



Joint Action Health Workforce  
Planning and Forecasting

# What is the new demand in dental care?

Tsvetan Tonchev, Medical University of Varna, Bulgaria

Metodi Abadjiev, Medical University of Varna, Bulgaria

Stefan Peev, Medical University of Varna, Bulgaria







## Factors with the potential to influence the future delivery of dental care

1. Increasing population (absolute numbers)
2. Ageing population
3. Increased tooth retention into old age
4. Changed attitudes to oral health
5. Public less willing to accept extractions
6. Ever-rising expectations for good dental appearance
7. Ever-improving dental technology, which means teeth can be restored that previously would have been extracted
8. Increased demand for cosmetic dental care
9. Increased demands for less invasive solutions
10. Increased demands for more reliable solutions

## Ageing population

### Does the demand for dental care fall with increasing age?

Demand and health expenditure increase as a whole with advancing age.

On a personal level, teeth are preserved longer through advances in medical technology, the behaviour of patients with regard to care and professional prophylaxis.

The risk due to periodontitis and other diseases of the teeth, the periodontium and mouth increases with advancing age.

Treatment requirements increase as a whole.

The appreciation of health grows with age, meaning that private expenditure for dental health in particular increases as one grows older.

However: most correlations encountered in general medicine appear to be completely inverted in the case of dental medicine:

1. The sicker a patient, the more frequently medical consultations occur. Dentists, on the other hand, are usually visited when one is healthy; the sicker people are, the less likely they are to visit a dentist.
2. The lower the level of education, the more frequently medical consultations occur, whereas visits to the dentist increase where the level of education is greater. (73% of university graduates visited the dentist in Europe last year, compared to only 29% of those who have attained a lower educational qualification).
3. Medical consultations increase in old age, whereas dental visits decrease.



# KEY FACTS

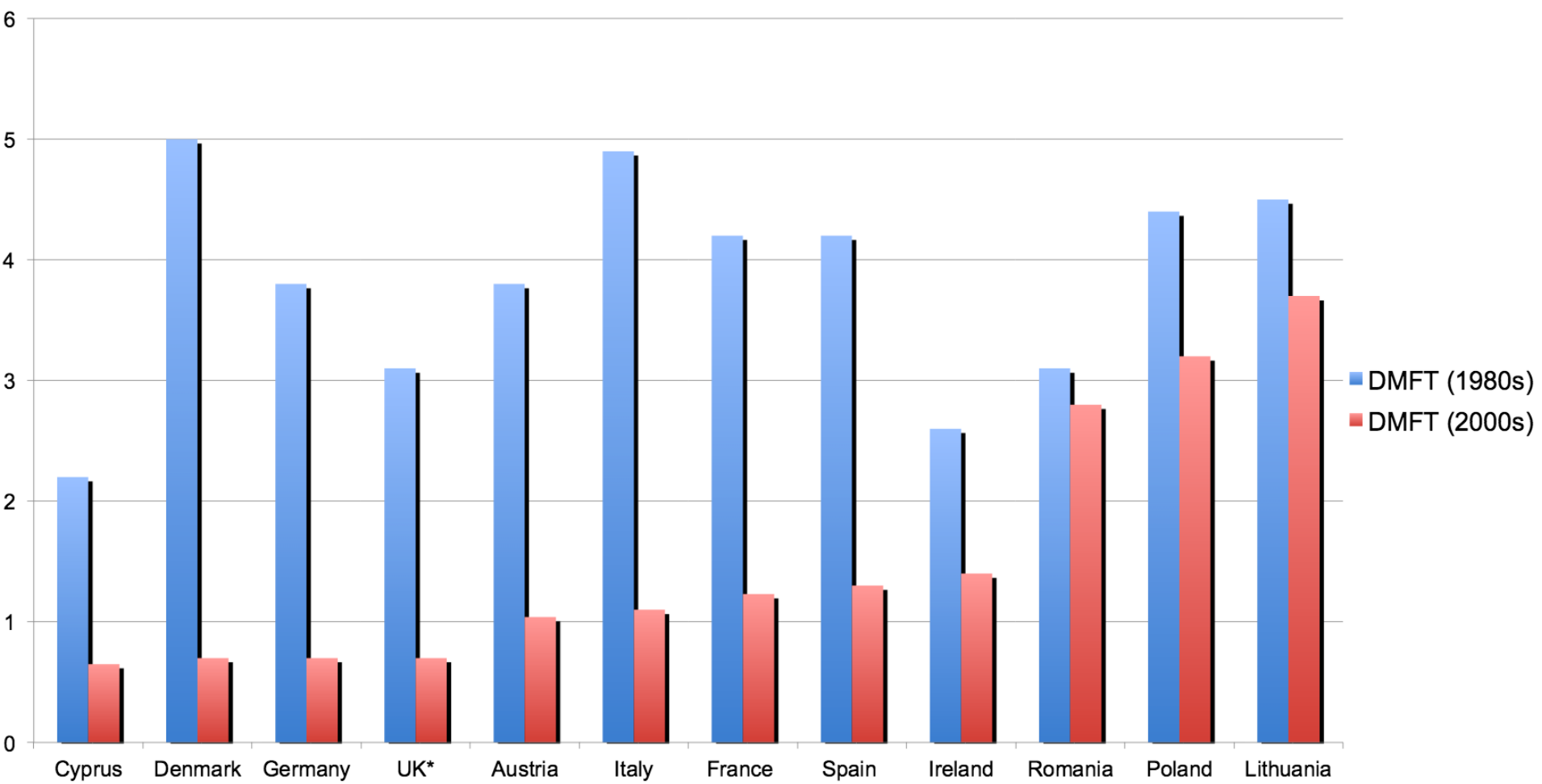
Percentage of total health expenditure for dental treatment.....5.12%

Total health expenditure for dental treatment..... 72,270,000,000 €

Source: SCHEDULE FOR THE EUROPEAN DENTAL MARKET: Dr. med. Heidrun Sturm MPH, Dr. Bernd Rebmann REBMANN

RESEARCH GmbH & Co.

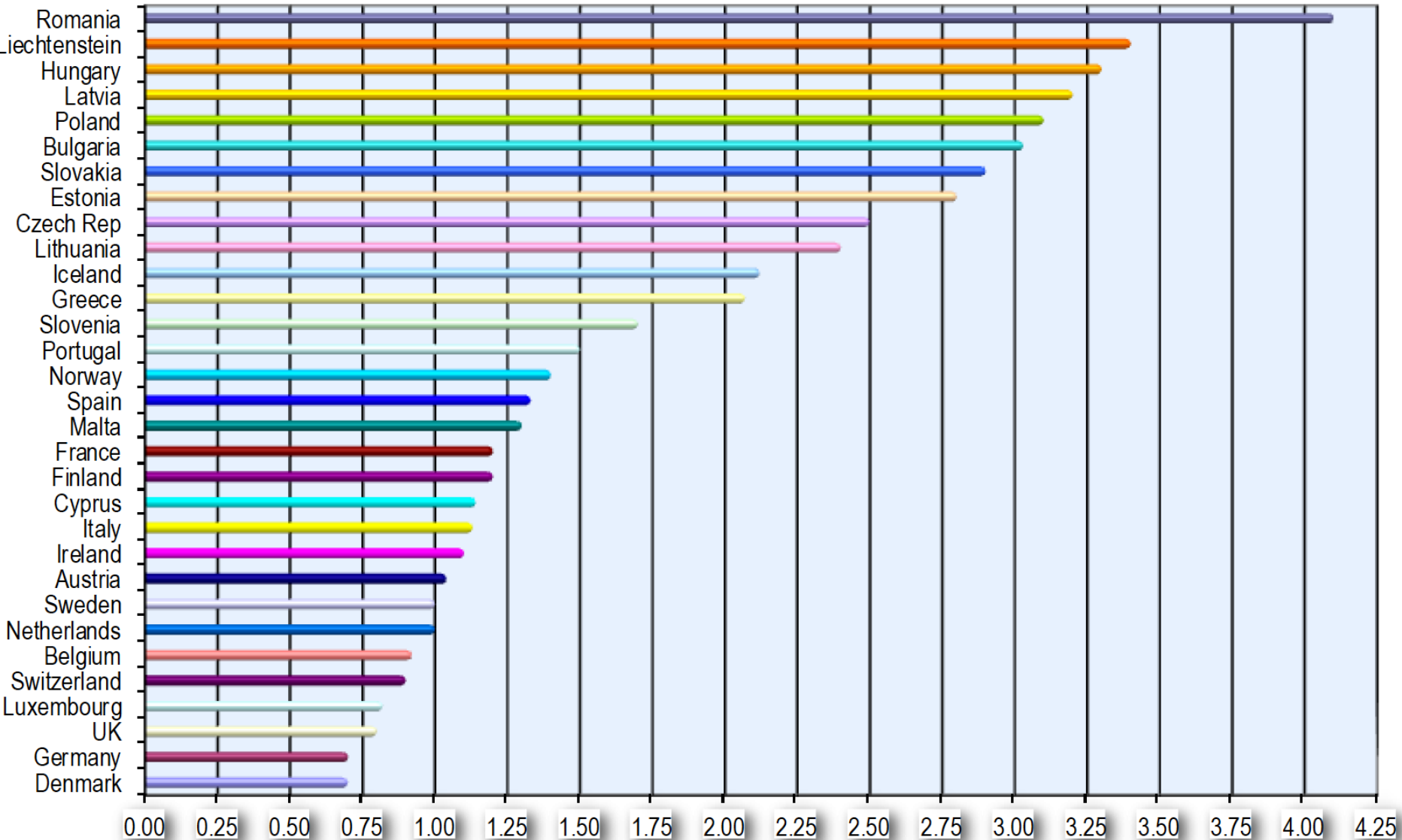




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# Average DMFT at 12 years of age



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Source: Kravitz et al. EU Manual of Dental Practice 2015 Edition 5.1



1. 50% of EU population may suffer from periodontitis and 10% have
2. severe disease. Prevalence increases up to 70-85% of population aged 60-65 years old.
3. Common risk factors with other chronic diseases and bi-directional relationship (**diabetes/periodontal disease**).
4. Caries still remain a problem for many people in Eastern Europe
5. and for those from socio-economically deprived groups in all EU Member States.
6. Patients now between 30 and 65 who have retained much of their natural dentition but with high levels of dental disease treated by fillings and other restorations – a so-called “heavy metal generation” and the upcoming demand for repair or replacement of existing restorations.

## **Population's demands:**

**Functional, pain free mouth**

**Increased demand for aesthetics  
(orthodontics, veneers, bleaching, the Hollywood smile)**

**Increased demand for implant restoration of missing teeth**

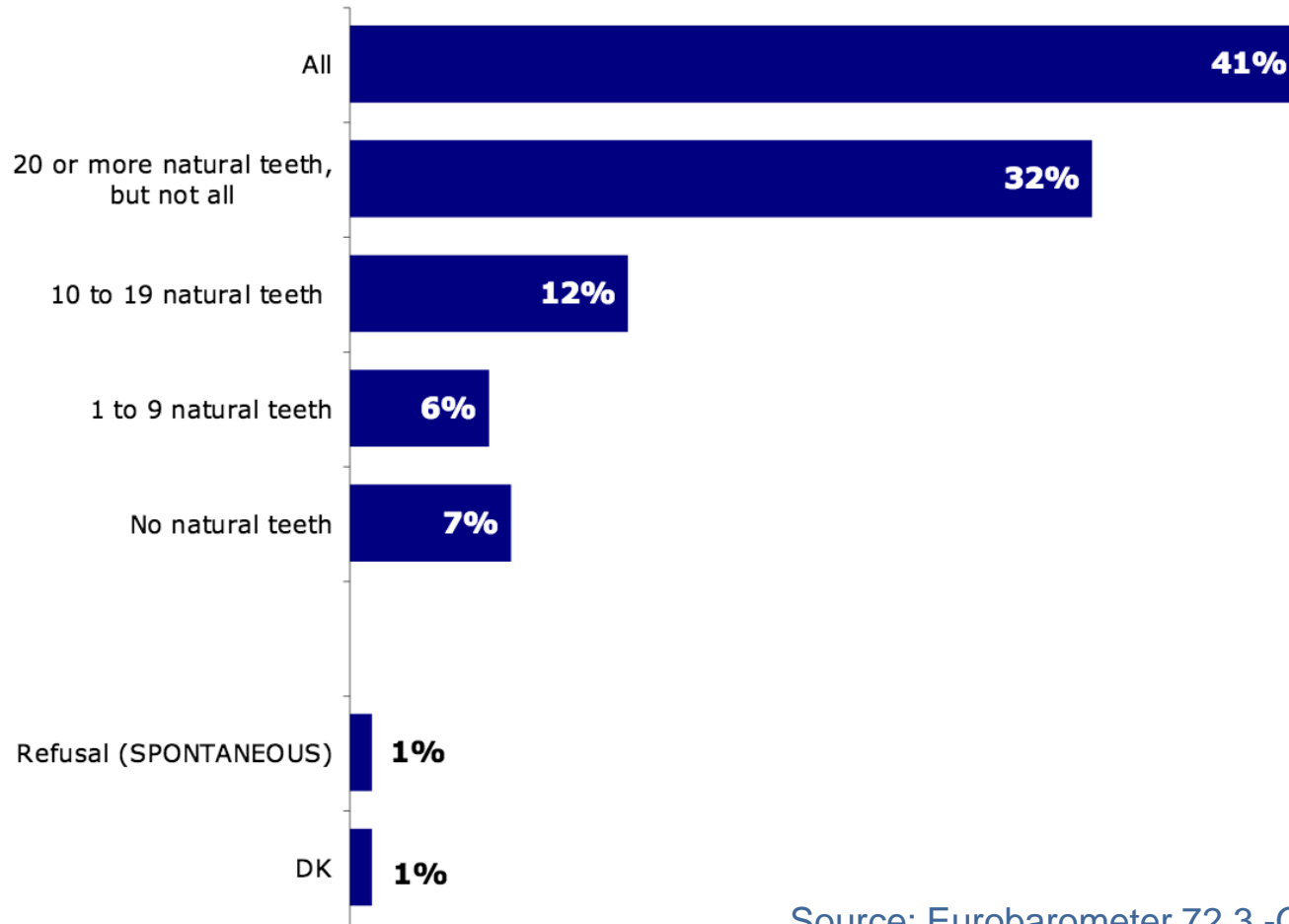
**Increased demand for more cost-effective treatment**

**Increased demand for decreased duration of the treatments**

**Increased demand for more reliable solutions**

# Increased demand for implant restoration of missing teeth

QB10 How many of your natural teeth do you have? - % EU



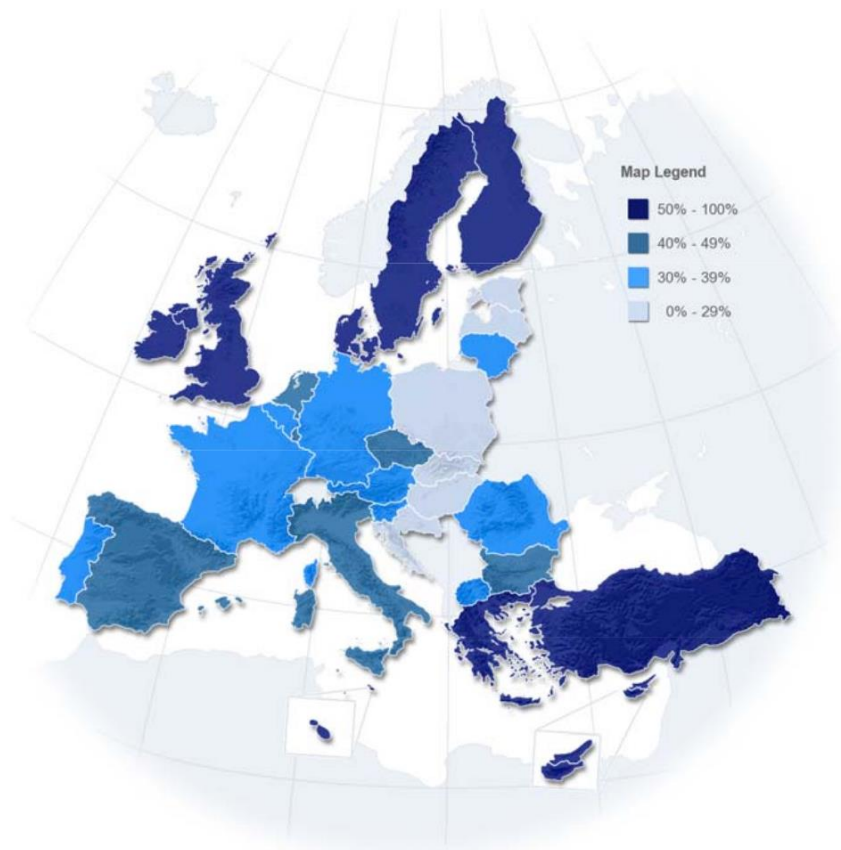
Source: Eurobarometer 72.3 -Oral Health



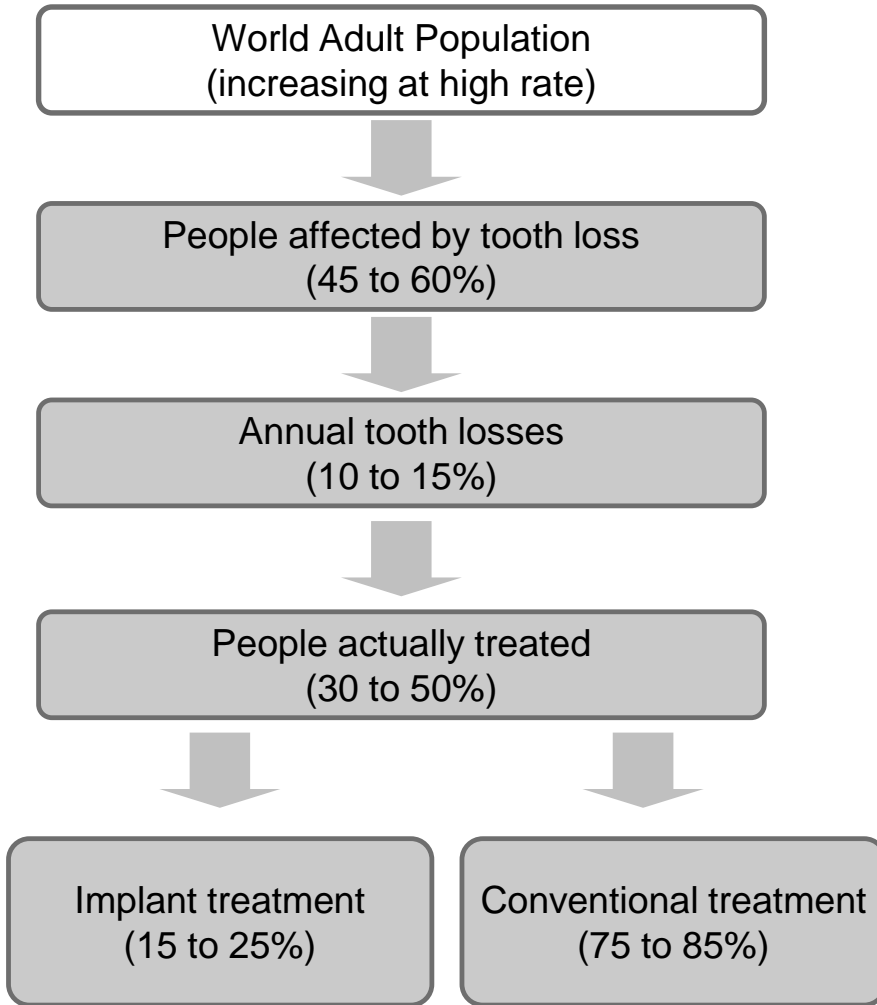
MT	57%
CY	57%
DK	57%
SE	55%
FI	53%
IE	51%
UK	50%
EL	50%
IT	49%
ES	47%
NL	46%
CZ	43%
EU27	41%
LU	40%
BG	40%
DE	38%
AT	35%
FR	34%
BE	33%
SI	32%
PT	32%
LT	31%
RO	30%
SK	29%
LV	29%
PL	28%
EE	27%
HU	19%
* CY (loc)	65%
TR	66%
MK	34%
HR	26%

Question: QB10. How many of your natural teeth do you have?

Answers: All



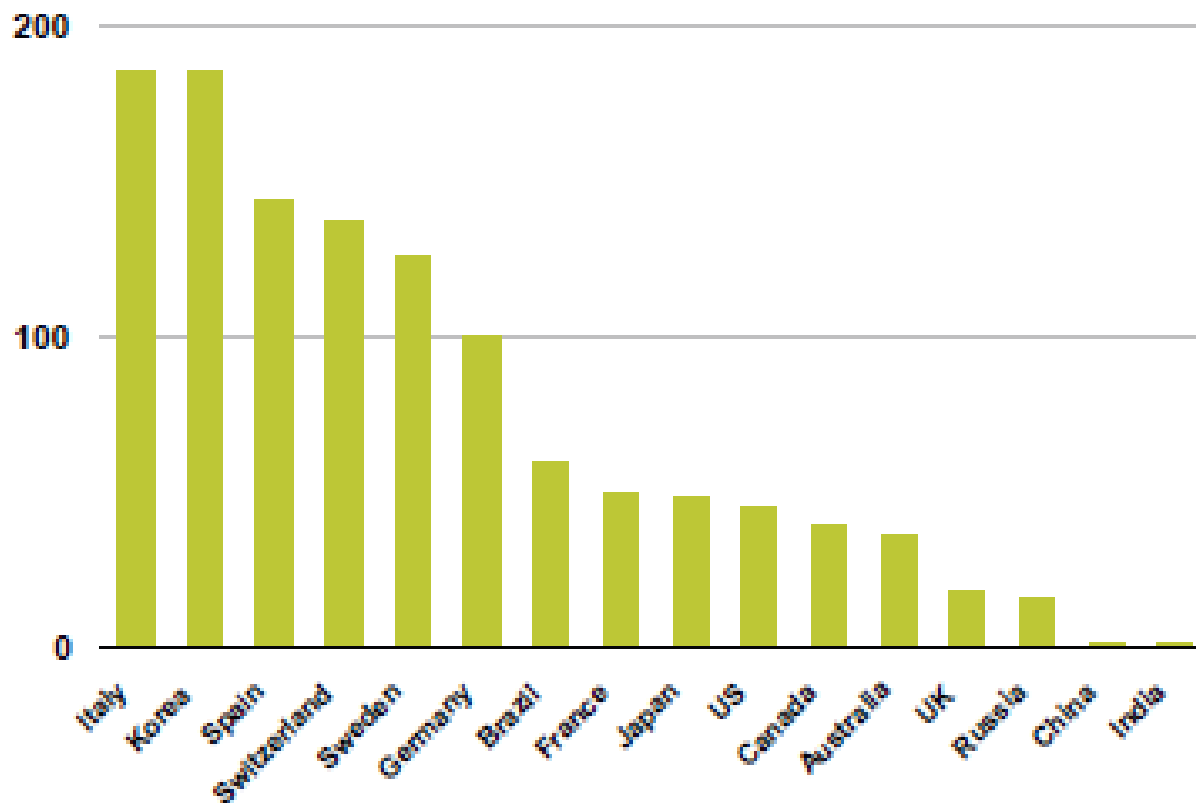
Source: Eurobarometer 72.3 -Oral Health



- Assuming that tooth loss is about the same we have 320 million people missing at least one tooth and close to 60 million tooth losses every year

- From that only 1.5 million every year treated by dental implants

## Implants placed per 10 000 population per year



# Implants mean better profitability for the dentist

**Table 17: Economics of Implants - Dentists**

Procedure	Three unit Bridge	Single-tooth (Implant Only)	Single tooth (provisional crown)
Fee	\$2,800	\$1,700	\$2,100
Component and other costs	-\$700	-\$550	-\$700
Net Earnings	\$2,100	\$1,150	\$1,400
Time	3 hours	1 hours	1.5 hours
Earnings per Hour	\$700	<b>\$1,150</b>	\$933

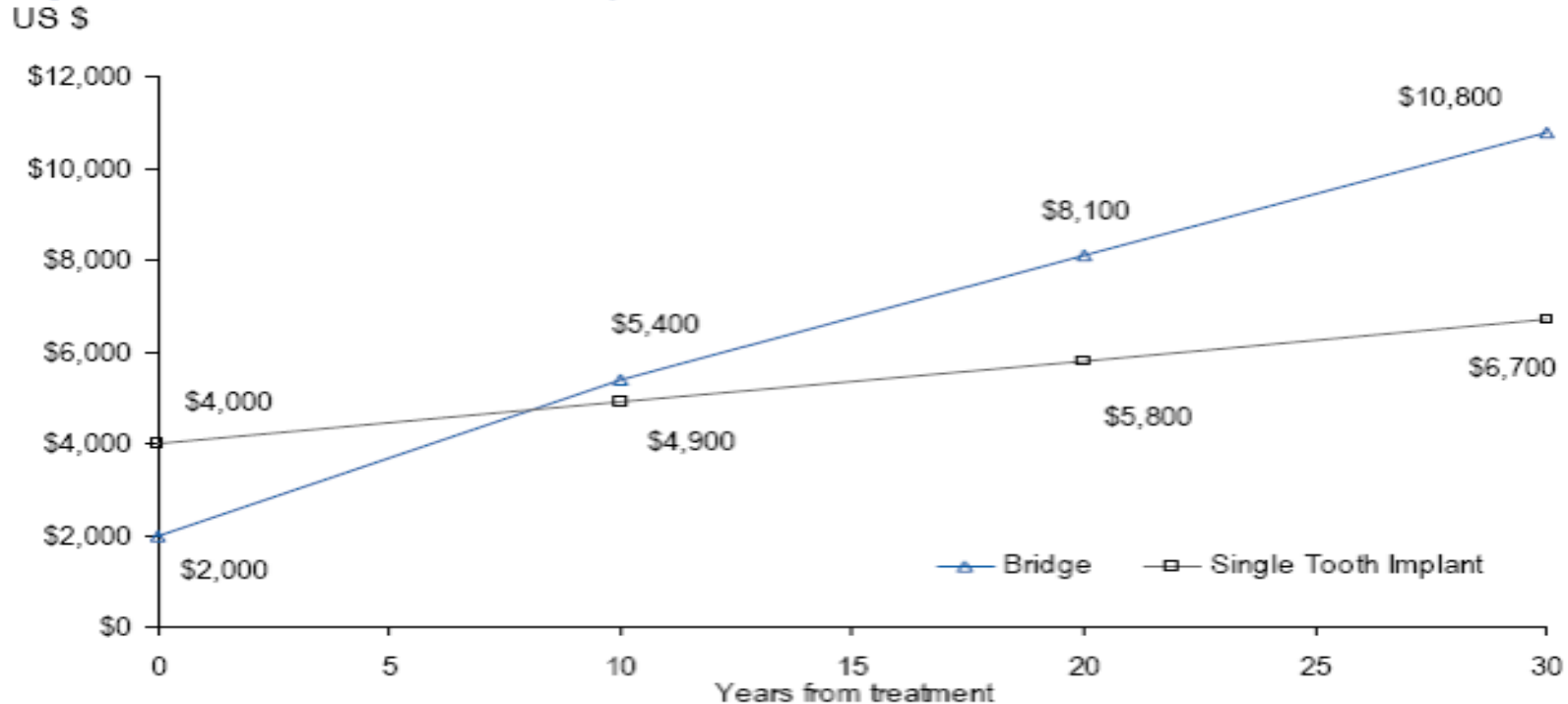
Source: Company reports and JPMorgan estimates.

Source: JPMorgan,2008

Despite higher initial costs, implants are cheaper in the long run

The break-even point is estimated to be around 7 years

Figure 108: Cumulative Patient Expense



Source: JPMorgan,2008



# Implant treatment has higher long term success and survival rates and lower complication rate compared to conventional treatment !!!

Success rate of endodontic treatment of teeth with vital and nonvital pulps. A meta-analysis.

Koko Kojima, Kyoko Inamoto, Kumiko Nagamatsu, Akiko Hara, Kazuhiko Nakata, Ichizo Morita, Haruo Nakagaki, Hiroshi Nakamura  
Oral Surgery, Oral Medicine, Oral Pathology, Oral Radiology and Endodontology - January 2004 (Vol. 97, Issue 1, Pages 95-99, DOI: 10.1016/j.tripleo.2003.07.006)

Buser, D., Janner, S. F. M., Wittneben, J.-G., Brägger, U., Ramseier, C. A. and Salvi, G. E. (2012),  
10-Year Survival and Success Rates of 511 Titanium Implants with a Sandblasted and Acid-Etched Surface: A Retrospective Study in 303 Partially Edentulous Patients. *Clinical Implant Dentistry and Related Research*. doi: 10.1111/j.1708-8208.2012.00456.x

Total sales value of dental implants is more than 20% of dental supplies market in Europe

More than 60 % of dentists perform or offer dental implant treatment to their patients !

There is a gap between the demand for dental implant treatment and the undergraduate and postgraduate training in Dental implantology (Oral implantology, Implant dentistry)

Solutions of the problem:

Recognition of Dental Implantology as a postgraduate dental speciality.  
(Bulgaria has done that in 2013).

Extensive training in Dental Implantology for undergraduates

Acceptance of medical standards for Dental implant treatment

Increased demand for more cost-effective treatment

Increased demand for decreased duration of the treatments

Increased demand for more reliable solutions

The current state of dental practice is one in which most dentists are in private practice in their own offices.

WITH THE INCREASED DEMAND FOR VALUE IN DENTAL CARE SPENDING  
PRACTICES WILL NEED TO BECOME MORE EFFICIENT

LARGER, MULTI - SITE PRACTICES

LARGER PRACTICES WITH INTEGRATED DENTAL LABS, IMAGING  
DIAGNOSTICS AND OTHER HI-TECH UNITS

IMPROVED DENTAL CARE TAKING WORKFORCE EFFICIENCY



IMPROVED DENTAL CARETAKING WORKFORCE EFFICIANSY



TO INCREASE THE DENTIST:POPULATION RATIO

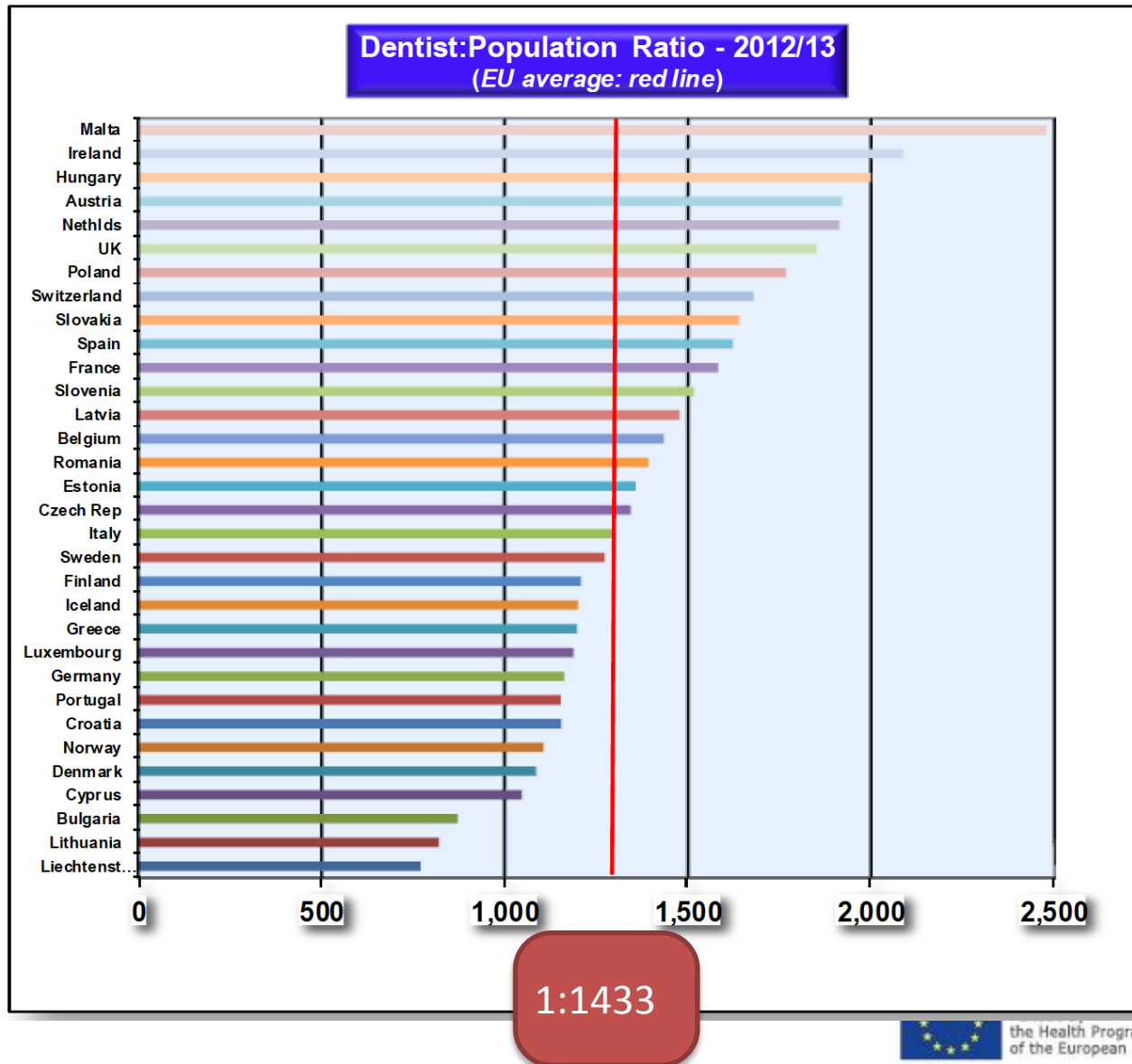


TO INCREASE THE  
DENTIST:AUXILIARY  
DENTAL SUFF RATIO



TO INCREASE SPECIALIST/GENERAL DENTISTS RATIO

# TO INCREASE THE DENTIST:POPULATION RATIO



## TO INCREASE SPECIALIST/GENERAL DENTISTS RATIO

	Year	Ortho	OS	OMFS	Endo	Paedo	Perio	Prosth	DPH	Others
Austria	2013	0		167						
Belgium	2011	399		290			100			
Bulgaria	2013	45	226	45	41					
Croatia	2013	184	98		97	130	74	156		Yes
Cyprus	2013	46	12							
Czech Rep	2012	337		72						
Denmark	2013	290		98						
Estonia	2013	62		25						Yes
Finland	2013	156		104					90	Yes
France	2012	1,981								
Germany	2012	3,443	2,552					0	460	
Greece	2013	476		174						
Hungary	2013	379	139	157		254	65	924		
Iceland	2012	15	4		2	3	8	5	3	Yes
Ireland	2013	140	49	5						
Italy	2012	1,795		640						
Latvia	2012	24	0	39	10	23	0	19		
Liechtenstein	2013	2	1					1		
Lithuania	2013	93	92	23	44	56	57	270		
Malta	2013	7		1	9	2	3	3	3	Yes
Netherlands	2013	331		265	73	46	81			
Norway	2013	206	68	0	63	20	90	65		Yes
Poland	2012	1,115	805	227	1,561	486	420	1,453	71	
Portugal	2012	51	4	93						
Romania	2008	412	157	234						
Slovakia	2013	193	192	26		39	95	64		
Slovenia	2013	84	24	34	24	36	16	24		
Sweden	2010	265		145	47	83	101	134		Yes
Switzerland	2013	370	185				112	72		
UK	2013	1,343	754		250	246	333	431	117	Yes
		<b>14,244</b>	<b>5,362</b>	<b>2,864</b>						
<b>Luxembourg and Spain do not recognise specialists</b>										

TO INCREASE THE NUMBER OF SPECIALISTS  
WITH  
EMPHASIS ON THOSE SPECIALITIES WHICH HAVE PROVEN POSITIVE IMPACT ON  
THE LONG-TERM SUCCESS- AND SURVIVAL RATE OF ROUTINE DENTAL TREATMENT  
(Endodontics, Periodontics, Implantology, Prosthodontics, Pediatric dentistry)

# TO INCREASE THE DENTIST:AUXILIARY DENTAL SUFF RATIO

	Hygien-ists	Techs	CDTs	Assist-ants	Thera-pists	Others	F/T equiv at 0.43	Equiv Wrkfrce	Equiv PopRatio	Dents per tech
Austria	0	620	0	10,200	0	0	0	4,421	1,920	7
Belgium	0	2,250	0	1,500	0	0	0	7,777	1,434	3
Bulgaria	0	1,235	0	No data	0	0	0	8,350	872	7
Croatia	0	1,691	0	631	0	0	0	3,875	1,155	2
Cyprus	458	130	0	34	0	0	197	827	1,047	6
Czech Rep	800	4,500	0	8,000	0	0	344	8,165	1,288	2
Denmark	800	1,100	565	4,400	0	0	587	5,748	975	5
Estonia	32	137	0	1,540	0	0	14	1,264	1,048	9
Finland	1,490	450	400	4,800	0	0	813	5,313	1,023	10
France	0	16,500	0	15,350	0	4,786	0	41,505	1,582	3
Germany	550	58,000	0	182,000	0	0	237	69,473	1,159	1
Greece	0	4,500	0	2,000	0	0	0	9,000	1,197	2
Hungary	1,000	3,000	0	4,668	0	0	430	5,403	1,833	2
Iceland	14	101	9	320	0	0	10	279	1,158	3
Ireland	458	350	24	1,262	5	0	209	2,409	1,905	6
Italy	6,000	13,023	0	95,000	0	0	2,580	48,476	1,231	4
Latvia	219	551	0	1,360	87	0	132	1,606	1,357	3
Liechtenstein	8	27	0	105	0	0	3	51	719	2
Lithuania	572	1,114	0	1,904	0	0	246	3,856	768	3
Luxembourg	0	82	0	390	0	0	0	452	1,188	6
Malta	21	53	0	100	0	0	9	179	2,354	3
Netherlands	3,200	5,000	370	19,000	0	0	1,535	10,308	1,629	2
Norway	902	703	0	3,671	0	0	388	4,964	1,020	7
Poland	2,500	7,000	0	9,725	0	0	1,075	22,875	1,685	3
Portugal	520	546	0	No data	0	0	224	9,321	1,125	17
Romania	100	4,500	8	2,000	0	0	46	14,446	1,388	3
Slovakia	187	1,392	0	3,610	0	0	80	3,378	1,602	2
Slovenia	15	251	0	870	0	0	6	1,364	1,510	5
Spain	13,200	11,135	0	37,000	0	0	5,676	34,676	1,357	3
Sweden	3,749	1,500	0	12,000	0	360	1,612	9,140	1,048	5
Switzerland	1,600	1,800	50	6,500	280	0	830	5,630	1,431	3
UK	6,291	6,283	233	48,465	2,194	322	3,749	38,283	1,669	5
<b>EU/EEA Totals</b>	<b>44,686</b>	<b>149,524</b>	<b>1,659</b>	<b>478,405</b>	<b>2,566</b>	<b>5,468</b>		<b>382,814</b>	<b>1,358</b>	

Source: Kravitz et al. EU Manual of Dental Practice 2015 Edition 5.1

Number of dentists	442,027
Number of auxiliaries	681,850
Workforce total	1,123,877

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Funded by the Health Programme of the European Union

# CONCLUSION

IN ORDER TO SATISFY THE NEW DEMAND IN DENTAL CARE  
ARE NECESSARY :

LARGER, MULTI - SITE PRACTICES

LARGER PRACTICES WITH INTEGRATED DENTAL LABS, IMAGING  
DIAGNOSTICS AND OTHER HI-TECH UNITS

INCREASED DENTIST:POPULATION RATIO

INCREASED DENTIST:AUXILIARY DENTAL SUFF RATIO

INCREASED SPECIALIST/GENERAL DENTISTS RATIO

THANK YOU FOR YOUR ATTENTION !

[stefan.peev@mail.bg](mailto:stefan.peev@mail.bg)