

# Systems for the Provision of Oral Health Care in the Black Sea Countries

## Part 5: The Russian Federation

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### Abstract

This paper outlines some aspects of oral health care for the population of the Russian Federation in 2007. It details oral health care that is funded by the public health insurance system. It then describes the dental workforce in the Russian Federation, setting out the numbers of dentists and other dental workers. It highlights that there is a plan to reform both health and oral health services by 2020 and describes the plan for oral health services. A section on dental education at undergraduate, specialist, and continuing levels follows. Finally, the paper gives details of national epidemiological studies.

*Key Words: Russian Federation, Oral Health Care System, Dental Workforce, Dental Education*

### Introduction

This is the fifth in a series of papers describing the systems for the provision of oral health care in the countries that surround the Black Sea. Unless stated to the contrary, all data quoted in this paper relate to 2007.

#### The Country and its Health Insurance System

In 2009, the estimated population of the Russian Federation was 140,041,247 [1]; 73% were estimated as urban dwellers as of 2008 [1].

Russia is governed as a federation consisting of 46 oblasts (oblastey), 21 republics (respublik), four autonomous okrugs (avtonomnykh okrugov), nine krais (krayev), two federal cities (goroda), and one autonomous oblast (avtonomnaya oblast) [1]. Each region has its local government, usually including a separate health authority.

The Ministry of Public Health of the Russian Federation and the health administration organisations in the constituent states/regions of the Federation have a committee structure to manage public health services. They also organise, direct, and supervise public dental services in Russia.

Health care is primarily funded through the Federal Obligatory Insurance Scheme (FOIS). Funds for the FOIS are collected from a combination of employees' wages and contributions from their employers. Specialised health care is funded directly by the state or region and is delivered in high-tech hospital-based care programmes.

General medical practitioners are paid a salary and may work in municipal clinics, hospitals, the armed forces, mental institutions, prisons, and so on. The health care system's goal is to develop a healthier society through health promotion and increase accessibility and quality of health care provision by 2020.

#### The Provision of Oral Health Care

The oral health care system in the Russian Federation is funded through obligatory medical insurance. It has budgets at all levels (national, regional, municipal), which are updated and agreed annually. The practical arrangements for the provision of oral health services vary from municipality to municipality. There is a plan to specify guaranteed care provision from the state by the means of standards and protocols, which is currently under development.

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Oral care (including some orthodontic treatment) is free for children and adolescents up to the age of 16 years and is usually delivered in municipal dental clinics or departments of general medical clinics, staffed by salaried dentists. It is estimated that in 2007, 99% of children and adolescents used this service to some extent and that 44% of children and adolescents were involved in an oral health preventive programme. Elderly people living in either nursing homes or their own homes with social support are also provided with free municipal oral health care. Some prosthetic dentistry is provided free of charge for the elderly.

Specialised dental and maxillofacial care services are provided through dental hospitals and departments in general medical hospitals and are funded directly by the state. As mentioned previously, a number of salaried dentists work in hospitals, in the armed forces, mental institutions, and in prisons (*Figure 1*).

Adult patients have a right to free treatment in the public oral health system. The list of treatment provided by the state varies from region to region, but usually oral surgery, restorative care, and some prosthetic dentistry can be obtained from public clinics (including dental examinations, scaling, prophylactic and periodontal treatment, fillings,

root canal treatments, simple bridges, extractions, and surgical procedures). Most adults obtain oral health care from the private sector and the cost is not refunded by the state. However, if the paperwork for such private care meets the tax regulators' criteria, individuals may offset the cost against income tax.

The overall health care system is undergoing a reform that will be completed by 2020. In 2009, as part of this reform, the chief dental officer of the Russian Federation, pursuant to the Ministry of Health and Social Development, proposed a concept paper describing possible changes to oral health care provision in the country.

The concept paper outlined a programme aimed at reforming the existing national system of oral care provision, safeguarding the state guaranteed level of care to the public at the following levels:

- Primary oral care (treatment of primary caries and congenital disorders).
- All types of emergency oral care.
- Children's oral care (orthodontic care to 12 years of age).
- High-tech hospital-based oral and maxillofacial care.
- Oral preventive programmes.
- Monitoring oral health of the population.

**Figure 1. Scheme of Organisation of Dental Care Provision in Public Health Care Services.**

| Type of medical care            | Local government medical care facilities      |  |  |                                 | Regional medical care facilities                               | Federal medical care facilities   |   |
|---------------------------------|---|--|--|---------------------------------|--|-----------------------------------|---|
|                                 | Municipality                                  |  | Town   |                                 |  |                                   |   |
|                                 | Municipal General Dental Clinics <sup>1</sup> | Municipal General Medical Clinics, Municipal Hospitals | Town General Dental Clinics, Town General Medical Clinics, Town Medical Hospital | Town Emergency Medical Hospital | Specialised institution <sup>2</sup> (hospital, clinics, etc.) | Regional General Medical Hospital | Federal Specialised Dental Institutions |
| <i>Primary care</i>             |   |  |  |                                 |  |                                   |   |
| Dental                          | +   | +  | +  | -                               | -  | -                                 | -                                       |
| Maxillofacial                   | -   | -  | +  | +                               | -  | -                                 | -                                       |
| <i>Specialised medical care</i> |   |  |  |                                 |  |                                   |   |
| Dental                          | -   | -  | -  | -                               | +  | +                                 | -                                       |
| Maxillofacial                   | -   | -  | -  | -                               | +  | +                                 | -                                       |
| <i>High-tech medical care</i>   |   |  |  |                                 |  |                                   |   |
| Dental                          | -   | -  | -  | -                               | -  | -                                 | +                                       |
| Maxillofacial surgery           | -   | -  | -  | -                               | -  | -                                 | -                                       |

<sup>1</sup> incl. paediatrics, <sup>2</sup> incl. army

- Training of personnel for the maintenance of oral care quality and for the development of a managed market for oral care services.

Development of this system involves designing a three-tiered national system of oral care provision.

### Level 1

The first level will be represented by the general dental practitioner (local care provision). Thus, a primary link to oral care will be a territorial dental district. Territorial districts will be organised in all regions of the Russian Federation, each district serving no fewer than 10,000 people. Basic functions of the territorial dental district will be:

- Provision of primary oral care.
- Provision of routine oral examinations (once in six months).
- Monitoring the oral health of the assigned population.
- Provision of state preventive programmes.

In remote and under-populated regions, oral care has to be provided through the use of mobile dental offices.

### Level 2

The second level of oral care will be represented by specialist oral care establishments. The structural unit will be the dental polyclinic in which the specialist dentists provide care.

### Level 3

The third level will be represented by the federal and regional centres (and/or specialist departments in general medical hospitals) providing high-tech hospital-based oral and maxillofacial care (e.g., maxillofacial surgery, complex prosthetics).

## The Dental Workforce

Dental hygienists, dental technicians, and dental nurses provide clinical support for dentists. In 2007, the number of registered dentists working for local, regional, and federal authorities in public clinics was 18,072, of whom 11,911 were female and 6161 male. In addition, an estimated 24,000 worked in private oral health clinics [2]. Thus in 2007, in the Russian Federation there were about 42,000 active dentists.

Also in 2007, there were the following numbers of specialists working for the state: 1733 oral surgeons, 566 orthodontists, 1402 paediatric dentists, 689 prosthodontists, and 287 oral maxillofacial surgeons [2].

Dental hygienists are trained in the Russian Federation but unfortunately data about them are

not registered by the state authorities. They mainly work privately. It is estimated that there are over 3000 dental hygienists in the country.

The number of dental technicians is estimated as 2200. It is unclear how many dental nurses (chair-side assistants) are working in the Russian Federation because they, too, are not registered.

There are also some “tooth doctors” (zubnoy vrach) who have undertaken short three-year courses in polytechnics and provide some dentistry in some regions where regional law allows them to work. It is estimated that there are some 19,000 “tooth doctors”. They are not permitted in a number of the larger cities, including Moscow and St. Petersburg.

## Dental Education

The basic curriculum for specialty 060105 “dentistry” was authorised by the Ministry of Health of the Russian Federation and Department of Educational Institutions and Personnel of the Russian Federation in 2000.

The undergraduate curriculum has a stipulated total of 6541 contact hours and includes:

- Humanitarian and socioeconomic disciplines: 866 hours (13.2%).
- Mathematical and natural science disciplines: 636 hours (9.7%).
- Medical-biological disciplines: 1229 hours (18.8%).
- Medical-preventive disciplines: 141 hours (2.2%).
- Clinical medical disciplines: 1197 hours (18.3%).
- Special dental disciplines: 2472 hours (37.8%).

All students now entering dental school undertake a five-year full-time university course that leads to the Diploma of Doctor Stomatologist (D.D.S.). They are then obliged to work as an intern for one year (1728 hours) and to pass an initial specialisation examination in general dental practice before they are given the right to practise independently.

For all those who have completed the year’s internship, there is an opportunity to further specialise over a period of two to five years and receive a specialist’s certificate in one of a number of dental specialties. These are restorative dentistry, prosthetic dentistry, paediatric dentistry, orthodontics, and oral surgery. Those who wish to work as maxillofacial surgeons have to complete the undergraduate courses in both general medicine

**Table 1.** Comparison of Data from the Two National Dental Epidemiological Surveys for the Russian Population [3,4]

| 1997  | 2008  |
|---|---|
| <b>Children (12 years old)</b><br>o Mean DMFT=2.91<br>o Caries-free: 22%<br>o Periodontal disease: 48%  | <b>Children (12 years old)</b><br>o Mean DMFT=2.51<br>o Caries-free: 27%<br>o Periodontal disease: 34%  |
| <b>Adults (35-44 years old)</b><br>o DMFT=13.14<br>o Periodontal disease: 86%<br><b>Adults (over 65 years old)</b><br>o DMFT=21.79<br>o Missing teeth: 17.3 | <b>Adults (35-44 years old)</b><br>o DMFT=13.93<br>o Periodontal disease: 81%<br><b>Adults (over 65 years old)</b><br>o DMFT=22.75<br>o Missing teeth: 18.3 |

and dentistry before they commence specialist training.

In 2010, there were 47 dental schools in the Russian Federation. Approximately 2000 students entered a dental school and started the five-year course in 2009. Each year, 1200 graduates can enter intern or specialist training in dentistry, of whom 50% are paid by the state. The other 50% must pay for their training.

Continuing education courses are obligatory for dentists. The length of a course cannot be fewer than 144 hours. Dentists have to pass these courses no less than once every five years while they are professionally active. On completion of training, they are awarded a Professional State Certificate, giving them the right to practise dentistry. The courses have to be taken in the educational institutions accredited by the Ministry of Health and the Ministry of Education.

Dental technicians are trained for two years and dental hygienists for three years, in educational institutions accredited by the Ministry of Health and the Ministry of Education. Dental nurses are not specially trained and usually are trained individually by the dentists for whom they work, after

receiving training as general nurses. The state registers only dentists, dental specialists, and dental technicians.

“Tooth doctors” are trained for three years in educational institutions accredited by the Ministry of Health and the Ministry of Education. This dental degree was introduced following the Second World War because there was a shortage of dentists in the Soviet Union.

### Epidemiology

A national dental epidemiological survey was conducted on behalf of the Ministry of Health and Social Development in June 2007; data became available in 2009. Data were collected in 46 regions of the Russian Federation. A previous study took place in 1996-1997. Thus there is now the possibility of some level of comparison between the two national studies, as shown in *Table 1*.

### Costs

Approximately 4.2% of gross domestic product (U.S. \$2.176 trillion in 2007) is spent annually by the government on health care in the Russian Federation. Unfortunately, there are no clear data on how much was spent on oral health care.

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