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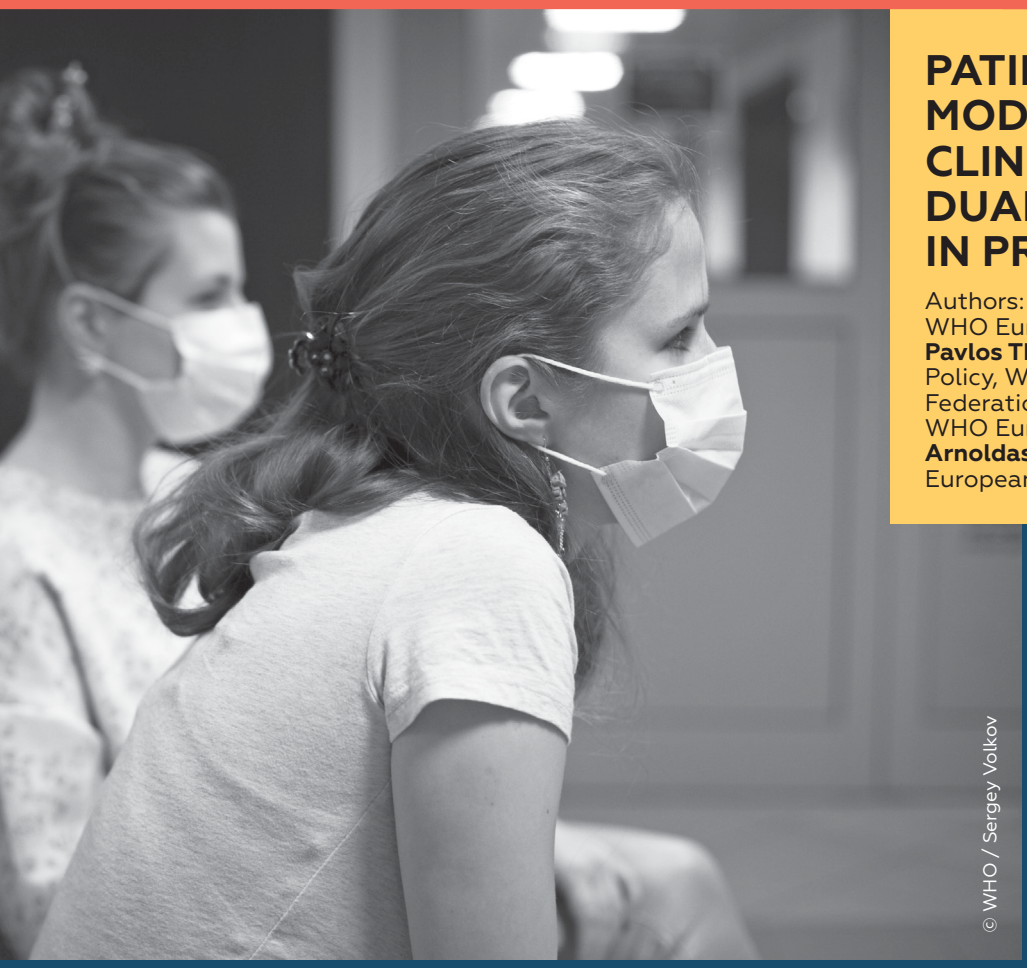
Transforming primary health care during the pandemic



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PATIENT-FRIENDLY NEW MODEL FOR OUTPATIENT CLINICS IS THE KEY TO THE DUAL-TRACK RESPONSE IN PRIMARY HEALTH CARE

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MOTIVATION

Promoting and protecting people's health is a strategic priority for the Russian Federation. Based on the national policy on development of the Russian Federation for 2019–2024, 14 national priority projects have been developed *(1,2)*. Among these, the Health System project directly addresses health care services, and the Demography project addresses public health. The strategic goals of the policy are to increase the country's population, improve people's standard of living, increase life expectancy and improve health. The national priority projects outline the vision, goals and main directions of the selected high-impact development areas *(3–5)*.

The national priority project Health System aims to move towards universal health coverage with primary health care at the centre. To this end, the project focuses on optimizing processes in outpatient clinics (multi-profile primary health care centres), expanding the preventive focus of their operations, using digital technologies, creating a system for protecting patients' rights, addressing health workforce shortages, creating primary health care infrastructure in rural areas and bringing services closer to the population by using mobile medical facilities mounted on trucks. These mobile facilities, which are fully equipped and staffed by specialists, bring health care services to people in the most remote parts of the Russian Federation.

The COVID-19 pandemic, which emerged during the phased implementation of the national priority project Health System, confirmed the relevance of these transformations. Their aims are to achieve Sustainable Development Goal 3 (on achieving universal health coverage), meet the provisions of the Declaration of Astana on primary health care and address the priorities defined by the WHO European Programme of Work, 2020–2025 *(6,7)*.

TRANSFORMATIONAL POLICIES AND TOOLS

A set of transformational policies and tools to develop primary health care had been devised well before the pandemic. Strategic actions included introducing the new model for outpatient clinics, developing training programmes for health care workers, strengthening the preventive orientation of the health system and developing rural health infrastructure. This combination is enabling the transformation of primary health care and ensuring its availability and readiness to provide an effective and rapid response in the context of a pandemic.

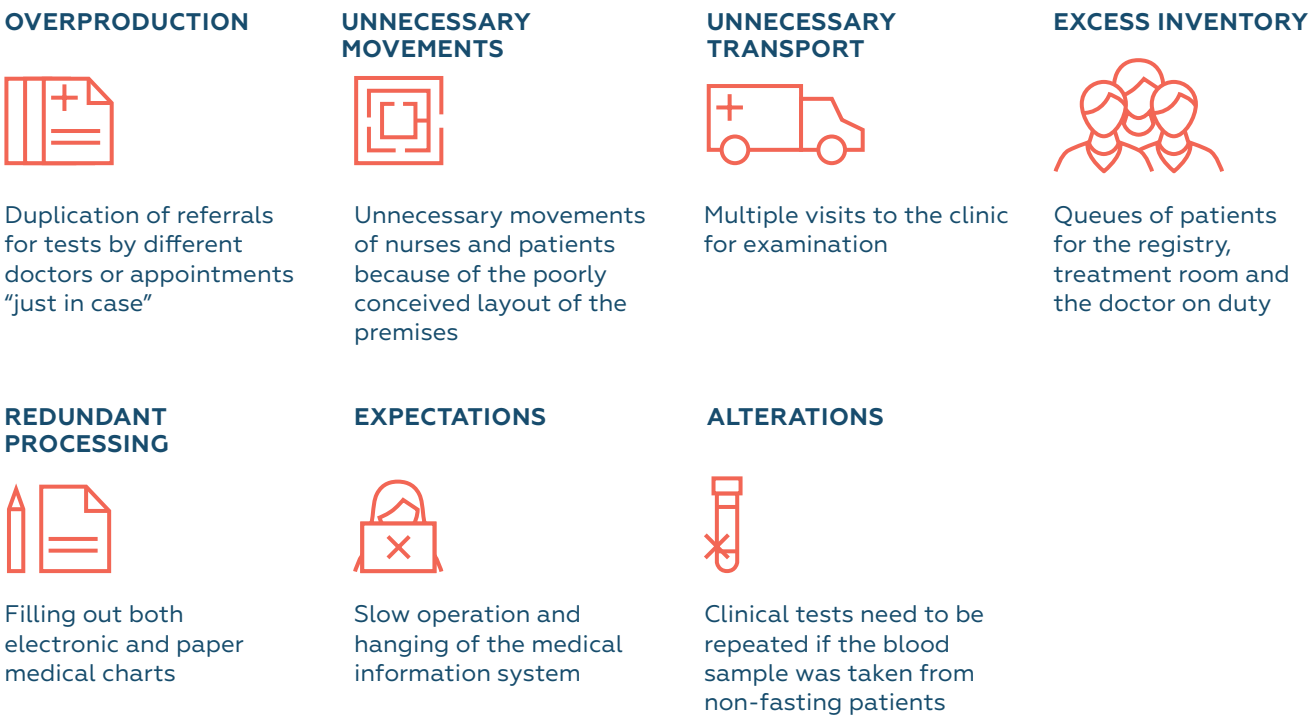
TRANSFORMATION OF PRIMARY HEALTH CARE BEFORE THE PANDEMIC

Patient-friendly new model for outpatient clinics

Insufficient availability of primary health care services, together with a large number of complaints and poor patient satisfaction, served as the basis for launching a project to create a patient-oriented new model for outpatient clinics. Its development was based on the needs of patients and health care workers and aimed to improve the organization of health care services. Implementation began in 2016 as part of a pilot project and became a priority under the national priority project Health System *(8)*.

The main goal of the new model for outpatient clinics is to eliminate seven types of losses in the organization of health care services using lean management methods and tools (Fig. 1).

Fig. 1. Lean management method applied to the workflow in primary health care



Source: [Presentation about the implementation of the federal project Development of the Service Delivery System for Primary Health Care.] *(9)*

The workflow and time required for issuing a prescription was an example of inefficiency. The process of issuing a prescription in a clinic (from the entry to exit, including visiting the registry, examination by a doctor and receiving a prescription) initially took between 2.5 and 3.2 hours, contributing to patient dissatisfaction and wasting health care professionals' precious time. The process was simplified through lean management techniques, eliminating bottlenecks. The process was reduced to 38 minutes by cutting patients' waiting time in the reception, doctor's office and prescription-writing office and making information about medicines available online *(10)*.

The description of the new model for outpatient clinics is set out in the methodological recommendations *(11)*, including 22 criteria for a patient-oriented outpatient clinic distributed over nine blocks (Fig. 2).

Fig. 2. Building blocks of the new model for outpatient clinics

Criteria for the new model of health care organizations providing primary health care were developed initially.
Achievement is based on working with the outpatient clinic as an integral system with unified approaches to organizing health care.

9 BLOCKS reflect the main activities of the outpatient clinic

22 CRITERIA: objectivity, measurability and the possibility of improving the results achieved

1 Patient flows	**2 Quality of the space**	**3 Inventory management**
4 Standardization of processes	**5 Quality of health care**	**6 Availability of health care**
7 Employee involvement in improving processes	**8 Formation of the management system**	**9 Efficiency of equipment use**
Methodological recommendations: implementation of improvement projects using lean production methods in a health-care organization providing primary health care	Methodological guide: effective navigation system in a health-care organization	Methodological recommendations (2nd ed.): a new model for a health-care organization providing primary health care

Source: Ministry of Health of the Russian Federation *(11)*.

Inefficiency was identified by mapping and standardizing all service processes in each specialized pilot outpatient clinic. Several projects were implemented to reduce waste and improve processes by optimizing remote appointments, redistributing and enhancing doctors' and nurses' roles, instituting paperless document management, routing patients based on the separation of patient flows (including for preventive services using navigation) and organizing ergonomic workplaces. Ultimately, these changes enabled the availability of health care services for patients to be increased and working conditions for staff to be improved.

The number of project participants had increased significantly by the end of 2019. More than 3300 outpatient clinics and outpatient clinic units (35%) began implementing the new model for outpatient clinics versus 5.2% in 2018 *(4)*.

As a result of the introduction of lean management methods, the share of timely virtual appointments with doctors reached 30%, and more than 50% of patient complaints were settled through pretrial orders by health insurance organizations *(5,12)*.

Management training for primary health care personnel

Project offices were created in all regions of the Russian Federation, with project leaders and teaching staff of leading medical universities trained for successful scaling-up of the new model for outpatient clinics. Based on the training, nine process factories were created to train medical and non-medical outpatient clinic staff at the district level on the basics of lean production. The methodological recommendations that were developed were posted on the website of the Ministry of Health of the Russian Federation and sent to the regions *(10,11)*. Health-care staff were trained and thereafter were involved actively in the process of transforming outpatient clinics.

Giving priority to prevention

The Government of the Russian Federation announced the implementation of the all-Russian health examination of the adult population, based on a nationwide system of annual preventive examinations *(13)*. This combines the legacy of the Semashko model of prevention with contemporary international experiences of cancer screening and cardiometabolic disease assessment, including reviews of key risk factors for the four noncommunicable diseases in high-risk populations. Applying lean technologies enabled increased efficiency within organizations and allowed patients to undergo all necessary examinations and analysis in one day, enhancing convenience for service users. Patients were also seen in the evenings and at weekends to increase access to preventive measures in outpatient clinics. Insurance agents from private health insurance organizations, which work in partnership with territorial mandatory health insurance funds, participated actively in the process of informing patients about the opportunity to undergo screening tests through, for example, text message notification; more than 45% of the population was reached through such methods in 2019 *(5, 12)*.

All preventive and primary care services are covered by the programme of state guarantees for providing health care services for citizens free of charge, which is approved annually by the Government and provided through mandatory health insurance *(14)*. Population coverage with preventive examinations increased from 40% in 2018 to 47% in 2019 and amounted to 69.3 million people in one year.

THE ROLE OF PRIMARY HEALTH CARE IN THE RESPONSE TO THE PANDEMIC

By 2019, the necessary conditions for ensuring the effective operation of primary health care in the context of the pandemic were implemented in the Russian Federation, ranging from prevention to providing seamless health care services.

In the early stages of the spread of COVID-19, infectious disease hospitals and redeveloped hospitals played a leading role in services delivery. Over time, primary health care has been able to take the lead through a dual-track services delivery model.

The response of primary health care could be strengthened because of the emergence of specific therapy and prevention tools for COVID-19, universal access to testing, ambulatory services based on developed recommendations *(15,16)*, management of patients' medicines that were free of charge and the beginning of mass vaccination. Only patients with a moderate or severe disease trajectory required hospital care.

Towards dual-track primary health care services

Primary health care services were reorganized on a dual track to reduce the burden on hospitals of people with COVID-19 while maintaining essential health services for other diseases such as noncommunicable diseases, tuberculosis and HIV and maintaining services for children.

Pandemic response

A big role was assigned to the organization of outpatient care for people with COVID-19 *(17,18)*. In accordance with the epidemiological requirements, primary health care providers for people with symptoms of acute respiratory viral infections, community-acquired pneumonia, influenza and COVID-19 were identified. An algorithm of actions was developed and implemented for health care workers providing health services in ambulatory conditions, including in patients' homes, to patients with acute respiratory viral infections, flu and community-acquired pneumonia. The services provided include testing, advice on duration of isolation, tracing of contacts and applying the principles of triage.

Essential health services

At the onset of the COVID-19 pandemic, the Government decided to provide all necessary health care within the framework of the state guarantee programme for health care free of charge for all citizens with cardiovascular and cancer diseases, diabetes and those receiving haemodialysis *(19)*. To reduce possible contacts among patients and reduce the burden on the health care system during the first pandemic peak, preventive measures, including preventive health examinations, were suspended *(20)*. Understanding of the correlation between chronic diseases and severe complications in the trajectory of COVID-19 illness has caused rethinking on the planned work with people with noncommunicable diseases. Active work to restore preventive measures in primary health care and health care for people with comorbidities, adapted to the epidemiological situation, began in mid-2020. Methodological recommendations for organizing preventive health examinations under the conditions of continuing risk posed by the spread of COVID-19, considering already proven lean technology, were developed to help regions *(21)*. Outpatient clinics gradually returned to their normal work but under new conditions. This was the beginning of a dual-track approach to organizing health care in outpatient settings.

Lean management methods help to manage increased demand during the pandemic

The lean management methods introduced before the pandemic helped to further optimize patient flows and increase efficiency to maintain the feasibility of the dual-track response to the increased demand for health care services. The pandemic accelerated the implementation of the new model for outpatient clinics to optimize primary health care services and increase their responsiveness.

Waiting times in outpatient clinics were reduced and the contact of people with COVID-19 with those uninfected was minimized by clearly separating their flows, optimizing and standardizing the main processes of providing health care services and introducing remote appointments and specific infection control measures by an individual institution.

Lean methods helped to streamline processes in several areas without the need for face-to-face contact, simultaneously improving efficiency, reducing the likelihood of infection and improving patient satisfaction. These included:

- making appointments without face-to-face contact
- admitting scheduled patients strictly by appointment
- issuing sick-leave certificates without requiring face-to-face visits
- prescribing medicines electronically and delivering them to patients' homes
- settling patient complaints.

Digital health applications and services were deployed in almost all regions of the Russian Federation based on existing electronic systems in the regions. Electronic appointments were feasible through the state services portal and electronic patient cards. Telemedicine was further developed, and the Ministry of Health of the Russian Federation approved regulations for organizing and providing consultations with specialized health care services using telemedicine technologies patients can operate at home *(17)*. Remote home-monitoring systems for people with noncommunicable diseases were also implemented in some regions.

Expanded training of health care personnel

From the first days of the pandemic, the continuing education portal of the Ministry of Health began to function. Federal education organizations conducted short-term additional professional programmes and remote seminars on the peculiarities of the trajectory, diagnosis and treatment of COVID-19 infection.

Based on WHO recommendations, temporary methodological recommendations on preventing, diagnosing and treating COVID-19 were developed *(18)*. They contain clear algorithms for the diagnosis of infection, interpretation of test results and specific treatment regimens for patients with COVID-19 treated at outpatient health facilities.

Training in the tools and methods of lean production continued for health care professionals and other workers of the nine process factories.

EARLY ACHIEVEMENTS AND SUSTAINABILITY PROSPECTS

National implementation of the new model for outpatient clinics continued against the background of the pandemic, which enabled primary health care services to be optimized and responsiveness increased. By the end of 2020, the number of outpatient clinics implementing the principles of lean production had significantly increased in all 85 regions of the Russian Federation to more than 6000 (73%) *(2)*.

Reducing waiting times in outpatient clinics and minimizing contacts between infected and uninfected patients were achieved by managing the intersection of patient flows. In the first quarter of 2021, more than 4000 health care organizations separated patient flows to minimize intersections between patients, which is 50% more than in the same period in 2020. Since early 2020, the number of outpatient clinics in which the proportion of electronic appointments made through the registry of a health care organization exceeds 50% has doubled to 5000. Timely admission of scheduled patients strictly by appointment has been implemented by 4000 outpatient clinics, which is 150% more than in 2020.

About 24% of the population (34.7 million people) underwent preventive examinations in 2020 *(2)*. Outpatient clinics that conducted preventive and health examinations in the shortest possible times with a minimum number of visits increased by more than 50%, from 1300 to 2300. The focus on digital services, remote monitoring and telemedicine has enabled outpatient clinics to provide health care services at home, avoiding face-to-face meetings.

The pandemic has highlighted the critical role of primary health care in responding to the unfavorable epidemiological situation while maintaining essential health services. Consolidating the new model for outpatient clinics is a priority for the health authorities. The national priority project Health System will continue to be implemented and will be updated to reflect new contextual requirements and regional programmes for modernizing primary care services. The further development of the outpatient clinic model draws on the knowledge and experience obtained during the COVID-19 crisis and focuses on the dual-track approach based on the digital transformation of the health care system. The model of care conveyed by the new model for outpatient clinics will be reinforced by new approaches to preventive measures, health examinations, vaccination and rehabilitation in primary care. Special attention is being paid to developing a new concept of providing health care for infectious diseases, including managing epidemics.

"THE LEAN MANAGEMENT METHODS INTRODUCED BEFORE THE PANDEMIC HELPED TO FURTHER OPTIMIZE PATIENT FLOWS AND INCREASE EFFICIENCY TO MAINTAIN THE FEASIBILITY OF THE DUAL-TRACK RESPONSE TO THE INCREASED DEMAND FOR HEALTH-CARE SERVICES. THE PANDEMIC ACCELERATED THE IMPLEMENTATION OF THE NEW MODEL FOR OUTPATIENT CLINICS TO OPTIMIZE PRIMARY HEALTH-CARE SERVICES AND INCREASE THEIR RESPONSIVENESS."

LESSONS LEARNED

1. The COVID-19 pandemic accelerated the transformation of primary care services, guided by previously defined strategic goals and ongoing actions. The Russian Federation can implement a dual-track approach to ensure equal access to planned prevention services and care and guarantee the full range of necessary services in the emergency conditions of the COVID-19 pandemic to all citizens.

2. The pandemic has proved the importance of joint action and political leadership for developing unified strategic plans to achieve universal health coverage. Involving every single outpatient clinic, every paramedic and obstetric centre, every obstetric centre, every health professional and every citizen to improve health care services and increase their accessibility has proved valuable to the process of ensuring health for all.

3. Digital health services, remote monitoring and telemedicine has helped to protect patients and professionals while ensuring access to care. Using lean technology in combination with digital services is key to providing care to patients in the pandemic.

4. The status of health care professionals needs to be improved, including investing resources. The pandemic has demonstrated that continually training primary health care personnel should be a priority and that enhancing professionals' prestige is critical.

5. A new model of outpatient clinic services delivery has demonstrated responsiveness to people's needs and more efficient use of resources, thanks to applying lean management techniques. The process has highlighted the reliability of the foundation created in outpatient clinics through the project for rapidly transforming health care services for emergency conditions and the orientation towards preventive activities. The experience of the Russian Federation demonstrates that good managerial practices are critical not only to improve efficiency but also to minimize the probability of hospital-acquired infections and to respond better to patients' expectations.

ACKNOWLEDGEMENTS

The authors thank the following people for sharing their insights and resources to inform the drafting the report and for reviewing the document:

Michael Murashko (Minister of Health of the Russian Federation)

Evgeny Kamkin (Deputy Minister of Health of the Russian Federation)

Melitta Jakab (Head of Office, WHO European Centre for Primary Health Care)

Melita Vujnovic (WHO Representative and Head of the WHO Country Office, Russian Federation)

Ekaterina Karakulina (Director, Department of Organization of Medical Care and Sanatorium-resort Business, Ministry of Health of the Russian Federation)

Sergey Muraviev (Director, Department of International Cooperation and Public Relations, Ministry of Health of the Russian Federation)

Oleg Sonin (Deputy Director, Department of International Cooperation and Public Relations, Ministry of Health of the Russian Federation)

Irina Hodyreva (Head of Project Office on Implementation of the Federal Project Development of the Service Delivery System for Primary Health Care)

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