



# Medium-term adaptation of public health systems under the influence of the COVID-19 pandemic: challenges and proposals

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## Abstract

The research note examines some aspects of the medium-term adaptation of public health care systems to the COVID-19 pandemic. Economic consequences of the pandemic are likely to tighten the budget constraints in public healthcare, what will force policymakers to reallocate, rather increase financing; this reallocation should be done taking into consideration new disease and disability risk profile. Epidemiological uncertainty will additionally complicate the planning.

## Keywords

coronavirus, public health care, adaptation of health care systems, medium-term challenges

**JEL codes:** H51, I15, I18

The COVID-19 pandemic has caused the need for urgent adaptation manoeuvres in national public health care systems, along with constraints on economic and social activity. A return to “business as usual”, as it seems, should become a manageable process, not just a “switching off” the pandemic regime.

National public health care systems need, first, to focus on mitigating the negative impact of the decisions taken in the spring of 2020; second, to respond to medium-term public health care financing challenges that may arise from the quarantine-provoked economic downturn, and thirdly, to be prepared for subsequent waves of the pandemic. The latter is compounded by the fact that there is no reliable and complete information that enables predicting the incidence of SARS. Indicators which describe the behaviour of the virus and predict its ability to cause disease (Kissler et al. 2020), including the emergence and sustainability of acquired immunity, are still being specified; there are no reliable protocols for treat-

ing severe patients, nor are there medications with proven effectiveness, and the appearance of a vaccine is possible only in mid-2021.

Some of the challenges facing public health care system managers today are discussed in more detail below.

Firstly, the forced transfer of resources to fight the immediate threat to life, due to COVID-19, violated the protocols of receiving medical care for many patients, except for emergency cases. The authorities suspended the provision of non-emergency medical care, and for many patients it became more difficult to obtain the care that should be provided (for example, patients were referred to other assistance points). In future it will be needed to take measures to assess and compensate for the influence of these decisions on affected people's health.

Secondly, it is necessary to assess and compensate for the negative effect of quarantine restrictions imposed for the purpose of "smoothing the curve" on the physical and psychological conditions of citizens. A full assessment of this effect will require work that goes beyond the analysis of the growth of domestic violence incidents, alcohol and antidepressant sales, as well as divorce data.

Thirdly, according to some reports, the severe course of COVID-19 causes long-term health consequences for some survivors (including lesions of organs other than lungs), which should be addressed in future periods. Currently, many patients are discharged from hospitals and are considered to have recovered on the basis of negative coronavirus tests and improved basic symptoms of the disease.

Fourthly, public health care systems will have to assist national Governments to their utmost in preparing a quarantine restrictions exit plan, with a view to ensuring epidemiological security of such a process. It will be necessary to offer not only assessments of the security of withdrawal from quarantine restrictions of different industries, localities or groups of citizens, but also to develop recommendations to improve the safety of resumed activities (e.g. reduction of social distancing, fine-tuning of sanitary regulations).

Fifthly, since it is currently unknown whether long-term population immunity is possible and whether the spread of the virus is subject to seasonal factors, for Governments, together with the physicians it will be necessary to develop an arsenal of mechanisms to regulate economic activity taking into account the current epidemiological situation.

Sixthly, the likelihood of subsequent waves of the pandemic raises the question not only of the constant readiness of public health care systems for new mobilization, but also of a more sustainable medium-term period of redistribution of public health care system resources to control the disease. It is obvious that in the coming months it is possible to solve this problem exactly by redistribution, not by increasing funding.

In particular, on the basis of experience, it is necessary to formulate what can better prepare public health care systems for the next waves. Among the parameters directly controlled by health care systems, the forced KPI – the number of severe patients, with the need to be connected to ventilators and ECMO devices – is affected, in particular by (1) availability and accuracy of virus testing systems; (2) design of the selection process of candidates for testing; (3) ability of healthcare providers (mainly in the primary healthcare) to identify patients at risk and to take them under special control at the beginning of the pandemic; (4) condition of these patients due to chronic diseases; (5) ability to provide adequate medical care – including medication supply and testing – beyond hospitals; (6) ability to provide medical care within hospitals at different stages and severity of the course of diseases.

In the spring of 2020, the main efforts were aimed at expanding the “bottlenecks” of the system – testing and the adequate hospital beds capacity. During the current wave of the pandemic, health care systems were given *carte blanche*: the authorities imposed strict quarantine restrictions and allocated the necessary funding to fight COVID-19, and economic problems were given second priority. Shortfalls and constraints related primarily to the physical and human resources of health care systems (personal protective equipment, number and location of hospital beds with the necessary equipment and personnel, the ability to provide testing in the required amount and without additional risks for medical personnel and patients).

However, the countries affected by the epidemic will have to cope with its economic consequences. Quarantine is already accompanied by significant economic losses (the fall of China’s GDP in the first quarter of 2020 was 6.8%), which, in turn, are fraught with negative consequences for the state of citizens’ health (Janke et al. 2020). Business recovery will also not be instantaneous, and in many cases will be accompanied by restructuring of economic activity, intersectoral and intra-industry capital and labour flows. European politicians’ concerns (Draghi 2020) for job preservation seem justified amid a possible drop in demand for services, that assume close physical contact, and accelerated deployment of digital technologies by businesses.

It can be expected that the willingness of both the general public and business, and the authorities to re-introduction of broad restrictions on economic and social activity in the event of subsequent waves will be lower. The spring of 2020 quarantine was justified by the fact that the danger was discovered too late to use other measures, and in the future this argument will no longer be valid. Public health care systems are faced with the challenge of avoiding critical points in possible subsequent waves.

The response to the new waves of the epidemic must be formulated so that not only to protect citizens, but also to minimize economic losses and social tensions associated with limitations of citizens’ opportunities to work, to fully function in society, for which, probably, it is preferable to direct efforts to reduce the number of severe patients not so much by quarantine restrictions as individualized advance medical support for patients at risk. Repeating the lock-down of spring 2020 may have too significant political consequences to be considered by the authorities as a priority method of confronting the threat in the future.

Finally, the current crisis has brought the debate on the need to increase funding and redesign public health care systems. The crisis provoked by COVID-19 is perceived by many political actors precisely as a result of cuts in funding for health systems in the past, and in some countries this has been accompanied by an increase in inequality in access to health care, which also affected mortality from COVID-19.

Prospects for increasing funding for public health care systems in the future, however, will be severely constrained by national budget capabilities, which will be hit by both nationalization of economic losses (and increase of the level of state debt), and as a result of economic recession (and corresponding fall in budget revenues).

It is likely that additional funding for public health care systems is possible in some countries, however, measures aimed at reformatting the systems taking into account the actualized risks will be no less in demand. Their design should enhance the ability of national health care systems to rapidly mobilize resources to respond to emerging threats, with minimal loss of quantity and quality of other medical assistance aimed at maintaining the level of citizens’ health.

In the context of what is mentioned above, Russia has several peculiarities of the response to the pandemic that deserve to be mentioned. Firstly, it is relying mainly on the

public capacity of the health care system for both testing and treatment, with the possibility of involving the private sector. Private labs and clinics were extremely slowly permitted to organize testing on their own, and for weeks were unable to offer virus testing services to all who wished to do so. The potential of private clinics was also underutilised in continuing the provision of necessary types of medical care as per The Programme of State Guarantees of Free Medical Care Provision to Citizens (the main document specifying the volume of medical care provided to citizens in Russia). For a brief period (from 3 to 13 April) even a monopoly of one federal and several regional operators was introduced on the trade of personal protective equipment (Resolution of the Government of Russia of 03.04.2020 N 431; Resolution of the Government of Russia of 13.04.2020 N 500). Inclusion in a single management framework of all available health care facilities, including healthcare capacities of the private sector, as well as those under management of various ministries and state agencies, could increase the speed and effectiveness of the response to the epidemy, albeit accompanied by increased complexity of coordination.

Secondly, the pandemic has shown significant differences in the level of public health care in the regions. For example, Moscow was able to not only quickly repurpose several hospitals and polyclinics already equipped with CT scanners to help patients with COVID-19, but also promptly organized the construction of new capital capacities. Murmansk Oblast was able to organize the construction of field facilities equipped with X-ray as a tool for radiation diagnostics (Lobanova 2020). It can be assumed that the limitations of testing and provision of adequate health care will have a significant impact on the reported dynamics of the pandemic in the regions.

## Reference list

- Draghi M (2020) We face a war against coronavirus and must mobilise accordingly. Financial Times. <https://www.ft.com/content/c6d2de3a-6ec5-11ea-89df-41bea055720b> [Accessed on 22.04.2020]
- Janke K, Lee K, Propper C, Shields K, Shields MA (2020) The impact of COVID-19 on chronic health in the UK. VOX CEPR Policy Portal. Research-based policy analysis and commentary from leading economists <https://voxeu.org/article/impact-covid-19-chronic-health-uk> [Accessed on 22.04.2020]
- Kissler SM, Tedijanto C, Goldstein E, Grad YH, Lipsitch M (2020) Projecting the transmission dynamics of SARS-CoV-2 through the postpandemic period. Science. <https://doi.org/10.1126/science.abb5793>. [Accessed on 22.04.2020]
- Lobanova N (2020) The situation of coronavirus in Murmansk: in Mezhdurechye an air-mobile hospital is fully prepared and equipped to combat coronavirus. Komsomolskaya Pravda [Komsomol Truth] <https://www.murmansk.kp.ru/daily/27118/4199003/> [Accessed on 22.04.2020] (in Russian)
- Resolution of the Government of Russia of 03.04.2020 N 431. <https://www.garant.ru/hotlaw/federal/1343796/> [Accessed on 22.04.2020] (in Russian)
- Resolution of the Government of Russia of 13.04.2020 N 500. <https://www.garant.ru/products/ipo/prime/doc/73787943/> [Accessed on 22.04.2020] (in Russian)

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