
The Functioning of the Polish Health Care System During the First Wave of the SARS-CoV-2 Pandemic in the Opinion of Primary Health Care Patients

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Abstract:

Purpose: The aim of this scientific study is to analyze selected issues related to the functioning of Polish Primary Health Care units in the initial period of the SARS-CoV-2 virus pandemic.

Design/Methodology/Approach: The analysis focused on the access to health services provided by Primary Health Care doctors and quality of those services, as well as issues related to the so-called tele-advice. Changes introduced in this respect directly affected the provision of health services to patients in their place of residence. The surveys we conducted were aimed at identifying the problems encountered by patients of these health care units. The following research methods were used in the study: the historical-legal method – selected legal acts and communiques issued by public administration bodies during the initial period of the pandemic were analyzed; the dogmatic-legal method – a systematic and linguistic interpretation of legal acts, reports, and information on websites was carried out; the survey method – surveys conducted among patients of Primary Health Care.

Findings: The research results allow to draw *de lege ferenda* conclusions regarding the improvement of organizational functioning of Primary Health Care units. These conclusions will be helpful if new infectious diseases appear in the future. Making the rules for accessing Primary Health Care units more stable will enable public authorities to better prepare for potential crisis situations.

Practical implications: The conducted empirical research can be utilized by decision-makers, individuals managing the Polish health care system, and those managing/running Primary Health Care facilities. The responses obtained from the respondents indicate the strengths and weaknesses in organizing the health care process in a non-standard situation,

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such as during a pandemic. With their help, it is possible to better organize the process of patient contact and treatment in a crisis situation, during so-called extraordinary states.

Originality/value: The article is an original analysis of patients' opinions on the access to health care services provided by Primary Health Care facilities. The results of empirical research conducted among representatives of Polish society may serve as a basis for making comparisons in this area with other countries. The article may provide an impetus for an international discussion on the scope and quality of services provided by such health care entities.

Keywords: Primary health care, health services, COVID-19 pandemic, patient reviews.

JEL Classification: I18, K32, P36.

Paper type: Research article.

1. Introduction

The outbreak and onset of the COVID-19 pandemic (Thalassinos *et al.*, 2022; Grima *et al.*, 2020; Khan *et al.*, 2020) necessitated the implementation of exceptional legal solutions in the world and in Poland aimed at minimizing the threat to public health (Płonka-Syroka, Hudaszek, and Kurzyna, 2022). The regulations concerning the operation of Primary Health Care⁶ facilities were of great importance. The provisions of the Act of 5 December 2008 on the prevention and control of infections and infectious diseases in humans (Journal of Laws 2008, No. 234, item 1570) were applied in particular.

In order to strengthen the regulations regarding pandemic prevention, the Polish Parliament passed the Act of 2 March 2020 on special measures related to the prevention, counteracting, and combating of COVID-19, other infectious diseases, and crisis situations caused by them (Journal of Laws 2020, item 374). This law was subject to multiple amendments between March and September 2020 due to the rapid development of the pandemic.

It regulated the principles and procedures for preventing and combating the infection and the spread of infectious diseases caused by the SARS-CoV-2 virus, including the principles and procedures for implementing epidemic control measures and preventive actions to neutralize sources of infection and interrupt possible routes of disease transmission, the tasks of public administration bodies in preventing and combating the disease, the rights and obligations of patients, healthcare providers, and individuals residing on the territory of the Republic of Poland in terms of preventing and combating the disease (Borkowski, Fal, and Filipiak, 2021).

⁶ Hereinafter referred to as PHC.

The aforementioned statutory regulations were supplemented by regulations issued by the Minister of Health and other relevant ministers.

The executive acts on handling patients (provision of health care services) in PHC mainly included:

- Regulation of the Minister of Health of 6 April 2020 on infectious diseases requiring hospitalization, isolation, or home isolation, as well as quarantine or epidemiological supervision - in force until 26 February 2021 (Journal of Laws 2020, item 607) - some of the below-mentioned executive acts referred to the provisions contained in this regulation. The strategy for combating the COVID-19 pandemic in Poland imposed new obligations on PHC doctors (Hudaszek, 2020). This professional group actively participated in the fight against the pandemic. The new obligations imposed on them included the diagnostic and therapeutic process aimed at helping patients infected with the SARS-CoV-2 virus. The PHC medical staff made decisions regarding the place and duration of patient isolation.
- Regulation of the Minister of Health of 1 September 2020 amending the Regulation on infectious diseases requiring hospitalization, isolation, or home isolation, as well as quarantine or epidemiological supervision - in force until 26 February 2021 (Journal of Laws 2020, item 1506), which regulated medical procedure issues related to patient isolation and quarantine in detail.
- Regulation of the Minister of Health of 8 October 2020 on the organizational standard of health care for patients suspected of infection or infected with the SARS-CoV-2 virus - in force until 29 April 2022 (Journal of Laws 2020, item 1749), introducing the so-called organizational standard. This standard concerned the tasks of PHC related to:
 - deciding about patients' isolation or home isolation;
 - referring patients for treatment in hospitals;
 - ordering diagnostic tests for SARS-CoV-2 infection.
- Regulation of the Council of Ministers of 9 October 2020 on establishing specific restrictions, orders, and prohibitions in connection with the state of epidemic (Journal of Laws 2020, item 1758), and of 23 October 2020 - in force until 28 November 2020 (Journal of Laws 2020, item 1871). This executive act introduced additional restrictions, orders, and prohibitions in connection with the epidemic and divided the country into:
 - areas covering poviats listed in the annex to the regulation, referred to as the "red zone";
 - areas covering poviats not listed in the annex, referred to as the "yellow zone."
- Regulation of the Minister of Health of 3 November 2020 amending the Regulation on infectious diseases requiring hospitalization, isolation, or home isolation, as well as quarantine or epidemiological supervision - in force until 26 February 2021 (Journal of Laws 2020, item 1942).

- Regulation of the Minister of Health of 18 November 2020 amending the Regulation on the organizational standard of health care for patients suspected of infection or infected with the SARS-CoV-2 virus - in force until 29 April 2022 (Journal of Laws 2020, item 2043). This act made changes to the organizational standard and affected two professional groups: doctors and paramedics who provided:
- night and holiday health care services,
 - care and support services within long-term care,
 - psychiatric care and treatment services, as part of psychiatric care and addiction treatment.

2. Research Methodology

The research results presented below are based on data collected after the first wave of the SARS-CoV-2 virus pandemic among respondents living in Poland and using the services of the Polish health care system.

The main objective of the empirical research was to gather the respondents' opinions on the functioning of the Polish health care system during the first wave of the pandemic. For the purposes of research exploration, a questionnaire was prepared, which included questions addressed to the respondents. Their answers helped the authors to achieve the research goals.

The empirical research was carried out in the autumn of 2020. The survey was conducted using the CAWI technique – the respondents were asked to complete the questionnaire in electronic form. Since another wave of the pandemic was unfolding, this way of conducting research turned out to be the simplest.

It should be emphasized, however, that the questionnaire was available only to people who could use a computer or smartphone and had access to the Internet. 452 respondents took part in the study.

3. Presentation of the Results

The first question the respondents were asked concerned their trust in the treatment methods used by Polish doctors as part of PHC. As shown in Table 1, the respondents trust the methods of treatment chosen by PHC doctors. Most often, such trust was declared by residents of cities with a population of 21,000 to 1,000,000.

Table 1. Do you trust the treatment methods used by PHC doctors? (N=452)

	the country side	city of up to 20,000 inhabitants	city of 21,000 to 100,000 inhabitants	city of 101,000 to 300,000 inhabitants	city of 301,000 to 500,000 inhabitants	city of more than 500,000 inhabitants	in total
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definitely yes	8%	6%	14%	11%	10%	5%	8%
rather yes	66%	63%	69%	58%	40%	70%	66%
hard to say	13%	10%	2%	-	-	11%	10%
rather not	11%	19%	10%	21%	40%	13%	13%
definitely not	3%	2%	5%	11%	10%	1%	3%
in total	100%	100%	100%	100%	100%	100%	100%

Source: Own study.

As shown in Table 2 below, 55% of the respondents (including those who answered rather badly – 17%, very badly – 17%) negatively assessed the quality of medical services provided by PHC facilities during the pandemic. Every third respondent rated them positively (27% of all the respondents, including the ones who stated rather well – 26%, definitely well – 1%).

Interestingly, the most negative opinions on the quality of medical services provided by PHC facilities were held by the respondents living in cities which had from 301,000 to 500,000 inhabitants. As many as 80% of them rated the quality of these services very low.

Table 2. How do you assess the quality of medical services provided by public health care facilities during the pandemic (N=452)

	the country side	city of up to 20,000 inhabitants	city of 21,000 to 100,000 inhabitants	city of 101,000 to 300,000 inhabitants	city of 301,000 to 500,000 inhabitants	city of more than 500,000 inhabitants	in total
definitely well	1%	-	2%	-	-	-	1%
quite well	26%	23%	21%	42%	20%	30%	26%
hard to say	18%	15%	19%	-	-	22%	17%
rather badly	38%	35%	38%	37%	80%	33%	38%
very badly	17%	27%	19%	21%	-	15%	17%
no data available	-	-	2%	-	-	-	-
in total	100%	100%	100%	100%	100%	100%	100%

Source: Own study.

The respondents negatively evaluated the Minister of Health's decision introducing restrictions on the functioning of public health facilities during the COVID-19 pandemic. Such was the opinion of 64% of the respondents. At the same time, one in four respondents positively evaluated these restrictions.

The residents of cities with 101,000 to 300,000 inhabitants were most likely to give positive opinions on the Minister of Health's decisions. On the other hand, negative

opinions on this issue prevailed among residents of cities with up to 20,000 inhabitants.

Table 3. Do you consider it well-grounded to introduce significant restrictions on access to public health facilities during the Covid-19 pandemic? (N=452)

	the country side	city of up to 20,000 inhabitants	city of 21,000 to 100,000 inhabitants	city of 101,000 to 300,000 inhabitants	city of 301,000 to 500,000 inhabitants	city of more than 500,000 inhabitants	Total
definitely yes	5%	0%	2%	11%	0%	8%	5%
rather yes	19%	19%	24%	32%	20%	20%	20%
hard to say	12%	10%	5%	0%	20%	12%	10%
rather not	32%	31%	36%	21%	40%	30%	32%
definitely not	32%	40%	31%	37%	20%	29%	32%
no data available	0%	0%	2%	0%	0%	1%	1%
in total	100%	100%	100%	100%	100%	100%	100%

Source: Own study.

The SARS-CoV-2 pandemic affected not only the lives of individuals, but also determined the functioning of practically all sectors of the world economy. The unknown virus caused fear among health care workers as well as their patients.

Therefore, direct contact between patients and health care providers was limited. The former were encouraged to give up direct contact with doctors in favor of indirect contact. Some health care workers also preferred this form of patient contact.

Our respondents' opinion on the availability of PHC doctors in the period from March 2020 to March 2021 was mostly negative.

The analysis of the respondents' answers shows that the most negative opinions about the direct contact with a doctor were expressed by residents of cities with 101,000 to 300,000 inhabitants (84% of the respondents, including the ones that answered: rather badly - 37%, definitely badly - 47%) and residents of rural areas (79% of the respondents, including the ones that answered: rather badly - 45%, definitely badly - 34%).

On the other hand, residents of cities with 21,000 to 100,000 inhabitants rated the possibility of direct contact with a doctor most positively (66% of the respondents, including the ones who answered: rather well - 52%, definitely well - 14%).

As indicated by the data in Table 3, according to every other respondent direct contact with doctors was significantly hindered but possible. Tables 4-8 present the results of the study for each question.

Table 4. How do you assess the direct availability of patients to PHC doctors during the pandemic (March 2020 – March 2021)? (N=452)

	the country side	city of up to 20,000 inhabitants	city of 21,000 to 100,000 inhabitants	city of 101,000 to 300,000 inhabitants	city of 301,000 to 500,000 inhabitants	city of more than 500,000 inhabitants	in total
definitely well	-	2%	14%	5%	10%	1%	1%
rather well	13%	8%	52%	11%	30%	14%	12%
hard to say	8%	15%	2%	-	-	11%	9%
rather badly	45%	44%	26%	37%	50%	38%	44%
definitely badly	34%	31%	7%	47%	10%	37%	34%
in total	100%	100%	100%	100%	100%	100%	100%

Source: Own study.

Table 5. Were public health care facilities available to patients in your place of residence during the Covid-19 pandemic (direct contact with doctors)? (N=452)

	the country side	city of up to 20,000 inhabitants	city of 21,000 to 100,000 inhabitants	city of 101,000 to 300,000 inhabitants	city of 301,000 to 500,000 inhabitants	city of more than 500,000 inhabitants	in total
were available to all patients	9%	6%	3%	11%	10%	8%	8%
were not available	23%	23%	16%	26%	20%	13%	20%
access was significantly hindered, but possible	48%	50%	48%	42%	70%	65%	52%
available to patients at risk of life or health	12%	13%	24%	21%	0%	9%	13%
I don't know	8%	8%	9%	0%	0%	6%	7%
in total	100%	100%	100%	100%	100%	100%	100%

Source: Own study.

During the SARS-Cov-2 pandemic, the vast majority of Polish people had limited direct contact with specialists employed in the health care system. The most common possible form of contact with a doctor turned out to be indirect contact in

the form of tele-advice. Almost every other respondent rated this form of contact negatively (49% of all the respondents, including the ones who answered: rather badly - 34%, definitely badly - 15%). It was positively rated most often by residents of cities with over 500,000 inhabitants (40% of the respondents, including the ones who answered: definitely well – 5%, rather well - 35%). Residents of cities with a population of 301,000 to 500,000 rated this form of patient diagnosis most negatively (70% of the respondents, including the ones who answered: rather badly - 50%, definitely badly - 20%).

Table 6. How do you assess the indirect availability of PHC doctors during the pandemic (tele-consultation in the period: March 2020 – March 2021)? (N=452)

	the country side	city of up to 20,000 inhabitants	city of 21,000 to 100,000 inhabitants	city of 101,000 to 300,000 inhabitants	city of 301,000 to 500,000 inhabitants	city of more than 500,000 inhabitants	in total
definitely well	4%	4%	3%	5%	-	5%	4%
rather well	31%	25%	24%	32%	30%	35%	30%
hard to say	18%	10%	16%	16%	-	16%	16%
rather badly	31%	46%	41%	26%	50%	31%	34%
definitely badly	15%	15%	16%	21%	20%	12%	15%
in total	100%	100%	100%	100%	100%	100%	100%

Source: Own study.

It seems that one of the reasons why the respondents assessed the functioning of the public health care system negatively may have been difficulties in contacting the registration of public health care facilities or doctors themselves. As many as 84% of the respondents reported having such problems. Among them, as many as 53% reported significant problems with contacting the registration, while 31% had minor problems of this type.

Table 7. How do you assess the possibility of calling the registration of a public health care facility during the pandemic? (N=452)

	the countryside	city of up to 20,000 inhabitants	city of 21,000 to 100,000 inhabitants	city of 101,000 to 300,000 inhabitants	city of 301,000 to 500,000 inhabitants	city of more than 500,000 inhabitants	in total
there were no problems with reaching the	8%	6%	3%	0%	0%	8%	7%

registration							
there were minor problems with reaching the registration	33%	31%	29%	37%	40%	28%	31%
there were significant problems with reaching the registration	51%	52%	59%	58%	40%	54%	53%
hard to say	7%	10%	9%	5%	20%	11%	9%
no data available	1%	0%	0%	0%	0%	0%	0%
in total	100%	100%	100%	100%	100%	100%	100%

Source: Own study.

If it was possible to get through to the registration and contact a doctor, the respondents rated this contact rather positively. Such an opinion was held by 44% of the respondents (including the ones who answered: definitely well - 4%, rather well – 40%). Interestingly, tele-consultations provided by doctors were most negatively assessed by residents of cities with 301,000 to 500,000 inhabitants. Every other of them rated this form of contact as rather badly or very badly.

Table 8. How do you assess the telephone contact (tele-consultation) with your PHC doctor? (N=452)

	the country side	city of up to 20,000 inhabitants	city of 21,000 to 100,000 inhabitants	city of 101,000 to 300,000 inhabitants	city of 301,000 to 500,000 inhabitants	city of more than 500,000 inhabitants	in total
definitely well	3%	2%	3%	11%	-	6%	4%
rather well	35%	48%	40%	37%	40%	47%	40%
hard to say	26%	21%	28%	26%	10%	18%	24%
rather badly	20%	25%	19%	16%	30%	22%	21%
very badly	15%	4%	10%	11%	20%	6%	12%
in total	100%	100%	100%	100%	100%	100%	100%

Source: Own study.

4. Recapitulation

The research exploration conducted among the 452 respondents showed that the majority of them trust the treatment methods used by PHC doctors. At the same time, every other of them negatively evaluated the quality of medical services provided by public health care facilities during the pandemic. The most negative comments about the direct contact with a doctor during the first wave of the SARS-CoV-2 virus pandemic were expressed by the residents of cities with a population between 101,000 and 300,000 inhabitants.

During the first wave of the pandemic, patients were limited in their ability to have direct contact with specialists employed in the health care system. The most common possible form of contact with a doctor turned out to be indirect, in the form of tele-advice.

Almost every other respondent assessed this form of contact negatively due to the difficulties related to getting through to the registration of PHC facilities or to doctors themselves. If it was possible to get through to the registration and there was a phone contact with a doctor, then the respondents evaluated this contact rather positively.

5. Conclusions

The analysis of the research results has shown that during the first wave of the COVID-19 pandemic patients were limited in their ability to have direct contact with specialists employed in the health care system, while the majority of those surveyed trusted the treatment methods used by PHC doctors.

The research results show that during the SARS-CoV-2 pandemic, residents of large cities (101,000 to 300,000 inhabitants) expressed the most negative opinions regarding the possibility of direct contact with doctors.

The research exploration has shown that the health care system in Poland was not prepared to care for patients in extreme conditions such as the SARS-CoV-2 virus pandemic.

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