

# Healthcare Service In The "Dentistry" Profile To The Population Of Moscow Under Restrictive Measures Of Covid-19

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## Abstract:

In the beginning of the COVID-19 pandemic in March 2020, by the decree of the Mayor of Moscow, the provision of dental services to the population was temporarily suspended, with the exception of diseases and conditions requiring emergency or urgent dental care. A Headquarters was established to coordinate the provision of emergency and urgent dental care for COVID-19 patients and for those who was in isolation during lockdown. The Moscow Healthcare Department has been organized an activity of mobile medical and nursing teams (MNT) to provide emergency medical care in the "dentistry" profile. All MNTs were equipped with portable dental equipment. The MNTs has been working for free within the framework of compulsory medical insurance. For the period from March 26 to June 16 – 2020, medical care was provided to 1501 patients, of which 294 with a confirmed diagnosis of COVID-19, including 57 children. The measures taken were of a temporary nature and were aimed at preserving the health of Moscow residents and preventing the further spread of the new coronavirus infection COVID-19 in Moscow.

**Keywords:** COVID-19, dentistry, emergency medical aid.

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## INTRODUCTION

Dental care for the adult population of Moscow is provided in 34 adult dental practices, the Oral and Maxillofacial Hospital for War Veterans of the Moscow Department of Healthcare and other institutions. Emergency dental care for the adult population was provided in the day time in the district general dental practices and at night in the Oral and Maxillofacial Hospital for War Veterans of the Moscow Department of Healthcare.

Dental care for children is provided in 24 children's dental practices, 8 children's dental departments of state dental practices and dental departments of state hospitals located in new Moscow district.

In accordance with the decree of the Mayor of Moscow dated March 5, 2020 No. 12-MD "On the introduction of a high alert regime" and the order of the Moscow City Health Department dated March 25, 2020 No. 282 "On the temporary introduction of restrictive measures in medical organizations of the state health system of the city Moscow, providing primary specialized medical

and sanitary care in the field of "dentistry" from March 26 to June 16, 2020 in dental practices in Moscow was temporarily suspended scheduled conservative, surgical, prosthodontic, orthodontic, preventive and children's dental appointments, as well as clinical examination and preventive medical examinations, with the exception of diseases and conditions requiring the provision of dental care in emergency or urgent forms [1,2].

From June 16, 2020, in order to exclude the mass presence of patients in medical organizations, the appointment is organized in accordance with the order of the Moscow Health Department of June 1, 2020 No. 573 "On Amending the Order of the Moscow Health Department of March 25, 2020 No. No. 282 "with the following time intervals: dentist-therapist (pediatric dentist, dentist) – 1-2 patients per hour; dental surgeon – 2 patients per hour; orthodontist – 2 patients per hour; prosthodontist – 1 patient per hour. In this regard, the recording horizon was extended to 21 days. There is a

10-minute interval between patient visits, during which the office and medical equipment are disinfected [3].

### PROVIDING MEDICAL CARE TO PATIENTS ON THE PROFILE "DENTISTRY" DURING THE COVID-19 PANDEMIC

A working group was promptly created to analyze the current sanitary and epidemiological situation in dental clinics in Moscow and further forecast the situation, with the involvement of the chief freelance specialist in epidemiology of the Moscow Department of Health, given the current unfavorable sanitary and epidemiological situation, as well as in connection with the re-profiling of the Oral and Maxillofacial Hospital for War Veterans of the Moscow State Health Department as an infectious hospital for the treatment of Covid-19 patients, on March 16, 2020 by the Office for the Organization of Dental Care of the City Health Department Moscow, together with the Organization and Methodology Department (ODM) on dentistry.

On March 25, 2020, the Moscow State Health Department issued order No. 282 "On the temporary introduction of restrictive measures in medical organizations of the Moscow state health system providing primary specialized health care in the "dentistry" profile.

In accordance with the order, the work of mobile medical and nursing teams (hereinafter referred to as MNT) was organized to provide emergency and urgent medical care in the field of "dentistry" to persons with a new coronavirus infection COVID-19 and persons in isolation in accordance with Resolution of the Chief State Sanitary Doctor of the Russian Federation dated March 18, 2020 No. 7 "On ensuring isolation in order to prevent the spread of COVID-19", as part of a conservative dentist (general dentist, pediatric dentist) dental surgeon, nurse [4].

The MNT was assigned the tasks of treating acute toothache and other emergency and urgent dental conditions associated with acute toothache, dental injuries, the imposition and removal of previously applied

stitches, tooth extraction, and primary treatment of stomatitis. All MNTs were equipped with portable dental equipment, personal protective equipment, medical boxes, and ambulance vehicles. The departure of the teams is free of charge for patients within the framework of compulsory health insurance

Dental medical care to citizens (adults and children) in emergency and urgent forms (acute toothache, dental injuries, stomatitis, etc.) continued to be provided in all medical organizations of the state health care system of the city of Moscow during their working hours, including repairs (repair) dentures. In medical organizations, there were organized: thermometric control at the entrance groups, filter boxes. When patients with ARVI symptoms were identified, they were placed in filter boxes, where they were provided with the necessary dental care by specialist doctors equipped in PPE (biological protection suit, FFP3 respirator, goggles, etc.). At the same time, emergency and urgent dental care for patients with COVID-19 in hospitals, observatory and at the place of residence (stay), as well as all persons in self-isolation mode, were provided by the MNT in the required amount, in accordance with the order of the State Department of Health Moscow dated March 25, 2020 No. 282 [8].

At the same time, on the basis and forces of the ODM for dentistry (location – "Dental practice No. 3 of the Moscow Department of Health"), a Headquarters was created to coordinate the provision of dental care in emergency and urgent form to people with the new coronavirus infection COVID-19 and people in isolation mode during the high alert mode, as well as organized the work of a round-the-clock information center on the provision of medical care in the "dentistry" profile in Moscow under restrictive measures by phone: 8 (499) 842-41-12 ( hereinafter – the information line) and ensuring the call by medical organizations and citizens of the MNT, routing and coordination of the activities of the MNT .

MNT for dentistry, together with the Office for the Organization of Dental Care of the Moscow Department of Health, were prepared [9-11]:

**Table 1. The results of dental care in Moscow, 2019/2020**

	2019 year	2020 year
Total visits	3 055 746	2 211 729
including primary	1 458 916	1 220 111
Fillings made	1 392 152	1 009 716
Sanitized	763.882	623 725
The ratio of uncomplicated caries to complicated	4.1 : 1	3.6 : 1
Percentage of sanitized from primary	52.3	61.7
Teeth extracted	627 877	476 674

**Table 2. The results of dental care in prosthetics profile in Moscow, 2019/2020**

	2019 year	2020 year
Number of persons who received dental prosthodontics services	257 263	179 682
Number of people who received dentures	202 665	146 071
Number of manufactured prostheses	352 464	252 168
Amount / RUB /	2 830 520 663.99	2 193 560 083.60
Average cost per person	13 966.49	15 017.08

- Guidelines;
- Checklists for patients;
- Epidemiological questionnaire of a dental patient;
- Algorithm of interaction between the information line and the MNT.

The headquarters carried out not only coordination of the provision of dental care by medical organizations of the state health system of the city of Moscow, but also coordination of the round-the-clock information line, the MNT, interaction with the State Unitary Enterprise "Mosavtosantrans", the Center for Emergency Medical Aid (hereinafter – CEMA).

For the period from March 26 to June 16, 2020, medical assistance was provided by the VSB to 1501 patients, of which 294 with a confirmed diagnosis of COVID-19, including 57 children, as well as 1207 people with suspected new coronavirus infection. Over the same period, 182,456 people, including 45,763 children, received emergency dental care within the framework of the Territorial Compulsory Medical Insurance Program in Moscow city dental clinics.

Dynamic observation with the use of telemedicine consultations for patients with COVID-19 and persons in self-isolation mode was organized. Audio and video communication is used for communication. A single telephone hotline was launched to call the mobile dental team for adults and children with the new coronavirus infection COVID-19: 8 (499) 842-41-12, 8 (977) 810-59-58; open daily from 08:00 to 20:00.

**INFORMATION OF THE POPULATION ABOUT THE PROCEDURE FOR PROVIDING MEDICAL CARE FOR THE PROFILE "DENTISTRY"**

A round-the-clock information telephone line of the Moscow Healthcare Department for dentistry has been opened, +7 (495) 795-15-33, which allows you to get complete information:

- on the procedure for the provision of dental medical care to citizens who have become ill with the new coronavirus infection COVID-19, as well as to those under "social monitoring";
- on measures to prevent the spread of COVID-19 in city dental clinics;
- on the procedure for receiving dental medical care for citizens (adults and children);
- on the free production and repair of dentures;
- about the order of attachment to the dental clinic;
- about telemedicine consultations in state dental clinics.

**IMPLEMENTATION OF TELEMEDICAL TECHNOLOGIES**

In accordance with the joint order of the Moscow Healthcare Department and A.I. Evdokimov Moscow State University of Medicine and Dentistry of the

Ministry of Health of Russia dated November 5, 2020 No. 1262/571 / 02.01-03 in difficult diagnostic cases, patients – residents of the city of Moscow have the opportunity online, via teleconference (hereinafter – TC), to get a second opinion from leading doctors and scientists of one of the leading dental universities of Russia.

Currently, deferred telemedicine consultations in the "doctor-doctor" format are carried out on the basis of the patient's medical documents, followed by the issuance of a medical opinion. Consultations for insured persons are provided free of charge under the Territorial Compulsory Health Insurance Program.

In 2020, TC operated 53 dental practices in Moscow. In 2020, more than 1000 telemedicine consultations were carried out.

**RESULTS OF TREATMENT WORK ON THE PROFILE "DENTAL" FOR 2020**

*Providing dental care to adolescents and children*

179 720 preventive medical examinations were carried out in the patient facilities, 38% less than in 2019 (293 220), which is 13% of all visits, 8% of the total child population of Moscow (2,282,040).

Children are provided with specialized medical care for the treatment of caries and its complications, for injuries, malformations of both temporary and permanent teeth. Treatment of diseases of the oral mucosa and periodontal disease in children is carried out.

In 2020, only 399,332 of both temporary and permanent teeth were cured in the patient facilities (29% less than in 2019 (562,134); 252,509 children were sanitized (27% less than in 2019 (346,756)).

Dental surgical care for children is provided without restrictions within the framework of the Territorial Compulsory Medical Insurance Program. In 2020, 9,580 permanent teeth were removed from the chipboard. Outpatient operations are performed.

Children – residents of Moscow are provided with qualified orthodontic care using both removable and non-removable orthodontic appliances.

Patients were consulted on the section "Pediatric Dentistry" at the A.I. Evdokimov Moscow State University of Medicine and Dentistry in the direction of the children's dental service of the city.

Due to the epidemiological situation, in 2020, the volume of emergency dental care for children increased by 17.5% compared to 2019.

According to the analysis of the provision of dental care to children under the conditions of anesthesia, 4,995 visits were performed, 5,341 consultations (decreased by 9% compared to 2019), 2802 anesthesia were performed (decreased by 18% compared to 2019), 2,628 reorganizations (decreased by 8% compared to 2019). Mostly this type of assistance was provided to children under 7 years of age.

In 2019, 22 365 children with disabilities were under dispensary observation in the DSP of the city of Moscow, 31% of children were examined, 77% of children were sanitized (2 704 children out of 3 493 in need of sanitation). In 2020, in children's dental institutions in the city of Moscow, 20,330 children with disabilities were under dispensary observation, 4,562 (22.5%) children were examined, and 2,017 children were sanitized.

According to the analysis of the dental examination within the framework of the clinical examination of orphans and children in difficult life situations, in 2019, 2860 (83%) children were examined, 87% of children underwent dental treatment, 58% of children in this category were sanitized. In view of the restrictions established due to the difficult epidemiological situation, the admission of orphans and children in difficult life situations in 2020 was carried out on request.

#### *Provision of dental care to the adult population of Moscow*

Dental institutions in Moscow provide all types of dental care: conservative, surgical and prosthodontic with the use of electroodontodiagnosics, 2D radiovisiography, computed tomography and physiotherapeutic treatment.

The main dental diseases with which the population turns to dental clinics are tooth decay and its complications (pulpitis, periodontitis), periodontal disease, non-carious tooth damage, oral mucosa diseases, as well as partial or complete loss of teeth. In recent years, patients began to apply for restoration of aesthetic parameters of teeth, implant treatment and implants supported restorations (Table 1). Various types

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of pain relief are widely used in the treatment of dental diseases.

Prostodontic dental care was provided in 34 adult dental clinics, as well as in the TyNAO (TGB and ShchGB), Medius S JSC, NAVA LLC, Optus-Medo LLC (Table 2).

In 2020, a measure of social support for preferential dental prosthetics was provided to 99 057 beneficiaries, which is 11% of the number of beneficiaries included in the Unified City Register of Citizens entitled to free production and repair of dentures, of which:

- 27 persons from among mothers of many children who have given birth and raised five or more children;
- 1 736 veterans;
- 22 925 persons with disabilities;
- 74 369 persons from among citizens of retirement and pre-retirement age, as well as other benefit categories entitled to the provision of measures of social support for preferential dental prosthetics.

#### CONCLUSIONS

The measures taken were of a temporary nature and were aimed at preserving the health of Moscow residents and preventing the further spread of the new coronavirus infection COVID-19 in Moscow.

Taking these reasons into account, in 2020, the number of visits to children's dental practices in Moscow (1 376 892) decreased on average by 30% compared to 2019 (1 961 710). However, despite the restrictions in force, the rate of the number of sanitized patients from primary adult patients increased from 52.3% in 2019 to 61.7%. According to the Ministry of Health of the Russian Federation, the average indicator for Russia is 55-60% for previous years.

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