Impact of the conflict on the costs of primary health care and investments in Ukraine

Survey of war effects
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Abstract

This study assesses the impact of the Russian Federation's invasion of Ukraine in February 2022 on the country's primary health care (PHC) providers. Ukraine was implementing significant reforms to the PHC system before the invasion, including benefits packages, increased autonomy of providers, capitation-based payments and a choice of preferred PHC provider.

Conducted in early 2023, the study involved 86 online questionnaires and 16 interviews with PHC providers. It found that despite initial uncertainty, most providers had stabilized their situation, although ongoing challenges remained, including staff shortages and demographic shifts due to displacement. Changes were noted in patient visits and declarations, with an increase in cardiovascular and mental health cases and a decrease in COVID-19 cases.

Funding from the National Health Service of Ukraine had remained relatively consistent, while humanitarian and charitable aid helped to alleviate the financial burden on providers. The study also highlighted additional disruptions such as electricity outages and price increases.

These findings offer valuable insights into the evolving PHC landscape in Ukraine during the invasion and possibilities for its future after the invasion, revealing the challenges faced and adaptations made in this challenging environment.

Keywords

PRIMARY HEALTH CARE
HEALTHCARE FINANCING
HEALTH CARE SYSTEMS
UKRAINE
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## Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>CNE</td>
<td>communal non-profit-making enterprise</td>
</tr>
<tr>
<td>CT</td>
<td>computed tomography</td>
</tr>
<tr>
<td>CVD</td>
<td>cardiovascular diseases</td>
</tr>
<tr>
<td>FOPs</td>
<td>fizychna osoba-pidpryemets  [individual entrepreneur or small or medium-sized business]</td>
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<tr>
<td>IDPs</td>
<td>internally displaced people</td>
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<tr>
<td>IOM</td>
<td>International Organization for Migration</td>
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<tr>
<td>mhGAP</td>
<td>WHO Mental Health Gap Action Programme</td>
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<tr>
<td>NHSU</td>
<td>National Health Service of Ukraine</td>
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<tr>
<td>PHC</td>
<td>primary health care</td>
</tr>
<tr>
<td>PTSD</td>
<td>post-traumatic stress disorder</td>
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<tr>
<td>SARS-CoV-2</td>
<td>severe acute respiratory syndrome coronavirus 2</td>
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1. Summary

From 2018 Ukraine committed to a reform of primary health care (PHC) services, including the design of an explicit benefits package, conversion of PHC centres to state-owned nonmedical enterprises, implementation of capitation-based payments, free enrollment for the population and reimbursement of selected medicines on an e-prescription basis. The overarching strategy consisted of focusing on health financing reforms initially to catalyse transformation in service delivery1.

According to data provided by the National Health Service of Ukraine (NHSU), as of the beginning of 2022 almost 33 million Ukrainians had signed declarations with family doctors; and as a result, more than 2000 PHC facilities in turn signed contracts with the NHSU to provide a guaranteed package of PHC services to all who had signed declarations2.

Directly before the full-scale invasion of Ukraine, PHC was already facing several challenges:

- a new wave of COVID-19 caused by the Omicron severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) variant had increased the workload of doctors in terms of testing, and continued to affect the health-seeking behaviour of the population, often leading to delayed or foregone care;
- the third (booster) dose of the COVID-19 vaccine was being rolled out to all those who had previously received two vaccinations, also increasing the workload of doctors involved in the vaccination process; and
- a lack of effective preventive measures continued to increase the burden of noncommunicable diseases.

The start of the full-scale invasion of Ukraine by the Russian Federation in February 2022 led to significant changes in the service delivery and patient pathway. The biggest impact of the war on service provision was evidenced in the first few months of the invasion, when major uncertainty concerning how service provision should be conducted was accompanied by a decrease in the number of patients in areas of active hostilities, and increasing effects of the war on PHC services have been experienced ever since.

The main objective of this study was to assess the impact of the full-scale invasion on the costs of PHC providers in Ukraine, and to identify the chief disruptions affecting the work of these providers, with a goal of identifying current provider needs through


2. NHSU Dashboard Indicators of achieving universal coverage of the population with medical services at the level of primary medical care.
the analysis of specially developed questionnaires and in-depth interviews. It is also intended to provide input to, and ensure the relevance of, the PHC costing model both in reaction to, and in preparation for the period after the full-scale invasion, within the process of its development and implementation.

After the first few months of the war, which were full of uncertainty as a number of processes and patient pathways were disrupted, most providers reported that their situation had stabilized by around summer 2022, as people became used to new circumstances and processes were adapted to a new reality. However, in the autumn of 2022, electricity blackouts began, becoming a major new challenge to PHC service provision. Lack of electricity meant that many services in PHC facilities were unable to be conducted. This included medical services requiring the use of equipment powered by electricity, as well as administrative processes requiring the use of computers. For example, it was mentioned by some providers during interviews that these electricity cuts affected the ability to enter data consistently into the electronic health care system.

Unsurprisingly, the biggest need reported at the time of the study was a need for uninterruptible power supply devices, requested by more than half of the providers surveyed. This need was fulfilled, as all medical providers received generators provided by the Ministry of Health of Ukraine, the Regional Department of Health and charitable and humanitarian aid bodies. This disruption impacted provider costs; 26% of surveyed providers (23 providers) were forced to increase their spending on fuel and lubricant materials. Unfortunately, no detailed information was provided or collected concerning the source of funding from which these costs were covered. However, according to the survey, 56% (48 providers) noted that humanitarian and charitable aid had increased since 24 February 2022 and had reduced the financial burden of providers.

Another common need faced by providers was a lack of staff, as many people left the country or were internally displaced, affecting almost all facilities in areas of hostilities, and leaving many providers understaffed. According to the survey, the majority of providers have not faced problems covering salary costs; 57% (47 providers) fund their salary costs for their medical employees through NHSU funding, and the second-largest source of funding for salaries is from the local budget. The same situation is seen for nonmedical staff; 74% (59 providers) fund salary costs for their nonmedical employees through NHSU funding entirely, and again funding from the local budget is the secondary source.

Missile alerts still remain a challenge for providers, requiring staff to leave premises and cease service provision. Some providers expend a lot of time travelling to and from their closest shelter due to the distance from their facilities. While some effects of the war impacted all providers, far greater disruption was experienced by providers in regions of hostilities, and in the central and western oblasts, which
hosted many internally displaced people (IDPs). Many providers, primarily in the western, central and northern areas, had to accommodate an increased number of patients without declarations, increasing expenses of providers without any associated increase in income.

More than half of the providers experienced changes in the number of visits from patients with declarations: most increased doctor visits were observed in the western and southern oblasts, while in the rest of the macro-oblasts, most providers reported less visits. Additionally, by provider assessment, for almost half of them the number of patient declarations also changed. Most common was an increase (for 30% of providers) and the changes ranged from -15% to +20%. This can be explained by changes in patients’ place of residence, especially effecting young people and families with children, who either travelled abroad or moved to a safer oblast of the country. For patients that remained, visits were still limited due to air alarms, the threat of shelling and limited public transportation.
As many people were displaced, were enlisted to fight (primarily men) or left the country (primarily women and children), it is unsurprising that some providers also noticed changes in the overall age and/or sex of their patient roster. Such changes have an eventual effect upon the number and types of services provided, given the difference in requirements of these different groups of the populations. A significant share of providers also reported an increased number of veterans registering as patients; with a unique profile of needs compared with other groups of the population.

During the war, many providers noticed an increased number of patients with cardiovascular diseases and conditions, and with mental health-related illnesses and diseases. Additionally, the prevalence of COVID-19 appeared to have decreased during the war. This is possibly not a direct effect of war, given the similar concurrent trend emerging in other countries, and could also be attributed to a significant and increasing share of the population being vaccinated.

For the most part, working hours did not change for providers. However, some reported decreased hours due to the decreased need for COVID-19 vaccinations, and some who saw an increase in hours spent on patients visiting family doctors. This can be linked to providers having new patients who are internally displaced. Providers also noticed an increased number of consultations by phone, which resulted in some having a need for additional phones or means of communication to accommodate these. Many providers also experienced an increase in interactions within the PHC facility from patients without declarations.

One of the most regularly mentioned disruptions by providers is the depreciation of the currency (the Ukranian hryvnia or hrv) and price increases; 46% (40 providers) reported that this led to an increase in expenditure on consumables, fuel and lubricating materials, household materials, stationery and utilities among others; however, these difficulties were partly compensated by available reserves, increasing and sizable charitable or humanitarian aid, and changes in procurement processes; for example, some facilities reported that the need to purchase various consumables had decreased due to the reduction in the number of cases of COVID-19, which had freed up funds.

When surveying providers, it was noted that funding received from the NHSU was largely unchanged: 53 PHC providers reported that funding from NHSU through capitation payments did not change, eight facilities received more funding from NHSU through capitation, and 15 received less. Additionally, the majority of respondents noted an increase in funding from humanitarian and charitable aid bodies. This assisted in reducing the financial burden on providers and partially covered needs for drugs and medical equipment. Regarding funding from local authorities, institutions noted both increases and decreases.
As a result, the following disruptions were identified as the main impacts on PHC facilities and their costs and investments:

- electricity outages
- price increases
- changes in personnel.

It is important to note that on occasion, even providers who declared that the war had made no impact on their activities admitted that the above-mentioned factors had necessitated changes in their working practice. As was discovered during the interviews, the biggest additional impact of the war was clearly seen in the first few months of the invasion; the second most reported disruption was related to shelling of critical infrastructure, which lead to huge electricity cuts across the entire country, and the ensuing and increased costs for fuel and lubricating materials; these were partially covered by charitable or humanitarian aid.
2. Methodology

The main aim of the study was to assess the impact of the full-scale invasion on the costs of PHC and investments in Ukraine.

After desk research that included a literature review, a set of preliminary hypotheses was generated, such as:

- the growing number of IDPs increased the burden on PHC providers, predominantly in the western oblasts;
- due to disruptions impacting the health system, costs of PHC facilities have increased significantly, although humanitarian and charity aid may soften this burden;
- PHC facilities face both medical and nonmedical employee shortages as many workers have changed their place of residence. Overtime work and emotional burnout of employees are also issues;
- due to supply-chain disruption, including the pharmaceutical supply chain, and increased prices, PHC facilities face increased costs for medicines, diagnostic tests, medical and nonmedical equipment, transportation costs, etc.;
- PHC facilities face changes in their service delivery model, including changes in the types of interaction between health care workers and patients such as remote consultations; and
- due to changes in current health needs, PHC facilities face changes in the scope of care.

The assessment of the impact of the full-scale invasion involved:

- a questionnaire survey of the PHC providers, conducted from January–February 2023
- interviews with selected PHC providers, conducted in March 2023.

Under this study, 86 online questionnaires were completed, and 16 interviews were conducted.

The criteria for selecting PHC facilities aligns with the criteria for the selection of PHC reference providers of the cost study (Annex 1).
3. Background

Territories that are experiencing or have experienced hostilities since 24 February 2022

In accordance with Order #309 of the Ministry of Reintegration of the Temporarily Occupied Territories dated 22 December 2022, twelve oblasts are experiencing or have experienced hostilities, or are temporarily occupied or have been occupied: the Chernihiv, Dnipropetrovsk, Donetsk, Kharkiv, Kherson, Kyiv, Luhansk, Mykolaiv, Odesa, Sumy, Zaporizhzhia and Zhytomyr oblasts.

Four macro-regions were affected: the centre, east, north and south (Fig. 1).

Fig. 1. Map of territories that are experiencing/have experienced hostilities or are/have been temporarily occupied

Source: Map created using data from the Ministry of Reintegration of Temporarily Occupied Territories Order dated 22 December 2022 No. 309.

3. The Ministry of Reintegration of Temporarily Occupied Territories Order dated 22 December 2022 No. 309 “On the approval of the List of territories on which hostilities are (were) conducted or temporarily occupied by the Russian Federation” (https://zakon.rada.gov.ua/laws/show/z1668-22#Text, accessed 13 October 2023).

Internal displacement in Ukraine

According to the Ukraine Internal Displacement Report, an assessment conducted in January 2023, by the International Organization for Migration (IOM), the estimated number of IDPs in Ukraine has been steadily declining since August 2022. As of 23 January 2023, IOM estimates 5.4 million IDPs across Ukraine (Fig. 2).

Fig. 2. IDPs by macro-region

![Chart showing IDPs by macro-region](https://dtm.iom.int/reports/ukraine-returns-report-16-23-january-2023)


Comment [DO6]:
For large figures, combine numerals and words.
3 million, 3,000,000
3.5 million, 3,500,000, 3,574,987
Please, use the right format without commas.

At macro-region level, the largest decrease in estimated IDP presence across the rounds of assessment from April 2022 to January 2023 was observed in two regions: the west; from 2.93 million to 0.86 million IDPs, and the north; from 1.29 million to 0.6 million IDPs. The largest increase was noted in the east macro-region, from 0.86 million to 1.96 million IDPs.

The vast majority of IDPs from the east and south of Ukraine have relocated within the same macro-region (Fig. 3).

Fig. 3. Top regions of displacement of IDPs (assessment of IOM within a period from March 2022 to January 2023)

Source: Map created using data from the IOM, Ukraine Displacement Report, January 2023.6

4. General sampling

During the development of the study methodology, it was initially planned to divide all primary care providers taking part in the project on costing for provider payments into 2 groups: the questionnaire was intended to have 85 contributing providers, and 15 different providers were intended to be interviewed. However, after the questionnaire was conducted, it was decided to instead interview 15 providers from the group that had taken part in the questionnaire survey, and additionally indicated that the full-scale invasion has affected their service provision. This ensured that some questions could be examined in more detail, as well as giving the possibility to clarify some of the information provided in the questionnaires.

As a result, the questionnaire study initial phase encompassed 86 primary care providers eventually (Tables 1–3). One additional provider expressed a desire to fill in the questionnaire.

Table 1. Distribution of survey participants by macro-regions

<table>
<thead>
<tr>
<th>Macro-region</th>
<th>Number of providers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Centre</td>
<td>28</td>
</tr>
<tr>
<td>East</td>
<td>6</td>
</tr>
<tr>
<td>North</td>
<td>7</td>
</tr>
<tr>
<td>South</td>
<td>16</td>
</tr>
<tr>
<td>West</td>
<td>29</td>
</tr>
<tr>
<td>TOTAL</td>
<td>86</td>
</tr>
</tbody>
</table>

Table 2. Distribution of survey participants by type of ownership

<table>
<thead>
<tr>
<th>Ownership type</th>
<th>Number of providers</th>
</tr>
</thead>
<tbody>
<tr>
<td>CNEs</td>
<td>60</td>
</tr>
<tr>
<td>FOPs</td>
<td>26</td>
</tr>
<tr>
<td>TOTAL</td>
<td>86</td>
</tr>
</tbody>
</table>

Note: CNE: communal non-profit-making enterprise; FOP: fizychna osoba-pidpryemets (individual entrepreneur or small or medium-sized business).
Table 3. Distribution of survey participants within territories that are experiencing/have experienced hostilities/or are/have been occupied

<table>
<thead>
<tr>
<th>Oblasts</th>
<th>Number of providers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dnipro</td>
<td>3</td>
</tr>
<tr>
<td>Donetsk</td>
<td>1</td>
</tr>
<tr>
<td>Zhytomyr</td>
<td>6</td>
</tr>
<tr>
<td>Kyiv</td>
<td>10</td>
</tr>
<tr>
<td>Mykolaiv</td>
<td>1</td>
</tr>
<tr>
<td>Odesa</td>
<td>15</td>
</tr>
<tr>
<td>Sumy</td>
<td>3</td>
</tr>
<tr>
<td>Kharkiv</td>
<td>1</td>
</tr>
<tr>
<td>Chernihiv</td>
<td>1</td>
</tr>
<tr>
<td>Other oblasts</td>
<td>45</td>
</tr>
<tr>
<td>TOTAL</td>
<td>86</td>
</tr>
</tbody>
</table>

As most of the territories of Luhansk, Zaporizhzhia and Kherson oblasts were temporarily occupied, there were no participants from these oblasts in the research. Due to the level of experienced hostilities as note above, only one representative from affected territories such as Chernihiv, Donetsk, Kharkiv and Mykolaiv was able to report (Fig. 4).

Fig. 4. Map with the locations of providers at the oblast level participating in the survey

Source: Map created using data from the survey of war effects conducted in January-March 2023.

Data, $n = 86$

7. In accordance with the Ministry of Reintegration of Temporarily Occupied Territories Order dated 22 December 2022 No. 309 "On the approval of the List of territories on which hostilities are (were) conducted or temporarily occupied by the Russian Federation" (https://zakon.rada.gov.ua/laws/show/z1668-22#Text, accessed 13 October 2023).
5. Data analysis

Assessment of the impact on the service provision by the full-scale invasion

All providers were asked to assess the impact of the full-scale invasion on their service provision from 24 February 2022 until beginning of 2023 when survey was conducted. More than 37% (32 providers) of all participants indicated that they had been affected by the full-scale invasion. 62% (53 providers) indicated that their facilities were not affected at all. In 29 facilities, some services were affected, and 3 were affected by the full-scale invasion, but managed to sustain the majority of services. One respondent could not indicate the scale of impact. No respondents indicated that their facilities were so heavily affected that it was not possible to serve patients or heavily affected while sustaining even some services (Fig. 5).

Fig. 5. Assessment of the impact of the full-scale invasion on the service provision of providers

![Graph showing assessment of impact]

Data, n = 86

The three providers that indicated they were affected by the full-scale invasion while sustaining the majority of their services were located in Kharkiv, within the north macro-region, Sumy (also north) and Odesa, within the south macro-region.

Within interviews, some PHC providers indicated that the impact of the full-scale invasion varied across periods of 2022 (Fig. 6). In the first period (approximately winter–spring 2022), the work of PHC facilities was mainly affected by a lack of understanding of the situation in general; factors and questions such as whether a territory will be occupied, how often there will be air raids, how to organize service delivery in war-time; all of which was accompanied by anxiety. Additionally, there was a decrease in the workload requirement of facilities due to the fact that some patients left or were afraid to physically visit the facility (again due to air raid alerts and fear).
Communal provider in Odesa oblast (south macro-region)

In general, it was very difficult in the beginning. Therefore, we still did not understand how our work would be carried out during the period of martial law, in what format we should work and what population we should serve. Because some of our patients with declarations left.

Private provider in Kharkiv oblast (north macro-region)

It is important to note the different periods here because a year has passed, and different periods were affected differently by the full-scale invasion. In the first months, when it was March-April, we had, how to say it correctly, idleness. We went to work, but there were almost no patients, because most of the patients had left. Only some services were available. More activity began in mid-April. Around May, we started to work in the same mode as before.

Communal provider in Rivne oblast (west macro-region)

...it was difficult to adapt, particularly for doctors. The reception schedule has changed because there was a small influx of internally displaced people at first. Air raids, since there is no shelter in our facility, the closest to us is roughly a kilometer and a half and you understand that every time there is an alert, you take everyone out, one and a half kilometers in one direction, one and a half kilometers in the
other direction. Accordingly, the entire appointment goes astray, people are in queues, doctors switched to telephone communication. Over time, somewhere in a few months, it somehow more or less stabilized.

Communal provider in Chernihiv oblast (north macro-region)

For one part of the year, our facility was under occupation. We were completely cut off from any connections. There was no connection, no Internet.

Patients came to us, but we provided help only with what was available. No one could give us anything, people from most villages could not reach us, the road was cut off. So, we were approached by people who lived as close as possible to the institution.

Without transport, fuel and lubricants, it was very difficult. We tried to transfer the medicines we had to families with chronic diseases and diabetes.

For example, in order to pay salaries to doctors, we went with a laptop to catch roaming at the border, so that we could transfer money to people’s accounts.

It was the lack of money and the opportunity to buy something. And all this gave rise to fears and in general such chaos. And that’s why it was all very difficult.

In the second period of 2022, service delivery has more or less stabilized, and patients have begun to return. However, due to shelling of energy infrastructure, electricity cuts began again in the fall of 2022.

Patient profiles

Providers were asked to indicate the changes in their patient profiles, noting visits, age, sex distribution, number of IDPs and veterans, and any other notable changes.

Changes in the number of patients with declarations

More than half of providers (54%, 46 PHC providers) indicated that the number of patients with declarations had not changed significantly. Additionally, 30% (26 providers) indicated that the number of patients with declarations had increased and 15% (13 providers) indicated that the number of patients with declarations had decreased since 24 February 2022. One provider could not indicate whether the number of patients with declarations changed significantly or not (Fig. 7).
Fig. 7. Changes in the number of patients with declarations

Data, $n = 86$

Among the locations of providers in which the number of patients with declarations have increased are:

- territories that are experiencing or have experienced hostilities – no regions;
- top regions of displacement of IDPs – Vinnytsia oblast;
- both indicators – Odesa oblast;
- no indicators – Chernivtsi, Ivano-Frankivsk, Ternopil, Kirovohrad oblasts.

Among the locations of providers in which the number of patients with declarations have decreased are:

- territories that are experiencing or have experienced hostilities – Chernihiv, Donetsk, Sumy oblasts;
- top regions of displacement of IDPs – Lviv oblast;
- both indicators – Dnipropetrovsk oblast.

Among the locations of providers in which the number of patients with declarations have both increased and decreased are:

- territories that are experiencing or have experienced hostilities – no regions;
- top regions of displacement of IDPs – Poltava, Khmelnytskyi oblast;
- both indicators – Kyiv, Zhytomyr oblasts;
- no indicators – Rivne oblast.

Maps showing these locations are given in Figs. 8 and 9.

Most providers in the west, centre and south macro-regions indicated that the number of patients with declarations had increased. In other macro-regions, providers indicated that the same number had decreased.
Fig. 8. Map with locations of providers at oblast level in which the number of patients with declarations had changed significantly since 24 February 2022

Source: Map created using data from the survey of war effects conducted in January-March 2023.

Data, $n = 39$

Fig. 9. Map with locations of providers at the macro-region level in which the number of patients with declarations has changed significantly since 24 February 2022

Source: Map created using data from the survey of war effects conducted in January-March 2023.

Data, $n = 39$
These providers were also asked to indicate the approximate percentage change observed, if the number of patients with declarations had changed significantly since 24 February 2022.

Among 13 responding providers, the range of decrease in this number was between 1.2% and 15%. Of the 26 providers that reported an increase, the range of increase in the number of declarations was between 1% and 20%.

Among the facilities with the biggest increase in the number of patients with declarations (above 10%) were facilities from Ivano-Frankivsk (west macro-region), Odesa (south macro-region) and Zhytomyr (centre macro-region) oblasts. Regarding providers with the biggest indicated decrease in the number of patients with declarations were facilities from Rivne (west macro-region) and Chernihiv (north macro-region) oblasts (Fig. 10).

**Changes in the number of visits for patients with declarations**

**Fig. 10. Changes in the number of patients with declarations**

<table>
<thead>
<tr>
<th>Change in the number of patients with declarations, %</th>
<th>Number of providers, n</th>
</tr>
</thead>
<tbody>
<tr>
<td>-20.0</td>
<td>1</td>
</tr>
<tr>
<td>-15.0</td>
<td>1</td>
</tr>
<tr>
<td>-13.0</td>
<td>1</td>
</tr>
<tr>
<td>-10.0</td>
<td>1</td>
</tr>
<tr>
<td>-8.0</td>
<td>1</td>
</tr>
<tr>
<td>-7.0</td>
<td>1</td>
</tr>
<tr>
<td>-5.0</td>
<td>1</td>
</tr>
<tr>
<td>-3.5</td>
<td>1</td>
</tr>
<tr>
<td>-3.0</td>
<td>1</td>
</tr>
<tr>
<td>-2.6</td>
<td>1</td>
</tr>
<tr>
<td>0.0</td>
<td>1</td>
</tr>
<tr>
<td>5.0</td>
<td>1</td>
</tr>
<tr>
<td>7.1</td>
<td>1</td>
</tr>
<tr>
<td>8.0</td>
<td>1</td>
</tr>
<tr>
<td>10.0</td>
<td>1</td>
</tr>
<tr>
<td>11.0</td>
<td>1</td>
</tr>
<tr>
<td>18.0</td>
<td>2</td>
</tr>
<tr>
<td>20.0</td>
<td>1</td>
</tr>
</tbody>
</table>

Data, n = 39
52% (45 providers) indicated that the number of visits for patients with declarations had changed significantly since 24 February 2022. Among these, 28% (24 providers) noted that the number of visits had increased and 24% (21 providers) reported a decrease.

Additionally, 45% (39 providers) indicated that the number of visits for patients with declarations had not changed significantly since 24 February 2022. Two providers could not determine whether the number of visits for patients with declarations changed significantly or not (Fig. 11).

Fig. 11. Changes in the number of visits for patients with declarations

![Data, n = 86](image)

Among the locations of providers in which the number of visits for patients with declarations have increased are:

- territories that are experiencing or have experienced hostilities – Chernihiv, Donetsk oblasts
- top regions of displacement of IDPs – Lviv oblast
- both indicators – Odesa oblast
- no indicators – Chernivtsi, Ivano-Frankivsk, Kirovohrad oblasts.

Among the locations of providers in which the number of visits for patients with declarations have decreased are:

- territories that are experiencing or have experienced hostilities – Mykolaiv oblast
- top regions of displacement of IDPs – Khmelnytskyi, Poltava oblasts
- both indicators – Dnipropetrovsk, Kharkiv, Kyiv oblasts
- no indicators – Cherkasy, Ternopil, Volyn oblasts.
Among the locations of providers in which the number of visits for patients with declarations have both increased and decreased are:

- territories that are experiencing or have experienced hostilities – Sumy oblast
- top regions of displacement of IDPs – Vinnytsia oblast
- both indicators – Zhytomyr oblast
- no indicators – Rivne oblast.

Maps showing these locations are given in Figs. 12 and 13.

**Fig. 12. Map with locations of providers at oblast level for which the number of visits for patients with declarations had changed significantly since 24 February 2022.**

*Source: Map created using data from the survey of war effects conducted in January-March 2023.*

Data, $n = 45$
Most providers in the west and south macro-regions indicated that the number of visits for patients with declarations had increased. In other macro-regions, providers indicated that the number of visits for patients with declarations have decreased.

Providers’ assessment of the change in the number of patients with declarations and the number of visits for patients with declarations were similar. Most of the providers in the west and south macro-regions indicated that both of these indicators had increased. In the central macro-region, however, there were provider locations in which both increases and decreases were seen.

During the interviews, many providers mentioned that at the beginning of the full-scale invasion, a significant number of patients with declarations (mainly young people or families with children) moved abroad or to a safer region in Ukraine. Accordingly, a decrease in the number of visits to these facilities was observed through winter–spring.

Additionally, in one of the facilities that was under occupation for a certain time (Chernihiv oblast, north macro-region) a few patients with declarations moved abroad or to a safer region within the country, but had to cross the border with Belarus first in order to reach a final destination.
Some of the patients who remained did not visit their allocated facility due to air alarms and the threat of shelling. It was also more difficult to physically access facilities due to limited public transportation – both for patients and medical personnel.

Due to the decrease of visits from patients with declarations, some concerns about insufficient diagnostics for these patients were mentioned in interview.

**Communal provider in Zhytomyr oblast** (centre macro-region)

*Due to the decrease in the number of visits, we did not examine enough patients for the package of tuberculosis treatment at primary care. At the beginning of 2023, we see an increase in the incidence of tuberculosis. And an increase in the incidence of tuberculosis among contact children. This worries us a lot.*

*Again, we are concerned about cancer. How do we find this patient in time? We know that there are patients who did not visit us in 2022 and as a result, we did not screen them. And we are already thinking how to deal with it, how to find them.*

Starting from the summer, patients began to return, and the number of visits largely stabilized.

**Changes in the number of visits for patients without declarations**

It was noted by 54% (46 providers) that the number of visits for patients without declarations changed significantly since 24 February 2022. Among these, 41 reported that the number of visits had increased and five that they had decreased. Additionally, 22% (19 providers) indicated that the number of visits for patients without declarations did not change significantly. 25% (21 respondents) could not indicate if patient visits without declarations had significantly changed or not (Fig. 14).

![Fig. 14. Changes in the number of visits for patients without declarations](image)

Data, \( n = 86 \)
Among the locations of providers in which the number of visits for patients without declarations have increased are:

- territories that are experiencing or have experienced hostilities – Sumy, Mykolaiv oblasts;
- top regions of displacement of IDPs – Lviv, Khmelnitskyi, Poltava oblasts;
- both indicators – Kyiv, Odesa, Zhytomyr oblasts;
- no indicators – Volyn, Ternopil, Chernivtsi, Cherkasy, Kirovohrad oblasts.

Among the locations of providers in which the number of visits for patients without declarations have decreased are:

- territories that are experiencing or have experienced hostilities – Donetsk oblast;
- top regions of displacement of IDPs – no regions;
- both indicators – Dnipropetrovsk, Kharkiv oblasts.

Among the locations of providers in which the number of visits for patients without declarations have both increased and decreased are:

- territories that are experiencing or have experienced hostilities -no regions;
- top regions of displacement of IDPs – Vinnytsia oblast;
- both indicators – no regions;
- no indicators – Rivne oblast (Fig. 16).

Maps showing these locations are given in Figs. 15 and 16.
Fig. 15. Map with locations of providers at oblast level for whom the number of visits for patients without declarations changed significantly since 24 February 2022

Source: Map created using data from the survey of war effects conducted in January-March 2023. Data, $n = 46$

Fig. 16. Map with locations of providers at the macro-region level for which the number of visits for patients without declarations changed significantly since 24 February 2022

Source: Map created using data from the survey of war effects conducted in January-March 2023. Data, $n = 46$
Most providers in the west, centre, north and south macro-regions indicated that the number of visits for patients without declarations had increased. In the east macro-region there were an even number of facilities that indicated both an increase and decrease of the number of visits per patient without declarations.

During interviews it was indicated that patients who left abroad or to another region, were for the most part directly replaced with IDPs, some of whom went on to sign declarations with new family doctors.

This also applied to surveyed providers located in territories with active or previously active hostilities, as they had been serving IDPs from even more dangerous settlements.

Usually facilities serve IDPs without signing declarations, as changes to the regulations were made after the full-scale invasion in this regard.

**Changes in age and sex distribution within patients’ visits**

Since 24 February 2022, 30% (26 providers) indicated that age and sex distribution within patient visits had changed (Fig. 17).

**Fig. 17. Changes in age and sex distribution for patient visits**

![Changes in age and sex distribution for patient visits](image)

During interviews, one of the communal providers from the Odesa oblast (south macro-region) described these changes to age and sex distribution within the scope of patient visits:

*Part of the young population either went abroad or was drafted into the army, so some people from 18 to, perhaps, 60, left their place of permanent residence. Well, in addition, some children under the age of five were also forced to move to other countries and we did not always have the opportunity to conduct proper work on vaccinations.*
In addition, patients of an older age category remained here, but they remained in a stressful situation, so the number of appeals increased.

**Changes in the number of veterans among patients**

44% (38 providers) indicated that the number of veterans among patients had changed significantly since 24 February 2022:

- in 34 PHC facilities the number of veterans among patients increased;
- in four PHC facilities the number of veterans among patients decreased.

Also, there is a need to mention that currently the system of disability assessment of civilians and combatants is in a process of transformation because of corruption and poor effectiveness. Taking into account ongoing war which also may lead to an increase in the number of people with disabilities, facilities probably will face greater changes in terms of increasing the number of cases that need to be assessed by the medical system in the near future.

Additionally, 48% (41 providers) indicated that in their facilities the number of veterans among patients had not changed significantly since 24 February 2022 (Fig. 18).

***Fig. 18. Changes in the number of veterans among patients***

![Bar chart showing changes in the number of veterans among patients](image)

Data, \( n = 86 \)

During the interview process, **one of the communal providers from Sumy oblast** (north macro-region) mentioned that the number of military personnel had increased and that on occasion, they communicated with them via remote channels:

*The number of soldiers increased. They contact us when they have respiratory diseases. Where a military hospital is not needed, they turn to us. If they call on the phone, we consult them. They can even be there in the places where they are and we simply recommend what drugs they should take, etc.*
A communal provider from Odesa oblast (south macro-region) also indicated that the number of military patients had increased, and described the current service provision to them:

*The number of military personnel increased. We serve the military; we offer them periodic vaccinations. We help them with the diagnosis of acute conditions, refer them to inpatient treatment, regardless of whether we have declarations with these patients or not. On occasion, we treat them ourselves.*

*There are a lot of viral infections among servicemen and veterans of the anti-terrorist operation. High temperature, intoxication syndromes. We treat them in a day hospital so that they can return to service sooner.*

**Changes in health conditions among current patients who are seeking medical care**

Providers were also asked to indicate changes in health conditions among their current patients seeking medical care.

Most often, survey participants mentioned the following health conditions that have increased:

- cardiovascular diseases and conditions such as hypertensive crises, cardiac pathology, hypertensive conditions, hypertensive disease, ischaemic heart disease or increased blood pressure (63%, 50 providers);
- mental illnesses and disorders, including anxiety disorders, increased anxiety, depression, panic attacks, insomnia, nervous disorders, stress conditions, fear or post-traumatic stress disorder (PTSD) (59%, 47 providers).

Other mentioned health conditions were chronic diseases overall, endocrinological diseases, gastrointestinal diseases, respiratory diseases, skin diseases etc (Fig. 19).

**Fig. 19. Health conditions that have increased**

![Health conditions that have increased](Image)
Acute respiratory viral infection, including COVID-19, was mentioned most often as a health condition that has decreased since 24 February 2022 (73%, 41 providers). Other health conditions mentioned were issues such as gastroenterological and pulmonological diseases (Fig. 20).

**Fig. 20. Health conditions that have decreased**

![Graph showing health conditions that have decreased](image)

<table>
<thead>
<tr>
<th>Health conditions</th>
<th>Number of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute respiratory viral infection, incl. COVID-19</td>
<td>41</td>
</tr>
<tr>
<td>Gastrointestinal diseases</td>
<td>8</td>
</tr>
<tr>
<td>Pulmonological diseases</td>
<td>7</td>
</tr>
<tr>
<td>Other health conditions</td>
<td>7</td>
</tr>
</tbody>
</table>

Data, \( n = 56 \)

Interviews confirmed that survey results concerning the health conditions that have become more prevalent, and additional comments were made during the process concerning changes in health conditions.

Several facilities mentioned that they had observed increasing numbers of young patients with cardiovascular diseases and conditions than normal.
**Private provider in Dnipro oblast** (east macro-region)

*Due to the fact that in the first months, patients contacted the facilities less, hypertensive crises became more frequent. There were a lot of them. And plus, depressive states have become more frequent. In our facility, depression was not recorded at all in the past years. Also psychosomatic conditions. And strokes. Strokes were recorded in young people (around 50 cases), it was a lot.*

**Communal provider in Odesa oblast** (south macro-region)

*The number of acute disorders of cerebral blood circulation has increased. Strokes have become younger. We have several cases of myocardial infarction over the age of 35. During my 20-year work before the war, I had only one case of acute myocardial infarction in a 36-year-old man. However, now there are several cases. Acute disturbance of cerebral blood circulation against the background of acute disturbance of cardiac rhythm in a 32-year-old person, several cases of ischaemic strokes in people aged 37 to 45 years. In addition, the hypertensive disease became younger and more vicious. They have more pronounced crises. This applies to both elderly people and anti-terrorist operation veterans.*

Additionally, chronic diseases among patients have increased due to a decrease in visits within the first months of the conflict, and this is mirrored by a worsening of mental health of patients.

**Communal provider in Odesa oblast** (south macro-region)

*In addition, patients of an older age category remained here, but they remained in a stressful situation, so the number of contacts increased. We have moved from more preventive work to more curative work. We organized day hospitals. If there was a great need, in exceptional cases a home care was organized.*

*They were afraid, they were left without relatives in a stressful situation. Well, probably all people did not understand how a war could start in the 21st century. For most seniors, it was a very stressful situation, so all the chronic conditions got worse. In geometric progression. Therefore, we had quite a heavy workload.*

*Now we have moved on to more preventive work. We explain which drugs are better to take, even in order to sleep better, so that they do not cause hypertensive crises or some attacks at night with their psycho-emotional disturbances.*
As numbers of mental illnesses and disorders have increased, the staff of many providers have started to undergo training based on the mhGAP\textsuperscript{8} programme to provide better care to the patients.

**Communal provider in Sumy oblast** (north macro-region)

More began to turn to doctors with mental disorders, PTSD. I cannot say that it is a large flow of patients, but they have increased. We are currently in the process of taking mhGAP courses. Patients did not need medication or psychiatric help though. (All the needs were covered) within the competence of a family doctor.

**Changes to the main reason for contacting a PHC facility**

Providers were asked to indicate whether the main reason for contacting a PHC facility had changed: 14\% (12 providers) answered in the affirmative.

Among those, the main changes in the reasons for contacting the facility (on a single-answer basis) were:

- the number of patients with suspected COVID-19 for testing and vaccination has decreased;
- the number of patients for vaccination among children has decreased;
- the number of preventive examinations among children and adolescents has decreased;
- the number of patients requiring medical certificates and prescriptions has increased;
- the number of patients requiring medical certificates for the military commissions has increased;
- the number of patients requiring to establish disability has increased;
- the number of patients requiring certificates on social care for organizations has increased; or
- the number of patients requiring vaccination against diphtheria and tetanus among adults has increased.

The interviews confirmed several answers from the questionnaire.

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\textsuperscript{8} mhGAP Programme – the Mental Health Gap Action Programme is a WHO global programme that was launched in 2008 to improve access to mental health services through the involvement in service provision of non-specialist health professionals, such as family doctors and nurses, mhGAP has been implemented in Ukraine since 2018, in cooperation with the Ministry of Health, local and international nongovernmental organizations, and other partners.
Concerning COVID-19 testing and vaccination

Communal provider in Zhytomyr oblast (centre macro-region)

Rapid tests for COVID-19 were available. The same goes for vaccines. However, due to the fact that people were afraid to move even within the city, not to mention there for preventive purposes, people tried not to go to the facility once again.

Communal provider in Sumy oblast (north macro-region)

We stopped taking COVID-19 tests to the regional centre (for PCR analysis); we did rapid COVID-19 tests. The laboratory did not work the first period. Plus there were problems with fuel. Well, in fact, there were not so many patients.

About vaccination among children

Communal provider in Zhytomyr oblast (centre macro-region)

Our vaccinations did not stop for a single day, in particular the COVID-19 vaccination. The only thing is the children who left. We caught up with this vaccination already in June. We took them under control and tried to call them upon their arrival. Moreover, all children who went abroad still kept in touch with the paediatrician by phone and in fact all consultations were provided at our level. If there were any acute diseases, of course, these children tried to seek help at their place of residence, but in fact we stayed in touch. If any vaccination was carried out abroad, we recorded accordingly.

Communal provider in Odesa oblast (south macro-region)

Due to the fact that some of the children have left, they do not receive vaccinations now. We try to find out by phone when they will appear, update the vaccination schedule and schedule them according to the individual calendar.

About preventive examination among children and adolescents

Communal provider in Cherkasy oblast (centre macro-region)

The number of preventive examinations has decreased. Due to the fact that the children’s parents had an idea and partly also the teachers and school principals,
that if the children are on distance learning, there is no need to undergo a medical examination. And it so happened that on September 1, we did not have 80–90% of children who passed the medical examination, but somewhere around 60%.

**About medical certificates**

**Communal provider in Kyiv oblast** (centre macro-region)

If we talk about medical certificates, among the children it remained at the same level. Among the adult population, there may be slightly more requests due to the care of single people who stay at home (Fig. 21).

**Fig. 21. Changes in the main reason for contacting a PHC facility**

![Bar chart showing changes in the main reason for contacting a PHC facility.](image)

Data, \( n = 86 \)

**Service delivery**

**Changes in primary patient needs for medical care**

Providers were asked to identify changes in the primary patient needs for medical care at the PHC facility since the beginning of the war.

The main patient needs for medical care that have increased since the beginning of the war were identified as:

- the need for a referral to a specialist at the secondary level (42%, 36 providers)
- visiting the family doctor (38%, 33 providers)
- laboratory testing (30%, 26 providers).
The main patient needs for medical care that have decreased since the beginning of the war were identified as:

- vaccination for COVID-19 (63%, 54 providers).

Regarding other vaccinations within the national vaccination schedule, 21% (18 providers) indicated that this patient need had also decreased.

The main patient need for medical care that occupied the “no change” answer among providers was the need for a referral to a specialist at primary level\(^9\) (72%, 62 providers) and the need to renew prescriptions (67%, 58 providers) (Fig. 22).

**Fig. 22. Changes in patient needs for medical care**

![Chart showing changes in patient needs for medical care](chart.png)

Data, \(n = 86\)

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9. Physicians can refer a patient to a narrow specialist within the same facility if such specialists exist.
Changes in the number of working hours due to an increase/decrease of the workload

It was reported that 15% (13) of all providers had needed to increase their working hours due to increased workload from family doctor visits based on patient need.

Additionally, 24% (21 providers) had to decrease working hours due to a decreased workload from lower patient requests for COVID-19 vaccinations.

The least change in workload was revealed by providers as requests for referral to specialist(s) at primary level: 92% (79 providers) noted that there was imperceptible change in workload in relation to this need (Fig. 23).

Fig. 23. Changes in working hours of medical personnel

Data, n = 86
During interviews, some providers mentioned that they changed their working hours almost at the beginning of the full-scale invasion, as they did not know what to expect and how quickly events would develop.

For example, the communal provider in Mykolaiv oblast (south macro-region) discussed matters with local authorities on the first day of the full-scale invasion, and were advised to implement a 24/7 schedule at the facility. As a result, they brought in both medical and nonmedical personnel and organized sleeping areas and food provision around the clock.

The facility worked in this manner for three weeks: enemy troops were at a distance of 25 km, but were halted at this critical juncture. When the administration of the facility was finally certain that the enemy could not advance further, they were able to reduce the facility working hours, which were more of a preventive anticipatory measure than a calculated patient requirement.

Other reasons to change working and opening hours mentioned in the interviews were: air raid alarms and danger of shelling; electricity cuts.

Communal provider in Sumy oblast (north macro-region)

When there was no electricity, we even reduced our working hours. It was dark in the facility; 1 generator could not cover the entire facility. The transport did not run all day yet, so we had to shorten the reception hours.

Communal provider in Kyiv oblast (centre macro-region)

The number of visitors decreased due to the number of rocket attacks. In October, there was already a full number of visits, but then the missile strikes began. Of course, working hours have decreased again.

Also, a communal provider in Cherkasy oblast (centre macro-region) mentioned that due to the fact that weekends were a minor consideration in view of wartime constraints, medical staff currently did not receive additional pay for working on what was traditionally a “day off”:

The difference is that previously, if a doctor was on duty on Sundays and had patients, for this duty he had the right to receive double payment or to have a day off. Now there are no days off. It was a management decision. That is, in fact, working hours were extended, but they were not counted.
Additionally, a communal provider from the Odesa oblast (south macro-region) mentioned that they had to cease provision of services on-site for the curfew period, which lasted several days:

Most of the time we worked on a regular schedule. However, there were cases when the curfew lasted for several days; not all doctors had permits and, therefore, could not go to work. At this time, we consulted online. On occasion, we took a risk, we went out in our small cars with medical assistance written on them to sick patients, but we tried to do it rarely.

Changes in the types of interactions between health care workers and patients

Patients with declarations

59% (51 providers) indicated that interaction between health care workers and patients (with declarations) via remote contact had increased since the full-scale invasion.

Additionally, 23% (20 providers) noted that the number of home visits had decreased. However, 65% (56 providers) stated that for them, the number of home visits had not changed (Fig. 24).

Fig. 24. Changes in the types of interactions (patients with declarations)

Regarding on-site visits, 27% (23 providers) indicated that the number of contacts attending their facility had increased and a very similar 20% (17 providers) indicated that this number had decreased (Fig. 25).
Fig. 25. Map of locations of providers at oblast level in which the number of on-site visits has changed significantly since 24 February 2022

Source: Map created using data from the survey of war effects conducted in January-March 2023.

Data, \( n = 40 \)

Among the locations of providers in which the number of interactions with the PHC facility have increased are:

- territories that are experiencing or have experienced hostilities – Chernihiv oblast;
- top regions of displacement of IDPs – Lviv oblast;
- both indicators – Kharkiv, Dnipropetrovsk, Zhytomyr oblasts;
- no indicators – Ivano-Frankivsk, Ternopil, Chernivtsi, Kirovohrad oblasts.

Among the locations of providers in which the number of interactions in the PHC facility have decreased are:

- territories that are experiencing or have experienced hostilities – Donetsk oblast;
- top regions of displacement of IDPs – Khmelnytskyi oblast;
- both indicators – Kyiv, Kharkiv oblasts;
- no indicators – Cherkasy, Volyn oblasts.
Among the locations of providers in which the number of interactions in the PHC facility have both increased and decreased are:

- territories that are experiencing or have experienced hostilities – Sumy, Mykolaiv oblasts;
- top regions of displacement of IDPs – Vinnytsia oblast;
- both indicators – Odesa oblast;
- no indicators – Rivne oblast.

During interviews, it was mentioned that doctors continued to communicate with patients who had moved abroad or to a safer region, through remote communication channels.

**Private provider in Kharkiv oblast** (north macro-region)

*Almost all patients who left, to another region or abroad, continued to communicate with us through remote channels. They began to return in the summer, in the fall already about 80% of our patients were back in our service area.*

**Communal provider in Sumy oblast** (north macro-region)

*Even those who were abroad continued to call us (including a video call) because they could not always get to a doctor there.*

**Communal provider in Cherkasy oblast** (centre macro-region)

*We got more phone calls. Plus many people who could not visit the facility, they called. And even those people who went abroad also called. They did not register with a doctor there yet, did not draw up documents. They often had some outbreaks of intestinal infections there and they did not understand how to get help and where to get that help, particularly for young children. Also in some cases, the facilities use distanced channels of communication as some kind of information source or psychological support of patients.*

**Communal provider in Donetsk oblast** (east macro-region)

*They call us both day and night. Both to us and to the nurses. As there is now a problem with communication and with the electricity and with emergency medical care. In general, there are many problems, so the connection is constant, it even reaches the point of absurdity.*
Communal provider in Odesa oblast (south macro-region)

My requirement for doctors and nurses is 24/7 online access with patients. Because on occasion, you just need communication and consultation in terms of “drink hot tea if you’re cold”, “put corvalol under your tongue if you have heart palpitations”. All this can prevent severe complications that can develop if a person is not told these elementary things.

Patients without declarations

62% (53 providers) noted that the number of interactions between health care workers and patients without a declaration held at the facility (on-site visits) had increased. 5% (4 providers) mentioned that the number of interactions at patients’ home had decreased.

During the interview one of the communal providers from Cherkasy (a central macro-region) mentioned that in the first months after the full-scale invasion, patients without declarations (in particular, families with infants from IDPs) visited in person, as they had not had such an opportunity previously:

In the first months of the war, as a paediatrician, I had many children who came from Kyiv, Kharkiv and Mykolaiv. The children, who were born literally in February, were quickly discharged from the maternity hospital and they just wanted to see a doctor to have the children examined and vaccinated (Fig. 26).

Fig. 26. Changes in the types of interactions (patients without declarations)

Data, n = 86
Assistance from institutions/organizations that provide social care/community-based care

22% (19 providers) noted that they had received assistance from institutions or organizations that provide social- or community-based care in their regions. Moreover, 65% (56 providers) indicated that they had not received any assistance within social care/community-based care (Fig. 27).

Fig. 27. Assistance from institutions/organizations that provide social- or community-based care

Providers were also asked to specify the institutions/organizations that provide social-or community-based care and to specify the services they deliver (Table 4).

Table 4. Institutions or organizations that provide social- or community-based care, and list of services delivered

<table>
<thead>
<tr>
<th>Name of the institution/organization</th>
<th>Services</th>
<th>Number of providers, (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>National and local authorities</td>
<td>Care for lonely people and supervision of people in difficult life circumstances</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Provision of social assistance without housing for elderly people and people with disabilities</td>
<td></td>
</tr>
<tr>
<td>Territorial centres of social service</td>
<td>Food products, personal protective equipment</td>
<td></td>
</tr>
<tr>
<td>Department of Labour and Social Protection of the Population</td>
<td>Assistance in transporting patients with reduced mobility to secondary and tertiary institutions</td>
<td>7</td>
</tr>
<tr>
<td>Local authorities</td>
<td>Additional funds for the facility's needs</td>
<td>6</td>
</tr>
<tr>
<td>United territorial community</td>
<td>Asylum, humanitarian aid</td>
<td>1</td>
</tr>
<tr>
<td>NGOs</td>
<td>Medicine, diapers</td>
<td>2</td>
</tr>
<tr>
<td>Red Cross</td>
<td>Personal protective equipment, technical equipment, food products</td>
<td>2</td>
</tr>
<tr>
<td>Volunteers</td>
<td>Medicine, diapers</td>
<td>2</td>
</tr>
<tr>
<td>United Nations Children's Fund</td>
<td>Humanitarian aid and centralized supply of medicines and medical products</td>
<td></td>
</tr>
<tr>
<td>Public organization &quot;Turbota&quot;</td>
<td>Care services for patients who are unable to move and take care of themselves</td>
<td>1</td>
</tr>
</tbody>
</table>

Data, n = 19
**Changes in the patient pathway**

Providers were asked whether the patient pathway had changed since 24 February 2022. 17% (15 providers) indicated that it had. However, most (73%, 63 providers) replied that the patient pathway had not changed (Fig. 28).

**Fig. 28. Changes in the patient pathway**

![Bar chart showing changes in the patient pathway](image)

Data, n = 86

53% (8 providers) among those that indicated a change in the pathway noted that a change in the specialist referral pathway was the reason (Fig. 29).

**Fig. 29. Changes to the stages of the patient pathway**

![Bar chart showing changes to the stages of the patient pathway](image)

Data, n = 15
There were additional changes/problems within the patient pathway mentioned by providers during the questionnaire survey.

**Appointments**

• In Cherkasy oblast (a central macro-region) a provider mentioned that due to a lack of electricity, there was no cellular coverage in villages, and thus, patients could not call to make appointments. In some facilities, there was a lack of personnel staff, which made it impossible to receive calls from patients, leaving reception to be carried out on a first-come, first-served basis.

**Visit**

• In Mykolaiv (a south macro-region) a provider indicated that some patients changed their family doctors and facilities to ones that were located in (more or less) safe places.

• In Cherkasy (a central macro-region) a provider indicated that the number of bus connections between villages and district centres had decreased. The increase in the cost of travel to regional centres and fear of possible missile attacks in regional centres had forced patients to postpone visits for tertiary-level care.

**Specialist referral**

• In Dnipropetrovsk (an eastern macro-region) a provider indicated that the patient pathway had been disrupted when electricity was disconnected, making it impossible to issue an electronic referral to a specialist.

• A similar situation was experienced in a facility in Cherkasy (a central macro-region). Due to interruptions to electricity and the Internet, family doctors cannot immediately issue electronic referrals. The same provider noted that due to the lack of cellular coverage, messages via mobile phones might not reach patients on time. In addition, due to the repurposing of some hospitals to military hospitals, ways to directly access many specialists are continually changing.

• In Kyiv city, a provider noted that the number of specialist referrals has increased due to the increase in the number of patients.

• In Ternopil (a western macro-region) the provider indicated that it is more difficult to access specialists. While there are hospitals that offer computed tomography (CT) diagnostics for free upon referral, the demand is very high.

**Diagnoses**

• In Donetsk (an eastern macro-region) the provider noted that at present it is not possible to perform additional laboratory, diagnostic or functional examinations when required on escalation of a case, because of a lack of some specialists in the region.
In Sumy (a northern macro-region) a provider indicated that due to the threat of shelling and air raids, patients lack the opportunity to be fully diagnosed and consulted within secondary and tertiary level premises. These facilities are located in the regional centre.

In Cherkasy (a central macro-region) one provider mentioned that for the first 9 months from the beginning of the full-scale invasion, due to the lack of some personnel or the inability to repair various devices, it was not possible to perform ultrasound diagnosis at the Central Medical Centre. This caused an increase in the queue for free ultrasound work at other institutions, and patients were forced to turn to paid services more often.

**Disruptions affecting the work of the PHC facility**

Providers were asked to assess the impact on their service provision by the disruptions.

Electricity cuts and increases in prices were identified as the main disruptions that PHC facilities had been affected by since 24 February 2022 during the questionnaire survey (Fig. 30).

![Fig. 30. Assessment of the impact to the service provision by the disruptions](image-url)
When comparing the overall impact of the full-scale invasion on PHC providers and assessing the impact of this on the depreciation of the hryvnia or the increase of prices, there were facilities that reported they were not affected at all by the full-scale invasion, yet they were evidently affected in real time by the depreciation of hryvnia and inflation (Fig. 31).

**Fig. 31. Comparison of provider assessment of the impacts of the full-scale invasion and inflation**

![Bar chart showing the comparison of provider assessment of the impacts of the full-scale invasion and inflation.](image)

Data, n = 86

The same situation can be observed when comparing the overall impact of the full-scale invasion and the impact of electricity cuts. Several providers indicated that they were not affected at all by the full-scale invasion, but at the same time, admitted to being affected by the electricity cuts (Fig. 32).

**Fig. 32. Comparison of provider assessments of the impact of the full-scale invasion and electricity cuts**

![Bar chart showing the comparison of provider assessments of the impact of the full-scale invasion and electricity cuts.](image)

Data, n = 86

*Impact of depreciation of UAH/increase of prices on the cost categories, procurement and investments*

Within the interviews, special attention was paid to the impact of the increase of prices on the work facilities could undertake (Fig. 33). Prices for consumables, fuel and lubricating materials, household materials, stationery, utilities, etc. have all increased.
Despite this, the increase in prices was partially offset by the fact that:

- some facilities had stocks of some consumables, fuel, goods, etc. directly before the full-scale invasion;
- medicines were provided through the period at the cost of charitable or humanitarian aid bodies;
- for some FOP enterprises, landlords reduced the rent; and
- due to the decrease in incidence of COVID-19, procurement profiles changed, and the amount of funds spent on consumables and laboratory tests in turn decreased.

**Fig. 33. Impact of depreciation of hryvnia/increase of prices**

![Chart showing the impact of depreciation of hryvnia/increase of prices across different categories.

Data, \( n = 86 \)

**Communal provider in Mykolaiv oblast** (south macro-region)

*In January, we bought fuel for the whole year, which actually made it possible to save a lot of money. Because, of course, then it all became more expensive. We bought it for UAH 29/l. Due to this, we managed to achieve certain savings. We had a very good reserve when facilities faced this problem. We also purchased consumables in advance. Therefore, we were basically ready for the beginning of the year. We had good supplies.*
Private provider in Odesa oblast (south macro-region)

Prices have a big impact. Although our landlord reduced the cost of rent for us in the first half of the year and this, of course, was a significant help, but everything else – medical consumables, household expenses, stationery, everything increased significantly in price. Approximately two times.

Impact of electricity cuts on the cost categories, procurement and investments

During the interview phase, the representatives of all facilities that participated confirmed that electricity cuts had affected the provision of services for PHC providers (Fig. 34).

Fig.34. Impact of electricity cuts

Data, n = 86

This was particularly felt by facilities that did not have their own generators at the time of the first attacks on the energy system or had generators that were underpowered. Some facilities had to physically move generators from one outpatient clinic to another, depending on where power had failed. This, in turn, affected generators’ overall capacity. Overall, generators were primarily used for proper preservation of medicines and vaccines.
Electricity cuts affected not only provision of services directly, but also the entry of data into the electronic health care system. Since any Internet connection would be lost along with a power cut, doctors frequently lacked the opportunity to enter data into the system, and had to switch to paper records as a temporary measure. This clearly resulted in an increase of working hours, as doctors were forced to note essential medical records onto paper, and only when electricity and/or an Internet connection was restored, they could enter the data into the medical information system.

Some facilities had to amend their hours when electricity cuts were longer. In this case, doctors were forced to switch to remote communication with patients, or postpone the appointments to another day.

**Communal provider in Chernihiv oblast** (north macro-region)

*I cannot even tell you how many vaccines have been destroyed due to the blackout. Then we were given humanitarian aid by refrigerators, they can keep the temperature longer when turned off. We also kept some of the vaccines in the hospital because they have their own generator there. In remote dispensaries, there was no electricity and mobile connection at all. Therefore, the part of the available vaccine was damaged. However, when the occupation was over, we already bought them a generator, more or less powerful and a refrigerator. Therefore, the situation became more controlled.*

**Communal provider in Zhytomyr oblast** (centre macro-region)

*When there was no electricity, there were problems, the medical information system did not work. There was electricity for two hours after four hours, so it was difficult for the doctors. They first did it on paper, then entered it into the system. Or they entered it from home.*

**Communal provider in Cherkasy oblast** (centre macro-region)

*For the period of electricity cuts, when there was no Internet, the prescription of medicines was delayed. That is, patients still received their prescriptions, but just a little later. And yet, turning off the electricity also affected the fact that doctors had to stay longer at work in order to partially conduct medical records of the patients they had provided services to in the morning. We have a rural area. And very often the electricity was cut from 8 to 12 in the morning, which is precisely the time when the doctor is actively conducting appointments. However, the referral cannot be issued, they cannot do anything.*

With regard to other disruptions, during interviews some PHC facilities also indicated that medical employee shortages were another of the main disruptions they had experienced. Several doctors and nurses went abroad or changed their place of residence within Ukraine to a safer locale; and additionally, some doctors were mobilized to FOP facilities.
Communal provider in Kyiv oblast (centre macro-region)

*There was no one to hire, no people. Unfortunately, they were leaving. In general, we had enough doctors, they replaced each other. There was no such thing as a patient who came and was not accepted.*

In one of the interviews with a representative of a private facility [FOP] it was mentioned that one of the most important current tasks is to reduce risks and work out a plan how the facility will work in case the doctor [head of the facility] is mobilized:

*The war also made me think about the fact that I am a conscripted man. If I go to war and if I get killed, for example, where do all the personnel go? The activity of the business entity is stopped, where all the staff and patients will go?*

*Therefore, together with another FOP, we decided this year to use the available resources to create a health care facility with independent management, with several founders and gradually transfer all our active declarations and personnel to this facility.*

In a communal facility in the Odesa oblast, the departure of a doctor who had decided to seek temporary protection abroad, followed by the hiring of another internally displaced doctor made it possible to improve the knowledge of the entire staff of the facility regarding provision of medical care and vaccination of children:

*There was no need to lay off staff. It happened that one paediatrician went abroad at the beginning of the war and an internally displaced doctor was immediately found in her place. Due to the fact that the doctor has a lot of work experience, my doctors and nurses received a rather large cluster of knowledge on providing assistance to children, on vaccination work, on emergency conditions in babies. Despite the fact that there was a war, we had a very good experience in this part.*

**Funding sources**

*Changes in funding received from the NHSU through capitation payments*

PHC providers were asked about the changes in funding from the NHSU through capitation payments.

27% (23 providers) indicated that the funding received from NHSU through capitation payments had changed since 24 February 2022. Of these, 8 received more funding from the NHSU through capitation payments and 15 received less funding (Fig. 35).
Additionally, 71% (61 providers) answered that funding from the NHSU through capitation payments had not changed. This can be simply explained: during 2022 and the first quarter of 2023, the regulations regarding payments changed several times. From the beginning of the full-scale invasion, all payments were fixed based upon the original monthly budget that providers were receiving before the war; however, this only applied to providers located in territories that are experiencing or have been experiencing hostilities.

**Fig. 35. Changes in the funding received from the NHSU through capitation payments**

![Chart showing changes in funding](image1)

Data, $n = 86$

Funding received from the NHSU varies depending on the type of ownership; more communal providers noted a change compared with private providers: 33% of communal providers (20 providers) remarked upon a change, in comparison to 12% (3) of private providers (Fig. 36).

**Fig. 36. Changes in funding received from the NHSU through capitation payments by type of ownership**

![Chart showing changes by type of ownership](image2)

Data, $n = 86$
Changes in other funding sources

56% (48 providers) noted that humanitarian and charitable aid has increased since 24 February 2022 (Fig. 37).

Fig. 37. Changes in other funding sources

However, depending on the type of ownership, changes in other funding sources vary. Most providers did not indicate any change in their funding from other sources. The biggest change by the number of providers was observed within paid services: 23% (6) of private providers indicated that funding via paid services had decreased after the full-scale invasion.

During the interviews, most private providers also mentioned that they did not receive any humanitarian or charitable aid (Figs. 38 and 39). One provider noted that they had received humanitarian aid, although not all assistance was relevant:

Private provider in Kirovohrad oblast (east macro-region)

We even received humanitarian aid from the Department of Health, but it was not always relevant. For example, I was given 2000 tablets of Analgin. For me, it became a bigger question how to dispose of them if they are not used. However, of course, communal institutions receive more humanitarian aid. We were sad that we did not receive any flu vaccines. We could increase vaccination coverage if we could get at least some of these vaccines for our patients.
The interviews also confirmed the increases in funding through humanitarian and charitable aid received among communal providers. Most noted that they had received medicines and supplies through this source of funding. In general, this has solved several problems:

- at least partially resolved the issue of lack of medicines and medical supplies experienced during the first months of the full-scale invasion; and
- reduced the financial burden on providers.
Regarding funding from local authorities, some facilities received additional funding, allowing them to be able to purchase additional medical equipment and supplies. However, some facilities noted that due to increased prices, overall they received fewer supplies from local authorities than in the previous year.

Some facilities decided not to charge for commonly paid services during the full-scale invasion, since the majority of patients without declarations are currently IDPs. These facilities consider it unethical to take money from IDPs. Additionally, due to changes in regulations, they can now provide services to IDPs without signing declarations with them.

Private provider in Dnipro oblast (east macro-region)

Currently we do not provide. It could be before the war, but not now. We decided not to provide during the war. We already help IDPs, without paid services.

Communal provider in Odesa oblast (south macro-region)

However, there were people who were temporarily displaced, had status or did not have status and we made a decision (by order) that we will serve people who do not have declarations with us, without any additional costs on their part. Because in wartime conditions, people simply have to help each other in a humane way, particularly since we had sufficient supplies for emergency medical care. I mean medicines, rapid tests, laboratory tests.

Coverage of cost categories, procurement and investments by funding sources

Salary: medical employees

Salary expenses for the medical employees were covered through NHSU funding for 57% (47 providers) of providers, with the second most predominant source being funding from the local authority budget.

Other providers indicated the following distribution of funding sources to cover salaries for their medical employees (Fig. 40)
During the interview stage, one of the communal providers from the central macro-region confirmed that the salary for their medical employees, specifically nurses, is partially covered by the local authority’s budget:

*Within the local budget, there is a development program that covers free medicines for privileged groups that are not covered by affordable medicines. In addition, this program partially covers the salaries of nurses. If, for example, we have about 300 people in our village, we will not keep the nurse there at full rate. That is, we set for*
her 0.25 of the normal working time, which is very little money. And in order to keep this nurse and give her a more or less decent salary, the city budget can partially finance it, as much as it deems necessary.

**Salary: nonmedical employees**

Salary expenses for the nonmedical employees were covered through NHSU funding for 74% (59 providers) of providers, with the second most predominant source being funding from the local authority budget.

Other providers indicated the following distribution of funding sources to cover salaries for their medical employees (Fig. 41).

**Medicines and immunobiological drugs**

![Fig. 41. Salary: nonmedical employees: coverage by source of funding](chart)

The primary funding sources covering medicines and immunobiological drugs are NHSU funding, humanitarian and charitable aid, and funding from local authorities, as indicated by the providers surveyed.

Expenses for medicines and immunobiological drugs were covered solely from NHSU funding for 26% (21 providers) of providers.

Other providers indicated the following distribution of funding sources (Fig. 42).
The distribution of sources to cover medicines and immunobiological drugs varied dependent on type of ownership between communal and private providers.

Among communal providers, only four covered these costs solely through NHSU funding. The main funding sources for most providers are humanitarian and charitable aid and funding from local authorities (Fig. 43).
Fig. 43. Medicines and immunobiological drugs: funding sources for communal providers

Among communal providers, only four covered these costs solely through NHSU funding. The main funding sources for most providers are humanitarian and charitable aid and funding from local authorities (Fig. 43).

Data, \( n = 59 \)

Among private providers, however, NHSU funding is the main source covering medicines and immunobiological drugs. Only seven private providers cover these items from other funding sources (Fig. 44).
Among private providers, however, NHSU funding is the main source covering medicines and immunobiological drugs. Only seven private providers cover these items from other funding sources (Fig. 44).

Medical devices

The primary funding sources for medical devices are NHSU funding, humanitarian and charitable aid, and funding from local authorities, as indicated by the providers surveyed.

35% (28 providers) cover their costs on medical devices solely through NHSU funding. Other providers indicated the following distribution of funding sources (Fig. 45).
Fig. 45. Medical devices: coverage by source of funding
Disinfectants

The primary funding sources for disinfectants are NHSU funding, humanitarian and charitable aid and funding from local authorities, as indicated by the providers surveyed.

45% (37 providers) cover their costs on disinfectants solely through NHSU funding. Other providers indicated the following distribution of funding sources (Fig. 46).

Fig. 46. Disinfectants: coverage by funding source

![Disinfectants Coverage by Funding Source](image)

Data, n = 46

Personal protective equipment

The primary funding sources for personal protective equipment are NHSU funding and humanitarian and charitable aid, as indicated by the providers surveyed.

36% (30 providers) cover their costs on personal protective equipment solely through NHSU funding. Other providers indicated the following distribution of funding sources (Fig. 47).
Diagnostic tests

These are tests performed directly by providers or outsourced to external services. The primary funding sources for diagnostic tests are NHSU funding, humanitarian and charitable aid and funding from local authorities, as indicated by the providers surveyed.

47% (36 providers) cover their costs on diagnostic tests solely through NHSU funding. Other providers indicated the following distribution of funding sources (Fig. 48).
These are tests performed directly by providers or outsourced to external services. The primary funding sources for diagnostic tests are NHSU funding, humanitarian and charitable aid and funding from local authorities, as indicated by the providers surveyed.

47% (36 providers) cover their costs on diagnostic tests solely through NHSU funding. Other providers indicated the following distribution of funding sources (Fig. 48).

**Fig. 48. Diagnostic tests: coverage by funding source**

Data, \(n = 40\)

**Stationery**

This includes forms, special accounting journals, signboards, signs, plates, printing products, periodicals, etc.

The primary funding sources for stationery are NHSU funding and funding from local authorities, as indicated by the providers surveyed.

77% (61 providers) cover their costs on stationery solely through NHSU funding. Other providers indicated the following distribution of funding sources (Fig. 49)
Household materials and inventory

The primary funding sources for household materials and inventory are NHSU funding and funding from local authorities, as indicated by the providers surveyed.

68% (54 providers) cover their costs on household materials and inventory solely through NHSU funding. Other providers indicated the following distribution of funding sources (Fig. 50).
The primary funding sources for household materials and inventory are NHSU funding and funding from local authorities, as indicated by the providers surveyed. 68% (54 providers) cover their costs on household materials and inventory solely through NHSU funding. Other providers indicated the following distribution of funding sources (Fig. 50).

**Fuel and lubricating materials**

The primary funding sources for fuel and lubricating materials are NHSU funding and funding from local authorities, as indicated by the providers surveyed. 56% (44 providers) cover their costs on fuel and lubricating materials solely through NHSU funding. Other providers indicated the following distribution of funding sources (Fig. 51).
The primary funding sources for fuel and lubricating materials are NHSU funding and funding from local authorities, as indicated by the providers surveyed. 56% (44 providers) cover their costs on fuel and lubricating materials solely through NHSU funding. Other providers indicated the following distribution of funding sources (Fig. 51).

Utilities

The primary funding sources for utilities are funding from local authorities and NHSU funding, as indicated by the providers surveyed. 56% (45 providers) cover their costs on utilities solely through funding from local authorities. Other providers indicated the following distribution of funding sources (Fig. 52).
The primary funding sources for utilities are funding from local authorities and NHSU funding, as indicated by the providers surveyed. 56% (45 providers) cover their costs on utilities solely through funding from local authorities. Other providers indicated the following distribution of funding sources (Fig. 52).

![Fig. 52. Utilities: coverage by funding source](image_url)

Depending on the type of ownership, the distribution of sources to cover utilities varied and differences were seen between communal and private providers.

Most communal providers cover utilities through funding from local authorities. Other funding sources to cover utilities for communal providers are included NHSU funding, paid services and other sources (Fig. 53).
In contrast, most private providers covered utility expenses through NHSU funding. Only four providers covered utilities with other sources, such as paid services and other sources (Fig. 54).
Current, or ongoing regular repairs and maintenance were primarily covered from NHSU funding and funding from local authorities, as indicated by the providers surveyed.

47% (35 providers) cover their costs on maintenance solely through NHSU funding. Other providers indicated the following distribution of funding sources (Fig. 55).
**Building materials**

The main source of funding for building materials indicated by the providers was NHSU funding.

53% (33 providers) cover their costs on building materials solely through NHSU funding.

Other providers indicated the following distribution of funding sources (Fig. 56).
Other operating costs

The primary funding sources for other operating costs are NHSU funding and funding from local authorities, as indicated by the providers surveyed.

58% (42 providers) cover their costs on other operating costs solely through NHSU funding. Other providers indicated the following distribution of funding sources (Fig. 57).
Fig. 57. Other operating costs: coverage by funding source

Reimbursement of the cost of discounted drug and insulin

The primary funding sources for reimbursement of the cost of discounted drugs and insulin are funding from local authorities and NHSU funding, as indicated by the providers surveyed.

65% (41 providers) cover their expenses for reimbursement of the cost of discounted drugs and insulin solely through funding from local authorities. Other providers indicated the following distribution of funding sources (Fig. 58).
Fig. 58. Reimbursement of the cost of discounted drugs, insulin: coverage by funding source

Data, \( n = 22 \)

**Capital investments**

The primary funding sources for capital investments were NHSU funding and funding from local authorities, as indicated by the providers surveyed.

36% (21 providers) cover their costs on capital investments solely through NHSU funding. Other providers indicated the following distribution of funding sources (Fig. 59).
Purchase of goods and material assets

The primary funding sources for the purchase of goods and material assets, such as procurement of stock, were NHSU funding and funding from local authorities, as indicated by the providers surveyed.

41% (29 providers) cover their expenditure on goods and material assets solely through NHSU funding. Other providers indicated the following distribution of funding sources (Fig. 60).
Several of the defined cost categories, procurement and investments were almost wholly covered through NHSU funding, such as salaries for medical and nonmedical employees; fuel and lubricating materials; cleaning and hygiene materials, products and inventory; stationery; building materials; other operating costs; and reimbursement of the cost of discounted drugs and insulin.
Other cost categories were not covered by one main source, but by a range:

- medical devices – NHSU funding, humanitarian and charitable aid and funding from local authorities;
- disinfectants – NHSU funding and humanitarian and charitable aid;
- personal protective equipment – NHSU funding and humanitarian and charitable aid;
- diagnostic tests – NHSU funding and humanitarian and charitable aid;
- repairs and maintenance – NHSU funding and funding from local authorities;
- capital investments – NHSU funding and funding from local authorities; and
- purchases of goods and materials – NHSU funding, humanitarian and charitable aid and funding from local authorities.

For two cost categories – medicines and immunobiological drugs, and utilities – the coverage from funding sources varied dependant on the type of ownership of the provider.

Communal providers cover medicines and immunobiological drugs mainly through humanitarian and charitable aid and funding from local authorities; and utilities through funding from local authorities. Private providers, cover both cost categories from NHSU funding.

The interviews showed that some facilities had needed to change their plans regarding capital investments, procurement of medical equipment and other cost categories. Additionally some of them were obliged to put on hold plans to contract within new packages. Currently, facilities are focusing on accumulating additional financial reserves to cover future expenses.

Communal provider in Donetsk oblast (east macro-region)

*In general, we rely on the budget that we have. We started saving, buying less fuel. We optimize in all categories, stationery, household goods, the same fuel, even salary. If we see that a person does not work out according to the number of declarations, then we pay him accordingly. We expected to encourage the staff, but we did not succeed, thank god that we at least had enough to pay salaries in full.*

Communal provider in Rivne oblast (west macro-region)

*We try to save in order to cover all basic expenses and salary payments first. We will think about other things closer to the middle of the year.*
Private provider in Kharkiv oblast (north macro-region)

Before the invasion, I really wanted to raise the salary of the employees. I planned it for 2022. We have had a certain development plan since the opening, by the end of 2021 many declarations were added. I was not able to get to the salary level that I wanted, and the development was somewhat suspended, because there is no such clarity in the future. Invest – I cannot, there is no such reserve as I planned to make. There are certain problems with this, I do not think about them now, because we only want one thing now and everything else will come later.

Private provider in Odesa oblast (south macro-region)

We are delaying some big purchases. If this is something that is not very necessary. I can say that we probably have enough for current needs so that our facility can develop. Now, of course, everything is much better, but at present we cannot open additional branches or develop a network.

Communal provider in Odesa oblast (south macro-region)

Due to changes in legislation, we are not able to do capital repairs now. Most of the buildings that have been handed over to us for operational management are not in a satisfactory condition and we cannot make capital investments at present, it is a bit inconvenient. I am not the first year as the chief doctor and I have always insisted that the facility should always have financial reserves that would allow us to survive in the event of something. Therefore, we had some cash reserves. There are fewer of them now, but we fully cover the salary of employees.

We were planning to upgrade some medical equipment. We plan to hire several interns in 2023. If the number of declarations increases, we will be able to cover these plans and needs.

Communal provider in Kyiv oblast (centre macro-region)

Yes, we planned capital repairs with budget funds. And also upgrade some medical equipment. However, for the time being, all of that was curtailed.

Communal provider in Zhytomyr oblast (centre macro-region)

We were going to contract for a package of mobile palliative care. During the year, we were going to purchase all the necessary equipment under this package, to improve the conditions of patients' stay at home. But, of course, from what we planned, we did not fully implement it and we did not purchase all the necessary equipment that was supposed to be used for the patients.
**Provider needs**

Providers were asked to identify their current needs (Table 5).

The most often-mentioned current need by survey participants was autonomous power supply devices (62%, 47 providers).

**Table 5. Provider needs**

<table>
<thead>
<tr>
<th>List of needs</th>
<th>Current needs (number of providers)</th>
<th>Needs after 24 Feb 2022 (number of providers)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autonomous power supply devices</td>
<td>47</td>
<td>42</td>
</tr>
<tr>
<td>Need for staff (doctors, nurses, specialized staff for work with mental illnesses, etc.)</td>
<td>19</td>
<td>9</td>
</tr>
<tr>
<td>Current and capital repairs (including to increase energy saving of buildings), as well as the construction of additional buildings</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td>Computer equipment, telephones and other means of communication (including for the needs of telemedicine)</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>Fuel</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>Automated laboratory equipment and reagents</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Medical equipment</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Cars</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Improvement of staff qualifications (including special training of existing staff to work with mental illnesses)</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Medicines</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Means for heating (radiators, convectors, boilers)</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Other needs (office furniture, personal protective equipment, disinfectants, salary, fuel storage containers, etc.)</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>No needs</td>
<td>13</td>
<td>18</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>76</td>
<td>68</td>
</tr>
</tbody>
</table>
Annex 1. Provider selection criteria of the cost study

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ownership</td>
<td>Communal and private practitioners</td>
</tr>
<tr>
<td>Type of institution</td>
<td>Primary health care providers</td>
</tr>
<tr>
<td>Number of doctors</td>
<td>Without restrictions</td>
</tr>
<tr>
<td>Number of patients per doctor</td>
<td>The number of patients per doctor ranges from 900 to 2000</td>
</tr>
<tr>
<td>Structural subdivisions</td>
<td>Without restrictions</td>
</tr>
<tr>
<td>Service packages</td>
<td>PHC services package, package of vaccination against COVID-19</td>
</tr>
<tr>
<td>Structure by regions</td>
<td>The structure of reference providers proportionally corresponds to the existing network of medical service providers with the PHC package and NHSU regions:</td>
</tr>
<tr>
<td></td>
<td>● central – 20%</td>
</tr>
<tr>
<td></td>
<td>● eastern – 18%</td>
</tr>
<tr>
<td></td>
<td>● northern – 16%</td>
</tr>
<tr>
<td></td>
<td>● southern – 13%</td>
</tr>
<tr>
<td></td>
<td>● western – 33%</td>
</tr>
<tr>
<td>Subdivisions in a mountain area</td>
<td>Without restrictions</td>
</tr>
<tr>
<td>Structure of communal/private providers</td>
<td>The structure of reference providers proportionally corresponds to the existing network of providers with a PHC package: 59% communal, 41% private</td>
</tr>
<tr>
<td>Structure of rural/urban area providers</td>
<td>Of the communal providers, 22% were located in rural and 78% in urban areas (cities and developed towns)</td>
</tr>
<tr>
<td>Service provider’s willingness to participate in a study and ability to provide cost data</td>
<td>Providers willing to participate in a cost study and able to provide cost data</td>
</tr>
<tr>
<td>Period of research</td>
<td>2021 calendar year</td>
</tr>
</tbody>
</table>

Note: PHC: primary health care; NHSU: National Health Service of Ukraine.

Annex 2. Questionnaire

1.1 In your opinion, on a range from 1 to 5, how much your facility was affected since 24 February 2022 till the current time, where:

- 5 = being heavily affected in a way that it was not possible to serve patients
- 4 = heavily affected but some services remained
- 3 = affected, but majority of services remained
- 2 = affected only some services
- 1 = did not affect at all

Responders should tick the right block.
Patient profile

2.1 Did the number of patients with declarations change significantly since 24 February 2022?

- Yes, increased (please, specify the approximate percentage change)
- Yes, decreased (please, specify the approximate percentage change)
- No
- Not sure

2.2 Did the number of patients' visits (with or without declarations) change significantly since 24 February 2022?

<table>
<thead>
<tr>
<th>Types of patients</th>
<th>Yes, increased</th>
<th>Yes, decreased</th>
<th>No</th>
<th>Not sure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients with declarations</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Patients without declarations</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>

Responders should tick the right block for each type of the patients.

If the responder answers ‘Yes, increased’ or ‘Yes, decreased’ on patients without declarations, please ask the following question.

2.2.1 Please specify the approximate percentage change.

2.2.2 Did the number of internally displaced people (IDPs) among patients without declarations change significantly since 24 February 2022?

- Yes, increased (please, specify the approximate percentage change)
- Yes, decreased (please, specify the approximate percentage change)
- No
- Not sure

2.3 Did the age and sex distribution within patients' visits change since 24 February 2022?

- Yes
- No
- Not sure

If the responder answers Yes to the Question 2.3, please ask the questions 2.3.1 and 2.3.2.
2.3.1  Please, specify the number of patients visiting your facility during the period from 24 February 2022 to 1 December 2022 by the following age and sex groups:

<table>
<thead>
<tr>
<th>Group number</th>
<th>Age/sex group</th>
<th>Number of patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>0–5 years (male)</td>
<td></td>
</tr>
<tr>
<td>1.2</td>
<td>0–5 years (female)</td>
<td></td>
</tr>
<tr>
<td>2.1</td>
<td>6–17 years (male)</td>
<td></td>
</tr>
<tr>
<td>2.2</td>
<td>6–17 years (female)</td>
<td></td>
</tr>
<tr>
<td>3.1</td>
<td>18–39 years (male)</td>
<td></td>
</tr>
<tr>
<td>3.2</td>
<td>18–39 years (female)</td>
<td></td>
</tr>
<tr>
<td>4.1</td>
<td>40–64 years (male)</td>
<td></td>
</tr>
<tr>
<td>4.2</td>
<td>40–64 years (female)</td>
<td></td>
</tr>
<tr>
<td>5.1</td>
<td>over 65 years (male)</td>
<td></td>
</tr>
<tr>
<td>5.2</td>
<td>over 65 years (female)</td>
<td></td>
</tr>
</tbody>
</table>

2.3.2  Please, specify the approximate percentage change for patients’ visits by the following age and sex groups for a period from 24 February 2022 to 1 December 2022 in comparison to the pre-war period:

<table>
<thead>
<tr>
<th>Group number</th>
<th>Age/sex group</th>
<th>Approximate change, % (for example 20% increase or -10% decrease)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>0–5 years (male)</td>
<td></td>
</tr>
<tr>
<td>1.2</td>
<td>0–5 years (female)</td>
<td></td>
</tr>
<tr>
<td>2.1</td>
<td>6–17 years (male)</td>
<td></td>
</tr>
<tr>
<td>2.2</td>
<td>6–17 years (female)</td>
<td></td>
</tr>
<tr>
<td>3.1</td>
<td>18–39 years (male)</td>
<td></td>
</tr>
<tr>
<td>3.2</td>
<td>18–39 years (female)</td>
<td></td>
</tr>
<tr>
<td>4.1</td>
<td>40–64 years (male)</td>
<td></td>
</tr>
<tr>
<td>4.2</td>
<td>40–64 years (female)</td>
<td></td>
</tr>
<tr>
<td>5.1</td>
<td>over 65 years (male)</td>
<td></td>
</tr>
<tr>
<td>5.2</td>
<td>over 65 years (female)</td>
<td></td>
</tr>
</tbody>
</table>

2.4  Did the number of veterans (in particular soldiers, officers, volunteers in connection with the Russian Federation invasion of Ukraine which began on 24 February 2022; ex-combatants of the anti-terrorist operation/out of service) among patients change significantly since 24 February 2022?

- Yes, increased (please, specify the approximate percentage change)
- Yes, decreased (please, specify the approximate percentage change)
- No
- Not sure
2.5.1 Which health conditions among current patients who are seeking medical care have increased?

For example, the number of patients with mental health conditions has increased since 24 February 2022.

Open question

2.5.2 Which health conditions among current patients who are seeking medical care have decreased or have not changed?

Open question

2.5.3 Do health conditions among veterans who are seeking medical care differ from the other patients?

- Yes/please specify the list of major health conditions of veterans seeking medical care
- No
- Not sure

2.6 Has the main reason for contacting the PHC facility changed?

- Yes
- No
- Not sure

If the responder answers Yes to Question 2.6, please ask the following question.

2.6.1 Please, specify the changes in the reasons for contacting the PHC facility.

For example, more patients with children contact the PHC facility to vaccinate children within routine vaccination or less patients with suspected or with COVID-19 contact the PHC facility to perform the testing or less patients contact the PHC facility to do vaccination for COVID-19.

Open question
### Service delivery

3.1 Did the proportion of the following types of interactions between the health care worker and the patient change since 24 February 2022?

<table>
<thead>
<tr>
<th>Type of patients</th>
<th>Type of interaction</th>
<th>Yes, increased</th>
<th>Yes, decreased</th>
<th>No change</th>
<th>Not sure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients with declarations</td>
<td>In the PHC facility</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td></td>
<td>Home visit</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td></td>
<td>By phone</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td></td>
<td>Via a video call/chat in messenger</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td></td>
<td>Other (please specify)</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Patients without declarations</td>
<td>In the PHC facility</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td></td>
<td>Home visit</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td></td>
<td>By phone</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td></td>
<td>Via a video call/chat in messenger</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td></td>
<td>Other (please specify)</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>

Responders should tick the right block for each type of interaction.

If the responder answers ‘Yes, increased’ or ‘Yes, decreased’ on any of the interactions, please ask the following question on each type of interaction.

3.1.1 Which health care worker does this interaction (in the PHC facility, home visit, ...) most often occur with?

- Family doctor
- Nurse
- Nonmedical staff
- Not sure
3.2 How did the main patient needs for medical care change since the beginning of the war at the PHC facility?

<table>
<thead>
<tr>
<th>Patient need for medical care</th>
<th>Increased</th>
<th>Decreased</th>
<th>No change</th>
<th>Not sure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visiting the family doctor</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Need to renew prescriptions</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Need for a referral to a specialist at the primary level</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Need for a referral to a specialist at the secondary level</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Visiting a specialist at the primary level</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Laboratory testing</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Diagnostics using medical equipment (CT, X-ray etc)</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Vaccination within national vaccination schedule</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Vaccination for COVID-19</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supportive therapy (injections, IVs etc)</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>

3.2.1 If there have been changes in patient needs that are not listed in the previous question since the start of the full-scale invasion at the facility where you work, please indicate what those needs are and how they have changed (needs increased or decreased).

*Open question*
3.3 Did the staff of your facility have to change the number of working hours since 24 February 2022 due to changes in patient needs?

<table>
<thead>
<tr>
<th>Patient need for medical care</th>
<th>Yes, duration of working time increased due to increase of the workload</th>
<th>Yes, duration of working time decreased due to decrease of the workload</th>
<th>No change</th>
<th>Not sure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visiting the family doctor</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Need to renew prescriptions</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Need for a referral to a specialist at the primary level</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Need for a referral to a specialist at the secondary level</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Visiting a specialist at the primary level</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Laboratory testing</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Diagnostics using medical equipment (CT, X-ray etc)</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Vaccination within national vaccination schedule</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Vaccination for COVID-19</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Supportive therapy (injections, IVs etc)</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>

3.3.1 If in question 3.2.1 you indicated that since the beginning of the full-scale invasion in the facility where you work, there have been changes in other patient needs, please specify whether the staff of your facility had to change the work schedule from Feb 24, 2022, due to the change in needs (to increase or decrease the duration of working hours).
3.4 Do you receive any assistance from institutions/organizations that provide social care/community-based care in your region?

- Yes/If yes, please specify the organizations and the services they deliver
- No
- Not sure

3.5 In your opinion, has the patient pathway changed since 24 February 2022?

- Yes
- No
- Not sure

If the responder answers Yes to 3.5, please ask the following question.

3.5.1 In your opinion, did the changes occur on the following stages of the patient pathway?

<table>
<thead>
<tr>
<th>Stages of the patient pathway</th>
<th>Yes</th>
<th>No</th>
<th>Not sure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appointment</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Visit</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Specialist referral</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Diagnostics</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Treatment prescription</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Follow-up</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>

Responders should tick the right block for each stage of the patient pathway.

If the responder ticks the block Yes on any of the rows, please, answer the following question for each such row.

3.5.2 Please specify the changes on the following stages of the patient pathway.

Open question

3.5.3 Did the changes occur on the other stages of the patient pathway that were not previously mentioned? If so, please specify the changes on these stages of the patient pathway.

Open question
4.1 Since February 24th, 2022, on a scale from 1 to 5, to which extent was your PHC facility affected by the following disruptions, where:

5 = being heavily affected in a way that it was not possible to serve patients,
4 = heavily affected but some services remained,
3 = affected, but majority of services remained,
2 = affected only some services,
1 = did not affect at all.

<table>
<thead>
<tr>
<th>No.</th>
<th>List of disruptions</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>Not sure</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Medical workforce shortages – physicians</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>1.2</td>
<td>Medical workforce shortages – nurses</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>1.3</td>
<td>Nonmedical workforce shortages</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>2</td>
<td>Increased number of patients (e.g. IDPs)</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>3</td>
<td>Damage to health facilities</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>4</td>
<td>Disruptions to laboratory testing</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>5</td>
<td>Supply chain disruption for medical equipment, supplies etc.</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>6</td>
<td>Supply chain disruption for medicines</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>7</td>
<td>Depreciation of UAH/Increase of prices</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>8</td>
<td>Deteriorated mental health of the facility workers</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>9</td>
<td>Water supply cuts</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>10</td>
<td>Electricity cuts</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>11</td>
<td>Heat supply cuts</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>
Responders should tick the right block for each disruption.

4.2 Did the work of your PHC facility experience any other disruptions?

- Yes/Please specify
- No
- Not sure

If the responder puts 2 to 5 in Q 4.1, please ask the following question on each disruption mentioned by the responder

4.3 In your opinion, which cost categories/procurements/investments and how were affected by the disruption?

<table>
<thead>
<tr>
<th>№No.</th>
<th>Disruption/challenge specified by the responder in Q 4.1</th>
<th>Yes, increased the cost</th>
<th>Yes, decreased the cost</th>
<th>No</th>
<th>Not sure</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Salary (medical workforce)</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>1.2</td>
<td>Salary (nonmedical workforce)</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>2</td>
<td>Medicines and immunobiological drugs</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>3</td>
<td>Medical devices</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>4</td>
<td>Disinfectants</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>5</td>
<td>Personal protective equipment</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>6</td>
<td>Diagnostic tests (tests performed directly by the provider and outsourced (external service)</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>7</td>
<td>Stationery (including forms, special accounting journals, sign boards, signs, plates, printing products, periodicals, etc.)</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>8</td>
<td>Household materials, inventory</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>9</td>
<td>Fuel and lubricating materials</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>№№</td>
<td>Disruption/challenge specified by the responder in Q 4.1</td>
<td>Yes, increased the cost</td>
<td>Yes, decreased the cost</td>
<td>No</td>
<td>Not sure</td>
</tr>
<tr>
<td>------</td>
<td>-------------------------------------------------------</td>
<td>-------------------------</td>
<td>------------------------</td>
<td>----</td>
<td>---------</td>
</tr>
<tr>
<td>10</td>
<td>Utilities</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>11</td>
<td>Repair (current)</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>12</td>
<td>Building materials</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>13</td>
<td>Other operating costs</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>14</td>
<td>Reimbursement of the cost of discounted drugs, insulins</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>15</td>
<td>Capital investments</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>16</td>
<td>Purchase of goods and material values</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>

Responders should tick the right block for each cost category/purchase/investment.

If the responder ticks “Yes, increased” or “Yes, decreased” on any of the cost categories, ask the following question on each cost category/purchase/investment where the changes occurred.

4.3.1 Please, indicate the approximate percentage change in the specified cost/purchase/investment.

<table>
<thead>
<tr>
<th>Cost/purchase/investment</th>
<th>Approximate change, % (for example 20% increase or -10% decrease)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical devices</td>
<td></td>
</tr>
</tbody>
</table>
**Sources of funding**

5.1 Did the funding received from the NHSU through capitation payments change since 24 February 2022?

- Yes, it increased
- Yes, it decreased
- No, it did not change
- Not sure

5.2 Did other sources of funding change since 24 February 2022?

<table>
<thead>
<tr>
<th>Sources of funding</th>
<th>Yes, increased</th>
<th>Yes, decreased</th>
<th>No</th>
<th>Not sure</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Humanitarian and charitable aid</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>2 Funding from local authorities</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>3 Additional funding from national budget</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>4 Paid services</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>5 Other/please specify</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>

Responders should tick the right block for each source of funding.

If the responder indicates the funding change of any of the sources in Q 5.2, please ask the following question on each source mentioned by the responder.
5.2.1 Please indicate which cost categories are covered by the mentioned funding sources. Please, put the percentage share of each funding source, 100% in total per each cost category.

<table>
<thead>
<tr>
<th>№</th>
<th>Covered cost categories, 100% in total</th>
<th>NHSU Funding, %</th>
<th>Humanitarian and charitable aid, %</th>
<th>Funding from local authorities, %</th>
<th>Additional funding from national budget, %</th>
<th>Paid services, %</th>
<th>Other sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Salary (medical workforce)</td>
<td></td>
<td></td>
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<tr>
<td>1.2</td>
<td>Salary (nonmedical workforce)</td>
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<tr>
<td>2</td>
<td>Medicines and immunobiological drugs</td>
<td></td>
<td></td>
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<tr>
<td>3</td>
<td>Medical devices</td>
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<tr>
<td>4</td>
<td>Disinfectants</td>
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<tr>
<td>5</td>
<td>Personal protective equipment</td>
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<tr>
<td>6</td>
<td>Diagnostic tests</td>
<td></td>
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<tr>
<td>7</td>
<td>(tests performed directly by the provider and outsourced (external service)</td>
<td></td>
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</tr>
<tr>
<td>8</td>
<td>Stationery (including forms, special accounting journals, sign boards, signs, plates, printing products, periodicals, etc)</td>
<td></td>
<td></td>
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<tr>
<td>9</td>
<td>Household materials, inventory</td>
<td></td>
<td></td>
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<tr>
<td>10</td>
<td>Fuel and lubricating materials</td>
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</tr>
<tr>
<td>11</td>
<td>Utilities</td>
<td></td>
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</tr>
<tr>
<td>12</td>
<td>Repair (current)</td>
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<tr>
<td>13</td>
<td>Building materials</td>
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<tr>
<td></td>
<td>Other operating costs</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>№</td>
<td>Covered cost categories, 100% in total</td>
<td>NHSU Funding, %</td>
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<td>Other sources</td>
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<tr>
<td>14</td>
<td>Reimbursement of the cost of discounted drugs, insulin</td>
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<tr>
<td>15</td>
<td>Capital investments</td>
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<td></td>
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<tr>
<td>16</td>
<td>Purchase of goods and material values</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Responders should put the percentage share of each funding source, 100% in total per each cost category.

**PROVIDER NEEDS**

6.1 What are the current needs of your PHC facility?

For example, purchase of autonomous power supply devices, purchase of medical drugs for stock, staffing needs for patients with mental health conditions etc.

*Open question*

6.2 Which of the mentioned needs come up after 24 February 2022?

*Open question*
The WHO Regional Office for Europe

The World Health Organization (WHO) is a specialized agency of the United Nations created in 1948 with the primary responsibility for international health matters and public health. The WHO Regional Office for Europe is one of six regional offices throughout the world, each with its own programme geared to the particular health conditions of the countries it serves.

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