dental practitioner; and a minimum study/training period of four years for dental practitioners.

Sources for article:

- Extracts from "The State of Oral Health in Europe" commissioned by the Platform for Better Oral Health in Europe: <http://www.oralhealthplatform.eu/wp-content/uploads/2015/09/Report-the-State-of-Oral-Health-in-Europe.pdf>
- "EU Manual of Dental Practice": <http://www.cedentists.eu/library/eu-manual.html>
The EU Manual of Dental Practice, commissioned by the Council of European Dentists (CED), was first published in 1997 and last updated in 2015.
- Extracts from Eurobarometer Survey: http://ec.europa.eu/public_opinion/archives/ebs/ebs_330_en.pdf
- http://ec.europa.eu/eurostat/statistics-explained/images/0/0b/Practising_dentists%2C_pharmacists_and_physiotherapists%2C_2014.png
- The Association of Dental Dealers in Europe (ADDE) - <http://www.adde.info/en>

...some 5.4 % of the EU-28's population reported they had unmet needs for dental care due to financial reasons in 2014



Focus on European Oral Healthcare Systems In Brief

Oral health is defined by the WHO as a part of human health and it is essential to generate health and well-being.

There are nevertheless substantial differences between oral healthcare provision systems and general healthcare.

Chief among these is the fact that dental care has much less tradition of third-party involvement of any kind in funding, whether by insurance or government, than does general healthcare.

In the European Union (EU), oral healthcare is mostly available through private practice. Although entitlement to state or insurance-funded healthcare is

a constitutional right in some countries and a stated principle in others, in oral health it is not as much guaranteed as it is in general healthcare. Most European countries are now increasing co-payments or decreasing the level of dental care coverage.

Private provision among small group practices that may enter into a service contract with a third-party payer (an insurance company or the National Health Service) is a growing phenomenon. Let us take a look at some of the systems.

NORDIC MODEL Found in Denmark, Finland, Norway and Sweden

- Large public dental service financed by national or local taxation with free services for under 18 year-olds and some adults
- Central guidance and supervision
- Private sector generally treats adults many of whom receive co-payment from the state
- Well developed team dentistry with wide use of Dental Hygienists and Nurses (Chair-side Assistants)
- Clinical Dental Technicians/Denturists, who provide removable prostheses directly to patients, are found in Denmark and Finland
- Over 90% of those under 18 years and 60% - 90% of adults attend regularly for oral healthcare



Population (2015)
5,676,000

GDP per capita (2015)
USD 51,989

Share of dental expenditure on total health expenditure (2011)
4.3%

% of Oral health expenditure private (2008)
80%

DENMARK



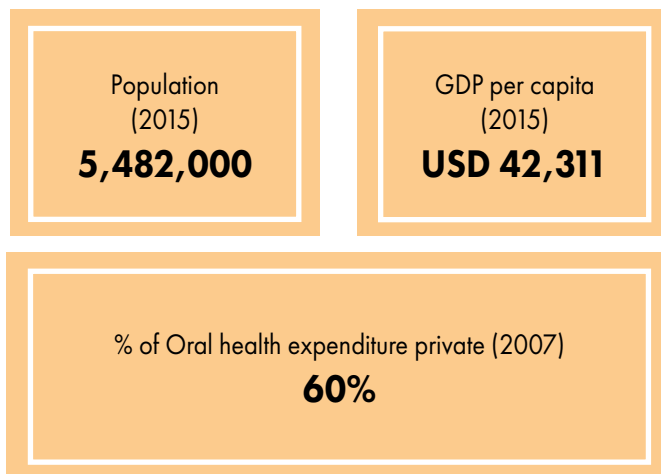
Highly decentralized National Health Service, largely funded by general taxation. **Oral healthcare is provided for children and young people (0-17) and only partly subsidized by the government for adults (approximately 17 -20%).** While the government pays approximately 85% of the national costs of healthcare, 15% comes from individuals through co-payments for treatment. **For dental care this ratio is reversed since the national cost of caring for adults' dental health is 20% government-funded, with the remaining 80% paid by patients.**

Number of registered dentists (2013)	7,900 (Percentage female 58%)
Active dentists (2013)	Between 4,295 - 5,161
Active dental offices (2015)	1,930
Population to (active) dentist ratio	1,086 (2013)
Members of Danish Dental Association (DDA)	81% - Dentists are advised to hold a membership even though not mandatory
Technicians (2015)	1,200
Dental labs (dentists' & commercial labs, 2015)	130
No. of Dental Dealers (2015)	37

* All figures are approximate, varying year by year, taken and/or compared from different sources.



FINLAND



Healthcare is funded largely through general taxation, with an additional special tax for health which is paid by everyone including those who have retired.

Dental services are delivered either through the system of public health centers, or by private dentists, denturists and dental laboratories. About 36 % of dental care is state-funded (half by the municipalities, half by central government) and 56% is paid for directly by households. Oral health services are provided in both the public and private sectors with about half of dentists in each sector.

About three quarters of the population receives oral healthcare regularly (in any two-year period) and oral examinations would normally be undertaken every 1-2 years.

* All figures are approximate, varying year by year, taken and/or compared from different sources.

Number of registered dentists (2013)	5,925 (Percentage female 69%)
Active dentists (2013) (The register does not distinguish between working or retired persons)	Between 4,234 - 4,500
Population to (active) dentist ratio (2013)	1,208
Members of Finnish Dental Association	98% (representing private and public health dentists)
Technicians (2013)	450
No. of Dental Dealers	35

NORWAY



General health services are funded through a form of national insurance, the Folketrygden. Benefits include pensions, full salary for long term sickness, unemployment benefit and healthcare. **But, only priority groups receive dental healthcare free of charge from the Public Dental Health Service. Adults must pay the full cost for dental care. Children and juveniles 0-18 year also receive free dental care.** About 80% of adults see a dentist every 12 months and more than 90% within 2 years, the majority from general practitioners in private practice paying full cost of treatment.

* All figures are approximate, varying year by year; taken and/or compared from different sources.

Population (2015)
5,196,000

GDP per capita (2015)
USD 74,400

% of Oral health expenditure private (2011)
71%

Number of registered dentists (2013)	5,350 (Percentage female 47% estimated)
Active dentists (2013) (The register does not distinguish between working or retired persons)	Between 4,450 - 4,576
Population to (active) dentist ratio (2013)	1,107
Membership of the NDA (Norwegian Dental Association)	90% of active dentists are members. It represents private and public service dentists
Technicians (2013)	703

SWEDEN



Most healthcare is provided through a national social insurance system, which also provides sick pay, child benefits, disability allowances and pensions. General healthcare is paid for through general taxation, plus a small fee for each visit to a doctor. **In total, around 81% of healthcare costs, including dentistry are funded by government. 80% of dental care is carried out by dentists within the Public Dental Service (PDS); but there are also private practitioners (PP) who provide care that is financed by the county/region.** In any one-year period, approximately 60% of the whole adult population access dentistry.

Population (2015)
9,799,000

GDP per capita (2015)
USD 50,579

Number of registered dentists (2010)	14,454 (Percentage female 52%)
Active dentists (2010)	Between 7,528 - 7,747
Population to (active) dentist ratio (2010)	1,251
Membership of the Swedish Dental Association (SDA)	95%
Technicians (2008)	1,500 (estimated by SDA, for "active" technicians)

* All figures are approximate, varying year by year; taken and/or compared from different sources.



SOUTHERN EUROPEAN MODEL Found in Spain, Italy and Portugal

- Predominantly private provision of oral healthcare without Government involvement
- Very limited number of public clinics
- Limited number of insurance schemes
- Limited provision of free treatment for under 18 year olds
- Some team dentistry
- Low rate of regular attendance for oral healthcare in Portugal and Spain (30-40% per year)



SPAIN



Spain has a National Health System which is mainly financed by the deductions on the workers income. These deductions are proportional to the income amounts. **The population has the right to all primary healthcare but dental, psychiatric and cosmetic services are excluded. Each region has a small Public Dental Service available to all sections of the population delivering free urgent treatments, for example extractions and prescription of antibiotics.** Patients attending the public dental service pay nothing for their care. Less than 5% of registered dentists work in the service.

As such, almost all oral healthcare in Spain is provided by private practitioners and patients usually pay the total cost. Only around 27-30% of Spaniards visit a dentist within a year; most tend to go only when they have dental problems.

Population (2016)
46,500,000

GDP per capita (2016)
USD 26,528

Share of dental expenditure on total health expenditure (2011)
5%

% of Oral health expenditure private (2007)
85%

Active dentists (estimated)	Between 29,000 – 33,286
Active dental offices (2016)	21,500
Population to (active) dentist ratio (2014)	1,394
Membership of the Dental Association (Consejo General de Colegios Oficiales de odontólogos y estomatólogos de España)	100%
Technicians (2016)	Between 13,000 – 14,500
Dental labs (dentists' & commercial labs, 2015)	4,200
No. of dental dealers (2015)	350

* All figures are approximate, varying year by year; taken and/or compared from different sources.

ITALY



Population
(2015)
60,802,000

GDP per capita
(2015)
USD 29,957

Share of dental expenditure on
total health expenditure (2011)
6.5%

% of Oral health expenditure
private (2007)
95%

The comprehensive public health system provides universal health coverage through public taxation with small co-payments by patients limited to specific classes of pharmaceuticals, specialist visits and diagnostic services, with various exemptions (medical conditions and income levels). **Each Italian region determines the size and type of public dental services provided, included in the so called LEA (“Livelli Essenziali di Assistenza”, basic assistance levels). LEA generally provides government funded primary care (restorative treatment and only occasionally prosthetics and implants, with co-payment by the patient). As such, dentistry should be considered as private sector treatment as only 5% of dental care is provided within the National Health Service (NHS) completely free, in public or semi-public facilities (some with co-payments), while 85% of patients have to pay totally out-of-pocket for their dental treatment.** Theoretically, everyone is eligible to use the NHS but in reality it is mostly used by the lower or middle class, who cannot afford private care. Patients do not have problems of access to private dentists but they do have access problems in the public sector with under-provision or waiting lists. The private health sector is increasing in importance and number of structures, due to the faster service and higher quality offered, as well as a consequence of the possibility to be treated under co-payment schemes allowing patients to receive care in private structures contracted by the National Health System. According to a 2010 ANDI study based on ISTAT data, 39.7% Italians visited a dentist at least once a year, compared to 11.5% who never visited. Only about 27% of children between 3 and 5 years have access to completely free dental care and even less in the 6 to 10 years group (12%) and between 11 and 13 years (10%).

Number of registered dentists (2015)	60,600 (Percentage female 34%)
Active dentists (2013)	Between 39,075 - 45,896
Active dental offices	41,000
Population to (active) dentist ratio (2015)	1,003
Members of Dental Association (ANDI and AIO)	52%
Technicians (2015)	26,000
Dental labs (dentists' & commercial labs)	12,800
No. of Dental Dealers (2015)	326

* All figures are approximate, varying year by year, taken and/or compared from different sources.



PORTUGAL



Population
(2015)
10,349,000

GDP per capita
(2015)
USD 19,222

The Portuguese National Health System (NHS) was introduced in 1979 to provide universal insurance coverage to the Portuguese population irrespective of income. The Constitution was amended in 1989 to the effect that the NHS would not be totally free, but would continue to follow a free “tendency” according to the individual ability to pay. Taking into account the economic and social conditions of the user and chronically ill patients, about 40% of the population is exempt of any extra co-payment when using the NHS. While the rest of the population pays a co-payment for each appointment or treatment provided. Finance is mainly through taxation but some services are still provided within the social insurance scheme.

Oral healthcare is provided almost entirely by the private sector. Public Dental Services are available in only a few hospitals and the type of treatment offered is limited to major conditions that require hospital admittance, e.g. major surgery, oncology etc. A handful of Public Health centers provide simple restorative treatments and extractions.

Approximately 50% of the population has no access to dental care, due to financial reasons, amongst others.

The Portuguese Public Oral Health Program (PPOHP) – From 2008 a new complementary public strategy to control oral diseases was introduced. For the first time ever, some vulnerable selected groups (low income over 65 years old, pregnant women, patients with Human Immunodeficiency Virus, 3-16 years old children and adolescents) have access to oral health promotion, prevention and treatment of oral diseases integrated in a public program. The patients can choose from a list of private enrolled dentists.

Number of dentists, stomatologists* & odontologists*	Between 9,125 - 9,886
Population to (active) dentist ratio (2013) (active dentists, stomatologists & odontologist)	1,153
Membership of the OMD (Ordem dos Médicos Dentistas)	100%
Technicians	4,000-5,000

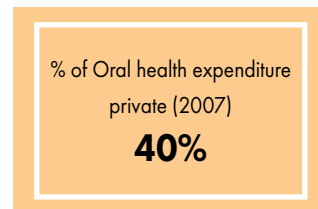
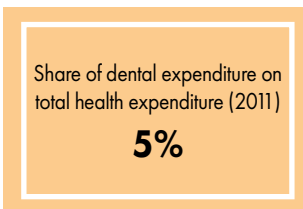
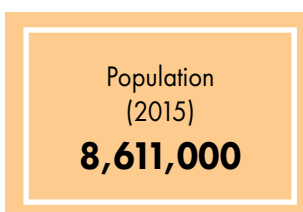
*Odontologists - the former group of “technicians”, designated as odontologists, are recognized only in Portugal. They are no longer being trained. Their qualification is insufficient to be recognized as dentists.
// Stomatologists - medical practitioners with an additional of dental training. Portugal EU membership has caused a growth of the number of Médicos Dentistas (dentists with specific dental university education) and a dramatic reduction of the number of stomatologists. All figures are approximate, varying year by year, taken and/or compared from different sources.



BISMARCKIAN MODEL Found in Austria, Belgium, France, Germany, Luxembourg, the Netherlands and Switzerland

- Based on statutory sickness insurance paid for by employers and employees
- Costs of oral healthcare totally or partially reimbursed by the insurance scheme
- Fees negotiated between insurance agencies and dental associations
- Very little Government involvement
- Very small public dental service
- Apart from in Germany and the Netherlands, little use of team dentistry
- No dental hygienists in Austria, Belgium, France and Luxembourg
- Dental nurses (chair-side assistants) relatively uncommon in Belgium, France and Luxembourg

AUSTRIA



The Austrian healthcare system is based on compulsory social insurance. Entitlement to receive funded healthcare is through membership of health insurance organizations (or sickness funds). These are provided by public compulsory and private supplementary insurance. **Approximately 99% of the population is covered by the compulsory insurance schemes which include cover for specified dental treatments. Premiums are paid by employers and employees (each 50%). Children are covered by the social sickness insurance of their parents and have the same rights.** The type of treatment covered by the social sickness fund is the same throughout Austria; there are regional differences in the percentage the patient has to pay. Oral health services are provided mainly in general (private/liberal) practice, both in the public and private sectors. Compulsory insurance schemes do not cover all types of dental treatment: 41 conservative and surgical items and 11 removable orthodontic and prosthodontic treatments are fully covered by the sickness insurance. Crowns and bridges, implants, fixed orthodontic appliances and other complex or cosmetic treatments have to be paid in full by the patients.

Active dentists	Between 4,421 - 4,893
Active dental offices (2015)	3,850
Population to (active) dentist ratio (2015)	1,977
Members of Dental Association/Austrian Dental Chamber	100%
Technicians (2015)	2,800
Dental labs (dentists' & commercial labs, 2015)	720
No. of dental dealers (2015)	57

* All figures are approximate, varying year by year; taken and/or compared from different sources.



BELGIUM



Population
(2015)
11,286,000

GDP per capita
(2015)
USD 40,324

Share of dental expenditure on
total health expenditure (2011)
2,2%

% of Oral health expenditure
private (2007)
40%

The system is based on a compulsory social insurance system. Working adults, both salaried and self-employed, make compulsory payment through deductions from their wages or incomes which contribute to the health and social services, provided by the National Health Insurance scheme. Employers also contribute additional sums for their employees. Self-employed people are only obliged to pay an insurance premium related to high risk healthcare (major surgery, hospitalization etc.). Dental care is classified as low risk healthcare.

Approximately 85% of the population is covered for all risk (low and high) healthcare.

Patients are reimbursed at 75% of the nationally agreed fees for restorative care, removable dentures, minor oral surgery and limited preventive care. Restorations for children aged 0-12 years, including fissure sealants, have almost total reimbursement. Periodontal treatments, fixed prostheses and oral implants are not covered. There is only a low level of reimbursement for orthodontic treatment and only for children who start orthodontic treatment before the age of 15 years. Only approximately half of the population attends a dentist regularly.

Number of registered dentists (2013)	8,879 (Percentage female 48%)
Active dentists	Between 7,800 - 8,108
Active dental offices (2015)	4,290
Population to (active) dentist ratio (2015)	1,436
Members of Dental Associations	about 74% (4 dental associations recognized by the social security system)
Technicians (2015)	1,340
Dental labs (dentists' & commercial labs, 2015)	650
No. of dental dealers (2015)	48

* All figures are approximate, varying year by year; taken and/or compared from different sources.

FRANCE



Population (2015)
66,808,000

GDP per capita (2015)
USD 36,205

Share of dental expenditure on total health expenditure (2011)
4.5%

A mandatory insurance system called "Sécurité Sociale" (National Health Insurance) covers the entire population living legally in France. The social insurance system is established by law and is divided into 3 major branches, the Sick Funds (Assurance Maladie), Pensions and Family. These are managed independently of the state. The Assurance Maladie is financed by compulsory contributions from individual incomes and taxes on the employers. **This obligatory insurance gives individuals the right to be totally or partially reimbursed for their health expenses for themselves and their dependants. Co-payments complete the cost of healthcare.**

Patients can claim the reimbursement of a part of the cost for conservative and surgical treatments (70%); prevention and examination at the age of 6, 9, 12, 15 and 18 (100%); orthodontics and prosthodontics treatments (approx. 35% for prosthetics and 5% for orthodontics). Many items of treatment are not covered by health insurance and private insurances are largely contracted by the French people. About two-thirds of the population visits a dentist at least once a year.

Number of registered dentists (2012)	46,104 (Percentage female 40%)
Number of active dentists	Between 41,495 - 42,281
Active dental offices (2015)	27,500
Population to (active) dentist ratio (2015)	1,605
Members of CNSD Members of ADF	36% (the Professional Union) 65% (the French Dental Association)
Technicians (2015)	18,000
Dental labs (dentists' & commercial labs, 2015)	3,800
No. of dental dealers (2015)	105

* All figures are approximate, varying year by year; taken and/or compared from different sources.



GERMANY



Population (2015)
81,413,000

GDP per capita (2015)
USD 41,313

Share of dental expenditure on total health expenditure (2011)
7.6%

Health insurance is mandatory for all citizens and permanent residents of Germany. It is provided by state-approved, not-for profit health insurance funds or “sickness funds” in the Statutory Health Insurance system (SHI), or by substitutive Private Health Insurance (PHI). All employed citizens (and other groups such as pensioners) earning less than Euro 54,900 per year (as of 2015) are mandatorily covered by SHI, and their dependents (nonearning spouses and children) are covered free of charge. Individuals whose gross wages exceed the threshold (over Euro 54,900) can remain in the publicly financed scheme on a voluntary basis (and 75% do) or opt out and purchase substitutive PHI. For self-employed persons and certain groups of professionals (e.g. civil servants) membership of a private insurance scheme is mandatory. Statutory Health Insurance, which provides a standardized level of coverage, is funded by a combination of employee contributions, employer contributions (almost half each) and government subsidies on a scale determined by income level. About 86% of the population receives their primary coverage through SHI and 11% through substitutive PHI.

Membership of a statutory sick fund entitles all adults and children to receive oral care from the statutory health insurance system. General clinic procedures are totally covered by the insurance, dental prostheses and orthodontics are subject to co-payments. Implants are not covered. Persons aged less than 18 are entitled to full compensation for all medically necessary conservative and surgical dental treatment as well as necessary orthodontist care. They are also entitled to receive certain prophylactic treatments free of charge.

With this system Germany reaches the impressive percentage of 70% of the adult population and 75% of the children using the dental system in a typical year.

Number of registered dentists (2013)	88,882 (Percentage female 42%)
Active dentists	Between 69,089 - 70,740
Active dental offices (2015)	47,805
Population to (active) dentist ratio (2013)	1,163
Members of Dental Associations	100% - The national federation of Chambers is known as the Bundeszahnärztekammer (BZÄK) and all dentists must be a member of the local Chamber.
Technicians (2015)	68,000
Dental labs (dentists' & commercial labs, 2015)	17,493
No. of dental dealers (2015)	167

* All figures are approximate, varying year by year; taken and/or compared from different sources.

LUXEMBOURG



There is one scheme for general healthcare, the Caisse Nationale de Santé (CNS), which is made up of several sick funds. It is funded by contributions from employers (50%) and employees (50%), as well as the government. **Medical (and dental) insurance is obligatory and covers 99.9% of the population.**

Everybody is entitled to dental care partly paid for by the CNS and all dentists must work within it. Every dentist must charge the fees specified by the fund, unless a fee is not stated,

Population (2015)
569,700

GDP per capita (2015)
USD 101,450

Number of registered dentists (2013)	512 (Percentage female 40%)
Active dentists	Between 452- 476
Population to (active) dentist ratio (2013)	1,188
Members of Dental Association	90% (voluntary membership)
Technicians (2013)	82

* All figures are approximate, varying year by year; taken and/or compared from different sources.

and patients obtain (variable) reimbursement. Items not listed in the scale of fees may be charge at any reasonable rate. 100% of care is provided in general (private) practice and there is no reported difficulty for access to care for patients.

THE NETHERLANDS



Population (2015)
16,937,000

GDP per capita (2015)
USD 44,299

Share of dental expenditure on total health expenditure (2011)
4.1%

% of Oral health expenditure private (2007)
74%

Since 2006 the Netherlands have a new health system. A government-regulated compulsory health insurance is provided to the Dutch population by private insurances. This insurance package is the same for everyone and includes the basic, mostly curative, healthcare. All other healthcare can be additionally insured or paid for privately. Healthcare insurers have a duty to accept applications from every individual seeking the basic insurance. Approximately 69% of the population is registered in the public system.

The basic oral care insurance package covers all preventive and curative care for individuals up to 21 years old; full set of dentures and care for subjects with specific conditions like physical or mental handicapped. All other treatments including all preventive and curative dental care for grown-ups and all orthodontic care can be additionally insured or paid for privately. Although dental treatment is provided under the private system, there is a national scale of maximum fees.

Number of registered dentists (2013)	10,780 (Percentage female 35%)
Active dentists	Between 8,750 - 8,773
Active dental offices (2015)	5,600
Population to (active) dentist ratio (2013)	1,914
Membership of the Dutch Dental Association (KNMT)	76% (not compulsory)
Technicians (2015)	3,200
Dental labs (dentists' & commercial labs, 2015)	880
No. of dental dealers (2015)	29

* All figures are approximate, varying year by year; taken and/or compared from different sources.



SWITZERLAND



Population (2015)
8,287,000

GDP per capita (2015)
USD 80,945

Share of dental expenditure on total health expenditure (2011)
6.2%

% of Oral health expenditure private (2012)
90%

Switzerland has a mandatory public health insurance system. Part of the financing comes from the fees paid to the private insurance companies (Kassen), other part comes from Federal taxes and a third part comes from the out of pocket contributions. The system is compulsory for everyone. Patients, except those on low income, pay a basic annual fee of approx. CHF 3,000 (€2,449). For those on low incomes the fee is reduced by up to 100% (approximately 30% of the population). The Kassen are not allowed to make profits from the basic statutory insurance, but can benefit from any additional coverage, such as dental care.

Apart from a minority of dentists employed by hospitals or the school dental service, **most oral healthcare is provided by independent private practitioners and paid for directly by individual patients.**

Unless dental treatment is necessary because of an accident, the medical insurance system only subsidizes the cost when a patient has a prescribed disease and only 10-15% of care is eligible. More specifically: oral conditions caused by another severe and not avoidable disease of the masticator system; oral conditions caused by another severe condition and its sequel; oral conditions which must be treated in the overall treatment of another severe disease; oral conditions caused by accidents. As such, most dental care is paid directly out of pocket for private services. About 90% of the population access dentistry in a 2-year period.

Number of registered dentists (2013)	4,850 (Percentage female 28%)
Active dentists	Between 4,217 - 4,800
Active dental offices (2015)	4,200
Population to (active) dentist ratio (2013)	1,679
Membership of the Société Suisse des Médecines-Dentistes (SSO)	90%
No. of dental dealers (2015)	10
Technicians (2013)	2,200
Dental labs (dentists' & commercial labs, 2015)	1,100

* All figures are approximate, varying year by year; taken and/or compared from different sources.



BEVERIDGIAN OR HYBRID MODEL Unique to the United Kingdom

- Mixture of publicly and privately funded oral healthcare
- Publicly funded either in relatively small number of public service clinics or in private clinics where the owners contract with the state
- Free of charge to all under 18 years of age and “special groups”
- Widespread and increasing use of team dentistry
- Growing numbers of dental hygienists, dental therapists, dental nurses
- Also clinical dental technicians and orthodontic nurses all are registered

THE UNITED KINGDOM



The National Health Service (NHS), providing healthcare to all, is financed mainly by general taxation (approx. 90%) with the balance coming from charges to patients for prescriptions, dental & optical care. Oral healthcare is available from the NHS or privately. The effect of an increased expenditure by patients in the private sector and the high proportion paid by them as dental charges when obtaining treatment in the NHS, means that **patients in the UK are funding 54% of all spending on oral healthcare, with 46% being publicly funded.** About 75% of private oral healthcare expenditure is made up by out-of-pocket payments and 25% by private dental insurance. **Access to a NHS general practitioner (GDP) is, in principle, available to all. NHS charges are about half or less of that which is paid privately.** In many parts of the UK, access to NHS dental care is difficult, therefore “Access Centres” staffed by salaried GDPs and Public Health Dentists (PHDs) offering clinical services at NHS charges are available. Children under 18 years old, pregnant and nursing mothers; individuals on welfare benefits; individuals under 19 years old in full time education are entitled to free oral care within the NHS. The vast majority of GDPs treat patients both within the NHS and privately. Individuals are entitled to immediate access to urgent oral healthcare when required and also have the right – subject to

Among main sources:

-Extracts from the “EU Manual of Dental Practice”. For full and detailed report: <http://www.cedentists.eu/library/eu-manual.html>

The EU Manual of Dental Practice, commissioned by the Council of European Dentists (CED), was first published in 1997 and last updated in 2015. The CED is a European not-for-profit association which represents over 340,000 dentists across Europe. Established in 1961 is now composed of 32 national dental associations from 30 European countries. <http://www.cedentists.eu/>

- The Association of Dental Dealers in Europe (ADDE) - is a trade organization working actively in the dental industry. Today ADDE represents the interests of a total of more than 960 dental dealer organizations: <http://www.adde.info/en>

Population (2015) 65,138,000	GDP per capita (2015) USD 43,876
Share of dental expenditure on total health expenditure (2011) 6%	% of Oral health expenditure private (2012) 55%

Number of registered dentists (2015)	39,258 (Percentage female 45%)
Active dentists (estimated, 2014)	Between 33,000 – 34,638
Active dental offices (2015)	11,800
Population to (active) dentist ratio (2015)	1,630
Membership of the British Dental Association (BDA)	57% (active dentists)
Technicians (2013)	7,656
Dental labs (dentists' & commercial labs, 2015)	2,080
No. of dental dealers (2015)	60

* All figures are approximate, varying year by year; taken and/or compared from different sources.

a set of co-payments – to all clinically necessary treatments such as preventive treatment, white fillings, dentures, root canal treatment, crowns and bridges. **Nevertheless, they may choose to receive a mix of private and NHS treatment within the same episode of dental care (known as “mixing”). Often basic treatment is carried out within the NHS and more advanced treatment, involving the use of more expensive materials, privately.** About 60% of adults and 70% of children (0-18 years) see GDPs for continuing care annually.



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Total Population
(2016)

46.5
million

Urban
Population

79.1%

GDP
per capita

26,528
USD

GDP

1,232.6
Billion USD

*Ut in interdum
hendere itibus,
at ornare sem
consectetur id.
Maure lacus et
lauris ac quam
molis in congue
et et velit.*



Focus on Spain

- Employment rate (1st quarter 2017): 60.4% of working age population
- Internet access (2015): 78.7% of all households
- Official Language: Castilian is the official State language. Other Spanish languages also have official status in their respective Autonomous Communities, in accordance with their Charters of Autonomy (Article 3 of the Constitution)
- Territory: Spain covers 505,955 km², third largest surface area in western Europe
- Political structure of State: Parliamentary Monarchy
- Head of State: H.M. the King Felipe VI
- Prime Minister: Mariano Rajoy Brey, since October 2016
- Party in power: Popular Party (PP)
- Political organization: the Spanish state is made up of the central state and 17 highly decentralized regions (Comunidades Autónomas, that is, autonomous communities) with their respective governments and parliaments

Spain's Economic Recovery

The Spanish economy is the fifth-largest in Europe behind Germany, United Kingdom, Italy and France and the 14th largest in the world. Following the financial crisis of 2007–2008, the Spanish economy plunged into recession, entering a cycle of negative macroeconomic performance. Compared to the EU's and US average however, the Spanish economy entered recession later (the economy was still growing by 2008), but stayed there for longer. **The economic boom of the 2000s was reversed, leaving over a quarter of Spain's workforce unemployed by 2012. In aggregated terms, the Spanish GDP contracted by almost 9% during the 2009-2013 period.**

The economic situation started improving by 2013-2014 and after three years of impressive economic growth, Spain's economy is experiencing a notable rebound facilitated by structural reforms and is now on the verge of exceeding its pre-crisis level of gross domestic product. Nine years after Spain slid into a long and bitter recession, the country is back where it was in 2008.

The recovery of the eurozone's fourth-largest economy shows that the unpopular policies pushed through at the height of the crisis worked. Despite causing initial pain, Spain's efforts have focused on reducing the inefficient and oversized government sector and reforming the labour market. Top income tax rates on individuals and corporations have been lowered as well. Furthermore, the decision to overhaul the banking system and cut the deficit paved the way for a return to growth.

Spain is now growing again and it is creating jobs and the outlines of a new economic model for Spain are beginning to move into view. But its ongoing economic recovery remains highly vulnerable to challenges related to ensuring fiscal stability and restoring the financial sector's competitiveness. **Despite relatively sound economic institutions and transparent regulatory and judicial systems, the indebted public sector is still a drag on overall economic dynamism.** A lack of progress in fiscal consolidation has resulted in a high level of public debt that is close to the size of the economy.

In fact, critics argue that the country's recovery is not just incomplete but that the price of austerity and reform was too high. The unemployment rate may have fallen sharply, but at 18.6% it remains far above the pre-crisis level and almost double the eurozone average. **Inequality has increased dramatically and public finances continue to bear the scars of the crisis: Spanish government debt is 100% of GDP, up from 40% before the crisis.** There is also concern about the low productivity of Spain's private sector and the poor state of the country's education system. But a deeper look at the origins and causes

of the post-2007 downturn suggests that Spain has tackled some of the country's old weaknesses. The once decrepit banking system is on a sound footing, companies have become more competitive and the over-reliance on construction is gone. In 2007, Spain accounted for more housing starts than Germany, France, Britain and Italy combined and 2.7m Spanish workers were active in the construction sector — equivalent to 13% of the national workforce.

Today, growth rates are nearly back to levels during the boom years. The Spanish economy expanded by more than 3% in both 2015 and 2016, far ahead of its European peers. That is expected to continue this year, with GDP forecast to rise at least 2.5%.

The composition of Spanish output is however the most important aspect. In the years before the crisis, the volatile construction sector accounted for more than 10% of GDP. Today, that share has fallen to 5%. At the same time, Spanish exports of goods and services have risen from 25% of GDP to 33%. The country's exports are also more diversified, with more companies in more sectors selling to more markets. The export boom reflects, among other things, the country's recent competitiveness gains. Spanish unit labour costs have fallen 14% since 2010, in response to long years of wage restraint as well as the new flexibility granted to companies by the 2012 labour market reform.

Possibly the most important break with the past has come in banking. **Messy and costly as it seemed at the time, Spain's 2012 banking bailout and recapitalisation package turned out to be vital for the country's recovery.** But it also meant that markets regained trust in the broader banking system relatively quickly and, most importantly, credit started flowing to the private sector and to households once again.

Overview of the Spanish Healthcare System

The Spanish healthcare system is considered among the best in the world, in 7th position in the ranking calculated by the World Health Organization.

Its National Healthcare System (SNS) or "Instituto Nacional de la Salud", is founded on Spain's General Healthcare Act of 1986 and guarantees universal coverage and free healthcare access to all Spanish nationals, regardless of economic situation or participation in the social security network. Non-nationals who participate in the social security system — and their family members — are also covered by public healthcare.

As the system is based on universal healthcare, non-residents and tourists (and even people living in the country illegally) are never denied treatment.

Population coverage is almost universal (99.5%) and guarantees quite a comprehensive benefits package to all citizens. Only 0.5% of the population falls outside this welfare network; this group consists

Spain is now growing again and it is creating jobs and the outlines of a new economic model for Spain are beginning to move into view.



of high-income non-salaried individuals who are not obliged to join the social security system as per the 1088/89 Royal Decree.

Organization of the Health System

The Spanish National Health System (SNS) is almost fully funded from taxes and predominantly operates within the public sector. **Provision is free of charge at the point of delivery except for pharmaceuticals prescribed to people aged under 65, which entail a 40% co-payment with some exceptions.**

Health competences were totally devolved to the regional level (Autonomous Communities) as from the end of 2002; this devolution resulted in 17 regional health ministries with primary jurisdiction over the organization and delivery of health services within their territory. **The Autonomous Communities' financing scheme promotes regional autonomy both in expenditure and in revenue raising (especially after the 2009 revision).** The reforms, which regionalised the system, were implemented to provide greater and equal access to the population, thus avoiding the concentration of health services in urban areas. This has also improved response time and increased the participation of the target community in the development and management of the national healthcare system at regional and local levels. On the local level, the "areas de salud" are the fundamental structures of the national healthcare system and are responsible for the unitary management of the health services offered at the level of the Autonomous Community. To increase operability and efficiency, the "areas de salud" are subdivided into smaller units called "zonas basicas de salud".

The national Ministry of Health, Social Services and Inequalities (MSSSI) is therefore vested with only a limited extent of power. It holds authority over certain strategic areas, such as pharmaceuticals' legislation and as guarantor of the equitable functioning of health services across the country, including the definition of the basic benefits basket, the setting of minimum thresholds for services regarding expenditure and quality. **While the Inter-Territorial Council of the National Health System (CISNS) is the highest body for the National Health System coordination, responsible for the cooperation and liaison among the central and autonomous region public health administrations.** The board is chaired by the National Ministry of Health and the members are the 17 Regional Ministers. It approves the national catalogue of services that must be provided by all regional health services (cartera de servicios comunes). **Decisions in the CISNS must be adopted by consensus and, as they affect matters that have been transferred, they can only take the form of recommendations.**

The Spanish National Health System under citizens' scrutiny

The Spanish Ministry of Health has recently released the 2016 Health Care Barometer. This annual survey since 1993, is designed to capture the degree of satisfaction of Spanish citizens with the public health system as well as their assessment of the health care services as users.

According to these latest figures, the general satisfaction with the public national health system has remained constant since 2010, scoring around 6.5 out of 10 in 2016. Further, a 69.6% of citizens believe that services are provided regardless of the socioeconomic status of the individuals, similar to the 70.9% declared in 2010. However, the perception of regional inequalities in the provision of health services has increased overtime, with the percentage of citizens who declare that health services are offered equally among regions decreasing since 2010, from a 43.8% to a 37.7% in 2016. It is also relevant to highlight the steady increase in citizens who think that waiting lists are worsening, from 11.7% in 2010 to 28% in 2016.

The Health Care Barometer results are available (in Spanish) at the following link:

https://www.msssi.gob.es/estadEstudios/estadisticas/BarometroSanitario/home_BS.htm

Source: <http://hspm.org/countries/spain25062012/livinghit.aspx?Section=2.5%20Planning&Type=Chapter>

As in most European countries, the numbers in all categories of health professionals per 100 000 persons have increased over time; **it is worth noting the expansion in Spain of certain profiles, such as nurses, dentists or pharmacists (which have multiplied several times over their availability in the context of a growing population), compared to the relative stability of physicians.** This phenomenon reflects well how those professionals' role has grown within the range of services offered.

Primary Healthcare Services - The primary care network is entirely public and most of the providers are salaried professionals within the public sector with a few exceptions. Primary Healthcare services are available within a 15-minute radius from any place of residence. The main facilities are the healthcare centres, staffed by multidisciplinary teams comprising of general practitioners (family doctors), paediatricians, nurses, administrative staff and social workers, as well as, in some cases, midwives, physiotherapists and dentists' surgeries and are linked to some basic laboratory and image diagnosis resources, either in the same premises or centralized and serving several centres in the vicinity. There is a total of 13,121 primary health care centres that serve 35,233 citizens each on average.

Secondary Healthcare Services - Specialist care is

provided in specialist care centres and hospitals in the form of outpatient and inpatient care. **Access to specialist care requires referral from the GP, who acts as a gatekeeper.**

Around 40% of hospitals belong to the SNS; the remainder are privately owned, though many are included in the networks of public utilization or within a substitute concession by which their activity is publicly funded (around 40% of private hospitals' discharges in Spain are funded out of the SNS budget). The total number of hospital beds amounts to 160,981 or 3.43 beds per 1000 inhabitants. Overall, some 40% of total bed capacity is concentrated in big tertiary/quaternary hospitals with over 500 beds (mainly public); every Autonomous Community has at least one of these centres, with variations subject to access considerations such as levels of population dispersion and volume. **71.2% of the available beds are functionally dependent on the public sector.**

Health Expenditure

Based on 2015 OECD statistics and compared to health expenditure in other WHO European Region countries, Spain invests a percentage of GDP (9.3%) slightly below the average (10.4% in Belgium, 10.6% in Denmark, 11% in France, 11.1% in Germany and 9.8% in the U.K). **Most of the health expenditure, 71% relies on the public sector and is sourced mainly from taxation.**

The total expenditure of the Spanish Health System (both public and private), increased to 99,974 million Euros in 2015 (71,036 million coming from the public sectors and 28,937 million from the private). During the period 2011-2015 the annual average growth of total health expenditure was 0.2%. While public health expenditure decreased by 0.8%, private expenditure increased on average 2.8% per year.

The share of private health expenditure has increased over the years. The most recent international figures for Spain yield a 28.9% share of private sources in total health expenditure in 2015; this private expenditure unfolds into 22.4% funded out of pocket by households (mainly co-payment for drug prescriptions for under-65s, over-the-counter drugs, dental care and optical items such as lenses and glasses), 5.5% corresponding to private insurance and the remaining 0.9% spent by private non-profit-making organizations serving families.

The preference for paid, private healthcare is not caused by a lack in quality of the public system but mainly due to the long waiting periods patients are often faced with to see specialist doctors in the public healthcare system that can often be of weeks or months (excluding emergency care, which is immediate) or to access services such as adult dental care, which are limited within the benefits package.

Private voluntary insurance schemes still play a relatively minor, though increasingly relevant, role within the Spanish health system. In 2016, there were about 9.7 million private insurance policyholders in Spain (around 20% of the population), representing a 4.9% increase with respect to 2015.

Furthermore, the public system has traditionally contracted out some 15–20% of specialized care provision to private (mostly non-profit-making) hospital providers. This contracting out typically buys some high-resolution diagnostic services or outpatient surgical procedures as part of the management of waiting lists.

As far as per capita expenditure, total public health expenditure increased from 2,125 euros per inhabitant in 2011 to 2,152 euros per inhabitant in 2015, representing an average annual increase of 0.3% in the five-year period.

Total expenditure of the Spanish Health System (2011-2015), public and private (Million Euros)

	2011	2012	2013	2014	2015
Total Health Expenditure	99,191	95,742	93,662	95,382	99,974
Public Health Expenditure	73,261	69,152	66,552	66,799	71,036
Private Health Expenditure	25,930	26,590	27,110	28,583	28,937

Total health expenditure, public and private. Percentage of gross domestic product

	2011	2012	2013	2014	2015
Total Health Expenditure	9.3	9.2	9.1	9.2	9.3
Public Health Expenditure	6.8	6.7	6.5	6.4	6.6
Private Health Expenditure	2.4	2.6	2.6	2.8	2.7

Source: Spanish Ministry of Health, Social Services and Equality <http://www.msssi.gob.es/estadEstudios/estadisticas/sisInfSanSNS/pdf/SCSprincipalesResultados.pdf>



Health Market Trend

Spanish public healthcare institutions are the main purchasers of medical equipment and supplies and while they previously accounted for 80-85% of the market, austerity measures over the past several years have generated a decline in size and scope. This reduction in coverage has been offset to a certain extent by an ongoing growth in the private healthcare sector during the same period, which accounts for approximately 20% of the market and is still on the rise. The market for medical equipment and devices is estimated at approximately USD 8 billion. The regions of Madrid and Catalonia account for over 80% of medical equipment sales.

The sector relies heavily on imports. Imports in 2016 increased to approximately Euros 5.7 billion. Germany accounts for approximately 50% of the imports, while the U.S. has approximately 25 – 30% of the market share.

While a minority, large companies represent only 8% of the market, they account for approximately 60% of the sales. Because of each region being responsible for administering its corresponding healthcare budget, the rest of the market is made up of small and medium sized companies.

Except for companies in Madrid, Barcelona and the Basque Country, the vast majority operate mainly in their own region. However, these small and medium sized companies represent the 90% of the market and account for more than 40% of the sales.

Because of the difficult economic situation over the past few years cost-efficiency continues to be a deciding factor when it comes to procurement. As part of the economic measures adopted by the Government, adjustments were made to the Value Added Tax (VAT). As of 2015, many healthcare products, medical equipment, sanitary instruments and other sanitary products that formerly paid 10% are now subject to the 21% rate. To reduce expenditures, more and more items, particularly single use items, are being imported from Asia. However, when it comes to more complex and sophisticated items, quality continues to be an important factor in the purchasing decision.

Non-EU companies need to have either a Spanish distributor or their own branch in Spain to participate in official tenders and to avail of other market opportunities, as also to provide the after-care service required by law.

Spanish manufacturers are compensating for the drop in domestic activity by stepping up their international activities. Medical device exports from Spain have increased over 20% since 2008. The figure for 2016 exceeded USD 2.7 billion, a 2.3% increase over 2015. Europe continues to be the principal destination for exports in this sector, with 70% of

exports going to Germany, Portugal, Belgium, France and Italy.

Healthcare Assessment

Spain has among the world's healthiest people with an average life expectancy of 81, one of the highest in the EU. It is the 1st country in the world in organ transplants, the incidence of heart disease in Spain is among the lowest in the world, however, skin cancer is one of the highest.

Measured by international standards, the SNS ranks, in general, in a fairly good position yielding sustained good results in different dimensions of performance such as:

- population health status parameters
- coverage, access and financial equity parameters
- health care amenable outcomes, health care quality and safety
- users' satisfaction and system legitimacy according to the population (except for patient-oriented information and waiting list management).

These achievements have been attained with a relatively low level of expenditure (below the European average). The conclusion would then be that overall Spaniards are obtaining quite good value for money. Although international comparison offers important insights, in the case of a quasi-federal country like Spain assessment across the country becomes crucial. In fact, from the perspective of geographical differences in utilization and outcomes there is evidence suggesting large unwarranted variability in access, quality, safety and efficiency, not only across regions but mainly among health care areas and hospitals.

Spain has among the world's healthiest people with an average life expectancy of 81, one of the highest in the EU.

FACTS AND FIGURES ON THE DENTAL MARKET

Active dentists (estimated)	33,286
Active dental offices (2016)	21,500
Population to (active) dentist ratio	1,394
Number of new graduate dentists (2015-2016)	Between 1,500-1,800
Number of dentist training institutions	21 (public and private)
Membership of the Dental Association (Consejo General de Colegios Oficiales de odontólogos y estomatólogos de España)	100%
Dental technicians (2016)	Between 13,000 -14,000
Dental labs (dentists' & commercial labs)	4,200
No. of Dental Dealers	350

* All figures are approximate, varying year by year; taken and/or compared from different sources (see "among main sources" below).

- Share of dental expenditure on total health expenditure (2011) - 5%
- % of Oral Health expenditure private - 85%

The Spanish population has the right to all primary healthcare but dental, psychiatric and cosmetic services are excluded and almost all oral healthcare in Spain is provided by private practitioners with patients paying the total cost. A limited dental coverage is offered in each region through small Public Dental Services available to all sections of the population delivering free emergency treatments, for example extractions and prescription of antibiotics, although patients may be referred to an oral surgeon if necessary. Patients attending the public dental service pay nothing for their care. Less than 5% of registered dentists work in the service.

A few regions have introduced a capitation scheme, but only for children up to 14–18 years (depending on the region), except for braces. Framed within the SNS National Plan for Dental Health, the Ministry of Health has funded a broad set of dental health prevention and care measures in the years; the interventions include annual check-ups of teeth and oral cavity and dental treatment (fillings, endodontics, extractions and cleaning), in an attempt to homogenize basic dental care benefits for children across the regions.

There has been a positive evolution over the decades of the basic indicator “decayed, missing and filled teeth” (DMFT) at age 12 years, as shown below:

DMFT at age 12 years (mean value)

Year	1984	1994	2000	2015
DMFT index	4.2	2.3	1.12	0.7

Source: WHO Regional Office for Europe 2009 and Organizacion Collegial de Dentistas de Espana

DMFT in Spain 2015

Age	DMFT
5-6 (*)	1.1
12	0.7
15	1.3
35-44	8.4
65-74	16.3

(*) dft / Source: Organizacion Collegial de Dentistas de Espana

Spain has an excess of supply of dentists over need as it had a tradition of accepting dentists trained in “third world” countries, usually South America but, as entry examinations have become progressively more difficult, the numbers entering Spain have reduced.

92% of dentists in active practice are working in private (general) practices, largely in single-handed practice, most are self-employed and earn their living through charging fees for treatments. **Generally private practitioners accept only private fee-paying patients. There is no prescribed fee scale and the laws controlling free competition restrict the possibility of set fees.** However, prices for visiting dentists in Spain tend to be more affordable than in some neighbouring countries. Apart from the special compulsory insurance scheme for government employees with limited dental care covering only examinations, extractions and prophylaxis, there are several private health insurance plans which include these items and X-ray diagnosis. Several companies offer more comprehensive dental care for an additional premium. **However, just over 19% of the Spanish population uses private complementary insurances for their private dental care.**

Specialist care is very limited and no specialties are formally recognized (no specialist training in Spain). There are an increasing number of practitioners who are limiting their practice to a given specialty, mainly orthodontics, periodontics, endodontics and oral surgery. Clinical auxiliaries are limited to hygienists.

Patients in Spain do not attend for dental care on a regular basis, but tend to go when they have dental problems, only around 43% of Spaniards visit a dentist within a year. The dental association indicated in 2013 that there was a mean 2.2 years between visits to dentists by the population. Uptake of oral health-care services is therefore rather low in comparison with many other EU countries.

According to the Spanish Dental Council, there has been an evolution of treatment in the years. **In 2015 basic treatments have increased while more complex treatments such as implants and cosmetic dentistry have suffered a decline in demand up to 22%. 1 in 4 dentists has suffered important reduction in revenues.** In 2015 Spanish dentists worked 120 hours by month attending an average of 190 patients. A decrease in the number of hours worked is appreciated as well as the average number of patients in the second half of 2015. Spanish dentists devote 76% of their time to clinical activities, mainly curative care. The most commonly demanded treatments are restorative care, endodontics, prosthodontics and periodontics care.



QUICK FACTS, 2015

DENTAL CARIES

- 1.8 million Spanish children less than 12 years have dental caries in primary teeth (31.2%)
- 33 million Spaniards 12 years or more have dental caries in permanent teeth (86.5%)
- 803,000 Spaniards 64 years or more are fully edentulous (13.8%)

PERIODONTAL DISEASES IN SPAIN

- 8 millions of Spaniards have periodontal disease (30.7%), 1 in 3 adults
- 2 millions of Spaniards have severe periodontal disease, 1 in 13 adults

ORAL CANCER IN SPAIN

- Approximately 5,000 new cases of oral cancer were diagnosed in Spain in 2016, 1,200 Spaniard will die due to oral cancer. 85% of cases of oral cancer are diagnosed in Spain in late stage, early detection would reduce mortality by half.

USE OF DENTAL SERVICES

Adult population:

- only 5 out of 10 Spaniards have been to the dentist in the last year
- 8/10 chose a private dentist

- 1/10 chose a franchised clinic
- 1/10 chose a clinic insurance company

Which are the reasons for not going to the dentist in the last year?

- 56% don't have dental problems
- 21% for economic reasons
- 15% for fear of the dentist

Child population:

How often do your children brush teeth?

- 70% two or more/day
- 30% less

How often do you take your child to the dentist?

Age	Never been	Every 6 months	Every Year
2-6	54%		46%
7-10	11%	71%	18%
11-13		30%	70%

Which of the following treatments has your child received?

- 37% has received a dental restoration
- 17% has received a tooth cleaning
- 15% has received an orthodontic treatment

Source: Organizacion Collegal de Dentistas de Espana (2015)

Dental market - According to latest figures by the Association of Dental Dealers in Europe (ADDE) **total sales value of dental products in Spain reached 680.5 million Euros in 2016, ranking fourth after Germany (2,500 Mio. Euro), Italy (1,170 Mio. Euro) and France (1,123 Mio. Euro).**

Among the approximately 350 dental dealers in Spain, 80 are full service dental dealers providing also technical services, 15 are mail order dealers and 60 are specialized dealers concentrated on particular segments such as laboratory or orthodontics.

Considering the total dental business (dentists and laboratories), 43% of dental supply is delivered by solely full service dealers, 17% through mail orders, tele-sales and catalogue houses, 15% by specialized dealers, 13% directly by manufacturers. Only 3% of dental and laboratory consumables and equipment are supplied from outside Spain directly to dentists and technicians, bypassing the local dealer net.

As the Spanish market is fragmented in different regional markets joined by two hubs of Madrid and Barcelona, most of the dental companies wishing to appoint their representative in Spain focus on these two areas as the majority of agents, distributors, foreign subsidiaries and government-controlled entities that make up the economic power bloc of the country operate in these two hubs.

Sales channels to consumers have developed significantly in the last few years. While the traditional method of wholesalers selling directly to dentists continues, online sales are growing rapidly throughout the country.

Total Sales Values by Sector (2016)

Metal implants	215 MILLION EURO
Sundries	283 MILLION EURO
Teeth delivered to dentists and laboratories	11 MILLION EURO
After-sales technical service incl. spare parts	9.5 MILLION EURO

Source: ADDE, Association of Dental Dealers in Europe

Among main sources:

- Extracts from the "EU Manual of Dental Practice", commissioned by the Council of European Dentists. For full and detailed report: <http://www.cedentists.eu/library/eu-manual.html>
- ADDE, Association of Dental Dealers in Europe "2017 Survey of the European Dental Trade" for full report: www.adde.info
- Extracts from "Oral health in Spain: an update 2015" by the Spanish Dental Council, Consejo Dentistas (Organizacion Collegal de Dentistas de Espana)
- The U.S. Department of Commerce's International Trade Administration: <https://www.export.gov/article?id=Spain-Healthcare>
- http://ec.europa.eu/eurostat/statistics-explained/images/0/0b/Practising_dentists%2C_pharmacists_and_physiotherapists%2C_2014.png
- <http://data.worldbank.org/country/spain>
- Extracts from The Financial Times: <https://www.ft.com/content/254bb8a8-1940-11e7-a53d-df09f373be87?mhq5j=e3>
- <https://data.oecd.org/spain.htm>
- ICEX – Spain Trade & Investment, The Spanish institute for foreign trade <http://www.investspain.org/invest/en/-invest-in-spain/spain-profile/spain-in-numbers/index.html>
- Extracts from "Health systems in transition" (WHO, on behalf of the European Observatory on Health Systems and Policies): <http://hspm.org/countries/spain25062012/livinghit.aspx?Section=2.5%20Planning&Type=Chapter>
- Ministry of Health, Social Services and Inequalities (MSSSI)

New EU Rules on Medical Devices to Enhance Patient Safety and Modernise Public Health

Brussels 5 April, 2017 - The European Commission welcomes the adoption of its proposal for two Regulations on medical devices which establish a modernised and more robust EU legislative framework to ensure better protection of public health and patient safety.

These replace the existing Directives.

- Regulation (EU) 2017/745 of the European Parliament and of the Council of 5 April 2017 on medical devices, amending Directive 2001/83/EC, Regulation (EC) No 178/2002 and Regulation (EC) No 1223/2009 and repealing Council Directives 90/385/EEC and 93/42/EEC
- Regulation (EU) 2017/746 of the European Parliament and of the Council of 5 April 2017 on in vitro diagnostic medical devices and repealing Directive 98/79/EC and Commission Decision 2010/227/EU

The new Regulations on medical and in-vitro diagnostic medical devices proposed by the Commission in 2012 will help to ensure that all medical devices - from heart valves to sticking plasters to artificial hips - are safe and perform well. To address this, the new rules will improve market surveillance and traceability as well as make sure that all medical and in vitro diagnostic devices are designed to reflect the latest scientific and technological state-of-the art. The rules will also provide more transparency and legal certainty for producers, manufacturers and importers and help to strengthen international competitiveness and innovation in this strategic sector.

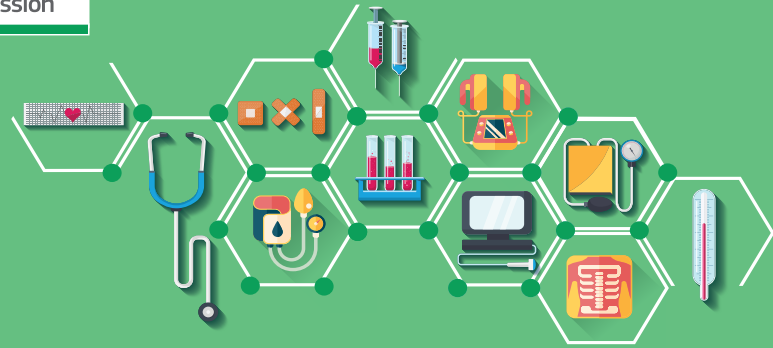
Elżbieta Bieńkowska, Commissioner for Internal Market, Industry, Entrepreneurship and SMEs, said: *"I'm extremely happy that our push for stricter controls of medical devices on the EU market will now become a reality. Whether for medical devices, cars or other products, we must ensure stronger supervision in the interest of our citizens. We should not wait for another scandal instead we should start a discussion how to strengthen European oversight over Member States' market surveillance activities."*

The two new Regulations bring a number of improvements for medical and in-vitro devices:

- **Improve the quality, safety and reliability of medical devices:** The new rules will impose tighter controls on high-risk devices such as implants, requiring a pool of experts at the EU level to be consulted before placing the device on the market. Controls will also be tightened on clinical trials as well as on the bodies that can approve the marketing of medical devices. The new rules will also cover certain, previously unregulated aesthetic products (e.g. coloured contact lenses that do not correct vision). In addition, a new system for risk classification in line with international guidelines will apply to in vitro diagnostic medical devices.



New EU rules to ensure safety of medical devices



EXISTING RULES

Outdated rules – rules on medical devices date back to the 1990s and don't reflect the technological progress made since then

Control of high-risk devices such as implants relies **on national Notified Bodies** – separate bodies risk inconsistency

Clinical trials taking place in more than one Member State are subject to **multiple national assessments**

Most aesthetic products, such as coloured contact lenses, are **regulated as general products**

Only one in five *in vitro* diagnostic medical devices is checked by a Notified Body before they are placed on the market

European database contains **limited** information on medical devices that is not publicly accessible

Varying and often limited information on implanted devices available to patients

In case of harm resulting from medical devices, compensation is **not guaranteed** if, for example, manufacturer goes bankrupt

Multiple registration procedures might be required for medical devices in different EU countries

NEW RULES

Up-to-date rules – new rules take into account technological progress and drive innovation

Control of high-risk devices such as implants involve also **panels of independent experts** at EU level

Clinical trials taking place in more than one Member State will be subject to **a single coordinated assessment**

Many aesthetic products are **regulated as medical devices and subject to stricter controls**

Four out of five *in vitro* diagnostic medical devices are checked by a Notified Body before they are placed on the market

European database contains **extensive** information on medical devices, most of which is publicly available

An **"implant card"** for implanted devices gives patients more information

A financial mechanism **ensures patients are compensated** in case defective medical devices harm them

Simplified procedure allows manufacturers to register their device only once at the EU level



- **Strengthen transparency of information for consumers:** The new regulations will make sure that vital information is easy to find. For instance, patients will receive an implant card with all the essential information, and a unique device identifier will be mandatory for every product so that it can be found in the new European database of medical devices (EUDAMED).
- **Enhance vigilance and market surveillance:** Once devices are available for use on the market, manufacturers will be obliged to collect data about their performance and EU countries will coordinate more closely in the field of market surveillance.

Background

There are over 500,000 types of medical devices and in-vitro diagnostic medical devices on the EU market. Examples of medical devices are contact lenses, x-ray machines, pacemakers, breast implants and hip replacements and sticking plasters. In vitro diagnostic medical devices, which are used to perform tests on samples, include HIV blood tests, pregnancy tests and blood sugar monitoring systems for diabetics.

The existing regulatory framework dates back to the 1990s and consists of three Directives. However, problems with divergences in the interpretation and application of the rules, technological progress as well as incidents involving malfunctions of medi-

cal devices—i.e. the PIP breast implant scandal—highlighted the need for revision of current legislation. The Commission is also currently working on more structural and horizontal solutions for better market surveillance within the broader frame of a goods package reform.

To address this, the European Commission presented two legislative proposals on medical and in-vitro diagnostic on 26 September 2012. This was followed by extensive expert consultations that resulted in an agreement on the general approach to the medical devices package among Member States' health ministers on 5 October 2015. The adoption of the package by Parliament, following today's vote in plenary, fully reflects the position of the Council reached in its first reading and in turn the agreement of the co-legislators from June 2016, therefore allowing to conclude the legislative process.

To allow manufacturers and authorities to adapt, the new rules will only apply after a transitional period. Namely, 3 years after entry into force for the Regulation on medical devices (spring 2020) and 5 years after entry into force (spring 2022) for the Regulation on in vitro diagnostic medical devices.

Source: European Commission Press Release, for more details: http://europa.eu/rapid/press-release_IP-17-847_en.htm

Treatment of a refractory hairy tongue with a 808 nm diode laser and hydrogen peroxide: a case report

Author: Cinzia Casu

Introduction

Black hairy tongue (BHT) is a benign condition characterized by a discolored, hairy appearance of the dorsal tongue. The prevalence of BHT is not known because its occurrence is highly variable among different populations and dependent on many factors; however, studies have shown that the prevalence may be as high as 11.3% in some populations. BHT is more common in men, elderly patients, smokers, HIV-positive patients, edentulous patients, and patients with cancer (1). BHT appears as a black membrane or film on the tongue, anterior to the circumvallate papillae. The lesion is distributed on the dorsal aspect of the tongue and does not involve the lateral and the tip site of the tongue. Visual examination of the tongue reveals hypertrophy and lengthening of the filiform papilla. The papillae become elevated, which gives the black coating a hairy appearance. BHT is a particular subset of a more broad condition called hairy tongue, and a wide range of colors have been described for this condition (2). The most common discoloration of the tongue in this condition is black to blackish-brown, but it can present with green or yellow discoloration or can lack pigmentation altogether. This disease is often asymptomatic, but sometimes is associated with alitosis, lymphadenopathy, burning or tickling sensation (3). Besides poor oral hygiene, many substances and medications could cause, aggravate, or predispose a patient to BHT, for example, smoking tobacco, excess consumption of beverages such as black tea, coffee, alcohol, oxidizing mouthwashes, and also intravenous drug use are linked to an increased prevalence of BHT. Immunocompromised states, HIV, and malignancies are also associated with an increased rate of BHT in men and women (1,2). BHT is a be-

nign, self-limiting condition, and the diagnosis is based on clinical presentation. First-line treatments include avoiding associated medications, practicing good oral hygiene, discontinuing habits predisposing to BHT, and gentle brushing or scraping of the tongue. Second-line treatments are anecdotal and include oral retinoids, antifungals, antibiotics, trichloroacetic acid, topical urea solution, topical triamcinolone acetonide, vitamin B complex, gentian violet, salicylic acid, and thymol (1). The use of laser in the treatment of this condition is not described in the literature. Association of hydrogen peroxide and diode laser and LED light for the management of periodontal disease is documented (4,5). The aim of this work is to report a case of hairy tongue in a healthy smoker patient undergone to antibiotic, refractory to other conventional therapies, treated with application of hydrogen peroxide on the tongue activated with a type of diode laser.

Case Report

A 48 year old male patient went to the private practice for a tongue discoloration present for a few weeks. The medical history of the patient include a good general state of health, smoking about 10 cigarettes a day and that he was recently subjected to antibiotic therapy with amoxicillin for a dental infection. Through a clinical examination you could see an elongation of the filiform papillae and a brown discoloration in the central part of the tongue (fig. 1). It has been made a hairy tongue diagnosis. It is recommended to the patient to clean the tongue with dedicated toothbrushes and rinsing with baking soda, at least 2 times a day to reduce the bacterial and fungal load. However, after a week the patient has a clearer discoloration but still elongation of the lin-

Black hairy tongue (BHT) is a benign condition characterized by a discolored, hairy appearance of the dorsal tongue

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Fig. 1



Fig. 2



Fig. 3



Fig. 4

gual papillae (fig. 2). It was therefore decided to treat the tongue with the aid of hydrogen peroxide and a diode laser. At the center of the tongue, along the median line, an hydrogen peroxide solution at 3% 12 volumes has been applied through cotton pellets (fig. 3). Subsequently, a 808 nm diode laser (Laser B-cure, Denmat IT, 0.25 watt) was used, with 6 consecutive applications of 1 minute. After the hydrogen peroxide was removed with a vacuum cleaner, and making the patient rinse with water. To the next control, 5 days after, the lesion at the center of the tongue healed (fig. 4).

Discussion

BHT is commonly an asymptomatic condition, patients seek treatment for overall cosmetic reasons. Several medications are associated with an increased risk for the development of BHT. Specifically, antibiotics such as penicillin, erythromycin, doxycycline, linezolid, and neomycin are well documented in the literature (1). First-line treatment consists of education on preventive techniques for patients who are either at risk for developing or who are receiving medications that have been associated with BHT (2). Reducing the risk of developing BHT may be achieved by practicing good oral hygiene, such as daily tongue brushing with a toothbrush or tongue scraping to promote desquamation of the hyperkeratotic papillae (1,2). Topical application of baking soda or 3% hydrogen peroxide are also proven effective treatments for BHT. Second-line treatments can include topical and oral retinoids, antifungals, such as fluconazole in the case of co-infection with *Candida*, and antibiotics, but there are no sufficient evidence to demonstrate their real effectiveness (1). In this case previous treatment with backing soda and the tongue toothbrush has failed in the management of this condition. For this reason we have tried to perform another type of non-invasive therapy with the use of hydrogen peroxide and a diode laser. Use of low-level laser therapy with a diode laser of 808 nm wavelength in the management of the oral

disease is described in the literature (5,6). In a work is demonstrated its effectiveness on oral pain when used prior to composite restoration for symptomatic non-carious cervical lesions unresponsive to desensitizing agent (5); and in another study laser with this wavelength is considered the best for the control and elimination of the endodontic microbiota (6). Hydrogen peroxide (H₂O₂) is used worldwide for cleaning wounds, removing dead tissue, or as an oral debriding agent, due to its strong oxidizing properties. Previous studies have indicated that the use of hydrogen peroxide associated with Photodynamic Therapy (PDT) gives increased killing of microorganisms (7). The results of a study conducted by Feuerstein et al. indicated a synergistic antibacterial effect of noncoherent blue light, often used in restorative dentistry, and hydrogen peroxide (H₂O₂) on *S. mutans* under planktonic conditions was observed. The results of this study also suggested a potential bactericidal mechanism in which the synergistic effect on bacterial vitality is the result of the generation of the highly reactive hydroxyl radical (8). The results of an Iranian study suggested that visible blue light in the presence of hydrogen peroxide would be consider as a potential approach of PDT to kill the main gram negative periodontal pathogens (4). Another work underlines that a solution to optimize such therapies seems to be use of lasers combined with hydrogen peroxide that provides optimal results for a substantial decrease of the bacterial load combined with biostimulation induction of soft tissues and osteogenesis (3). We proposed a new type of non invasive treatment for this oral disease that could be effective in the management of refractory BHT, without adverse events. Further studies are needed to investigate the best way to perform this treatment, for example the most effective hydrogen peroxide concentration, wavelength of laser, way of application and so on.

Treatment of oral herpes simplex virus infections with a diode lamp (Fotosan 630 nm): 2 case reports.

Author: Cinzia Casu

Introduction

Oral and perioral herpes simplex virus (HSV) infections is one of the most common oral soft tissue disease in the general population. HSV-1 serotype is the most common cause of orofacial infections. Primary oral HSV infections usually occur in early childhood and while the majority are subclinical, sometimes they are accompanied with general symptoms, such as fever and lymphadenopathy followed by vesicles and/or ulcers affecting a variety of intraoral surfaces, overall lips, hard palate and gum (1). Most primary oral HSV infections are readily diagnosed based on clinical history, signs and symptoms and further laboratory investigation is generally not warranted (1). A lot of topical and systemic treatments are proposed for the prevention and the management of oral HSV. The most commonly recommended topical antiviral agents are Acyclovir 5% , Penciclovir 1% and Docosanol 10% creams (1,2). A study shows that monocaprin with low-dose doxycycline offers an effective treatment for herpes labialis (3). Lidocaine gel 2%, viscous lidocaine 2% or mixtures of topical anesthetic are proposed to reduce symptoms and pain, and some authors supports the use of sunscreen on the lips with at least 15 sun-protection factor (SPF) to decrease the risk of developing episodes of recurrent herpes labialis (1).

In severe cases of primary oral HSV infection is important to prescribe systemic treatment, oral acyclovir 200 mg five times a day or 400 mg three times a day for 10 days, and also valacyclovir and famciclovir (1,4). To avoid collateral events linked to the use of pharmacological therapy other devices are studied in the literature for the treatment of oral HSV like HLLT (high level laser therapy) and LLLT (low level laser therapy) (5,6).

Photodynamic therapy is also proposed for the treatment of herpes labialis. Photodynamic therapy (PDT) is based on the interaction of a photosensitizer and a light in oxygenated tissue. Methylene blue (MB) and Toluidine blue are the most used photosensitizers. Damaging or killing a biological system by photo-oxidation is known as photodynamic inactivation. Several studies report virus inactivation by PDT. The antiviral effect is dependent on the dye concentration, the light source, and the substrate. The great advantage of PDT for the treatment of herpes labialis is that the technique is specific, painless, and affordable (7,8).

Low-level diode lasers were mostly used as the light emitting source to excite the photosensitizer, although, in principle, all type of lamps can be used if set on the specific excitement wavelength of the dye. Non-coherent light sources, as light-emitting diode lamps (LED), have some advantages in comparison to lasers: longer irradiation times are possible and lower costs and simpler to use (9).

We want to report 2 case of Herpes simplex infection treated by photodynamic therapy effected with a LED lamp 630 nm (FotoSan, Denmark for Dentalica) with the aid of a dye-based Toluidine blue, supplied with the lamp. The use of this device has already been documented in the literature especially in periodontal (9) and endodontic (10) treatment, and is effective especially for its antibacterial effect.

It is a device that emits a LED light used in combination with a photosensitive reagent (Toluidine blue in syringes with a concentration of 0.1mg / ml). The basic principle of this therapy is represented by the photochemical reaction between a photosensitive substance and a light source that emits a specific light

Oral and perioral herpes simplex virus (HSV) infections is one of the most common oral soft tissue disease in the general population.

Treatment of oral herpes simplex virus infections with a diode lamp (Fotosan 630 nm): 2 case reports.

spectrum. Specifically the photosensitizer binds to the surface of microorganisms and absorbs light of a specific wavelength taking energy. The received energy reacts with oxygen to form ROS (Reactive Oxygen Specimen) that is highly reactive and kills the microbial cell walls and internal structures. The principle LAD is effective not only against bacteria but also against microorganisms such as viruses, fungi and protozoa. The light-sensitive substances applied have very mild affinity with mammalian cells. For this there are no adverse effects during the treatments. The intensity of the light emitted diodes is between 2000 and 4000MW / cm². There are 3 programs for its operation: with the green mode, we decide the seconds of application; the orange active mode cycles from 20 seconds, the red mode active cycles of 10 seconds.

Case report 1

A 53 years old male patient with good general health, went to our study with a condition of paresthesia on the lower lip accompanied by small vesicles (Fig. 1). Patient reported that this condition is frequent and a diagnosis of herpes simplex labialis infection was made. The patient referred us that in the past he has shown irritation phenomena caused by topical antiviral agents and so we decided to try a session of photodynamic therapy performed with a LED lamp 630 nm (FotoSan, Denmark, Dentalica). It was first applied a high-viscosity gel based on toluidine blue on the lesion. The lamp has been activated with cycles from 30 seconds, in orange mode, with long tip, for 10 consecutive cycles. Subsequently the gel was removed with a gauze and the area cleansed with saline solution. After the session we could observe the formation of small scabs where there were stuffed vesicles of highly infectious liquid, as shown in Fig. 2 and the patient tells us immediate relief.

Two days later the healing was almost complete (Fig. 3) and 5 days later there was the total remission of the lesion (Fig 4).

Case report 2

A 76 years old female patient went to my private

practice, with a hard palatal lesion. The medical history is positive for rheumatoid arthritis, osteoporosis, and myocardial infarction (10 months earlier), with a slight heart failure.

The patient is under treatment with oral anticoagulants, cortisone and vitamin D supplements, and she was undergone at long prophylactic antibiotic therapies for tooth extraction. On the hard palate there were small blisters arranged in clusters accompanied by tingling sensation and pain (Fig. 5). A diagnosis of herpes simplex infection was made. We decided to avoid the administration of additional drugs and the patient was undergone to photodynamic therapy performed by FotoSan 630, in the way previously described.

It was applied the fluid with Toluidine over the lesion and was made 10 cycles of 30 seconds of LED light with long tip, remaining at about 0.5 cm from the lesion (Fig. 6, 7). Subsequently is removed the dye with gauze. The patient after a few hours notice an improvement of symptoms and there was a complete resolution 5 days later (Fig. 8).

Discussion

In a recent review of the Cocrane library, the authors concluded that current evidence demonstrates that long-term use of oral antiviral agents like topical and systemic acyclovir, can prevent HSV, but the clinical benefit is small, and topical antiviral agents showed no efficacy or could not confirm their efficacy in preventing HSV (2). In a study monocaprin with low-dose doxycycline (MCD) offers an effective treatment for herpes labialis, but there is no comparison with other topical and systemic drugs like acyclovir, penciclovir, valaciclovir. The authors concluded that although full enrollment to the trial was not achieved positive results for MCD, prodromal activity were statistically significant and MCD vesicle group showed also very good reduction in time to heal, but needed more subjects to support the results (3). Lidocaine gel 2%, or mixtures of topical anesthetic are proposed to reduce symptoms but their use in pediatric population is controversial due



Fig. 1

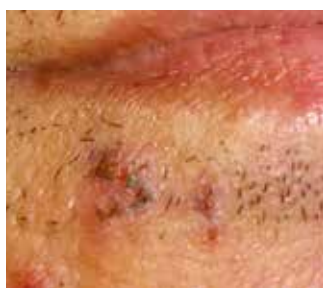


Fig. 2



Fig. 3



Fig. 4



Fig. 5



Fig. 6



Fig. 7



Fig. 8

to possible increased risk of lifethreatening events. Aspiration of topical lidocaine in this population has been linked to adverse neurologic and cardiovascular reactions, such as seizures and hypotensive episodes, respectively, while ingestion of topical benzocaine has been associated with development of methemoglobinemia (1). Famciclovir is also proposed successfully but side effects like headache and nausea are connected with its use and data for its use in childhood and pregnancy are limited (4). Studies on HLLT and LLLT shows that these devices are effective for treatment of oral HSV but they are very few and overall case reports (5,6). Works on photodynamic therapy for oral HSV therapy demonstrates that this type of treatment is effective and safe (7,8). A recent work examined the use of PDT to treat herpesvirus infection (HVI) using an in vitro model. The authors concluded that had an antiviral effect on an in vitro model of HVI in cell culture. PDT has been shown to be effective treatment for HVI in vitro, leading to a reliable decrease of viral titer (11). A review of the literature studies the effectiveness of Phototherapy on herpes virus cutaneous infections, including PDT. The conclusion is that light-based therapies can be considered a reasonable alternative in situations that preclude traditional drug-based therapies (12). Very

few studies are conducted on Fotosan 630 device but its antimicrobial activity against *Enterococcus faecalis* is demonstrated in an in vitro study in which is more effective if compared to diode laser 810 nm irradiation (10). *E. faecalis* is resistant to calcium hydroxide and has the ability to adapt to varying conditions. PDT in this study significantly reduces the counts of *E. faecalis* in infected root canals compared to traditional endodontic instrumentation and irrigation treatment protocols.

Advantages of photodynamic therapy include immediate effects, selectivity, access to complex areas, decreasing the possibility of bacteremia in immunocompromised systemic patients, decreasing patient discomfort, pain, and edema after surgery. Other 2 important points are time saving and avoidance of interfering with normal flora of adjacent tissues. Dentist is more exposed to contamination of oral HSV than the general population, and the idea of an effective local and safe treatment of herpes simplex that dentist could perform in dental office, promoting decontamination, improving healing and decreasing discomfort of patient is attractive.

These two case report could be a starting point for further studies on the FotoSan 630 effectiveness on oral herpes simplex virus.

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IFDEA

The International Federation of Dental Educators and Associations (IFDEA) is a global community of dental educators who have joined together to improve oral health worldwide by sharing knowledge and raising standards.

IFDEA contributes to improving global health by improving oral health.

IFDEA contributes to improving global health by improving oral health. IFDEA serves as an axis of information, best practices, exchange programmes, news and professional development for the many regional dental education associations, academic dental institutions and individual dental educators worldwide.

IFDEA will achieve its mission by:

- Operating *The Global Network for Dental Education*, a web-based knowledge sharing resource for the dental education community.
- Facilitating a better understanding of issues of diversity and inequality in oral health care and education.
- Pooling international intellectual resources and expertise in dental education
- Developing an accessible repository of evidence-based and useful information to support dental educators, with highly quality assured contents and specific attention to their dissemination
- Disseminating relevant and current information to dental educators on a global basis.
- Providing assistance in helping dental educators to implement recent developments in educational methodologies, research, biomedical sciences, biotechnology, information technology, and clinical dentistry, also thanks to excellent companies in IFDEA included and constantly assessed in order to provide support in high quality assured dissemination
- Promoting international peer collaboration, consultation, and dialogue in seeking to address oral health challenges on a global basis, while respecting regional priorities and structures.

History

The International Federation of Dental Education Associations (IFDEA) was inaugurated in 1992 at a dental educators' meeting celebrating the quarter-centenary (400 years) of the University of Dublin, Trinity College.

IFDEA was established to serve as the representative, independent worldwide voice for dental education by promoting advancement in dental education with the ultimate objective of improving the oral health of the public. To achieve its mission, IFDEA worked to serve as a forum for the free interchange of ideas in the field of dental education and research with an international perspective; foster communication among dental educators worldwide; search for improved methods of teaching and learning in the area of health sciences; search for improved methods and strategies for training dental educators; and foster research in health sciences education.

Since its inception, IFDEA has held periodic meetings, usually in conjunction with the annual sessions of either the American Dental Education Association (ADEA) or the International Association for Dental Research (IADR).

In March 2004, IFDEA President Dr. Mariano Sanz and IFDEA Executive Director Dr. Richard Valachovic conducted a general meeting of IFDEA to consider a new vision for the organisation. The impetus to create a new vision was precipitated by a number of factors, including the following:

- The desire to expand membership to be inclusive of all academic dentistry worldwide;



- The need to develop new services and resources to benefit current members and attract new ones;
- The opportunity to utilize information technology in innovative ways to support IFDEA's mission and goals;
- The opportunity to build on the momentum from the 2001 (Prague) and 2004 (Singapore) Global Congresses on Dental Education I and II; and
- The desire to be of mutual assistance to fellow educators wherever they are based.

To achieve its new vision, it was clear to the group that IFDEA would need to rethink both its strategy and its structure. From its inception, IFDEA's membership was composed of representatives from national, regional and international dental education organisations as well as representatives from the many corporate and industry groups committed to improving dental education worldwide. In many parts of the world, however, there are few or no organisations that represent dental education or research. Thus, a substantial number of the world's academic dental institutions and thousands of individual educators were ineligible to participate in IFDEA.

A New Vision for IFDEA

In 2007, fifteen years after its inaugural meeting, IFDEA returned to Dublin to re-launch the organisation. At the conclusion of the Global Congress on Dental Education III on September 8th, Mary McAleese, President of Ireland, officially launched the **International Federation of Dental Educators and Associations**: The Global Network for Dental Education. The name change was more than semantic; it reflects IFDEA's new strategy to connect and engage the 30,000+ dental staff at more than 900 dental schools worldwide.

We believe that academic dental institutions have the unique responsibility to educate the world's future oral health providers and to prepare students to meaningfully contribute to improving oral health globally. Through its Global Network for Dental Education, IFDEA will support the international academic dental community – including individuals, institutions, and related organisations – in this important undertaking, by serving as an axis of information, best practices, exchange programmes, news and professional development, and by supporting and contributing to the work of the many regional dental education associations and individual academic dental institutions worldwide.

Sharing knowledge and experience is a two-way pro-



cess that fosters better understanding and benefits both parties. By sharing knowledge within the global dental education community, we can raise standards and improve oral health worldwide, as well as recognise the incredible innovations to be found in under-resourced regions of the world.

Together, we can improve global health.

www.ifdea.net



Henry Schein Orthodontics presents 3RD Annual European Carriere® Symposium in Barcelona

Event to showcase the latest innovations and clinical solutions to help orthodontists, featuring keynote speaker, Dr. Luis Carrière

Henry Schein® Orthodontics™, the orthodontics business of Henry Schein, Inc., is pleased to announce its **3rd Annual European Carriere® Symposium, 14 – 16 September 2017, in Barcelona, Spain, at Hotel W**. As in prior years, the event is expected to sell-out, bringing together leading orthodontic speakers and forward-thinking attendees in a powerful learning environment.

The event will showcase a broad spectrum of the latest innovations and new clinical solutions that deliver dental, facial, and total-health results. Progressive topics will range from advancements in self-ligation and sagittal first concept, to new airway-friendly orthodontics cases and strategies and digital orthodontics. Attendees will have the chance to experience cutting-edge technology and forward-looking evidence-based protocols that can help enable orthodontists to achieve new levels of patient care and practices efficiencies and effectiveness. Several networking opportunities will be available to allow orthodontists to share their experiences with other peer professionals practicing around the world.

The exhibition will also review the key elements of the digital orthodontics workflow, including intraoral scanning, digital imaging, clinical ortho planning and 3D printing. A digital orthodontics exhibition area will be powered by Henry Schein ConnectDental, a platform that reflects the interoperability of digital

dental technology and links together every step of the clinical workflow.

For this year's event, the keynote speaker will be Dr. Luis Carrière, and the program chairman Dr. David Paquette, along with an impressive line-up of world-renowned speakers. Dr. Luis Carrière will focus on how facial, skeletal, and dental harmony can be achieved using the leading-edge Carriere® System. By using cases treated at his practice, the Spanish orthodontist and inventor of the system will demonstrate that orthodontic treatment using the Carriere System is a favorable alternative for patients with facial disproportions who would otherwise have to undergo invasive surgery.

"Orthodontists should claim their position as facial-aesthetic specialists. We do not only deliver straight teeth, but provide renewed confidence, enhanced appearance, and consequently new lives to patients," said Dr. Carrière. "In my opinion, the orthodontist should be the first professional to be consulted when it comes to oral and maxillofacial treatment planning."

Additional speakers and topics include:

- Dr. Sean Carlson: Learn how to unlock the vault of digital diagnostics and incorporate a total-patient treatment approach. He will focus on the visualization of the airway in particular and show how ortho-



odontic treatment can improve outcomes in patients with temporomandibular disorders or obstructive sleep apnea.

- Dr. Francesco Garino: Learn how to use the Carriere Motion™ Appliance as a break-through treatment strategy to correct challenging Class II aligner cases.
- Dr. Anil Idiculla: Learn how to align core philanthropic values within your practice and develop an unforgettable orthodontic experience.
- Dr. Jep Paschal: Learn how digital intelligence can help increase clinical efficiencies, effectiveness, and patient satisfaction, plus why we should pay attention in this progressive era.
- Dr. Thomas Shipley: Learn about his recent study using CBCT, which validates how the Carriere Motion Appliance repositions the mandible and expands the airway.

The event will be held in English and simultaneously translated into Spanish, Italian and French.

To register, visit www.CarriereSymposium.com or call +1 760 448 8712 for early bird pricing, which ends 10 July 2017.

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The newly relaunched Oral Reconstruction Foundation (former CAMLOG Foundation) is proud to announce the continuation of its renowned Research Award. The Research Award is presented every two years and is open to all young, talented scientists/researchers and dedicated professionals from universities, hospitals and practices.

The expected scientific papers must be published or accepted for publication in English in a peer-reviewed journal. They must address one of these topics in implant dentistry, oral reconstruction or related areas:

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The entry conditions and the mandatory registration form can be downloaded from www.orfoundation.org/awards. Registration deadline is November 30, 2017.

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Dentist is Driven to Raise Funds For Dentaid

A DENTIST is gearing up to raise money for Dentaid by driving from Britain to Siberia in his grandma's ageing Renault Clio.

For press inquiries contact press officer at Dentaid Jill Harding on +44(0)1794324249 or jill@dentaid.org.

Chris Shorrock is revving up for the Mongol Rally, a 10,000 mile driving challenge that will take him from Goodwood racing track, near Chichester, to Ulan Ude in eastern Russia. Along the way Chris and his partner Rico Pena will drive through Europe - including Luxemburg, Lichtenstein and Macedonia - cross Georgia, Uzbekistan, Turkmenistan and Kyrgyzstan before reaching the dusty Mongolian steppe and heading north into Siberia. The intrepid adventurers will set off on July 16 and expect their challenge will take about 6 weeks. Although many teams take part in the event, they all have to plot their own route and take their chances on the torturous roads. And, because there is no mechanical back up, Chris has attended a car maintenance course, swapping his dental drill for a spanner and learning some essential new skills.

"The car we're driving used to belong to my Grandma who used it as a run around, so it's going to be quite a challenge for us and the car," said Chris. "I've learned some mechanics and we're strengthening the bottom so it doesn't get torn apart by rocks. We'll take plenty of repair kits and hope for the best."

The rules of the race say the journey must be completed in a car that's at least 5 years old with an engine capacity of no more than 1.2 litres. In many places the roads will be bumpy, dusty or virtually non-existent and with searing temperatures and few places to stay, conditions will be tough. Visa restrictions in many of the countries the team will drive through also add pressure to keep their foot down.

"Some people think I'm mad but we're both really excited," said Chris. "In fact, we're planning to drive home as well but there's always the Trans-Siberian Railway if the car isn't up to it."

Chris, who lives in Brecon and is a dentist in Builth Wells, Wales, and Rico volunteered with Dentaid in the refugee camps in northern Greece. Working as part of a team they provided emergency dental care for many refugees who had no access to treatment since leaving their homes.



"It was a really good experience and when the opportunity came up to do this amazing challenge I decided to fundraise for Dentaid," said Chris. "We can't wait to hit the road."

To sponsor Chris in his Mongol Rally attempt visit <https://mydonate.bt.com/fundraisers/christophershorrock/> Dentaid was formed in 1996 and has worked in more than 70 countries providing dental treatment, training, equipment donations and oral health education. The charity also has projects in the UK including a school's programme and projects providing dental care for vulnerable people.

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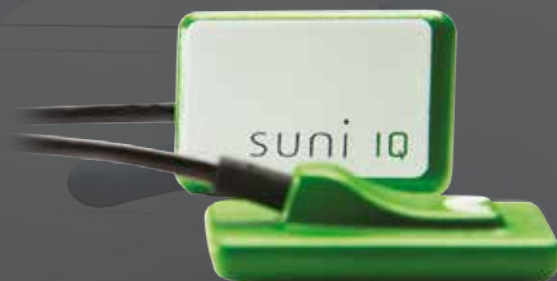
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