

# Polish struggle against COVID-19

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Bartosz Arłukowicz is a Polish politician and paediatrician. Mr. Arłukowicz served as the Polish Minister for Health in the years 2011-2015, and since 2019, he has been Member of the European Parliament, where he is Chairman of the Special Committee on Beating Cancer. He is also Member of the Committee on Environment, Public Health and Food Safety.



## Abstract

The article describes and analyses the course of the COVID-19 pandemic in Poland. It takes us through the most important statistics relating to it as well as offers a short commentary on each of them. It introduces the social and political context in which the pandemic befell on the Polish society and shows the actions undertaken by the authorities on the healthcare system level as well as on the organisational level with regard to measures introduced to prevent the spread of the pandemic. Finally, the article summarises the efforts of the vaccination campaign in Poland and offers some analysis of its weak and strong aspects. This policy brief argues that the course of the COVID-19 pandemic in Poland has been exacerbated by certain political choices made by the government. It shows that the insufficient level of testing, chaotic dissemination of information concerning lockdowns, as well as the undermining of the seriousness of the SARS CoV-2 by the representatives of the state led to increased incidence and mortality in Poland. However, the rollout of the vaccination campaign offers some hope that there difficulties will be surmounted and that Polish society will finally go out of the pandemic and go back to normal life. The article concludes with some overarching thoughts on the need for preparedness for future public health crises that can occur in our lifetimes.

**Key words:** COVID-19 pandemic, healthcare organisation, resilience, and health policy

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## 1. Introduction

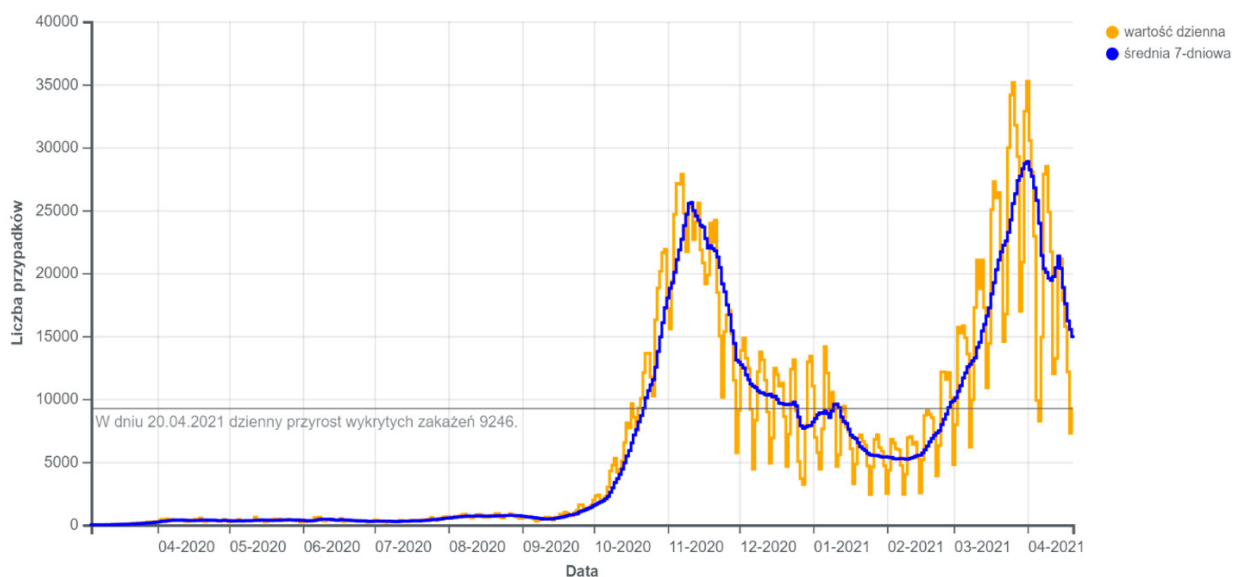
For more than a year now Polish society has been beset by COVID-19 pandemic. This struggle has seen, as in other European countries, waged with an enormous effort and sacrifice. On the one hand, the coronavirus pandemic, and especially its scale, surprised the whole world and it was hard to expect that even the most developed healthcare systems would be prepared for it. On the other hand, more than a year after the outbreak of a global pandemic we must begin to accumulate the acquired knowledge, analyse the errors and start planning, on this basis, both scientific and political actions for the future. The course of the pandemic did not seem to deviate from the European norm up to a certain point. Unfortunately, over time and for the various reasons that I will discuss in this contribution, the effectiveness of the actions taken primarily at the organisational and political level, was insufficient to protect public health. As in the case of many other countries, the fight against coronavirus pandemic in Poland was marked by delayed actions, chaos, inconsistency, lack of responsibility and courage.

In this article, I will first describe and analyse the course of the COVID-19 pandemic in Poland from its onset to mid-April 2021. In the next section, I will show the data on morbidity, mortality and the level of testing on the basis of available official data. It is crucial in order to be able to understand the scale and course of the pandemic and also to assess the legitimacy of the actions taken. In Chapter 3, I will describe the socio-political context specific to Poland during the pandemic, including the holding of the presidential elections in July 2020 and the government's behaviour during the campaign, as well as the mass protests caused by the government's actions in autumn. Thereafter, I will present the government's actions to combat the pandemic, including the adaptation of the healthcare system, the introduced restrictions and their effectiveness. Finally, I will describe the rollout of the vaccination campaign in Poland and I will try to shortly analyse its impact on the course of the pandemic in my country.

## 2. COVID-19 pandemic in Poland

In mid-April 2021, the counter of the coronavirus pandemic was in my country at the level of almost 2.7 million people infected since its beginning. During that time, over 62,000 people in Poland lost their lives due to COVID-19 (WHO 2021a). However, in addition to these frightening figures, the entire course of the pandemic must be looked at and analysed. The charts below, based on official data from the Ministry of Health, clearly show two infection peaks, each of them with a higher number of infections and deaths. The first wave of the pandemic spread over a relatively long time and had relatively small fluctuations in the number of infections. They began to slowly increase only around August 2020. Two peaks occurred in the periods October-November 2020, and March-April 2021. In the graph, the blue line represents the seven-day average infection rate and the yellow line represents the daily figure.

**Chart 1. Daily COVID-19 infections in Poland**

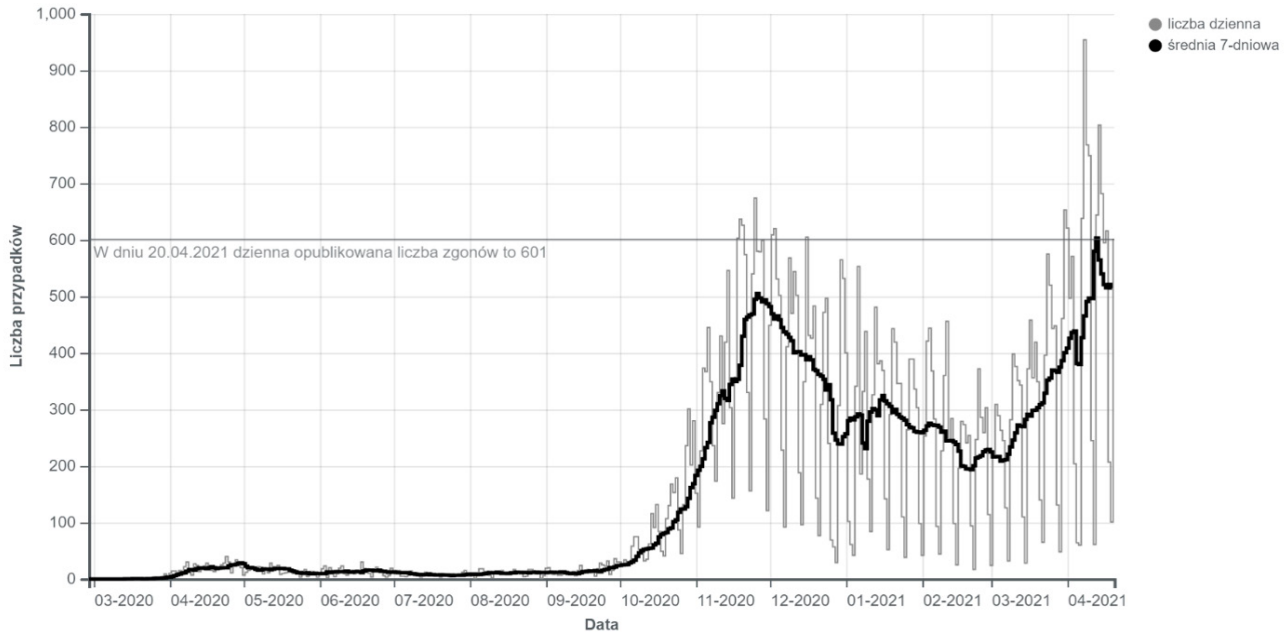


Explanations: wartosc dzienna = the daily figure; srednia 7-dniowa = the 7-day average; Liczba przypadkow = number of cases ; W dniu 20.04.2021 dzienny przyrost wykrytych zakazen 9246 = on 20.04.2021 the daily number of cases was 9246

Source: Koronawirus w Polsce 2021.

Death statistics follow infection numbers fairly closely, with a delay of between two to four weeks. In the graph below, the bold dark line represents the weekly average number of deaths and the thin line represents the daily figure. The daily record of deaths due to COVID-19 in Poland is 954, with the number of infections around 35,000. When discussing the number of deaths, it should be noted that during a pandemic, the case fatality rate (CFR) is at the level of 2.32% (WHO 2021b), which is the result around the global average. However, it is disturbing that the mortality rate in March and April 2021 was at a higher level, amounting to 3.3-4.0% (Statista 2021a), and in mid-April, Poland began to report the world's leading number of deaths per million inhabitants, as shown in Chart 3.

**Chart 2. COVID-19-related deaths in Poland**



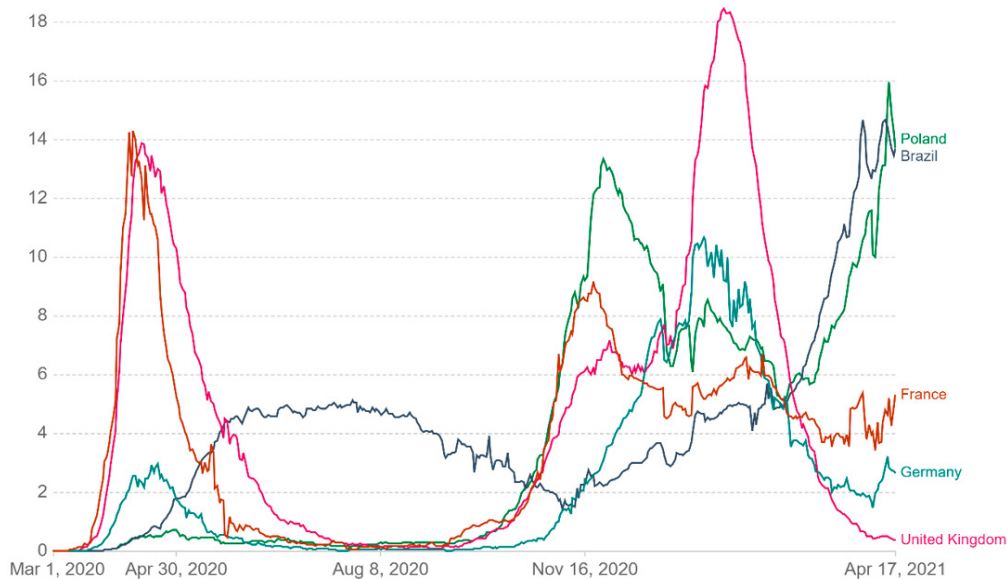
Explanations: liczba dzienna = the daily number; srednia 7-dniowa = the 7-day average; Liczba przypadkow = number of cases; W dniu 20.04.2021 dzienna opublikowana liczba zgonow to 601 = on 20.04.2021 the daily number of COVID-19 deaths was 601.

Source: Koronawirus w Polsce 2021.

**Chart 3. Daily new confirmed COVID-19 deaths per million people**

Daily new confirmed COVID-19 deaths per million people

Shown is the rolling 7-day average. Limited testing and challenges in the attribution of the cause of death means that the number of confirmed deaths may not be an accurate count of the true number of deaths from COVID-19.



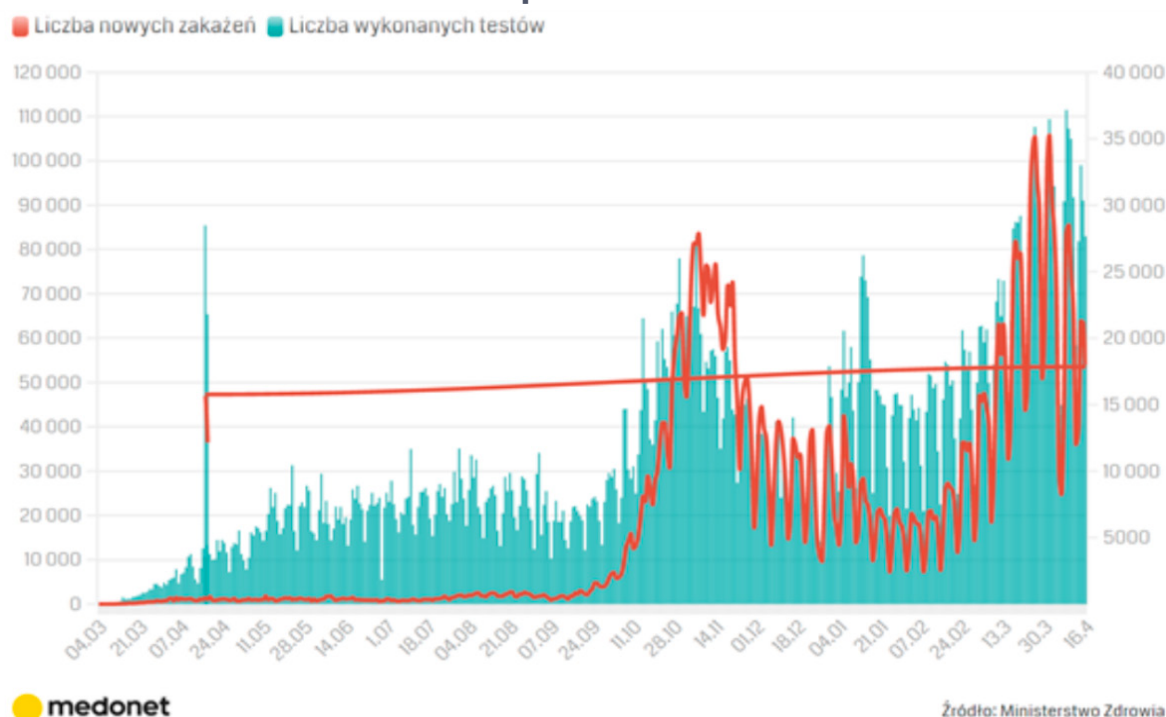
Source: Johns Hopkins University CSSE COVID-19 Data

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Source: Our World in Data 2021.

The third key statistic that is needed to properly analyse the course of the COVID-19 pandemic in Poland is the number of tests performed during it. In Poland, the government has repeatedly been criticised for the insufficient number of tests performed. More of them would allow for a better control and would give a fuller and more real picture of the actual state of the pandemic. The ratio of the number of tests showing a positive result to the daily total number of tests performed in Poland is around 20% (1 test in 5), while in Germany it is 5.9% (1 test in 17) and in the UK it is 3.23% (1 test out of 31) (WHO 2021b). In the chart below, the green data shows the number of tests performed (number on the left Y-axis) and the red number of infections at the same time (number on the right Y-axis).

**Chart 4. Number of COVID-19 test performed in Poland**



Explanations: Liczba nowych zakazen = number of new infections ; Liczba wykonanych testow = number of tests performed.

Source: Medonet 2021a.

The above data show a fairly typical pandemic pattern similar to other European countries, with two strong spikes in incidence and mortality. The first wave of the pandemic spread slowly across the country. As of August 2020, the numbers of both cases and deaths began to slowly rise to burst in October and November and then in March and April 2021. At the same time, the number of tests performed was definitely insufficient to effectively assess the state of the pandemic in Poland, especially during both the second and third waves. Although it seems that in April 2021 we are witnessing the declines and extinction of the third wave, special attention should be paid to the relatively increasing toll of coronavirus in the Polish population both during the first and second peak cases (see Chart 3). However, the case of Poland has several aspects that distinguish the course of the pandemic and its mortality from other countries both in Europe and around the world. One, described in this section, is the insufficient number of tests, which makes it impossible to estimate the reality. To this must be added the political and social factors that I will describe in the next part of this contribution.

### 3. Political and social context

The course of the COVID-19 pandemic in Poland coincided with several key political and social events that worsened the public health situation and may have contributed to the increase in the number of cases and deaths. In this part, I will describe the most important ones. The first will be the confusion related to the presidential elections in the period between May and July 2020. Second, speeches by high-ranking state officials, including the prime minister, dismissing the pandemic. Third, the ruling of the Constitutional Court on the right to abortion in the event of severe damage to the fetus. Finally,

confusion with hundreds of thousands of Poles living in Great Britain returning home over the Christmas season. All these events, peculiar only to Poland, had a significant impact on the course of the pandemic in that country.

According to the political calendar, presidential elections were planned for May 2020 in Poland, in which all adult citizens of the country can participate. As a result of the outbreak of the pandemic and the political turmoil, it was decided to postpone them to July. It was recognised that there was a good chance that the pandemic would then retreat or no longer threaten public safety and health. Briefly describing the situation, the leadership of the ruling party stated that the longer the pandemic lasted, the less chances would be for the re-election of the incumbent president, Andrzej Duda, who comes from the same party as the government. Contrary to many experts' opinions, the elections were held on June 28 (first round) and July 12 (second round). It was soon announced that July was the worst month since the start of the pandemic, as expected, with a record of 657 cases on July 31 (Medonet 2021b). Quite predictably, as can also be seen in the previous charts, August was the month of consecutive records in the number of COVID-19 cases in Poland (Medonet 2021c). However, the presidential election coincided with a second political element that negatively influenced the course of the pandemic.

During and after the election campaign, the ruling camp in Poland kept persuading citizens to take part in the elections. In order to encourage the electorate to do so, the highest state officials, including the Prime Minister Mateusz Morawiecki, began to state very openly that the COVID-19 pandemic should not be feared. The prime minister said, *inter alia*: "I am glad that we are less and less afraid of the coronavirus and the epidemic. This is a good approach, because COVID-19 is in retreat, we do not need to be afraid of it anymore. You have to go to the elections. ... Nothing happened during the first round, nothing will happen during the second – July 12th. Everyone, especially seniors, should not be afraid of anything, they can go to the elections. In summer, the flu viruses and the coronavirus are weaker, much weaker" (Interia wydarzenia 2021). The result of these actions was a record turnout in the presidential elections, which amounted to over 68% (National Electoral Commission 2020). These and many other words indicate that the actions of the rulers in Poland could be one of the reasons for the worsening epidemiological situation during the summer of 2020.

The third important event that could lead to a more severe course of the COVID-19 pandemic than in other countries was the ruling of the Constitutional Court on abortion, issued on October 22, 2020. The Tribunal's decision caused a great deal of controversy, as in practice it found the premise allowing the possibility of an abortion in the case of irreversible fatal defects to be contrary to the 1997 constitution. Many activists took to the streets of the largest Polish cities, as well as smaller towns, to protest against the restriction of the right to abortion. This was done despite the restrictions introduced by the government due to the pandemic. The public recognised that their freedoms were more important and that the constraints of the time of the public health crisis would not prevent it from manifesting its opposition to a decision restricting the right to abortion. It is worth mentioning that the Tribunal's decision was a response to a request from the ruling party's deputies. Record levels of cases were recorded in Poland throughout November, followed by a significant increase in the number of deaths due to COVID-19 in December. Naturally, coincidence does not mean causation, but it is hard not to get the impression that these important political and social events could have had a significant impact on the more severe course of the coronavirus pandemic in Poland than in other countries.

Finally, a fourth event that could have worsened the situation was the mass travel of Poles living in Great Britain to Poland for Christmas. By the end of 2020, it became clear that the virus was mutating and that the so-called British variant could be more dangerous and could spread more quickly from one host to another (CDC 2021). Knowing that a large part of the 815,000 Poles living in Great Britain would want to visit their families for Christmas, the government decided not to test this group of passengers (Statista 2021b). As one of the representatives of the authorities later explained, there was fear of enormous "hate" on the part of citizens (Polityka Zdrowotna 2021). In the context of the fact that as much as 80% of coronavirus infections during the third wave of the pandemic in Poland in March and April were caused by the British variant (Medonet 2021d), we have another element of the picture presenting the causes of the acute course of the pandemic in Poland.

It should, of course, be emphasised that these are not the only factors and that they do not fully explain the specific course of the public health crisis in Poland. However, due to the scale of these events, the time coincidence with periods of significant increases in morbidity and mortality due to COVID-19, it can be concluded that the described socio-political events contributed to many personal tragedies of Polish

citizens. However, since we know the course of the disease and social factors, we should analyse the government's reactions to the crisis, the moments of introducing lockdowns and restrictions on social and economic activity.

#### 4. Actions of the government

The responses of governments of countries affected by the COVID-19 pandemic varied across the globe, so their analysis is very interesting in terms of strengthening healthcare resilience in the context of future public health crises. In Poland, the government's fight against the pandemic was characterised by low transparency of actions taken, insufficient strengthening of hospitals and support of medical personnel, as well as the lack of coherence of actions, which would positively affect public confidence in the authorities. It is worth looking in particular at the fight against the pandemic at the systemic level, i.e. the health care organisation. Secondly, I will describe the cases of the chaotic introduction of a national lockdown. Finally, it is worth paying attention to the levels of hospitalisation of patients during a pandemic, the number of beds occupied and the number of ventilators in order to properly assess the possibilities of action during future crises. All these elements combine into a single whole with the socio-political activities described above. Poland is fighting the pandemic incoherently, chaotically, incorrectly distributing the emphasis between health protection and the need for a continuity of social, economic and political life.

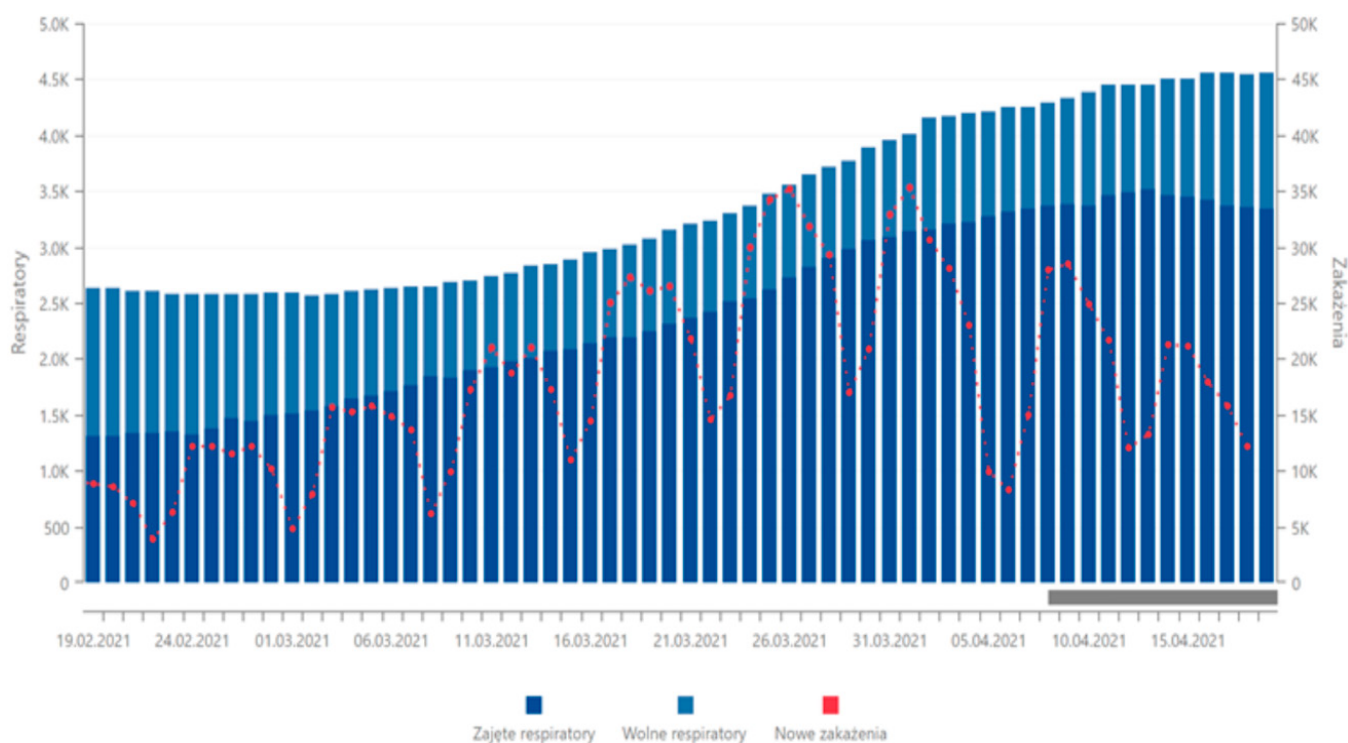
The beginning of the COVID-19 pandemic in Poland took place in March 2020. The government's response to the first, rapidly expanding infection outbreaks was similar to that of other European countries. On March 10, a national lockdown was introduced, all mass events, lectures at universities, schools and kindergartens were cancelled. At the level of the health care system, 19 infectious (so called "single-name") hospitals across the country were designated for COVID-19 patients (Government of Poland 2021a). At the same time, a minimum of 10% of the ventilator places in these hospitals have been assigned to beds for infected patients (ibid). The introduced system of single-name hospitals, which were to deal with patients infected with the coronavirus, was closed in the summer (Government of Poland 2021b). It was replaced by a three-stage hospital system, in which multidisciplinary units admitted patients with severe symptoms and required ventilators, and powiat (a Polish county) units admitted those who had the mild course of the disease and required only health monitoring. After another month, in October, an additional element was introduced to this puzzle, namely the co-ordinating hospitals. In each voivodeship (a Polish region), these units were designated to direct the COVID-19 patient movement in their region (NFZ 2021). The overlapping of all these systems, both the three-tier one aimed at patient segregation, and the co-ordination one that was to deal with this segregation, but lacking the tools for this in the form of patient data, caused organisational and information chaos. Unfortunately, many units have had to fight the pandemic on their own, or have co-ordinated patient movement among themselves based on available beds and staff. These organisational problems at the healthcare level coincided with the confusion over the rules for introducing restrictions.

The very initial response to the pandemic in Poland was similar to that of other governments. Restrictions were introduced regarding economic activity, movement and organisation of mass events (Government of Poland 2021c). At the end of April 2020, when the daily number of infected people seemed to be stable at the level of about 250 people, the process of easing the introduced restrictions began. However, a careful analysis of the situations in which the restrictions were introduced, and throughout the entire pandemic, shows a far-reaching inconsistency, which translated into social impatience and disregard for the restrictions. For example, on April 1, 2020, hairdressers were forced to close when the number of daily cases was 243, with 10 deaths from COVID-19. On May 18, 2020, it was decided to open hairdressing salons, when the daily number of cases was 356, and 11 deaths per day. Kindergartens and nurseries closed on March 12, 2020 with 20 cases and one fatality, and opened on May 6 with 309 cases and 17 deaths. The last example concerns the ski slopes, which were closed on December 17, with 11,950 cases and 431 deaths per day, and opened on February 5, when there were 6,054 cases, but 367 people died from COVID-19. During the pandemic, the Polish Government repeatedly faced a choice between protecting citizens' health and freedom of economic and social activity. However, this was not done according to clear criteria. This in turn had a negative impact on the observance of the restrictions by citizens. The next strategies of the government, which indicated the number of cases per day at which the restrictions would be introduced, were changed and bent by the government itself, depending on the public mood. Thus, we had to deal with the organisational chaos of the health service and information related to the

introduced restrictions. But how resilient was the health service at that time?

During the COVID-19 pandemic, the Polish health service was exposed to an overwhelming test of its efficiency and adaptation to crisis situations. Its employees, doctors, nurses and paramedics, who show extraordinary dedication, are responsible for the lack of a collapse of the system. There are several indicators that can be used to assess the resilience of the healthcare system, such as the level of occupation of the number of ventilators and hospital beds prepared for COVID-19 patients. We should remember that this is part of the total, because at the same time the health service must, albeit in a limited way, carry out other life-saving procedures, such as helping patients with heart attacks or strokes. Nevertheless, the graphs below clearly show that we are close to the system's capacity limit. The first graph shows the occupational level of ventilators intended for COVID-19 patients in the most severe period, which is now. The red line shows the number of infections (right Y axis), the dark blue boxes show occupied respirators, and the light blue boxes show free respirators (whose number is shown on the left Y axis).

**Chart 5. The level of occupied ventilators intended for COVID-19 patients (thousands)**



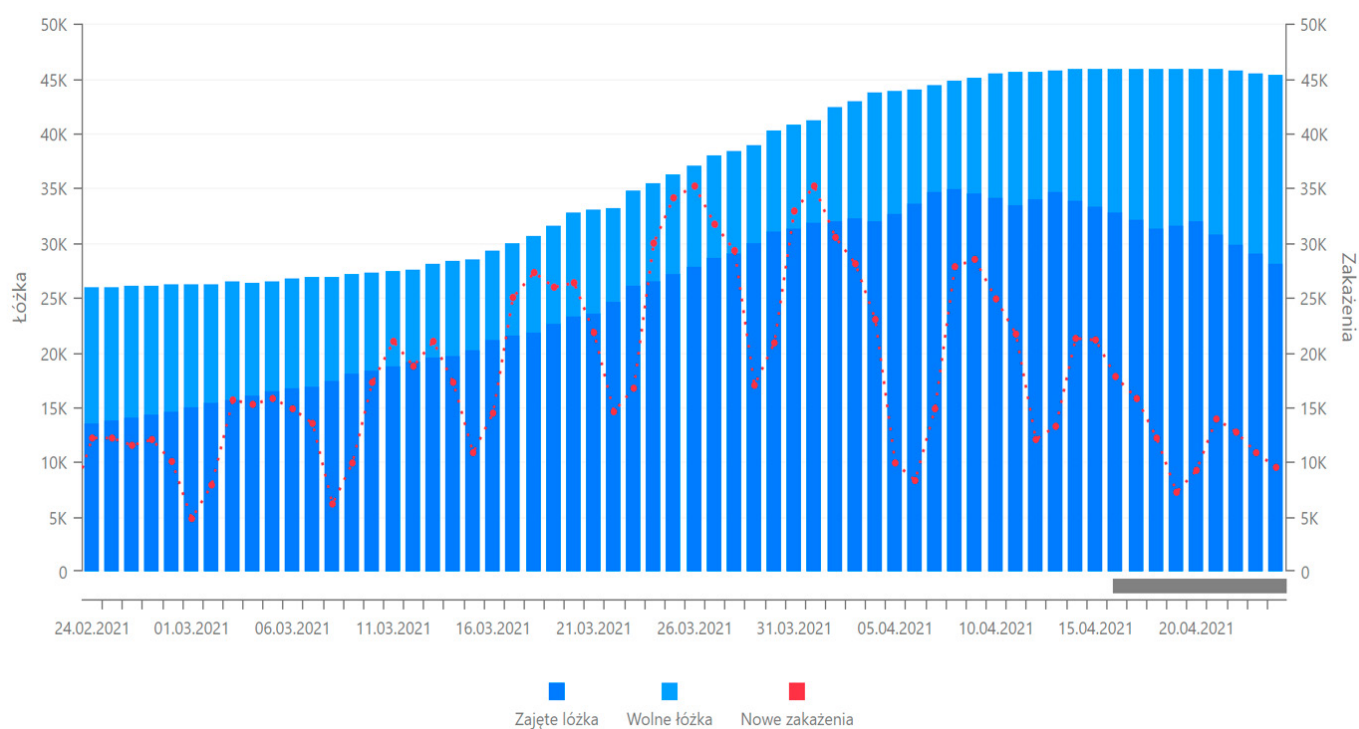
Explanations: Respiratory = number of respirators; Zakazenia = number of infections; Zajete respiratory = occupied respirators; Wolne respiratory = free respirators; Nowe zakazenia = number of new infections.

Source: Koronawirus w Polsce 2021.

The graph clearly shows the need to increase the number of ventilators from mid-March. Let us remember that these are devices taken away from other patients who require, inter alia, surgery. Thus, we can see the health system adjusting to the situation. The same applies to hospital beds intended for COVID-19 patients. Here, too, the system had to respond to demand, while limiting the possibility of helping other patients. In the chart below, the red line represents the daily number of infections (number indicated on the right-hand Y-axis), the dark blue boxes represent occupied beds, and the light blue boxes represent the vacant beds for COVID-19 patients (number of beds is indicated on the left-hand Y-axis).



**Chart 6. Occupied and free beds for COVID-19 patients in Poland (thousands)**



Explanations: Łózka = number of beds; Zakazenia = number of infections; Zajete lozka = occupied beds; Wolne lozka = vacant beds; Nowe zakazenia = number of new infections.

Source: Koronawirus w Polsce 2021.

However, the real picture of the impact that the Polish health service received in the COVID-19 pandemic is shown in the statistics of how much the number of other types of assistance, in the form of treatments or diagnostic procedures, has decreased. According to publicly available data, the following were recorded in Poland during the coronavirus pandemic:

- 70% fewer elective procedures performed by cardiac patients;
- 25% fewer hospitalisations of patients after stroke;
- 50% fewer visits to hospitals of diabetic patients;
- 20% fewer strokes detected;
- 30% fewer reports of women with suspected breast cancer;
- 90% less mammography and cytology; and
- 60% less testing for cervical cancer.

These data are of course in reference to previous years (RMF24 2021). Those patients who cannot receive the necessary medical care due to the pandemic are also its unplanned and unofficial victims. This should also be borne in mind in the context of work on strengthening post-COVID-19 healthcare systems.

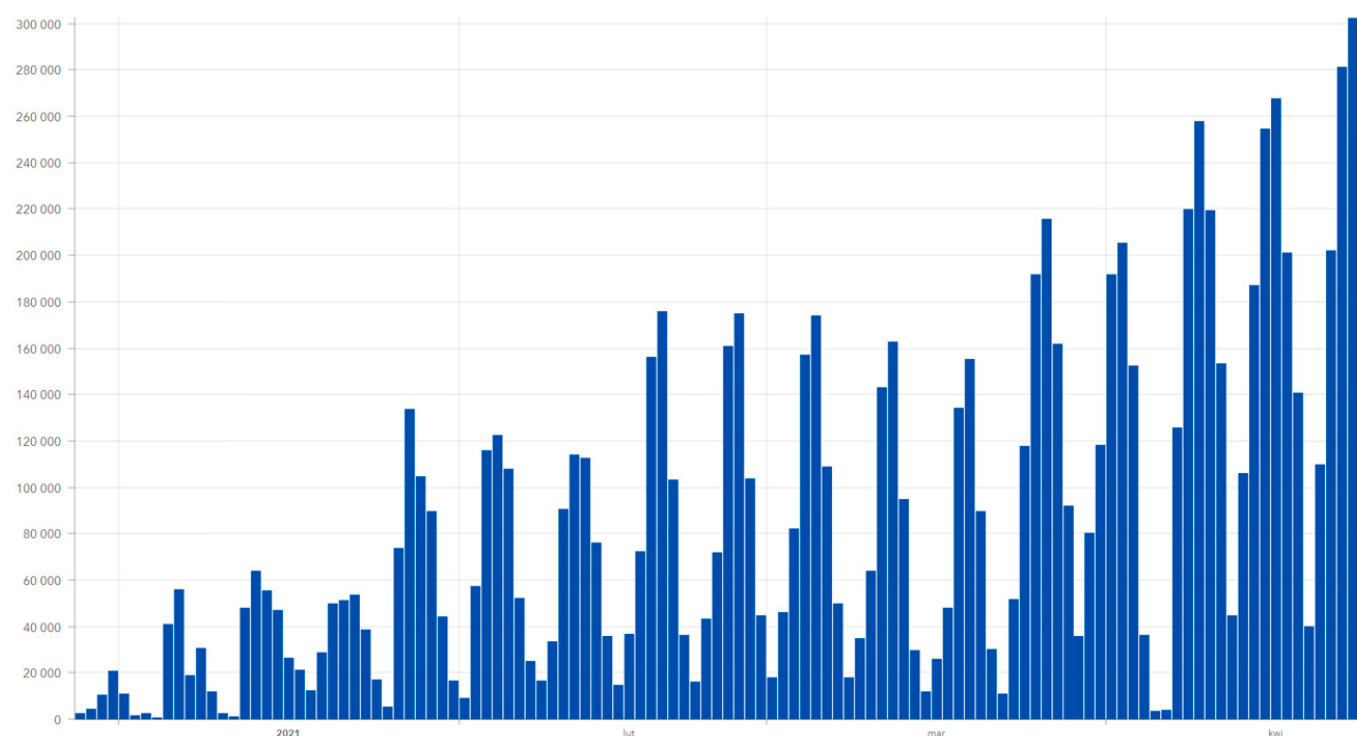
Thus, on the one hand, the healthcare system in Poland has shown flexibility and has adapted the number of ventilators and hospital beds to the requirements of the pandemic. However, the ability to fulfil other tasks has been lost, with long-term negative effects on the level of public health, for example on the level of early detection of cancers. Oncological patients, especially the future ones, are among the most disadvantaged in this situation. At the same time, the government has failed to deal with an appropriate, predictable and transparent system of introducing restrictions on social and economic activity. They also created an overly complicated system of organising health care during a pandemic, which in fact led to a situation in which hospitals and health centres operate alone, only partially implementing the ministerial plan. A chance to improve the situation is the vaccination system, which I will describe briefly in the next part of the article.

## 5. Vaccination campaign in Poland

In December 2020, Poland adopted the National Vaccination Programme that regulates the SARS-CoV-2 vaccination process (Government of Poland 2021d). According to it, and the procurement process supervised by the European Commission, Poland should be able to purchase over 62 million doses, of which 17 million is a single-dose Johnson & Johnson product. This is enough to vaccinate the entire adult population, but not enough to ensure continued vaccination in the short term. As many as 16 million doses ordered are Astra Zeneca's product, which, for reasons beyond the scope of this article, has the longest delivery delays, which exposes contracting countries to significant delays in the vaccination process. However, the most important aspects to consider are the organisation of the immunisation programme and the division of society into groups that should receive the vaccine first.

According to the provisions of the National Vaccination Strategy, the primary healthcare units, the so-called POZ, are dedicated vaccination sites. In addition to these facilities, the inoculation take place at mobile vaccination points, other medical facilities that meet the appropriate conditions, and hospitals. This process is free and voluntary in Poland. Qualification for vaccination is made by the primary care physician on the basis of a routine interview with the patient. Initially, patients were invited for vaccinations, but for some time, there has been a possibility of self-registration within the deadline for a given person, mainly on the basis of age. So, as a rule, the programme is quite coherent. However, two major problems surfaced soon after vaccination began. First, due to delays in drug supplies, the process was not as fast as expected by the government and the public. The chart below shows the daily number of vaccinations from January to April 2021. It clearly shows jumps in vaccination coverage, which most likely correlate with new drug supplies.

**Chart 7. Daily number of vaccination against COVID-19 in Poland**



Explanations: lut = February; mar = March; kwi = April.

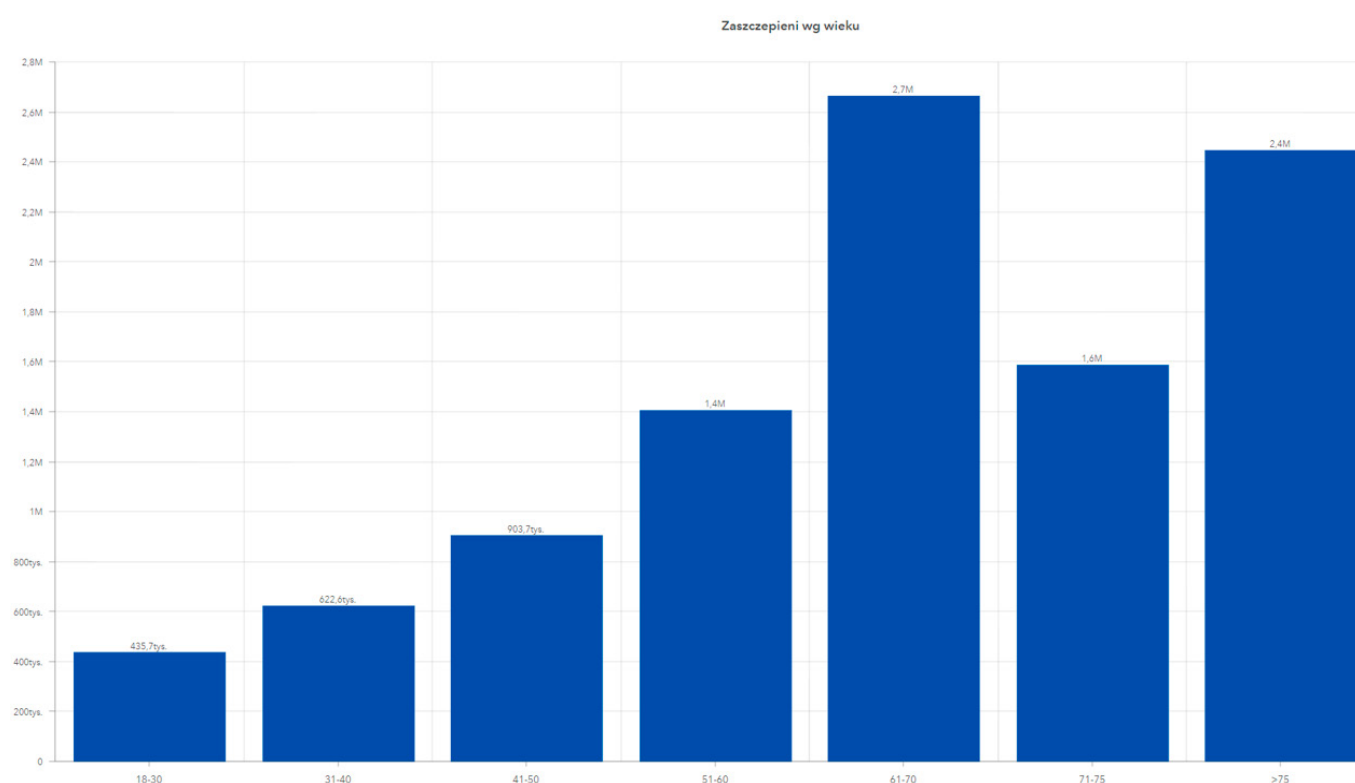
Source: Government of Poland 2021e.

The second problem can be called socio-organisational. A large part of the public who is registered for vaccination does not appear at the vaccination points within the prescribed period. Unfortunately, the government is poorly involved in the promotion of vaccination, and above all, it does not fight false, and often even absurd, information disseminated on the Internet. This means that at the end of almost every day, many points are left with unused doses. This results in informal routes of distribution between vaccination sites. This is not a problem in itself, however, it often means that points have to look for patients willing to take a dose of medication. This in turn means that the vaccine is often taken by people

who are not in the priority group who should get the vaccine. This brings us to a system of prioritising the groups that are vaccinated under the National Vaccination Programme.

The criteria the Programme takes into account in determining priority groups for vaccination against COVID-19 are risk of exposure to infection, risk of serious illness and death, risk of transmission, and socioeconomic risk (Government of Poland 2021d). This means that healthcare workers, the elderly in nursing homes, uniformed services, teachers and people over 60 were vaccinated first, in order of the oldest ones. The next stage includes people with chronic diseases, such as diabetes, cancer or cardiovascular diseases. Then the rest of the population is vaccinated in order of the oldest. Although the programme in theory has no major logical gaps and is similar to vaccination programmes in other European countries, it suffers from the problem which was discussed in the previous paragraph. Namely, many people miss the scheduled vaccination date. Nevertheless, the percentage of Poles willing to take the drug is gradually increasing and currently it is at the level of 54% (Medonet 2021e). Although this is not a sensational result, the trend may be optimistic. The chart below shows the number of people vaccinated in Poland by age group.

**Chart 8. Number of inoculated against COVID-19 people per age group in Poland (millions)**



Explanations: Zaszczepieni wg wieku = vaccinated according to age.

Source: Government of Poland 2021e.

However, the most objective measure of vaccine effectiveness is the vaccination coverage level in the population compared to other European Union countries, which received a very comparable number of vaccines to the population. Data for Poland as of April 21 indicate that 23.3% of the adult population were vaccinated with one dose, and 8.2% with two doses (ECDC 2021). The EU average is 23.7% and 8.7%, respectively, which means that Poland is slightly below this average. Overall, in mid-April, Poland was ranked 20th out of 27 European Union Member States. This points to some problems with the organisation of the vaccination programme, certainly going beyond the previously indicated delays in delivery, and ineffective measures to encourage people to vaccinate. Certainly, there are also organisational and distribution problems, as well as information problems in Poland, the analysis of which is not yet possible due to the lack of verifiable data.

## 6. Conclusions

From the above data and analysis, several important conclusions can be drawn regarding the assessment of the course of the SARS-CoV-2 pandemic in Poland. Due to the socio-political conditions peculiar to Poland, the course of the pandemic was characterised by sharper peaks of morbidity and deaths than in other neighbouring countries. Poland did not sufficiently cope with the system of obtaining general information on the course of the pandemic, as mass testing of the population was abandoned. The process of responding to the public health crisis was also chaotic and unpredictable, resulting in delayed actions and the need for patients, doctors and hospitals to act on their own. The political situation related to the forced presidential elections, the lack of testing people returning to Christmas from Great Britain, or the social crisis caused by the ruling of the Constitutional Tribunal in October 2020 meant that despite COVID-19 disease trends similar to those in Europe, Poland experienced the peaks of the pandemic in a worse way. The culmination of these and other factors is the fact that in late March / early April, Poland equalled, or even slightly surpassed, Brazil in terms of the number of deaths per million inhabitants.

However, if one wants to be fair, we must remember that in March 2020, no one in the world was prepared for the global coronavirus pandemic. Many governments have had trouble making decisions because they had to be made on the basis of rudimentary data. With that in the back of your mind, a few key lessons from the last 14 months should be highlighted. Mass testing of citizens is the key that unlocks opportunities for proper judgment. Consistency in messages based on science, not politics, is the right way to build confidence in government action. Only simple messages based on science can also reduce social hesitancy in the vaccination process. The simpler the information transfer system between health care units, the better the organisation of assistance to patients. Close co-operation with multidisciplinary hospitals allows to maintain the normal functioning of health care to the fullest extent possible. Very often, it was due to the lack of an appropriate exchange of information between the central government and its subordinate units that the loss of trust and acting on one's own took place. All these and dozens of other conclusions should be understood and implemented as soon as possible in order to improve patient care during this pandemic, as well as develop action plans for the future. Unfortunately, there is a high probability that this will not be the only pandemic in our lives. We must be much better prepared for the next ones.

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