

The orthodontic treatment in Lithuania: accessibility survey

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SUMMARY

The objective of the present study was to assess the public accessibility of orthodontic care in Lithuania.

Material and methods. In 2008, a request for the information about various aspects of public orthodontic care during 2000-2007 in Lithuania was submitted to the State Patients' Fund at the Ministry of Health. The data on the demographic distribution of orthodontists in Lithuania were received from the Lithuanian Dental Chamber. The authors of the paper also analyzed the national legislation regulating the State Patients' Fund expenditure on orthodontic care and treatment.

Results. In 2007, there were 73 orthodontists-practitioners in Lithuania, most of them highly concentrated in major cities and towns: most of them were practicing in Vilnius (22) and Kaunas (20), while there were only 5 orthodontists in Klaipėda, 4 in Šiauliai, 3 in each of Panevezys and Marijampolė. The public orthodontic treatment is rendered only to patients suffering from most severe pathologies. With the constantly increasing expenditure of the State Patients' Fund, the national public orthodontic care system definitely undergoes significant development: the number of patients who received the treatment with removable and with fixed orthodontic appliances was gradually increasing during 2002-2007, with however, a very small number of new facilities for ambulatory treatment facilities of orthodontists (consultations included). The number of patients who received treatment with removable orthodontic appliances was specifically higher in Šiauliai and Telsiai, Panevezys and Utena districts, with fixed orthodontic appliances - in Vilnius and Alytus, Kaunas and Marijampolė, Panevezys and Utena regions. The analysis of the availability of public orthodontic treatment showed a marked increase in the number highly-specialized ambulatory facilities in Vilnius and Alytus district in 2002-2007.

Conclusions. Specialists providing orthodontic treatment in the country are highly concentrated, while in general public orthodontic treatment undergoes development at the moment. The accessibility of orthodontic treatment in Lithuania, especially in the regions distant from Vilnius and Kaunas, remains inadequate.

Key words: orthodontic care, accessibility.

INTRODUCTION

The surveys conducted have shown that malocclusion is a problem encountered by very significant number of population in the country. The disease has

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been often referred to as the “disease of civilization”. At present the occurrence of malocclusion is several times higher, than it was only a few hundred years ago (1). According to the study of the Clinic of Orthodontics of the Kaunas University of Medicine carried in 2002, orthodontic anomalies are observed in 85% of 7-15 year old Lithuanian (2). Malocclusion can cause a number of consequent problems such as psychological discomfort and even discrimination because of facial appearance, oral dysfunction and greater susceptibility to oral diseases. However, people often refuse orthodontic treatment due to discomfort of wearing orthodontic appliances, long-lasting treatment, as well as financial and accessibility constrains. Nowadays, in

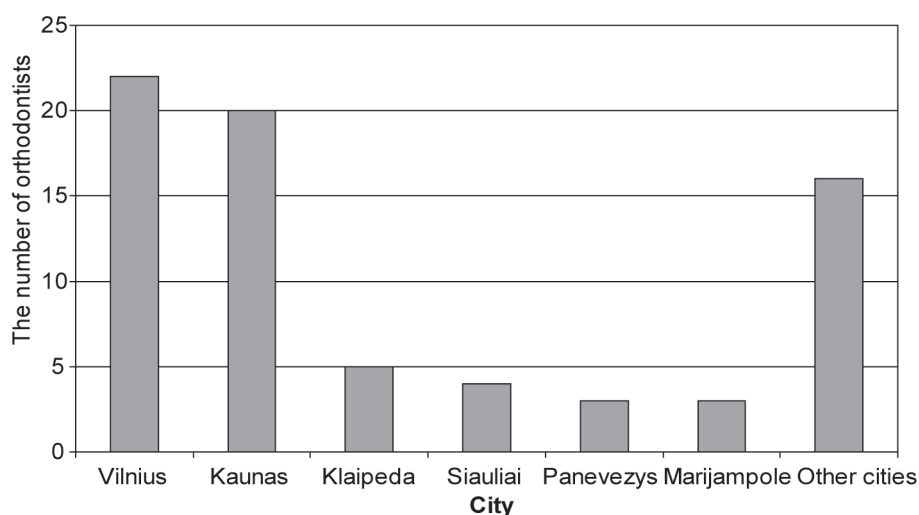


Fig. 1. The distribution of orthodontists in Lithuania

view of the changing attitude towards health, beauty and social adaptability, a greater focus upon oral health, dental and facial esthetics were the factors that led to highly increased demand for orthodontic care in Lithuania.

The statistics showed that in 2008 there were 8.8 dentists for 10,000 residents in the country (3,4). Thus the per capita number of dental specialists is higher than the average for the European Union (EU) (6.4), but the accessibility of dental care in Lithuania is reduced because of excessive concentration of specialists in major cities. There are 18.9 dentists for 10,000 residents in Kaunas, 13.5 – in Vilnius. Shortage of dentists is specifically obvious in regions distant from major cities: there are as little as 1.3 dentists for 10,000 residents in Alytus, 1.6 – in Salcininkai. The ratio of specialists to general dentists in Lithuania is also higher than in most EU States, statistically specialists constitute 21% of all dentists. Nevertheless, due to high concentration of specialists in major cities the dental care remains accessible mostly to residents of big cities.

An earlier study of adult Lithuanian residents showed that up to 67.1% of them were regular visitors of public dental institutions mainly due to affordability of treatment facilities offered to them, and as many as 41.2% never had a change to visit private dentists (5).

Table. The State Patients' Fund expenditure on public treatment with removable and fixed orthodontic appliances during 1999-2008

Order of the Ministry of Health (No.)	Date of the Order	Basic price for treatment with removable orthodontic appliance, LTL	Basic price for treatment with fixed orthodontic appliances (one bracket system), LTL
17	11-01-1999	100	800
V-296	27-04-2005	129.8	1,038
V-816	27-10-2005	141.1	1,128.3
V-325	27-04-2006	163.4	1,306.8
V-321	03-05-2007	179.7	1,437.5
V-425	09-05-2008	195.9	1,566.9

The trends in respect of children should remain highly similar. Furthermore, orthodontic treatment in general is more costly than therapeutic dental treatment. Therefore, public orthodontic care in the course of recent years has acquired a specifically high importance among Lithuanian residents.

The expenditures of the Public Fund allocated to public orthodontic care constitute just a small fraction of the overall treatment expenses. The allocations are approximately 2 times lower than the prices for orthodontic care in private practice. Therefore most orthodontists work in the private sector, with very few practicing in public health institutions, with a huge demand from the Lithuanian residents for costs of orthodontic treatment to be compensated from the State Patients' Fund.

MATERIALS AND METHODS

In 2008, a request for information about various aspects of public orthodontic care during 2000-2007 in Lithuania was sent to the State Patients' Fund at the Ministry of Health of the Republic of Lithuania. For the purpose of the present paper the authors inquired the data about the number of treatment cases with removable and with fixed orthodontic appliances, the number of specialized and high-specialized ambulatory facilities operating in individual regions of Lithuania and throughout the country, as well as the State Patients' Fund expenditure on treatment with removable and fixed orthodontic appliances in each year observed. The State Patients' Fund obtained the data from the reference system of health insurance "Sveidra" which included the relevant reports from the Regional Patient's Funds. The authors of the paper obtained and analyzed the data collected starting from 2002, i.e., the year the reference system "Sveidra" was launched.

The required statistics about the number of practicing orthodontists in Lithuania, their demographic factors including age, gender and residence place were obtained from the Lithuanian Dental Chamber. The reference material for the preparation of the present paper also included a thorough analysis of the legislation regulating the State Patients'

Fund expenditure on orthodontic care posted in the Internet website of the Ministry of Health of the Republic of Lithuania (6-11). Analysis of the data was performed using MS Office Excel software package.

RESULTS

The study showed that in 2007 there were 73 orthodontic practitioners in Lithuania, of which there were 60 females and 13 male doctors, 13 specialists aged over 63 (pensioners), and 1 – under 30. There were 35 orthodontists in the age bracket of 31-40, and 15 – in the group of 41-50 year olds, and 9 orthodontists in 51-63 age group.

Most orthodontists were practicing in Vilnius (22). There were 20 orthodontists practicing in Kaunas, 5 in Klaipeda, 4 in Siauliai, 3 in Panevezys as well as in Marijampole. 16 orthodontists were working in other cities (Fig.1).

According to the Order of the Ministry of Health of the Republic of Lithuania, the State Patients' Fund compensates the expenses for comprehensive orthodontic treatment (when fixed and removable orthodontic appliances can be used) only for children having cleft lip and/or palate and skull and facial bone formation defects (50). The Fund compensates orthodontic treatment of a limited group of orthodontic anomalies-tooth eruption disturbances and severe malocclusion, i.e., according to the national regulations orthodontic treatment with removable orthodontic appliances is free for the majority of children with malocclusion.

The amount and the procedure for the State Patient's Fund expenditure for public orthodontic care after the regain of the

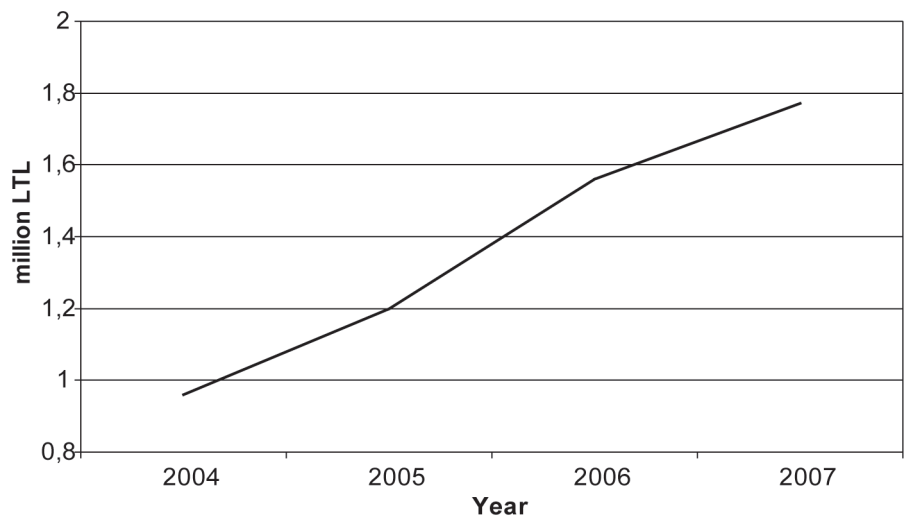


Fig. 2. The State Patients' Fund expenditure for treatment with removable and fixed orthodontic appliances

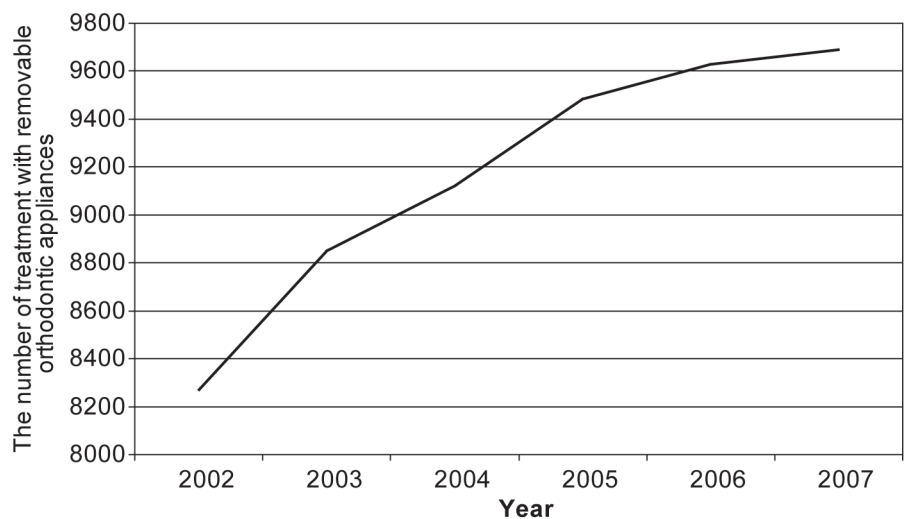


Fig. 3. The number of public treatment with removable orthodontic appliances during 2002-2007

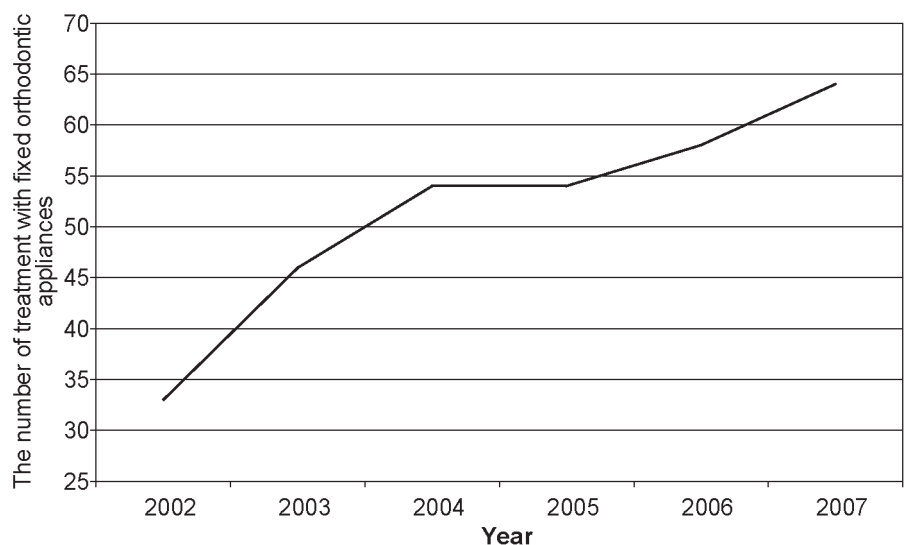


Fig. 4. The number of public treatment with fixed orthodontic appliances during 2002-2007

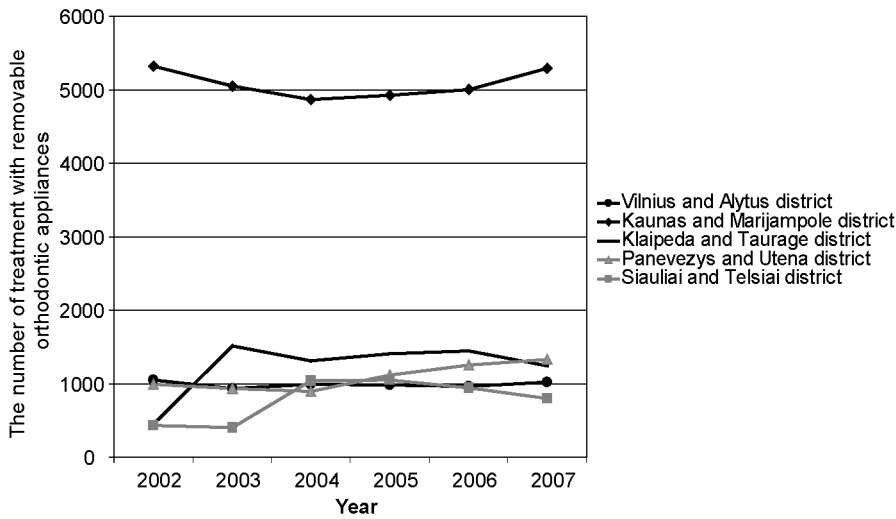


Fig. 5. The number of public treatment with removable orthodontic appliances during 2002-2007 by regions

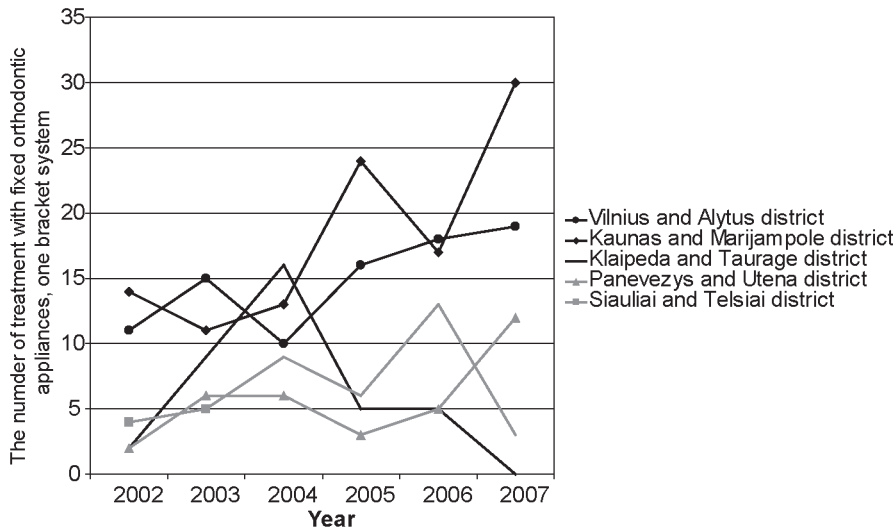


Fig. 6. The number of public treatment with fixed orthodontic appliances during 2002-2007 by regions

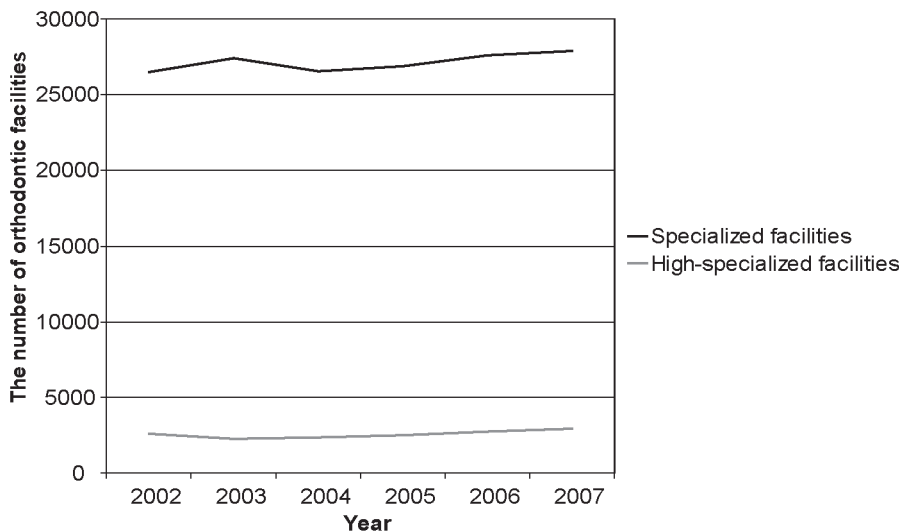


Fig. 7. The number of rendered public ambulatory specialized and high-specialized facilities of orthodontists during 2002-2007

independence by Lithuania was first determined in 1999 (6), and remained on the same level until 2005. The allocations from the Fund for treatment with removable and with fixed orthodontic appliances were increased only in 2005. At present the allocations under this item are regularly reviewed and gradually increased (Table, Fig.2) (7-11).

The analysis of the number of cases of the public treatment with removable and fixed orthodontic appliances showed a gradual increase in the period from 2002 to 2007 (Fig. 3, Fig. 4). Following a slow down in 2004, and specifically starting with 2005 the data showed an observable increase in the number of patients who received orthodontic treatment. In this respect the numbers of treatment with removable orthodontic appliances have specifically increased in Siauliai and Telsiai, Panevezys and Utena districts, with fixed orthodontic appliances – in Vilnius and Alytus, Kaunas and Marijampole, Panevezys and Utena districts (Fig. 5, Fig. 6).

The ambulatory facilities of orthodontists provide consultations and are open for treatment visits. During the period observed the number of ambulatory facilities specifically equipped for orthodontist services increased by just a very minute extent (Fig. 7, Fig. 8), with a markedly larger increase in the number of such facilities in Vilnius and Alytus district (Fig. 9).

DISCUSSION

The results of this study revealed a pronounced concentration of orthodontists Lithuania: most of them were practicing in Vilnius (22) and Kaunas (20), while there were only 5 orthodontists in Klaipeda, 4 in Siauliai, 3

in Panevezys and Marijampole. Factors contributing to this situation include better working conditions, professional development possibilities and higher compensation in major cities as compared to opportunities open in smaller towns.

A large portion of orthodontists practitioners were persons of pensionable age (as many as 13) in most cases engaged in practicing as a means to add extra income to their pension benefits that are considerably low after having worked for many years under the Soviet regime.

The State Patients' Fund compensates the costs of the comprehensive orthodontic treatment (when fixed orthodontic appliances can be used) only for minor part of children in Lithuania – for those with cleft lip and/or palate, with skull and facial bone formation defects. For all other children having orthodontic anomalies public orthodontic treatment is limited to removable orthodontic appliances treatment possibilities. With insufficient State Patients' Fund expenditure on public orthodontic care and rather few orthodontists in public clinics, the orthodontic care can be rendered only to a limited number of patients in only few locations in Lithuania, i.e., mostly in major cities. Therefore clinics have established the system of grouping the patients according to the index of orthodontic treatment need; treatment is in a priority manner rendered for patients having the highest index. Public orthodontic treatment in Lithuania is available only for patients with most severe pathologies.

The State Patients' Fund expenditure for treatment with removable and fixed orthodontic appliances, as originally determined, was relatively low compared with the actual treatment expenses, and this ratio is especially low under current conditions. However, starting with 2002, the increased demand on orthodontic treatment and the efficient management of the public orthodontic care system permitted an observable increase in numbers of treatments with re-

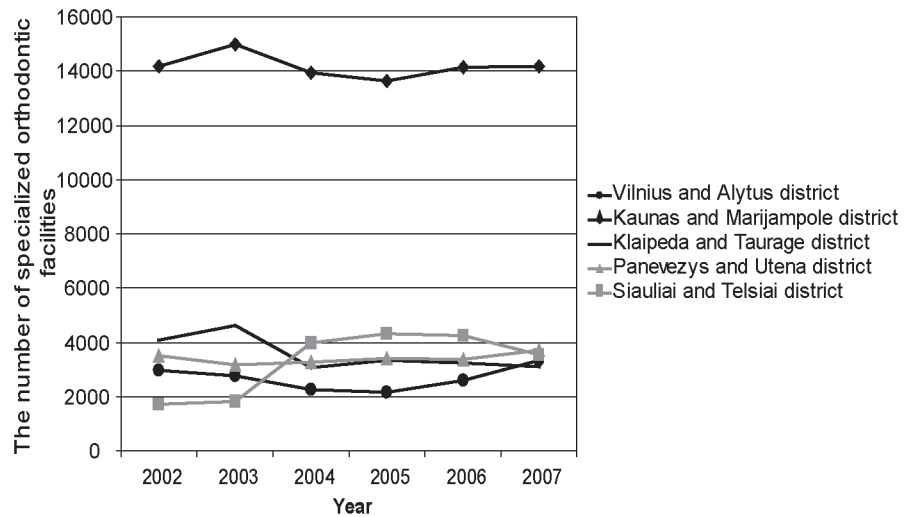


Fig. 8. The number of rendered public ambulatory specialized facilities of orthodontists during 2002-2007 by regions

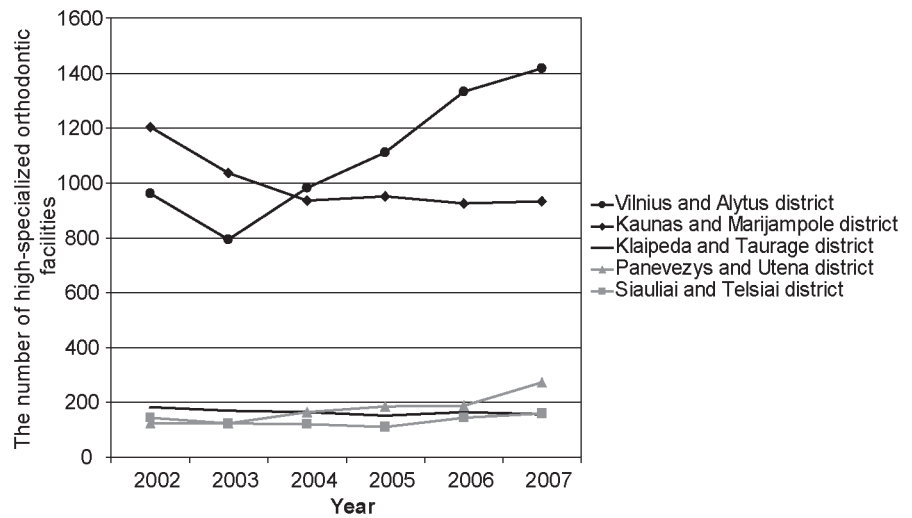


Fig. 9. The number of rendered public ambulatory high-specialized facilities of orthodontists during 2002-2007 by regions

movable and fixed orthodontic appliances. The constant increase of public expenditure on orthodontic care since 2005 facilitated a tangible progress in the field: the growing scope of public treatment using removable and fixed orthodontic appliances in the period until 2007, with, however, a very small increase in the number of ambulatory orthodontic facilities. As the State Patients' Fund expenditure on public orthodontic care negligible as compared to the actual prices charged for the service in the private sector, and mainly because of a very limited number of orthodontists the overall public accessibility of orthodontic treatment in Lithuania remains insufficient. Because of the pronounced concentration of orthodontists the accessibility of public as well as private orthodontic treatment in Lithuania is especially poor in the regions remote from Vilnius and Kaunas.

The situation is quite different in New Zealand, where over 50 % of the 10- to 14-year-old population reside within 5 km from an orthodontist, and nearly three-quarters within 10 km (12). Furthermore, most of the general dentists are also qualified to carry out orthodontic treatment there. A study in the field conducted in New Zealand showed that one-quarter of all orthodontic patients in New Zealand were treated by dentists, irrespective of the complexity of treatment (13), rendering the overall accessibility of orthodontic care in the country much higher in comparison to the rates in Lithuania. The findings of a survey conducted in Israel also indicated a rather high accessibility of orthodontic care in the country. From the point of view of demographic distribution, there is an observable over-supply of orthodontic professionals (saturation) in that country (14).

The primary measures with a view to improving the accessibility of orthodontic care in Lithuania is the increase of the State Patients' Fund expenditure for orthodontic care, and de-centralization of orthodontists

ensuring a higher availability of the service in sites other than the major cities in the country.

CONCLUSIONS

1. The pronounced concentration of orthodontists is observed in the country.
2. The national public orthodontic treatment system is currently undergoing significant development.
3. The accessibility of orthodontic treatment in Lithuania, especially in the regions distant from Vilnius and Kaunas, remains inadequate.

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