

Oral healthcare in transition in Eastern Europe

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Big changes have occurred in the oral healthcare delivery systems of most Eastern European countries since the fall of the Berlin wall in 1989 and the demise of communism in the former USSR in 1991. In the new situation it was necessary to reform the political and social systems including healthcare. Reforms were started to improve the economy and, in comparison with Western Europe, the generally lower living standards. It is difficult to obtain comprehensive data on oral healthcare in Eastern European countries but this paper reports data from nine countries and provides a 'macro' view of the current situation in these countries. Many countries seem to have adopted a Bismarckian model for the provision of oral healthcare based on a sickness insurance system.

Traditionally, the government's role in organising and financing healthcare was strong in Eastern European countries, with central planning and rigorous control. Nearly all health workers, including dentists and physicians, were salaried employees of the state who worked in state-owned clinics. Oral healthcare was provided free of charge for all citizens. In the last decade, there has been a general privatisation and in many Eastern European countries, most dentists now work in independent private practice. However, the pace of privatisation has varied from country to country and was most rapid in Former Eastern Germany¹.

In the European Union (EU) and European Economic Area (EEA), there is an underlying philosophy of free movement for the workforce. This philosophy is enshrined in Dental Training Directives 686/78/EEC and 687/78/EEC², which require all EU and EEA member states to recognise primary and specialist training completed in the EU and EEA by EU and EEA nationals. Although the Training Directives imply harmonisation and convergence of training standards within the EU, membership of the EU does not require member states to modify their health or oral healthcare systems. These vary throughout the EU and EEA³. Nevertheless, it is desirable to be aware of the differences in oral healthcare systems between the present and future member states. This paper therefore reports data from a recent survey carried out on behalf of the Council of European Chief Dental Officers (CECDO)⁴, supplemented by brief descriptions of the current systems for the provision of oral healthcare in the Czech Republic, Hungary and Poland. Data were received from nine Eastern European countries (Belarus, Bosnia, Bulgaria, Czech Republic, Hungary, Latvia, Lithuania, Poland and Slovenia). As far as possible the resulting data were checked by the authors through correspondence with alternative sources (dentists working in university departments and in dental public health appointments) and by comparing with existing reports.

Increasing numbers of dentists

Traditionally, oral healthcare has been provided by stomatologists in many Eastern European countries. In the former East Germany, Soviet Union, Poland, Bulgaria, CSSR and other Eastern European countries, a stomatologist provided the same range of care and treatment as dentists in Western Europe. However, their training was different and often included medical subjects such as obstetrics. Stomatologists were assisted by general (medical) nurses and in some countries there was very little four-handed dentistry. The ratio of stomatologists to nurses was therefore low. This tendency is reflected in the reported low numbers of dental nurses in relation to dentists (Table 1).

Bulgaria and the Czech Republic had the greatest numbers of dentists and technicians per 10,000 inhabitants. Four Eastern European countries reported higher numbers of dentists per 10,000 inhabitants than the EU/EEA mean. However, all countries reported considerably fewer technicians than the EU/EEA mean (Table 1), which suggests that less dentistry involving technical work took place. In the last 12 years the number of dentists increased in almost all countries, mostly in Slovenia (30%) and in the Czech Republic (29%). There was a dramatic fall in numbers of dentists/stomatologists in Bosnia between 1986 and 1988 which lost over half its dentists during the recent war. The increase of numbers of dentists does not necessarily reflect an increased output. In the Czech Republic the basic units of the past healthcare system were the 95 so-called District Centres of National Health. These were grouped in eight county centres and controlled by the Ministry of Health. Many dentists worked in this system as administrative dentists and did not practice dentistry. When the system was abolished in 1992, these dentists lost their administrative jobs and returned to clinical practice. During the 12-year period, the numbers of dentists in the EU and EEA rose by 15% (Table 2). Four countries reported that they did not have any dental hygienists, which was perhaps unsurprising as there were only 12,000 for a population of 378,000,000 in the EU and EEA in 1996⁵. However, Latvia and Czech Republic have started training hygienists and Slovenia may well follow suit.

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Table 1		Numbers of dentists, technicians, hygienists and dental nurses per 10,000 inhabitants in Eastern European countries in 1998			
Country	Dentists*	Technicians	Hygienists	Dental nurses (assistants)	
Belarus	5.6	0.7	No **	No **	
Bosnia	1.8	-	No **	-	
Bulgaria	8.5	3.6	No **	6.2	
Czech Republic	7.1	4.4	0.03	7.1	
Hungary	4.0	2.2	0.15	4.2	
Latvia	6.9	2.2	0.2	1.4	
Lithuania	5.9	2.1	0.2	3.9	
Poland	4.6	1.3	0.6	1.8	
Slovenia	6.8	3.2	No **	4.3	
Mean in EEA***	6.4	6.3	-	-	

*Stomatologists included
 **No such category
 ***No information reported from Belgium, France and Spain (EEA mean calculated without including these countries)

Data on oral health

High DMFT-index values can still be found among 12-year-olds in Eastern Europe (Table 3). In 1996 most EU/EEA countries reported current DMFT values of between 1 and 2 with the highest value of 3.2 in Portu-

gal³. Only Slovenia (1.8) reported achieving 'the EU/EEA-level'. During the last 10–12 years in four of the nine Eastern European countries the DMFT level in 12-year-olds appears to have deteriorated. Reported percentages of DMFT = 0 (caries free) were gen-

erally low (Table 3). There are many possible explanations for this situation. In EU and EEA countries improved oral health has been associated with improved living conditions and education, better oral hygiene and use of fluorides^{5,6}. A recent study has suggested that

Table 2		Numbers of dentists* in Eastern European countries in 1986 and 1998		
Country	1998	1986	Percentage increase or decrease	
Belarus	5 800	-	-	
Bosnia	639*	1 346*	- 53	
Bulgaria	7 119	5 745	+24	
Czech Republic	7 350	5 300	+29	
Hungary	4 000	3 200	+25	
Latvia	1 685	1 532	+10	
Lithuania	4 259	-	-	
Poland	17 782	17 440	+ 2	
Slovenia	1 347	1 039	+30	
Total in EEA in 1996	240 785	209 597**	+15	

*Stomatologists included
 **Eurostat data with 12,500 added for the former East Germany and estimate of 32,000 for Italy

Table 3

Mean DMFT scores for 12-year-olds in 1990 and 1998 percentage of caries free and percentage of edentulous 65–74-year-olds in Eastern European countries in 1998

Country	DMFT 1990*	DMFT 1998	% DMFT = 0 1996/98	% edentulous 65–74-year-olds
Belarus	3.3	3.8	5	12
Bosnia	4.0 – 6.0**	8.6	-	78
Bulgaria	3.5	4.2	10	53
Czech Republic	3.3	3.4	14	20
Hungary	4.3	3.8	17	54
Latvia	7.7	5.8	5	-
Lithuania	3.9	4.9	8	39
Poland	5.1	4.0	11	35
Slovenia	4.0 – 6.0**	1.8	-	22

*Data from WHO 1986–1991

**Data for all Yugoslavia

tooth brushing frequency among youngsters is lower in Eastern than in Western Europe⁷. The Eastern European countries also ceased to supplement the levels of fluoride in their drinking water during the 1990s. However, the four countries due to join the EU plus Latvia, have all achieved improved DMFT levels in 12-year-olds over the last decade. Two of these countries (Latvia and Slovenia) have organised special preventive programmes, which include oral health education and fissure sealing^{8,9}. Additionally, in the Czech Republic programs of oral health education in kindergartens and elementary schools were established in 1997 and are slowly expanding in number.

The range in the percentages of the population over the age of 65 years who were edentulousness was wide (Table 3). In the EU/EEA countries a similar range of from 17% (Sweden) to 72% (Portugal) has been reported¹⁰.

Uptake and costs of oral healthcare services

The data for utilisation of services in the five countries which reported data on this topic were higher than expected and may indicate that the populations of these countries are

aware of the need for, and are interested in, oral healthcare. The data indicated that in Belarus, annual uptake by the population was 65%, in Bulgaria and the Czech Republic 66%, in Hungary 50% and in Slovenia from 67% to 86% depending on age. EU/EEA countries report annual uptake of from 40% in Austria and Iceland to 80% in Sweden⁵.

Seven Eastern European countries reported data for the percentage of Gross National Product (GNP) spent on oral healthcare in 1998. These were Belarus (0.5%), Bosnia (1.0%), Bulgaria (0.1%), the Czech Republic (0.37%), Hungary (0.12%), Latvia (0.05%), Slovenia (0.62%). In the EU/EEA in 1996, the range was from 0.3% in Greece and Ireland to 0.9% in Sweden³. By themselves, the data on percentage of GNP spent on oral healthcare are of little value in that 1% of a low GNP may purchase less than 0.2% of a high GNP. However, this indicator does reflect the importance or priority given to oral healthcare in a particular country at a particular time. The reported data indicated that in 1998 only three of the Eastern European countries that responded to the CECCDO survey, committed a percentage of GNP to oral healthcare which matched that of EU and EEA countries; in others the percentage was lower.

Oral healthcare systems

The Czech Republic, Hungary and Poland are the three largest countries scheduled to join the EU. Their combined population is just over 60,000,000 (about the same as that of France, Italy or the United Kingdom). Collectively, in 1998 they had almost the same number of dentists (30,000) as the United Kingdom but fewer than France (39,500) and Italy (45,000)¹⁰. Their oral healthcare systems vary from each other and from those of the other Eastern European countries which reported data.

Czech Republic

In the Czech Republic oral healthcare is today predominantly private – ‘based on the principle of the free choice of dentist’ and upon the demand for treatment. Czechs have had obligatory oral health insurance since 1992 within the national General Health Insurance Scheme. The scheme covers 97% of children and adolescents up to 18 years of age, pensioners and 67% of the adult population. Fourteen other health insurance schemes and employees’ sick funds cover the remaining 33% of adults. The National Health Insurance Scheme is identical to the other 14

health insurance schemes and sick funds and covers the cost of oral healthcare of children up to 18 years of age, with the exception of some prosthodontics (special rules) and fixed orthodontic appliances. Basic oral healthcare of adults (an annual dental examination and calculus removal, necessary local anaesthesia, amalgam fillings, endodontics, periodontal treatment, dento-alveolar surgery, resin crowns and simple removable dentures) are fully covered by the insurance. Approximately one-third of the cost of tooth-coloured fillings and other than 'simple' prosthodontics are covered by the health insurance scheme, the rest by patients (policyholders). Implants are not covered and patients have to pay for them in full. Currently, no public oral healthcare exists in the Czech Republic. Oral healthcare of children and adolescents is provided predominantly by private dental practitioners working as 'family dentists' and partly by dentists who specialised in paediatric dentistry before 1990.

Hungary

In Hungary the costs of the provision of oral healthcare for almost all the population are covered by one central organisation – the National Health Insurance Company. All employers and employees are obliged to pay into this insurance company. Until they are 18 years of age Hungarians receive oral healthcare free of charge, with the exception of orthodontic care which is free if begun before the age of 16 years. Patients aged between 18 and 60 years obtain oral screening, emergency treatment and oral surgery free of charge but must pay a proportion of the cost of all other treatment and 90% of the cost of treatment involving laboratory work (crowns, bridges and dentures). However, expectant mothers, those who work in the military, the chronically sick or retired people are required to pay very little towards, or are exempt from, the costs of their oral healthcare.

At the beginning of 2000, about 50% of dentists worked as salaried employees of the National Health Insurance Scheme and the other 50% worked as independent contractors. These independent contractors may work totally privately (without the

public insurance system), or in contract with the National Health Insurance Company, or both. Before the reforms nearly all dental clinics were state owned, maintained by District Governments at a local level and employing dentists on a salary. Many clinics have now been sold or rented to dentists. Privatisation is seen as a way in which to raise more money for oral healthcare. To facilitate the process, Regional Governments can make loans available to dentists.

Poland

Reforms started in Poland in 1989. Prior to this year, primary oral healthcare was provided almost exclusively in the public sector by state-owned regional dental practices, dental offices affiliated with places of employment and by school dental offices. However, there were considerable differences in access to oral healthcare, particularly between urban and rural areas due to an uneven distribution of dental personnel. For example, according to data from 1995, in some areas the number of inhabitants per dentist was 10,000¹¹. In addition to the public dental service, funded from the state budget (ie taxes) and providing treatment free of charge, there was a small private sector providing services with the costs charged to individual patients. However, the size of the private sector was severely limited by the fact that dentists working in private practice were also obliged to work full-time in the public dental service.

Over the period 1989–1998, together with an opening up of the free market in general, there was an increase in the number of private dental practices but public clinics continued to function. Towards the end of 1992, around 80% of dentists were working in private practice at least part-time¹¹. At this stage, setting up a private practice was not regulated by any professional body – it was sufficient to register as an 'economic venture' with the local authorities. Since 1998, registration of practices has commenced by the Chamber of Physicians, which now has to give its permission for the opening up of a new practice. Furthermore, regular nationwide monitoring of oral health was commenced

in 1997 – this should indicate the treatment needs in different regions and, in the long term, provide information on the effectiveness of services provided. In 1993, a national programme of oral health promotion was introduced in the first class of primary schools as well as special preventive programmes for children from high-risk groups. The costs of this programme were covered by a national budget.

In 1999 regional sickness funds and a compulsory system of health insurance were introduced. At present, the insurance system guarantees basic services free of charge. These include:

- preventive services (check-ups, oral hygiene instruction, topical fluoride application, fissure sealing);
- curative services including emergency treatment (treatment of caries, pulpal and periapical pathology including endodontic treatment of single-rooted teeth in adults, endodontic treatment of all teeth in those aged 18 years and under, treatment of lesions of the oral mucous membrane, extractions, basic treatment of periodontal disease, basic emergency treatment of traumatized patients);
- prosthetic services (removable prostheses) and orthodontic treatment with a removable appliance for children aged 14 years and under.

Patients are free to choose a dentist from those dentists/practices that have a contract with the sickness fund. Basic care, treatment and materials used are guaranteed under the public insurance system and are specified by the Ministry of Health. However, the sickness fund operating in a given region allocates (rations) the volume of treatment which any particular dentist/practice may carry out. Any procedure or material not guaranteed by the public insurance system may be obtained privately by a co-payment from a patient, subject to availability at the practice concerned.

Political pressures to 'go west'

The fall of the 'Iron Curtain' started a major reform in the healthcare systems of the Eastern European countries which had been guided by the Soviet model and

operated by the individual states. Economics have probably been one of the driving forces behind the reforms in the general healthcare as well as oral healthcare. In the old system oral healthcare was invariably financed from the national budget. However, in some countries this public (state) system had problems with costly equipment and materials which sometimes might have influenced the treatment standards. The salaries for dentists were low compared with Western Europe but not with other professionals and academics in the East. However, the political pressure to 'go west' and the opening of 'the market' have led to privatisation.

The transition has been different in the individual countries depending largely on economic and political factors. The move from salaried (public) employment to private practice has been more rapid in the former Eastern Germany and Poland than in Hungary and Slovenia. In the former East Germany, 88% of dentists had moved from salaried employment into private practices by the end of 1992¹. In other countries the pace of change has been slower. There is still substantial public provision of oral healthcare for many sections of the community, including children and the elderly, in many Eastern European countries. Some countries have established an insurance system,

with or without co-payment by patients and others have no sickness insurance systems. Due to underdeveloped or a lack of established insurance systems most people in the former USSR countries, ie Russia and Belarus, still use the public oral healthcare clinics where some care is provided free of charge. However, the level of care is limited by a shortage of financial and other resources. In order to obtain a wider choice of treatment and materials, patients have to pay even within the public system.

In conclusion, there have been major changes in the systems for the provision of oral healthcare in the Eastern European countries. Many of them seem to have adopted a Bismarckian model³ with a sickness insurance system that covers part of the costs. In this respect they have drawn nearer to the systems in Germany, France, Austria and Belgium.

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