Using Targets to Reduce Waiting Times for Elective Care: What Can We Learn from the Russian Experience?

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**ABSTRACT**

This article explores the potential for maximum waiting times targets to improve access to healthcare in a country with limited financial resources. The study combines policy analysis, off-the-record communications, face-to-face interviews, public opinion surveys and open access patient complaints to create a rich picture of how waiting time targets are monitored and implemented in theory and practice. The study found that most waiting time targets in the Russian Federation are unrealistically low, while institutional and operational arrangements for their implementation have not been built in most regions. Estimates of actual waiting times are fragmented and unreliable. The lack of meaningful regulation and monitoring encourages opportunistic behavior among healthcare providers to meet the targets while there is growing uncertainty among patients. Maximum waiting times targets alone are insufficient to reduce excessive waiting times. Successful implementation relies on robust data systems and standardized measurements for waiting times as well as meaningful regulation and monitoring.

**Introduction**

Excessive waiting times for elective services is an important health policy issue.\textsuperscript{1–3} Where the promise to universal access to services meets a government’s need to control costs, waiting lists manage demand through rationing.\textsuperscript{2} To address this, many countries have established maximum waiting times targets.\textsuperscript{1–5} Such targets are a quantitative measure of a state guarantee of access to care: the citizen is entitled to receive care within a specified timeframe, and the government guarantees implementation of this entitlement.\textsuperscript{2} The expectation is that targets to reduce waiting times will improve access to healthcare.\textsuperscript{4,5}

Evidence of the successes and failures of waiting times targets is fragmented and the number of studies is limited, but they are only effective when enforced.\textsuperscript{2,3,5,6} Enforcement relates to penalties for the breach of targets in addition to supply-side and demand-side policies to increase capacity of health providers and promote competition. Targets need to be challenging, but also realistic—their usefulness is questionable if they cannot be met.\textsuperscript{7} Institutional and operational arrangements for the implementation of targets are equally important. If the capacity of the health system is inadequate and effective monitoring of actual waiting times does not exist, then the state guarantees become merely declarative. Some countries introduced waiting times guarantees but failed to meet them; for example, these policies were dropped when they proved unsuccessful in Sweden and Norway in the 1990s.\textsuperscript{2,8}

This option is particularly relevant for post-communist countries with a tradition of healthcare underfunding. Long waiting times are often a burning issue in these countries, therefore governments seek ways to reduce them. The Russian Federation has followed this line. It has a tradition of universal health coverage, with constitutional entitlement to free care for all citizens. A social health insurance (SHI) scheme was introduced in 1994 to replace the previous Soviet Semashko funding model. Federal and regional (territorial) SHI funds accumulate and pool earmarked contributions, while both SHI funds and health insurers (medical insurance organizations) purchase care. Private providers are involved in the provision of free care, but their input does not exceed 3–4% of the cost of medical benefits. State-owned providers predominate.\textsuperscript{9} However, the new health funding model did not mitigate historical underfunding of the health sector. Public health expenditures have not exceeded 3.5% of GDP and the country faces a serious problem of healthcare
rationing—both explicit and implicit. Postponing elective care is a common form of rationing. To cope with excessive waits, the federal government has introduced a maximum waiting times guarantee and launched a new waiting times targets policy.

In this paper we examine not just the waiting time targets for elective care in the Russian Federation, but also how targets are monitored and how they are implemented in practice. This is done to address the core research question: Do waiting time targets reduce long waiting times and improve access to elective care?

Methods and Data
Waiting times targets and requirements for their monitoring were found by accessing all the regulatory documents on the subject issued by the Federal Ministry of Health and the Federal Social Health Insurance (SHI) Fund. The review was comprehensive rather than selective to get a full picture of what the targets and requirements were. However, to understand how they are implemented and monitored in practice we also conducted expert interviews at different levels of the system and compared these findings with a range of data sources that explored the patient perspective. By doing this we sought to explore the gap between what happens on paper and what happens in practice—the implementation gap.6,11

The actual data on the length of waiting times are only available at the regional level and had to be collated by reviewing the annual reports of the health authorities for each region. This information was triangulated using open access facility-level waiting time estimates. These were for two cities—Moscow, the capital, and Voronezh, an average income, mostly urban region in Central Russia. For information on the monitoring of waiting times we collated all the data available online for each Russian regional health authority and each corresponding Territorial SHI Fund. We were particularly interested in Kemerovo region, an average income, mostly urban region in Western Siberia, where new approaches to monitoring had been tested. This was supplemented by off-the-record interviews with managers and IT specialists working at the regional level and officials working in federal institutions.

To understand how waiting times guarantees work in practice, we conducted face-to-face interviews with 20 hospital managers and physicians in Moscow city and Voronezh region, who were identified by snowballing contacts through official channels. The main interview topics were: “Which body monitors waiting times in your region and your hospital?”; “Are the monitoring requirements actually met?”; “What is the starting point for measuring waiting times?”; “What is your estimate of the actual waiting times?” These interviews were also anonymized, but respondents did not deviate from the official view. The role of health insurers in the monitoring and management of waiting times was clarified through interviews with the high-level managers of the two biggest Russian health insurance companies based in Moscow, who were approached directly.

The interview data were also compared against the results of large-scale national public opinion surveys conducted by major polling companies and we accessed popular online open-access discussion forums to explore patient experience narratives around the implementation of waiting time targets.

No single aspect of the research would be sufficiently robust on its own, but the combination of off-the-record communications, face-to-face interviews, public opinion surveys, web forum and policy analysis create a rich picture of how waiting time targets should be monitored and implemented and how this is achieved in practice.

Findings
The findings from these combined sources are presented below in three sections. First is a description of Russian waiting time targets based on the policy analysis. Second outlines the theory and practice of monitoring waiting times, and lastly the reality of waiting times is explored by examining the patient perspective.

Russian Waiting Time Targets
Waiting time targets are covered under the Federal Programme of State Guarantees of Free Healthcare (the Programme). Since 2014, the Programme has set waiting times targets for elective medical care: 24 hours for an appointment with a primary care doctor, 14 days for an outpatient specialist appointment, 14 days for instrumental diagnostics and lab tests, 30 days for more expensive tests (computer tomography, MRI scans), 30 days for hospital admission.12 In 2017, a 14-day target for oncological care was added. Referral is the starting point for measuring waiting times, but the level of referral is not specified. It might be a referral from primary care or after consultation with a hospital doctor who makes the decision to treat. For oncological care, the starting point is the date when cancer is diagnosed.

Due to the limited financial resources in the health system, the Programme specifies a special waiting list for particular interventions (hip replacement, knee replacement, heart bypass surgery, etc.) which do not have specific targets, so those listed above do not apply. As most of these procedures are provided in federal clinics
Among these six regions, the most promising example was Kemerovo region in Western Siberia, where a centralized regional information system with a unified pattern of waiting time measurement has been established, covering 75% of regional health providers. Rules determined at the regional level make the starting point for waiting times the referral from primary care. A physician chooses a hospital for admission using the waiting time data, agrees it with the patient and then clicks to “put on the waiting list and save.” There is a requirement that the time of the referral and the time of putting a patient on the waiting list should be the same. The hospital worker in charge of admissions management, looks at the referral and fixes the date of admission. The referring physician then can keep track of what happens with the referral.

The information system in Kemerovo collects information on referrals for outpatient appointments, the actual number of admissions, and the number of canceled admissions (mostly for medical reasons). The proportion of patients receiving inpatient care within the guaranteed time is estimated for each hospital, as is the estimated average waiting time. This information is open to patients, who can easily track their waiting list progress. The information system also collects data on a vacant bed capacity across communities. This means patients can be reallocated between hospitals. In this way, waiting time monitoring is used as an instrument for hospital admissions management.

Waiting times for “high technology medical interventions” are monitored through a centralized information system with clear waiting list management for individual patients. The federal Ministry of Health has issued a special requirement for the regional health authorities to measure the average waiting time and make the estimates public in annual regional health reports. However, our research found that only 7% provide this data at all (Table 1).

The data available vary greatly between regions but are inconsistent with the general economic level of these six regions (for example, the Jewish Autonomous Region and Republic of Chechnya have the lowest waiting times but are relatively poorly resourced regions). The data also differ substantially for specific interventions (30 to 180 days) but the averages are likely to be wildly underestimated. Additional information collected on the websites of individual tertiary care facilities found considerably longer waiting times. For example, the Saint-Petersburg Research Institute of Ear, Throat, Nose and Speech honestly reported that their waiting list is very long and patients have to wait from 9 months to 3 years for surgery. The progress of the waiting list
for this type of care is therefore poorly tracked by the centralized information system and is not monitored by health authorities.

All the hospital managers and doctors we interviewed knew about the 30 days target for hospital admission and saw it as easy to meet. The most common estimate for waiting times was that “admission is a matter of a few days.” However, hospital doctors do not see the ‘iceberg’ of waiting time below the water line—waiting for outpatient specialist consultations and tests in polyclinics and hospitals. The country has a multi-level system of service delivery with local facilities in small rural and urban areas, city, regional and federal hospitals in big cities. If the movement of patients through these levels is not tracked, only measuring the final step makes the waiting time estimates meaningless.

Official estimates of outpatient care waiting times were found also to be subject to adjustment to fit the targets. Multi-specialty polyclinics as major providers of outpatient care are well equipped to track the referrals for specialist appointments and tests through their electronic booking systems. However, we identified substantial evidence that the actual waiting times are being falsified as the official start date can be manipulated. People can make an appointment with a specialist only 14 days before the expected date of consultation (this is the target) but cannot do it 15 or more days before. This way of making appointments minimizes the risk of complaints about targets not being met, because they are always met. The electronic booking systems are ‘tuned’ to meet the targets rather than to create a waiting list and estimate the actual waiting time.

An example from the queries section of a health authority website demonstrates this clearly:

Patient: It is impossible to make an appointment for the test. The electronic system says “No appointments for the nearest days.” I see this every day for more than two weeks.

Civil servant: “According to the recommendation of the regional health authority, appointments with specialists are open for the time two weeks ahead, starting from the current date. It may happen that all specialists are busy. The appointment for the new time intervals is open every day after 7.30 am. The nearest date is June 26. You may sign up for July 10.”

Insurance companies are supposed to identify cases where waiting times have exceeded targets and report the numbers to Territorial SHI Funds. As waiting list data are not pooled, insurance companies collect data on individual patient complaints. Where these complaints are justified, providers must pay a fine for missing the target. However, all the insurance company managers we interviewed believed that this only serves to stimulate gaming of the waiting times system.

Official estimates of average waiting times in the Russian Federation and its regions are not available. Some regions provide fragmentary estimates; for example, Moscow city reported average waiting times in 2018: consultations of specialists—4 days, diagnostic CT and MRI tests—8 days, elective hospital admissions of therapeutic cases—6 days, surgical cases—7 days. But these estimates are based on the reports of selected hospitals rather than monitoring of the waiting times for all providers; in addition, they are not based on the date of referral, so are likely to be heavily underestimated.

Through our interviews with officials at the federal and regional level we confirmed that there is no additional information on waiting times except for what we collected in this study: “The desks of managers and officials are as empty as public reports.” This means such information is not available to inform policymaking or even for unofficial use.

The Patient Perspective on Waiting Times

It is usual for some rationing of expensive procedures to occur, and the use of waiting lists can be a more equitable way of managing excess demand for limited resources, but in the Russian Federation there is a generally lack of transparency around waiting list

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**Table 1. Estimates of the average waiting time for high technology medical care in some regions of the Russian Federation in 2011–2017, number of days.**

| Regions                      | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
|------------------------------|------|------|------|------|------|------|------|
| Arkhangelsk oblast           | 114  | 140  | 148  | 121  | n.a. | n.a. | n.a. |
| Vologda oblast               | n.a. | n.a. | n.a. | n.a. | 45   | 45   | 45   |
| Jewish autonomous region     | n.a. | n.a. | n.a. | n.a. | 30   | 30   | 30   |
| Omsk oblast                  | n.a. | n.a. | n.a. | n.a. | 60−180 | 30−180 | n.a. |
| Buryatia Republic            | 30−60| 30−60| 30−60| n.a. | n.a. | n.a. | n.a. |
| Republic of Chechnya         | n.a. | n.a. | n.a. | 53   | n.a. | n.a. | n.a. |

n.a.—data not available

Source: Annual reports of the regional health authorities to the Government of the Russian Federation on population health status and the organization of health care
progress and uncertainty regarding on-going waits. Complaints to regional health authorities demonstrate this:

The status of my case has been “under consideration” for over a year and a half. The hospital reports that the queue is unavailable and there is no opportunity to fix an expected date of admission. Please let me know how long I should wait. Can I be admitted by some other hospital, if my hospital is overburdened?

My mother was placed on the waiting list for knee replacement in December 2016. The physician said that we should wait for about a year. We called the information desk of the hospital in January 2018 and found out that our number in the queue was 194. Then we called in February and March, the number was the same—194. Please inform us if the waiting list is available and what is the actual progress of the queue.  

The major message we identified in the online complaints is that uncertainty is a problem. Patients understand that resources are limited, but do not understand why they are not told the actual waiting time. The uncertainty impacts their opportunity to look for the alternative providers in other parts of the country or in the private sector.

In mid-2016, two years after the Programme was introduced, a nationally representative opinion poll found that 43% of respondents stated that long waiting times are the major problem in healthcare. This was considered more important than the lack of modern medical equipment (reported by 37% of respondents), the short supply of physicians (29%) and their low salaries (21%). A separate survey found an even higher proportion of respondents (56%) reported long waiting times to be the major healthcare problem. A government survey in mid-2016 estimated the actual waiting times for primary care and diagnostic tests. 71% of respondents had to wait more than the target 24 hours to see a primary care physician; 22% of them waited more than 10 days. Also, 43% of respondents waited more than the target 14 days for routine diagnostic tests.

Discussion
Promising waiting times guarantees is a serious commitment of the government in any country, but particularly in those with limited financial resources for healthcare. The Russian Federation initiated this policy without any public discussion of its relevance and feasibility, but also without any baseline data. The waiting time targets set are lower than in countries with much more substantial health funding. For example, in England, the NHS Constitution established a maximum wait from general practitioner referral to treatment of 18 weeks in 2010. In the same year, Finland introduced a waiting time target of 3 days for primary care services, 3 weeks for outpatient specialists, 3 months for all types of diagnostics, and 6 months for the elective surgery since the moment of assessment. These targets were rooted in an analysis of the health system’s capacity and funding, and they were subject to broad consultation. Actual waiting times are monitored and compared against these targets. In England, their upward adjustment has not been ruled out, as waiting times have increased.

Apart from political declarations, the rationale for setting unrealistically low targets in the Russian Federation was the expectation that they would pressure providers into reducing waiting times. But this did not happen. With just declarative commitments, the first reaction of providers was to imitate the implementation of guarantees by using measurement procedures that ensure targets are met. The evidence supports Haining’s hypothesis that unrealistic targets may result in negative effects for health systems. We found they also increase the potential for gaming in the system: medical organizations want to meet the targets, so impede access to appointments with specialists and diagnostic tests. This also speaks to wider literature on how targets themselves encourage gaming as part of audit culture.

The degree to which it is possible to game the system varies across types of providers. It depends on the specific arrangements of waiting times monitoring and political power of providers. In the Russian context, hospitals have the most power to game with actual waiting times estimates, because the regulation makes them responsible for their evaluation. In a way, they “own” the waiting list, which determines the progress of patients and reports their estimates of the average waits to health authorities. Their political weight is sufficient to ensure that health authorities will not question these estimates. In other countries, the situation may be different. Mechanisms for patient empowerment and democratic accountability may preclude such gaming.

Paradoxically, therefore, health authorities in the Russian Federation must tolerate the opportunistic behavior of providers. Financial and administrative sanctions for not meeting targets, although theoretically possible, are not commonly used, because they might invite questions about the feasibility of the targets. There are no serious attempts to establish effective monitoring of waiting times in most of the regions and nation-wide. The available estimates of actual waits are fragmented and unreliable. There is no pressure on providers to make these estimates public. Being purposefully non-transparent, the system of waiting times management
incentivizes all providers to game with waiting times in order to avoid criticism. The balance of perverse incentives for all actors involved in the implementation of waiting time targets blocks the implementation of the initial objectives—to reduce waiting times. The results indicate that, overall, the current waiting times targets have not improved access to care in the Russian Federation and are not reducing excessive waiting times.

International evidence shows that setting maximum waiting time targets cannot be viewed as an isolated policy action. Siciliani et al.20, p.11 make the point that targets can be “only effective if enforced” through holding health providers to account for achieving the targets, or allowing patients to choose alternate health providers. But administrative and financial sanctions, used for example in the United Kingdom and Finland, are “difficult to sustain over a long time,” while consumer choice is inevitably based on actual waits data, therefore “waiting times need to be measured systematically.” The later OECD study states that waiting times guarantees are effective only when they are combined with supply-side and demand-side interventions.21 Also, a clear understanding of a starting point is needed together with a realistic estimate of the additional resources that the country is willing to invest in achieving these targets. Establishing a robust information system based on reliable data and definitions is a major pre-condition for the substantiation of these estimates and monitoring policy implementation.21

International experience demonstrates that waiting times guarantees can really work only when they: a) are realistic, b) have effective regulation and monitoring, c) have supporting policy activities, and d) have transparent accountability procedures. These conditions are particularly important when waiting time targets are introduced. Such targets can only serve as an instrument to pressure providers to improve their performance and decrease waiting times if they are meaningful.

The experience in better performing regions of the Russian Federation showed that the introduction of targets also needs to be backed by a monitoring system capable of collecting the right data in sufficient detail to measure compliance. The data gaps in the Russian context highlight the key features such a system requires: a) it should be centralized to allow a unified waiting list for all providers (in the region or the entire country); b) it should have a standard way of measuring waiting times; c) monitoring should be based on existing regional or national health information systems but specific to waiting list measurement and management; d) political commitment is needed to ensure universal data reporting by all providers; and e) the procedure for reporting waiting list progress and waiting times estimates should be explicit. Provider payment systems could be adjusted to make such data collection and monitoring a condition of reimbursement.

The international evidence demonstrates the importance of tracking the patient’s full journey through the health system. In Scotland, for example, 50% of the total time on the waiting list after the diagnosis was the time spent on the waiting list for a visit to outpatient specialists and the time between two waiting lists. It is also important for examining how any reductions are achieved, as there are potential incentives to game the system, as was found in England.22 In our study we found that in Kemerovo region, the online system automatically adds the patient to the waiting list on referral from primary care. This eliminates one opportunity to game the system by having different dates for referral and for being added to the list. Elsewhere, the patient is added to the waiting list once the referral is approved at a preadmission consultation with a hospital physician. Any inappropriate referrals are subtracted from the general waiting list, while the actual waiting time is measured from the primary care physician’s referral. This referral-to-treatment measurement reflects the actual waiting time for admission experienced by patients, which, as we found, is what really matters for them. Patients understand the need for waiting lists but knowing how long it will be and that they are being treated fairly is important.23 It is particularly important to determine how long a patient has already spent on the waiting list so that waiting lists can be managed and patients redistributed to idle capacity where appropriate.

Pooling waiting lists in the regional or inter-regional information systems is important for efficient utilization of existing hospital capacity. Our study concurs with this finding—centralized monitoring systems, where available, avoided the duplication of waiting lists with patients waiting on different lists concurrently, thereby making activity planning more accurate.

Pooling of information also encouraged patient choice: patients could access information on specific hospitals and choose to shift to a provider with a shorter waiting list. In St. Petersburg, for example, a centralized system of cataract surgery monitoring contributed to a reduction in waiting times for this procedure.24 However, the lack of federal regulation for waiting times monitoring means data pooling is not universal.

However, even in Kemerovo region, some hospitals have established their own waiting time monitoring systems and do not report their data to the regional information system. As their monitoring does not account for the entire patient pathway to admission, the average waiting time estimates are much shorter and usually meet the
federal target of 30 days. The regional information system tracked 90,000 hospital referrals in 2017 but only 58,000 were financed through the SHI system. This is because the biggest hospitals are not involved in the regional monitoring system; they adjust their average waiting time estimates so they always meet the target. The regional health authority does not question this practice, because it allows them to report that the targets were met.

The above constraints of managing long waits inevitably result in new ways of rationing care. There is reason to believe that rationing by waiting is no longer the main way of rationing in the Russian context. The referral system is increasingly based on the assumption that the actual waiting times targets are difficult to achieve, therefore other forms of rationing are being developed. Some clinicians do not refer because it is pointless given waiting times and some refer to providers that cannot be expected to deliver high quality care. Thus rationing by waiting is giving way to rationing by underprovision of care or by lowering the requirements for quality of care. Patients face a sort of lottery with unclear chances of winning or losing. The potential health gain of new rationing instruments remains unclear, but our hypothesis is that rationing by waiting remains the “least worst” option.

Conclusions

Establishing waiting times guarantees in the Russian Federation was an attempt to improve access to healthcare. However, this study shows that the institutional and operational arrangements for monitoring the associated targets are not in place. There is no clarity on the major actors responsible for monitoring—be they centralized information systems or hospitals themselves. There are also no clear rules and procedures for measuring waiting times. Estimates of actual waiting times are fragmented and unreliable and providers are not required to make them public. Most targets are unrealistic, thereby encouraging opportunistic behavior by health providers to meet them. The government tolerates gaming and inaccurate reporting of waiting times by hospitals. Some regions have started meaningful waiting times monitoring, but the coverage of providers remains limited. Therefore, this research shows that waiting times targets alone are insufficient for improving access to care. Policies to reduce waiting times can only work when they are realistic, rely on the effective monitoring and enforcement, have supporting policy activities, and are coupled with accountability procedures. Providing sufficient capacity exists, sustained efforts are still needed to ensure it is used well.

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Disclosure of Potential Conflicts of Interest

Authors report no conflicts of interest in this work.

Ethical approval

National Research University High School of Economics has a “Commission on the intra university surveys and ethical reviews of empirical research projects” https://www.hse.ru/org/hse/irb/. Projects under the basic research program do not require an ethical approval statement from this commission.

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