PRIMARY HEALTH CARE IN UKRAINE:
PROGRESS REVIEW
AND WAY FORWARD

Assessment and data collection 2020–2021

Health policy paper series
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ABSTRACT

This report builds on assessment and data collected during 2020–2021. It does not reflect the effects of the conflict in Ukraine, which escalated into a war in February 2022. A WHO team of experts with knowledge in primary health care (PHC) sector reform undertook a desk-based review of the Ukrainian PHC system before the war started in February 2022. The aims of the assessment were to provide a comprehensive overview of the current state of PHC in Ukraine, highlight key challenges and provide recommended actions and solutions on how to address and overcome them. The review also provides a potential contribution to dialogue on post-war recovery of the health sector. This report details review findings and suggests direct actions to develop the PHC model with enabling strategies.

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## ABBREVIATIONS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMP</td>
<td>Affordable Medicines Programme</td>
</tr>
<tr>
<td>CPD</td>
<td>continuous professional development</td>
</tr>
<tr>
<td>EU</td>
<td>European Union</td>
</tr>
<tr>
<td>ICPC-2</td>
<td>International Classification of Primary Care</td>
</tr>
<tr>
<td>mhGAP</td>
<td>(WHO) Mental Health Gap Action Programme</td>
</tr>
<tr>
<td>MIS</td>
<td>medical information system</td>
</tr>
<tr>
<td>MMR</td>
<td>measles–mumps–rubella (vaccination)</td>
</tr>
<tr>
<td>NCD</td>
<td>noncommunicable disease</td>
</tr>
<tr>
<td>NHSU</td>
<td>National Health Service of Ukraine</td>
</tr>
<tr>
<td>PHC</td>
<td>primary health care</td>
</tr>
<tr>
<td>PMG</td>
<td>Programme of Medical Guarantees</td>
</tr>
<tr>
<td>TB</td>
<td>tuberculosis</td>
</tr>
<tr>
<td>WONCA</td>
<td>World Organization of Family Doctors</td>
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</tbody>
</table>
EXECUTIVE SUMMARY

This report builds on assessment and data collected during 2020–2021. It does not reflect the effects of the conflict in Ukraine, which escalated into a war in February 2022.

The report aims to provide a comprehensive review of primary care in Ukraine, highlighting key challenges and providing recommended actions and solutions on how to address and overcome them. It also makes a potential contribution to dialogue on post-war recovery of the health sector.

The legacy of the previous model of primary care needs to be overcome and aligned with other parts of the modernized health system. Based on the detailed assessment, the report argues for strengthening primary health care (PHC) services through short- and long-term investments in a number of priority areas.

- **Patient providers and patient enrolment**: the proportion of the population enrolled in PHC should be increased to ensure access to services, and criteria that hospitals need to meet to be permitted to provide PHC should be set.

- **Workforce**: a PHC workforce strategy should be developed; curricula for undergraduate and postgraduate medical education should be aligned with European Union education systems; and the multidisciplinary approach should be developed and strengthened by improving collaboration between PHC and secondary care.

- **Patient pathways and referrals**: referral pathways should be developed and monitored at local level to ensure a comprehensive approach to PHC referrals.
• **Physical infrastructure**: a national review and one-off investment programme are recommended to bring PHC facilities up to a modern standard, ensuring access to diagnostic services and linkages with emergency and specialized care.

• **Medicine coverage**: national registers for chronic disease patients should be developed to assess the coverage and effectiveness of the Affordable Medicines Programme within the Programme of Medical Guarantees.

• **Contracting and payment mechanism**: the capitation mechanism should be adjusted to account for differences in costs of group and solo practices to increase efficiency and reward multidisciplinary approaches.

• **Digital technologies for health**: universal uptake of e-health in PHC services should be ensured by improving the system’s functionality, particularly incorporating care pathways for all common conditions, web-based consultations and clinical decision-support modules.

• **Quality improvement and monitoring**: desired outcomes should be defined and a monitoring and evaluation system developed to investigate variation in quality of care and care outcomes among providers.

• **Governance**: the alignment of PHC policies, outpatient and hospital planning and recovery planning and implementation should be enhanced.
1 • BACKGROUND

This report builds on assessment and data collected during 2020–2021. It does not reflect the effects of the conflict in Ukraine, which escalated into a war in February 2022.

The Government of Ukraine has taken a number of steps to reform its health system in recent years. Aligned with international evidence, it decided to make primary health care (PHC) the basis of health-care delivery. The Astana Declaration on Primary Health Care and the 2030 Agenda for Sustainable Development emphasize that PHC is the most inclusive, effective and efficient approach to ensuring services improve and preserving public health and well-being.

The reform process started in 2018, with the WHO Regional Office for Europe providing support for efforts to achieve universal health coverage and ensuring health for all.

A WHO team of experts with knowledge in PHC sector reform undertook a desk-based review of the Ukrainian PHC system before the war started in February 2022. The aims of the assessment were to provide a comprehensive overview of the current state of PHC in Ukraine, highlight key challenges and provide recommended actions and solutions on how to address and overcome them. The review also provides a potential contribution to dialogue on post-war recovery of the health sector.

The review included:

- assessing the status of PHC services in Ukraine by summarizing existing policy documents and reports and examining the available data; and
- proposing policy recommended actions on the staged development of a sustainable PHC service that is transparent, people-centred, integrated and updated, and which builds on the existing model to address ongoing concerns.
1.1 | The assessment framework

To undertake an assessment of Ukraine’s PHC system, elements from two assessment frameworks — the WHO Operational Framework for PHC (1) and the Primary Health Care Impact, Performance and Capacity tool (2) — were combined to cover the following domains:

- number and types of PHC providers (including patient enrolment)
- workforce availability, scope, skills and multidisciplinary teams
- patient pathways and referral processes
- physical infrastructure
- medicines and other health products
- purchasing and payment systems
- digital technologies for health
- systems for improving the quality of care
- governance, including policy-making, resource allocation and related issues.

More details about the assessment framework and approach taken are provided in Annex 1.

1.2 | Structure of the report

The report begins with a brief background on ongoing PHC policy reforms and the health status of the population (Chapter 2). Chapter 3 covers the state of the PHC system before the war across the domains of the assessment framework (see Annex 1 for the assessment approach details). The most up-to-date data from 2021 are drawn wherever possible, with evidence of potential challenges for the PHC system and its goals for development highlighted. The challenges provide helpful baseline knowledge that is required to interpret the advice and guidance provided in Chapter 4, which describes the actions required by the Ministry of Health, National Health Service of Ukraine (NHSU) and other stakeholders to ensure that progress in building a strong PHC system for universal health coverage can continue, even within a post-war recovery context. The recommended actions are briefly covered in Annex 2 and the suggested implementation timeline is presented in the table in Annex 3.
Ensuring the health and well-being of the population is one of the top priorities of the Government of Ukraine. It is also an important international commitment that is reflected in the United Nations Sustainable Development Goals adopted by Ukraine in 2017. To realize this commitment, steps were taken to provide Ukrainian citizens with access to state-guaranteed health-care services. These measures have included reforms establishing the NHSU (in 2017) and a campaign to increase population PHC service coverage through declarations (registrations) with PHC doctors (2018) that has resulted in over 30.5 million Ukrainians signing declarations with their family doctor. Further aspects of reform have included the introduction of a legislative order on PHC provision and financing (2018), the development of a system of digital health tools and means through which to refer patients out of PHC (2020), and adaptations to the national medicines list and regulations on the price of medicines.

Before the conflict escalated into war in February 2022, the Ministry of Health developed a draft policy concept note, the “Strategy of primary health care development in Ukraine to 2030”, that was integrated into the Ukrainian health-care system post-war recovery plan for 2022–2032 released by the National Recovery Council in 2022. This sets overall goals and specific objectives for PHC development for the next decade, including:

- expanding the range of PHC services, with an emphasis on preventing diseases and promoting healthy lifestyles;
- implementing multidisciplinary approaches¹ in PHC;
- ensuring continuity of care, person-centredness and integration with other levels of care and with the public health system and social care services; and
- managing quality and improving accountability in PHC.

The themes described here — both the successes and enduring challenges — are discussed in detail in the following chapters of this report.

¹ Multidisciplinary teams (as defined in the Ministry of Health concept note, the WHO Operational Framework for PHC and in this report) are formed of various health-care professionals working together as a team to provide a broad range of services through a coordinated approach. The composition of multidisciplinary teams in PHC will vary by setting but may include generalist medical practitioners (including family doctors, paediatricians and general practitioners), physician assistants, nurses, specialist nurses, community health workers, pharmacists, social workers, dieticians, mental health counsellors, physiotherapists, patient educators, managers, support staff and other PHC staff. They specifically do not include specialists working in polyclinics. Some of these roles do not yet currently exist in Ukraine, but following the example of other countries, it is anticipated that developing them will help to support a new modern PHC service.
3 • ASSESSMENT OF THE PHC SYSTEM

The state of Ukraine’s PHC system before the war is described in this chapter, drawing on the assessment framework. It sets out ongoing challenges that provide background to the recommended actions in Chapter 4.

3.1 | Number and types of PHC providers and patient enrolment

Significant efforts have been made by the Ministry of Health in recent years to ensure that all Ukrainians can be enrolled with a family doctor of their choice. The increase in the number of patients enrolled with a PHC doctor has been heralded as a success of recent reforms. As mentioned in Chapter 2, approximately 31 million Ukrainians have signed a declaration with their family doctor, representing around three quarters of the total population. Patients can choose to enrol with any family doctor as long as the doctor has a working agreement with a PHC facility that has a contract with the NHSU. Changing doctors is also possible.

The rapid increase in the number of providers is due to new contracting rules that allow any provider to contract with the NHSU for a defined PHC package if they meet the following requirements: availability of at least one PHC physician (and, from 2022, also at least one nurse), a valid medical licence, appropriate legal status, and minimal IT capability to operate in accordance with the NHSU medical information system (MIS) and e-health standards. Providers must also meet the requirements stated in PHC package specifications and conditions for the purchase of PHC services.

In 2020, the NHSU had contracts with 1675 PHC providers operating in slightly different ways. Over three quarters of the providers were PHC centres (n = 1307, 78%), which often employ multiple PHC doctors, and the remaining were solo practices (n = 368, 22%), which may employ only a single PHC doctor. As of 1 September 2021, the number of PHC providers was 1960, consisting of PHC centres (n = 1219, 62%), private providers (n = 221, 11%) and solo practices (n = 520, 27%).
Most PHC centres operate as single legal entities but have several practice sites in different locations (in district centres or nearby villages, for example). On average, one PHC centre has 4.1 locations in which services are provided, making a national total of 7016 practice sites in 2021. PHC solo practices are organized by individual PHC physicians who operate under the legal form of a private individual entrepreneur (WHO Country Office in Ukraine, unpublished data, 2021).

Around half of the practice sites (n = 3563, 51%) operate in rural areas, with 1754 enrolled patients on average (see Fig. 1). The average number of registered patients at PHC practice sites in urban areas is much higher because of larger populations, with an average of 7453 enrolled patients in big cities and in towns. All three types of geographic setting (urban, town and rural) nevertheless appear to have similar numbers of patients per PHC doctor.

The percentage of paediatricians among all PHC physicians is shown in Fig. 2.

**Fig. 1. Breakdown by geography (urban, town and rural) of the number of PHC provider sites, enrolled population per site and patients per doctor in 2019–2020**

While the policy ambition was to increase the number of PHC providers, two potentially worrying trends have appeared since recent reforms began that may have significant implications for future contracting arrangements: the increase of solo practices and the increase in hospitals registered as providers of PHC.
3.1.1 Trend 1: increases in the number of solo practices

In line with expectations for new legislation around who can apply to provide PHC, the total number of PHC providers contracted by the NHSU increased by 30% between 2019 and 2020. The number of PHC solo practices, however, nearly tripled (Fig. 3). The increasing number of solo practices runs against the desired direction of travel towards co-located multidisciplinary PHC teams working together in integrated ways. More investigation is needed to understand how services can vary between larger PHC group practices and solo practices, the reasons for doctors choosing solo practice and the impacts on patient outcomes.

Fig. 3. Number of PHC group practices versus solo practices contracted by the NHSU in 2019–2020

Q1–4: quarters 1–4.
Source: Internal WHO analysis based on NHSU Open Data publications.
3.1.2 Trend 2: increases in the number of hospital providers contracted by the NHSU to provide PHC

Since the NHSU contract was introduced, 124 hospitals have started delivering PHC services. This is problematic for a number of reasons.

When hospitals take on primary care contracts, risks of supplier-induced demand can develop. This may take the form of hospital-based PHC providers acting as patients’ agents, making decisions for them and referring them to hospital-based services that are surplus to what patients would choose or what is medically required. An opportunity may also exist for hospitals to provide additional chargeable services and secure rapid access to hospital for patients. This practice is already in place in urban areas and could make rural services less attractive to patients and staff.

Emerging data in 2021 suggest that the number of referrals for hospitalization was significantly higher from PHC providers that operate under hospitals. The national average was 61.2 referrals per 1000 declarations by non-hospital PHC providers (35% of referrals completed in the same organization) against 1112.2 referrals per 1000 declarations by oblast hospitals that have PHC contracts (98% of referrals completed in the same organization). This is a signal that further investigations into supplier-induced demand are needed.

Based on 2021 NHSU data, of the 124 hospitals delivering PHC services, 40 have fewer than 1000 registered patients (Table 1). This suggests that these PHC practice sites may not have even one full-time family doctor position (the Ministry of Health recommended ratio for family doctors to registered patients is 1 : 1800). The situation needs attention and close monitoring to ensure contractual arrangements are fair and health providers have the proper organizational and clinical capacities to provide PHC services.

It should also be noted that evidence from elsewhere has demonstrated that comprehensive care is a value best espoused in community-based PHC providers rather than in secondary care providers (3). Strong PHC systems that are holistic and comprehensive in their approach have been shown to have significant positive impacts on the efficiency of health systems (4). If more hospitals were to take on primary care services, concerns may arise around the extent to which services would be centred on urban areas (where hospitals typically are located), which could limit access to PHC in hard-to-reach rural areas.

Contracting mechanisms, as mentioned above, are uniform and broad. There currently are no specific policies or regulations in place to create incentives for selective contracting for PHC with a view to improving system effectiveness and quality improvement.
Table 1. Breakdown of hospital providers of PHC services

<table>
<thead>
<tr>
<th>Type</th>
<th>Providers</th>
<th>PHC doctors</th>
<th>Enrolled population</th>
<th>Patients per PHC doctor</th>
<th>Contract budget under PHC package</th>
<th>Total contract budget</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>District hospitals</td>
<td>67</td>
<td>54%</td>
<td>876</td>
<td>1 038</td>
<td>691 936 057</td>
<td>20 925 423 012</td>
<td>3.3%</td>
</tr>
<tr>
<td>City hospitals</td>
<td>41</td>
<td>33%</td>
<td>1 057</td>
<td>1 306</td>
<td>952 155 601</td>
<td>24 060 786 966</td>
<td>4.0%</td>
</tr>
<tr>
<td>Children hospitals</td>
<td>5</td>
<td>4%</td>
<td>114</td>
<td>774</td>
<td>112 745 624</td>
<td>1 262 940 420</td>
<td>8.9%</td>
</tr>
<tr>
<td>Specialized hospitals/</td>
<td>6</td>
<td>5%</td>
<td>18</td>
<td>571</td>
<td>3 796 320</td>
<td>2 348 231 019</td>
<td>0.2%</td>
</tr>
<tr>
<td>dispensers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oblast hospitals</td>
<td>5</td>
<td>4%</td>
<td>18</td>
<td>649</td>
<td>4 139 683</td>
<td>13 779 474 791</td>
<td>0.0%</td>
</tr>
<tr>
<td>Total</td>
<td>124</td>
<td>100%</td>
<td>2 083</td>
<td>1 152</td>
<td>1 764 773 285</td>
<td>62 376 856 208</td>
<td>2.8%</td>
</tr>
</tbody>
</table>

Source: Internal WHO analysis based on NHSU Open Data publications.

3.2 Workforce availability, scope and skills, and multidisciplinary approach

The PHC workforce in Ukraine is composed of three specialities — family doctors, therapists (a type of general medical doctor) and paediatricians — each of which has a recommended number of enrolled patients (1800 per family doctor, 2000 per therapist and 900 children per paediatrician). Nurses are also part of the workforce but are not considered specialists and therefore have no recommended patient ratios.

Ensuring sufficient workforce numbers will be essential to the goals for PHC set out in Chapter 2, such as expanding the range of PHC services and implementing multidisciplinary teams in PHC.

The numbers of PHC doctors and nurses and their scope of practice, skills and capabilities are set out below.
3.2.1 Numbers of PHC doctors

While there is a large number of doctors in Ukraine (47 doctors per 10 000 population, which is twice as high as in western Europe) and over 10 000 graduates annually (5), only around 25 000 (13%) were PHC doctors in 2018 (6) (the European Union (EU) average in the same year was 21%, with a range of 41% of all doctors being general practitioners in Portugal to 6% in Greece (7)). Statistics from Ukraine in 2021 show that most PHC doctors are family doctors (15 303, 66%), with paediatricians (4587, 20%) and therapists (3461, 15%) comprising smaller proportions.

Two major groups of challenges exist for the system relating to PHC doctors.

First, the age profile among PHC doctors is of concern. Half of family doctors are over 50 years, one quarter of whom are above retirement age. Around one quarter of family doctors (26%) are aged 35 years or less. This is challenging, as PHC is being asked to do more with new ways of working but is tending to rely on people who were trained many years ago. The trends among other PHC doctors are even more worrying, as 55% of paediatricians and 64% of therapists are over 50 years old (Table 2). Without further investment, the workforce is likely to shrink just at the point when the policy demands growth.

Table 2. Distribution of PHC doctors by age

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>Family doctor</th>
<th>Paediatrician</th>
<th>Therapist</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;= 30</td>
<td>2 045</td>
<td>418</td>
<td>216</td>
<td>2 679</td>
</tr>
<tr>
<td>31–35</td>
<td>1 918</td>
<td>577</td>
<td>278</td>
<td>2 773</td>
</tr>
<tr>
<td>36–40</td>
<td>1 333</td>
<td>388</td>
<td>221</td>
<td>1 942</td>
</tr>
<tr>
<td>41–45</td>
<td>1 217</td>
<td>303</td>
<td>278</td>
<td>1 798</td>
</tr>
<tr>
<td>46–50</td>
<td>1 153</td>
<td>399</td>
<td>246</td>
<td>1 798</td>
</tr>
<tr>
<td>51–55</td>
<td>1 517</td>
<td>484</td>
<td>318</td>
<td>2 319</td>
</tr>
<tr>
<td>56–60</td>
<td>2 206</td>
<td>634</td>
<td>429</td>
<td>3 269</td>
</tr>
<tr>
<td>61–65</td>
<td>2 241</td>
<td>740</td>
<td>598</td>
<td>3 579</td>
</tr>
<tr>
<td>66–70</td>
<td>1 224</td>
<td>435</td>
<td>529</td>
<td>2 188</td>
</tr>
<tr>
<td>71–75</td>
<td>374</td>
<td>154</td>
<td>266</td>
<td>794</td>
</tr>
<tr>
<td>&gt; 75</td>
<td>75</td>
<td>55</td>
<td>82</td>
<td>212</td>
</tr>
<tr>
<td>Total</td>
<td>15 303</td>
<td>4 587</td>
<td>3 461</td>
<td>23 351</td>
</tr>
</tbody>
</table>

Source: NHSU unpublished data.

Secondly, coverage of primary care services is uneven, especially in rural and remote areas, which also have the additional problems of lack of staffing, variable levels of local financing and, as a result, poor facilities and equipment. Local government is responsible for covering capital and the costs of utilities, but differences in their funding levels and priorities mean that investment is also uneven.
Issues around low recruitment, retention and poor motivation among family doctors have been linked in the past to the low prestige of medical workers in PHC (8). An additional challenge to recruitment is that medical education in Ukraine includes only 1–2 weeks of PHC in the sixth year compared to 4–8 weeks in other European countries (3).

The professionalization of PHC is supported by the Ukrainian Association of Family Medicine, a 10 000-member public organization that links family doctors, nurses and supporters of a stronger role for PHC. The Academy of Family Medicine of Ukraine unites over 500 professionals around advocacy of family medicine interests and continuous professional development (CPD). These two organizations will be supportive stakeholders in working through the reform process.

3.2.2 Numbers of PHC nurses

Little is known about the numbers of trained and available nurses in PHC. The Ministry of Health defines a doctor-to-nurse ratio of 1 : 1 as a minimum requirement for a PHC practice, but the actual ratio is unknown. The NHSU has an electronic register of all (active) physicians in the country and started forming a similar register for nurses during 2021.

3.2.3 Scope and skills of PHC doctors

Increasing the scope, skills and capabilities of PHC doctors and nurses is essential to strengthening the role of PHC in the wider health system. The scope, skills and capabilities of PHC doctors is described in the Programme of Medical Guarantees (PMG), as defined by Ministry of Health Order 504 (6). This Order sets out that PHC providers are expected to provide 17 types of consultations and interventions in areas such as internal general medicine, pediatrics, obstetrics/gynaecology, family planning, reproductive health and the management of tuberculosis (TB), hepatitis C and HIV. PHC doctors can be reimbursed for eight types of laboratory and diagnostic examinations covering chronic conditions, preventive screening and vaccination, pregnancy and childcare, as well as certain types of emergency, investigation of sporadic cases of communicable diseases and palliative care.

The Order also suggests that PHC doctors should provide health education, interact with public health institutions and work towards delivery of services as multidisciplinary PHC teams based on groups of doctors and other health professionals working collaboratively to support a defined population (6). In 2020, the Ministry of Health accepted the World Organization of Family Doctors (WONCA) competencies for the Ukrainian health system, which would suggest the Government is committed to seeing the values of PHC providers expanded to cover primary care management, person-centred care, specific problem-solving skills, a comprehensive approach, community orientation and a holistic approach (3).
3.2.4 Scope and skills of PHC nurses

According to regulations (9), the scope of practice for nurses is extensive. In practice, however, nurses at PHC level often find their clinical tasks and responsibilities are limited. A recent WHO report (10) found interviewees estimating that up to 90% of PHC nursing practice is spent on administration, documentation and handling (but not administering) vaccines, resulting in a disconnect from what they have been trained to do. Examples can nevertheless be found of practices in Ukraine where nurses undertake a broader scope of responsibilities, including providing screening, check-ups and assessments. Empowerment of nurses has the potential to enable more efficient and patient-centred PHC services, bringing care closer to community needs.

3.2.5 Multidisciplinary team-working

It is unclear to what extent PHC doctors and nurses (and others in PHC) in Ukraine are working in a multidisciplinary way as opposed to operating as solo practitioners, as no data are available. Significant potential for multidisciplinary team-working nevertheless exists. Services that could be delivered by a multidisciplinary PHC team include diagnostics and treatment of common and chronic conditions, preventive screening and vaccination, pregnancy care, paediatrics, and certain types of emergency, home and palliative care.

Implementation of the WHO Mental Health Gap Action Programme (mhGAP) in Ukraine led to examples of multidisciplinary collaboration around mental health-care provision and expansion of the range of PHC services provided. During the mhGAP training and supervision processes, PHC staff (represented by family doctors, general practitioners, paediatricians and nurses) and mental health specialists (psychiatrists and psychologists) established mutual collaboration to ensure continuity of care and the full range of health-care services for people with mental health conditions. Working as teams, PHC and specialist mental health staff developed local patient pathways, improved referral mechanisms and provided mutual professional advice on mental health aspects in PHC practice and physical health aspects of care for people receiving services in psychiatric hospitals.

PHC nurses have been trained in the second version of the mhGAP intervention guide (11) and have been supported to expand their role in teams. Training and supervision sessions tend to focus on psychosocial interventions such as psychoeducation and support to decrease stress and reinforce engagement in daily activities. PHC doctors usually provide psychological and pharmacological interventions as needed.

The training programme also includes reinforcement of social support and engagement with resources available in the community, including those provided by social workers.
3.2.6 Current challenges

While these new policies and regulations around expanding the scope and skills of the workforce and encouraging them to work in a multidisciplinary way are all steps in the right direction to creating a strong PHC system, a number of barriers to change remain.

Narrow specialists manage most chronic conditions in Ukraine. The historic model of care is that patients with multiple chronic diseases are managed by narrow specialists rather than family doctors. As a result, primary care doctors have limited experience of caring for patients with several common conditions. For example, a recent WHO report suggested that the recording of noncommunicable disease (NCD) behavioural risk factors by clinicians at PHC level in Ukraine is low. Total cholesterol was measured and recorded for only 28% of men and 29% of women, and waist circumference for 9% of men and 10% of women. Patients have become accustomed to receiving their care from specialists and may be reluctant to have their conditions managed in PHC, further reducing the opportunity to develop skills in PHC staff.

Little prevention work is undertaken in PHC. Effective prevention and healthy lifestyle promotion interventions and programmes are lacking at PHC level. This means PHC doctors have limited capacity to manage risk factors of chronic diseases and provide behaviour-change counselling. They also commonly do not have the technology necessary for early detection and treatment and may lack the skills to involve patients and their families in treatment. This can significantly limit patients’ self-care abilities and exacerbate the risks of falling ill or experiencing disease progression.

The scope of PHC providers is expanding over time. Conditions for PHC service procurement have been extended in 2022. Services are now required to:

- inform patients about prevention and treatment options;
- involve patients in decisions about their health, agreeing on a treatment plan with patients in accordance with their expectations and capabilities; and
- conduct preventive conversations with patients on leading a healthy lifestyle and taking care of their own and their children's health.

Educational support for all levels of PHC staff is necessary to ensure these services are provided to patients in a comprehensive and appropriate manner.

Nurses’ ability to provide care is limited. Nurses have a key role to play in primary care in expanding, connecting and coordinating care. As described above, however, nurses’ roles are mostly administrative. With some training and a mindset shift by PHC doctors and patients, PHC nursing roles could be expanded to incorporate the functions of family nurses. Nurses could then participate in service delivery under the supervision and guidance of family doctors, improving access to care by drawing on new technologies, providing mobile care and teaching self-care on behalf of family doctors. It is important to note that a review of the current continuing education of nurses would be advised, along with the development of regulations in line with those for doctors. Such actions may boost the professionalization of nurses.
Mental health services are limited in scope in PHC. The fact that psychiatric conditions are outside the scope of family medicine and there is no social work input to health-care practices limits the effectiveness of the current model to deal with the complex problems many patients experience. It may also have implications for the physical health of people with serious and long-term mental health conditions. Despite growing national consensus on the need for integration of mental health services in PHC provision, as reflected in the Concept Note on Mental Health Development approved by the Cabinet of Ministers in 2017, the scope of mental health services that could be provided in PHC remains undefined. WHO and partners are addressing growing needs and supporting the Ministry of Health in introducing mental health services in PHC by building capacity in PHC on management of common mental health conditions such as depression, self-harm/suicide, substance-use disorders, anxiety and stress-related disorders using the second version of the mhGAP intervention guide (11), which is also available as an e-version for smartphone. As of October 2021, WHO and partners had trained and provided supervision to over 370 PHC workers, enabling access to quality mental health services to more than 400 000 people.

The integration of public health and social care services with PHC is poor. Closer collaboration with social care services has the potential to enhance patient care, especially for those who are vulnerable. Clear and effective coordination mechanisms between social services and PHC have the potential to address such important determinants as alcohol and substance abuse, sexual- and gender-based violence, malnutrition, care of older people and many more. This in turn would have significant impacts on community well-being.

Managing HIV, TB and viral hepatitis at PHC level is challenging. These diseases are considered to be priority conditions in the Ukrainian public health context, so testing is included in the primary health task list set out in Ministry of Health Order No. 504 (2018). NHSU has enabled PHC services to bid for contracts for HIV and TB patient management since 2021. Despite this, many challenges remain for PHC in fully taking over detection and management of these conditions. Among them are:

- issues with the capacity of PHC staff to identify patients with AIDS-associated disorders, HIV-related conditions and those who practise risky behaviours;
- insufficient time to conduct rapid diagnostic tests;
- lack of knowledge on pre-exposure prophylaxis, antiretroviral therapy and care for people living with HIV/AIDS;
- weak blood-sample transportation capacity in PHC facilities;
- the high cost of testing or accessing rapid molecular genetic tests;
- gaps in data systems that include uncertain transition of TB data from the e-TB register to other electronic systems and ongoing connection with the e-health system, lack of clarity about which staff are responsible for data collection, and limited data flows between PHC and HIV and TB specialized facilities, and from the HIV MIS to e-health; and
- stigma towards HIV and TB patients and risk populations.
Training for PHC supervisors is limited. While PHC physician training involves a two-year residency with 10 months of theoretical training (lectures, seminars and case discussions) and a year of practical training in PHC clinics, practising PHC physicians who supervise residency training are not trained to do so and often lack academic experience.

Despite these limitations, there is evidence that change is happening. For example:

- the service basket is being expanded by the inclusion of COVID-19-related services;
- vaccinations are being administered by nurses;
- adults and children with TB are being treated and followed-up with additional laboratory tests;
- services related to mental and behavioural disorders are expanding;
- patients’ problems are being assessed more holistically;
- patients are engaged in self-management and development of their treatment plans;
- PHC staff are discussing lifestyle behaviour changes with patients; and
- the provision of prevention consultations is now considered to be within the scope of PHC.

These changes provide a framework for ongoing reforms.

3.3 | Patient pathways and referrals

Strong primary care systems tend to have clear criteria to support clinicians in making appropriate patient referrals. While measures are in place to prevent patients from bypassing the gatekeeping system and the number of PHC providers has increased since reforms began, it is understood that many patients are still unnecessarily being seen in secondary care. There are several possible reasons for this.

First, secondary care providers suggest that patients whose conditions are not severe or complicated are being referred to specialists for additional consultations by their PHC providers. This may be associated with the limited scope of PHC doctors described above or to a lack of links between PHC and pharmacies, social care or public health (outside of an outbreak situation). The driving factors, however, have not yet fully been explored.

Secondly, many people have not yet registered with their primary practitioner so access health services by bypassing the referral system. Among other interventions, the NHSU promotes transparency for patients on where and how to register with their PHC provider (14).
Patients in Ukraine are able to self-refer to specialist centres. Evidence suggests that up to one third of those who self-refer make an error and have to be redirected, which represents a significant source of inefficiency in the system (WHO Country Office in Ukraine, unpublished data, 2021). Clear referral pathways currently are obligatory across all oblasts for only three conditions — stroke, myocardial infarction and COVID-19. It is up to individual oblasts to develop other pathways. Currently, it is unclear which referral pathways exist and where. Patients are able to access a number of clinicians without a referral, such as gynaecologists (including paediatric), psychiatrists, narcologists, dentists (emergency care for all and planned for children), TB specialists and doctors who supervise patients with chronic diseases.

On a positive note, the first steps for monitoring referrals have been taken. The new electronic health records and e-referral systems enable health providers and the NHSU to monitor service provision and track referrals. The data indicate that by 1 October 2020, 96% of PHC providers (1601 of 1675) had started to use the e-referral system, having referred 7 485 335 patients to various levels of care (Fig. 4). Most referrals from PHC level (69%) were for counselling, 24% for diagnostics (imaging and laboratory tests), 4% for hospitalization and 3% for other services (Fig. 5). On average, PHC providers made 237 referrals per 1000 enrolled population, with broad variation across providers (from 103 per 1000 to 487) (Fig. 6). It is important to note, however, that more than half of all referrals (53%) were not completed in 2020 and almost half (48.7%) in 2021 (NHSU, personal communication, 23 August 2021). It is possible that secondary care specialists are not entering data into the e-health system or patients are not carrying through with their referrals. While e-health tools will prove useful in monitoring changes in referral behaviour over time, more investigation may be needed to determine why referrals are not being completed.

**Fig. 4. Number of referrals from PHC by 1 October 2020 (n = 7 485 335)**

```
<table>
<thead>
<tr>
<th>Month</th>
<th>Number of referrals</th>
<th>Cumulative number of referrals</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 2020</td>
<td>102 491</td>
<td>102 491</td>
</tr>
<tr>
<td>May 2020</td>
<td>617 015</td>
<td>1 739 506</td>
</tr>
<tr>
<td>June 2020</td>
<td>514 524</td>
<td>2 253 030</td>
</tr>
<tr>
<td>July 2020</td>
<td>1 232 077</td>
<td>3 485 107</td>
</tr>
<tr>
<td>August 2020</td>
<td>1 700 631</td>
<td>5 185 738</td>
</tr>
<tr>
<td>September 2020</td>
<td>1 912 918</td>
<td>7 111 653</td>
</tr>
<tr>
<td>October 2020</td>
<td>2 022 694</td>
<td>7 485 335</td>
</tr>
</tbody>
</table>
```

Source: NHSU unpublished data.
Fig. 5. Percentage of type of referral by service type by 1 October 2020

- Counselling
- Imaging
- Laboratory procedure
- Hospitalization
- Other

Source: NHSU unpublished data.

Fig. 6. Number of referrals from PHC by 1 October 2020 (per 1000 patients), per oblast

<table>
<thead>
<tr>
<th>Oblast</th>
<th>Number of referrals per 1000 enrolled population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kyiv city</td>
<td>457</td>
</tr>
<tr>
<td>Kharkivska</td>
<td>386</td>
</tr>
<tr>
<td>Kirovogradka</td>
<td>329</td>
</tr>
<tr>
<td>Khersonska</td>
<td>326</td>
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<tr>
<td>Zaporizhka</td>
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<tr>
<td>Chernivetska</td>
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</tr>
<tr>
<td>Chernihivska</td>
<td>280</td>
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<tr>
<td>Cherkaska</td>
<td>279</td>
</tr>
<tr>
<td>Dnipropetrovksa</td>
<td>274</td>
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<tr>
<td>Khmelnytska</td>
<td>271</td>
</tr>
<tr>
<td>Sumska</td>
<td>227</td>
</tr>
<tr>
<td>Lvivska</td>
<td>225</td>
</tr>
<tr>
<td>Mykolaivska</td>
<td>223</td>
</tr>
<tr>
<td>Vinnytska</td>
<td>214</td>
</tr>
<tr>
<td>Luhanska</td>
<td>211</td>
</tr>
<tr>
<td>Kyivska</td>
<td>207</td>
</tr>
<tr>
<td>Donetsk</td>
<td>182</td>
</tr>
<tr>
<td>Ivano-Frankivska</td>
<td>192</td>
</tr>
<tr>
<td>Zhytomyrska</td>
<td>178</td>
</tr>
<tr>
<td>Volynska</td>
<td>175</td>
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<tr>
<td>Odeska</td>
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<tr>
<td>Poltavska</td>
<td>160</td>
</tr>
<tr>
<td>Ternopilska</td>
<td>138</td>
</tr>
<tr>
<td>Rivenska</td>
<td>129</td>
</tr>
<tr>
<td>Zakarpatska</td>
<td>103</td>
</tr>
</tbody>
</table>

Source: NHSU unpublished data.
3.4 | Physical infrastructure

Since the start of the health system reforms, significant progress has been made in ensuring primary care providers are better financed, have modern IT linked to the centralized database and are appropriately equipped. The approach to upgrading facilities, however, has not been systematic, and many facilities still require major improvement. The physical infrastructure of PHC services will define the potential for future multidisciplinary working, so requires focus in this assessment.

PHC centres and solo practices were established across all regions of Ukraine in 2018. PHC centres were created through reorganizing polyclinics, meaning most PHC centres consolidated multiple doctors and service delivery locations. It has been suggested that some of the larger medical clinics in small towns may need to rent out space to survive, as the Government no longer pays for the facility but only for treatments given. This will make the system more efficient, but it is not popular with PHC staff (15).

Instead of closing, some clinics are being upgraded. Within the limits of their competence, local self-government bodies have discretionary powers to finance local developments and support programmes for health-care institutions, particularly in relation to upgrading facilities and equipment, carrying out capital repairs and increasing salaries for health workers (through local incentive programmes). The lack of a unified approach and coordination, however, has led to significant variation in the amount and quality of equipment available in PHC facilities across regions and municipalities. Fieldwork carried out by the WHO Country Office in Ukraine across five oblasts during COVID-19 demonstrated the extent of the variation. The fieldwork suggested that the sites visited had equal proportions of the following:

- high-level layouts, infrastructure and working conditions (newly built or refurbished to high specification);
- very good physical structures but issues in terms of space/layout (with options to better separate COVID-19 patients missing);
- acceptable state of buildings and layouts;
- poor condition of buildings with lack of space;
- very bad infrastructure conditions with inappropriate working conditions (to prevent infection outbreaks in the context of COVID-19); and
- temporary locations in rented structures (either in parts of buildings or integrated with secondary level settings), with mostly unacceptable buildings and working conditions.

Other recent fieldwork examining access found patchy availability of diagnostics on site. Access to diagnostics varies from region to region and from facility to facility. Some regions have fully equipped diagnostics with laboratories at facilities, while other facilities have diagnostics nearby. Some facilities have more diagnostic equipment and services than would be expected at PHC level (such as computerized tomography) (15).
A new programme was developed by the President to provide funding for the reconstruction and equipping of family medicine clinics located in small settlements. This will increase the availability of quality primary services in remote villages, with 449 outpatient clinics already in operation and another 151 planned for completion by the end of 2021.

### 3.5 Medicines and other health products

Ensuring access to a range of medicines is important to a strong PHC system. PHC doctors are authorized to prescribe a range of medicines regulated by orders No. 1303 of 17 August 1998 and No. 333 of 23 March and changes to the Cabinet of Ministers of Ukraine resolution dated 16 March 2017 (16). As part of the recent introduction of the Affordable Medicines Programme (AMP) and its inclusion in the PMG, patients with cardiovascular diseases, bronchial asthma and type 2 diabetes, rheumatic disorders, diabetes mellitus and diabetes insipidus, mental and behavioural disorders (since 1 October 2021) and epilepsy receive prescriptions from their family doctors and obtain the prescribed medicines free of charge or with a small co-payment at one of the 1194 NHSU-contracted pharmacies.

Centrally procured medicines for HIV, TB, cancer, diabetes, hepatitis B and C, opioid substitution therapy, dialysis, cardiovascular disease, rare diseases and vaccines are provided free of charge. The NHSU reimburses the prices of AMP medicines to the contracted pharmacies in accordance with the approved reimbursement scheme. The entire AMP process — patient identification, medicine prescription, medicine provision, verification and reimbursement — is supported by the e-prescription service. Information on the number of patients with chronic conditions is not available, so it is not possible to estimate coverage of groups targeted by the AMP. Medicines for other conditions are not included in the guaranteed benefit package of the AMP and are fully chargeable to patients. Local authorities, however, may allocate funds from subnational budgets to provide certain population groups and those with specific diseases with free or subsidized medicines prescribed by doctors via outpatient treatment according to the National Essential Medicines List (17).

Medicines constitute the most important driver of catastrophic health spending on health for households. Financial barriers to accessing medications may lead people to self-treat via medicines purchased over the counter rather than seeking health care. Significant progress has been made to develop the APM programme (see section 5.5), which is considered to be a core part of the PHC benefit package. Development of the AMP has proven to be a positive driver of PHC utilization: most of the episodes of primary care registered in the electronic health record system during 2020 were related to patients seeking either referrals or drug prescriptions, with over 60% of visits entailing prescriptions.
Prescriptions are also quoted by PHC providers as one of the most frequent reasons for patient visits, along with management of chronic disease and issuance of sick-leave notes. Increasing access to, and extending the scope of, the AMP is crucial to improving chronic disease management at PHC level (18).

Notable progress was made in AMP development during 2019–2020. The NHSU refined the approach for AMP budget planning at the end of 2019. Initially, the AMP overall budget was based on the number of prescriptions, without linkages to the number of users/patients. Since 2020, the NHSU has been using an estimated number of patients and needs by disease category as a basis for budget planning and reporting. The methodology and procedures are described in the NHSU Order of 28 January 2020. The NHSU has been working on further refining AMP procedures with the possibility of increasing coverage of the programme in 2021.

While progress has been positive, concerns about the AMP persist. For example, the number of patients with cardiovascular disease, type-2 diabetes and bronchial asthma who have used the AMP since 2019 (2.4 million) is low considering global trends and the national NCD burden (19). NHSU data from monitoring AMP implementation show a decrease in the number of prescriptions and number of new patients who joined the programme in 2020 (Fig. 7). The NHSU’s observations suggest that the main reasons for this trend are the overall decrease in essential services during the COVID-19 pandemic, some technical issues with the e-prescriptions system (delays in data verification/interaction between MIS and the e-health central component), low registration of patients with chronic conditions at PHC and doctors'/patients' preferences.

**Fig. 7. Number of patients/users of the AMP, 2019–2020**

![](image)

Q1–4: quarters 1–4.

*Source:* Internal WHO analysis based on NHSU Open Data publications.
Reportedly, many doctors/patients prefer prescribing combined rather than mono medicines and favour some modern options that are included in clinical guidelines but not in the National Essential Medicines List. Other anecdotal evidence suggests that the pharmacies in conflict-affected areas are not implementing the AMP, possibly due to reasons associated with excessive paperwork or troubles with Internet connection. An in-depth analysis is needed to understand the current trends and inform further improvements in AMP policies.

3.6 | Purchasing and payment systems

PHC spending has been increasing since 2014 (20) (Fig. 8). A major increase in PHC spending occurred in the early stages of health financing reform and development of the PMG, when PHC was heavily prioritized. In 2020 and 2021, however, a decreased share of spending on PHC was seen in the overall PMG budget, reflecting how the PHC budget must compete with the increasing expenditure on specialist services, the AMP and the COVID-19 response.

Fig. 8. Total public spending on health, PHC and AMP, and share of PHC in total public health spending from 2014 to 2021

Source: State Treasury Service of Ukraine (20).
The population of Ukraine is eligible for free PHC based on the scope of the PMG, which has not changed substantially since 2018. Balance billing is not permitted and there are no formal co-payments for patients with referrals.

As the scope of services at PHC level is limited, however, additional services can be subject to out-of-pocket payments as listed in the Cabinet of Minister’s Decree No. 1138 dated 17 September 1996 and in an amount approved by local authorities. For example, if a patient needs an ultrasound, they may be referred under the PMG package to the relevant specialist. If the waiting time or distance to access the ultrasound is a barrier for the patient, they may decide to pay for it at the PHC facility.

The 2018 Informal Payments Survey in Ukraine conducted by the United States Agency for International Development HIV Reform in Action project showed that 56% of 4000 patients had made at least one informal payment in the previous 12 months and 48% had made an informal payment for receiving PHC services (21).

Since July 2018, PHC providers contracted by the NHSU have received a simple capitation budget based on enrolment numbers. The free enrolment rule and the money-follows-the-patient principle are applied. A unified capitated rate is set at national level and adjusted by age (0–5 years, 6–17, 18–39, 40–64, 65 and older) and place of residence (lowland factor = 1, mountainous area factor = 1.25).

The size of population used for payment equals the sum of active declarations between PHC doctors and individuals. Since the scope of PHC services has not changed much, the capitation rates remained the same from 2018 until November 2020, when the base capitation rate was increased by 8.5% to reflect the growing COVID-19 workload, including collection of test samples.

The capitation rate covers wages, medical products, supplies and administrative costs, but utilities and capital costs are not covered by the NHSU tariffs. In 2018, most PHC centres reorganized from budgetary institutions to communal non-profit enterprises — a legal form that allows them greater autonomy to manage their funds.

This new legal form allows PHC providers to generate revenues from all legally allowed sources and manage funds (in terms of salaries, hiring additional staff, buying new equipment and organizing training) as they see fit. Previous to this, budget lines had been defined.

The owners of facilities are local entities — municipalities or communities — so legally PHC belongs to and is subordinate to them. This can have a range of implications. On the one hand, the local community can allocate additional resources to PHC and attract donors and investors to develop services. On the other, however, inequalities in service standards and access can be created in areas where little or no investments are made. This creates fragmentation in funding, as there is no clarity on covering capital expenses.
Currently, there is no systematic costing of PHC services, which may limit the potential to present a case for increased funding during budget negotiations. Costing may help to increase transparency in payment-rate negotiations between purchasers and providers and enable explicit priority-setting, especially if the budget envelop is limited. The NHSU initiated costing of PHC services in 2021 with the aim of completing the task to ensure input to 2023 budget negotiations.

Since 2019, the NHSU has also applied adjustments to final capitation payments to account for the recommended number of enrolled population by PHC specialties — the enrolment/PHC capacity thresholds. The recommended PHC physician’s full capacity is 1800 enrollees per family doctor, 2000 adults per therapist and 900 children per paediatrician. Providers are paid a lower capitation rate for patients beyond 110% of the recommended level, which is considered full physician capacity. Providers are not paid for patients beyond 150% capacity. There are no established standards for geographical and physical access and quality of care.

The NHSU started blending capitation with other payment methods in 2021, specifically through pay-for-performance routes. These include top-up payments for attainment of immunization coverage goals for childhood measles–mumps–rubella (MMR) vaccinations and per-patient payments to support outpatient treatment of those with TB at PHC level. The PMG 2021 package, which covered COVID-19 vaccinations, had a pay-for-performance element to reward each vaccination administered by the contracted provider. The provider received an additional 25 hryvnia for the first and 60 for the second vaccine.

The NHSU is monitoring PHC providers’ compliance with contract conditionalities and to detect potential fraud. PHC performance indicators are planned to be implemented in 2022, but they will not ensure systematic monitoring of PHC providers’ compliance with minimum standards (set by Cabinet of Ministers Decree No. 410 (2018)).

### 3.7 Digital technologies for health

National policies and strategies on e-health, telemedicine, digital health and literacy have been developed recently, introducing a range of new tools for providers. These include an electronic registration system for the public to enrol with a PHC doctor (e-declaration), e-registers of health facilities and doctors, electronic prescription of medicines at PHC level (e-prescription for AMP), an e-referral system and plans of electronic health records (electronic versions of patients’ medical histories that would be maintained by the provider over time but would also be shared with patients). The NHSU publishes open data and live dashboards on health provider capacities, enrolled populations, prescribed medicines, contracting and financing on its website (22). Table 3 presents a timeline of implementation of all e-health tools.
Table 3. E-health tools by implementation and data status

<table>
<thead>
<tr>
<th>Start-up</th>
<th>Tools (services)</th>
<th>Short name</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2018–2019</strong></td>
<td>Registration of providers, personnel, departments</td>
<td>Registers</td>
<td>3 095 providers, including 1 682 PHC</td>
</tr>
<tr>
<td></td>
<td>Contracting with NHSU</td>
<td>E-contracting</td>
<td>Total 6 695 contracts with 3 095 providers, including 1 682 PHC</td>
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<tr>
<td></td>
<td>Signing of declarations between PHC doctors and population</td>
<td>E-declaration</td>
<td>30 553 685 e-declarations</td>
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<tr>
<td></td>
<td>Electronic prescriptions under AMP</td>
<td>E-prescription</td>
<td>1 194 pharmacies 8 116 points 2.43 million users 18.3 million prescriptions</td>
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<tr>
<td><strong>April 2020</strong></td>
<td>Electronic health records</td>
<td>EHR</td>
<td>50 million EHR 8.6 million patients</td>
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<td></td>
<td>Electronic referral system</td>
<td>E-referral</td>
<td>7 485 referrals</td>
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<tr>
<td></td>
<td>• COVID-19</td>
<td>COVID-19</td>
<td>1 201 COVID contracts with providers, 19 124 patients, 340 000 tests</td>
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<tr>
<td></td>
<td>• NHSU published <em>Recommended actions on managing COVID patients</em> in the e-health system, which also included guidance on how to register data related to mobile teams</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>• NHSU’s analytical reports on COVID-19 are available online</td>
<td></td>
<td></td>
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<tr>
<td><strong>Implementation planned for 2021–2022</strong></td>
<td>Patient's Cabinet (allows viewing medical information about oneself, managing data and access to personal data, e-prescriptions, referrals, etc.)</td>
<td></td>
<td>Link with payment for performance and TB top up for 2021</td>
</tr>
<tr>
<td></td>
<td>• Collaboration with public health systems</td>
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</tr>
<tr>
<td></td>
<td>• Interaction with the emergency medicine system (Central 103)</td>
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<tr>
<td></td>
<td>• Inpatient records (diary)</td>
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<td></td>
<td>• E-prescriptions for all prescription medicines</td>
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<tr>
<td></td>
<td>• Integration with Ministry of Health and Government systems, including State Register of Medicines, Ministry of Health Licence Register, Logistic Management Information System, Unified State Base of Education and Demographic Register</td>
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<td></td>
<td>• Creation of common donor registry</td>
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The new e-health functionalities have also supported a number of policy initiatives, including the capitation payment mechanism (since July 2018), the outpatient medicines reimbursement programme (since April 2019) and the general management of contracts with PHC providers and pharmacies. The e-health system, however, was designed in extremely tight timeframes to match the rapid pace of the ongoing health financing reforms, meaning implementation has faced many technical issues.

One of the main reported challenges associated with the new national e-health system is that the introduction of MIS and electronic technologies did not allow practitioners to abandon paper-based records. In fact, doctors and nurses need to do double work, completing both e-based and paper-based documents. In addition, reports suggest that the e-health system is not performing well during working hours because of the volume of users, which means, again, that providers continue to keep paper records (alongside electronic records). The emphasis has been on developing a system to support purchasing at the NHSU (following the implementation of new financing arrangements) rather than providing a tool to help frontline clinicians to operate more effectively.

The absence of clinical decision-support functionality is a critical limitation of the e-health system. Medical staff therefore consider e-health primarily as an administrative rather than clinical system and have little motivation to implement it rapidly to full capacity in their daily practice. The lack of e-health clinical decision-support features goes beyond the design of e-health. Information for clinical support includes evidence-based care guidelines, guidance on patient pathways and case management, drug prescription and other clinical aspects that should be established by the Ministry of Health and related agencies at national level. The design and integration of the e-health clinical support system therefore involves a joint effort involving the Ministry, e-health, clinicians and professional associations.

Given the overall complexity of this challenging task, phased-in implementation of the clinical decision-support system, prioritizing PHC, most common conditions and NCDs, would be a feasible approach. The next developments could then consider improvements in existing e-health/MIS functionalities to better support clinicians' routine work (automatic alerts, chronic patients' registers and referral feedback, for instance) and more sophisticated tasks such as interoperability with other national health information systems (like public health) and clinical decision support. Many health workers would benefit from training to improve their digital literacy skills.

Other areas that merit attention include telemedicine, which can provide PHC professionals with access to specialist expertise from a distance through transmission of medical images, clinical data or clinical descriptions to off-site facilities that support diagnosis and can propose treatment options. Areas of focus so far include radiology, dermatology, pathology and psychiatry, but improvements in mobile technology are expanding the range of devices and services that can be offered, including in new areas such as cardiology and ophthalmology.
Another area worth noting is the digital technologies available to patients to help them manage their own health. As described in the WHO Operational Framework for PHC (1):

The revolution in information and communications technologies has brought about important shifts in how individuals and communities manage their own health and access information about health conditions, treatment options and the availability (and sometimes quality) of service providers. These shifts can play an important role in advancing the core PHC tenet of empowering people and communities by putting new power in the hands of people and shifting the nature of the relationship between medical provider and patient by reducing the asymmetry of information. However, too much of the information currently available is only in English or other languages that are typically not the first language of people in low- and middle-income countries. In addition, low digital health literacy limits the potential impact of these information and communications technologies in these settings. Digital technologies are creating new ways that people can hold service providers to account, as well as enabling more effective and larger-scale advocacy and health promotion efforts.

3.8 | Systems for improving the quality of care

Starting from 2019, the NHSU PHC contract requires that all PHC providers meet set criteria for service organization (see Cabinet of Ministries Decree No. 410 (2018)). The NHSU contract specifies service organization and provision requirements on factors such as medical personnel and basic equipment, but defined levels need approval from the Ministry of Health. This requires joint working and regular review between organizations.

As the PHC system develops, the Ministry will need to develop specific policies on PHC service standards and quality improvement. At present, the NHSU sets minimum organizational requirements for PHC on care providers (defining, for instance, staff, equipment, working hours and scope of services), but not for quality standards and processes. The International Classification of Primary Care (ICPC-2) has been introduced into the e-health system, creating an opportunity to support PHC practice and ultimately improve clinical governance, but this will require additional training for medical personnel to realize the benefits of the system. It might be possible to borrow from international examples of standards, such as the evidence-based guidelines produced by Duodecim, the Finnish Medical Society, but most existing standards have not been translated from English or adapted to the Ukrainian context and reference medicines and treatments that are not currently part of the benefits package.
The NHSU plans to introduce an internal quality management and control system, including indicators of PHC performance, in 2021 as part of the contract between the NHSU and PHC providers. Indicators for PHC performance developed by the Ministry of Health and the NHSU currently are under consideration. The President has issued a Decree, No. 369 (2021) (23), which would introduce new PHC quality indicators from 1 January 2022. One new measure has already been introduced — the childhood MMR vaccinations pay-for-performance indicator in contracting for 2021.

There is also a plan to transfer provider performance monitoring from the NHSU national office to the regional branches. Currently, the NHSU conducts data checks and verification of essential information needed for contracting (such as the licence and available equipment), and monitors data on population (declarations) and PHC physicians. In 2021, the regional branches will monitor providers against performance indicators (which, as mentioned, will be stated in contracts). The Ministry of Health and NHSU will need to develop a monitoring framework, establish a process and a mechanism to track and assess PHC performance, review its progress and patterns, benchmark PHC providers and exchange feedback to ensure that new PHC policies and arrangements meet the set goals.
4 • AREAS FOR ACTION

This assessment (see Annex 2 for a summary of main findings) and other reviews have examined primary care in Ukraine and have made a number of recommended actions. Before the conflict in Ukraine escalated into a war in February 2022, the Ministry of Health developed a PHC strategy and an action plan to set out priorities for PHC reform. Ukraine became a candidate to join the EU in June 2022 and the National Recovery Council has released the 2022–2032 Ukrainian health-care system post-war recovery plan. There is more to do to agree the overall vision for primary care and its role in the wider health system and a number of important steps need to be taken to ensure success in this area. Some of these are direct actions to develop the model but enabling strategies will also need to be put in place — these are detailed in this chapter. A timeline to guide the implementation stage is shown in Annex 3.

4.1 Number and types of PHC providers and patient enrolment

1. The Government should consider the steps required to shape PHC provider networks to implement the envisaged wider role for PHC providers, which involves multidisciplinary approaches to care, integration with other community health and home-care services, and coordination with secondary-care providers. Planning the PHC provider network should be part of the comprehensive approach to the post-war health network recovery programme.

2. The Government should consider setting criteria that hospitals would need to meet to be permitted to provide PHC. This would result in some hospitals being disqualified from providing PHC services.

3. Efforts should continue to be made to increase the proportion of the population enrolled in PHC and ensure access to services. This may require primary care networks to provide enhanced quality of services across neighbouring areas of low population density or incentivizing providers for new registrations of patients who have not yet registered into PHC.
4.2 | Workforce availability, scope, skills and multidisciplinary approach

4.2.1 Workforce strategy

4. A comprehensive workforce strategy for primary care (including nursing) is required. This should reflect the numbers of staff required, skills and competencies (and possible task-shifting), incentives and rewards to support skills development and CPD, and staff well-being. It might also include incentives for recruitment and retention in underserved areas.

5. Enhanced roles for nurses and other professionals will be a key part of the overall PHC strategy. It will be important to ensure that barriers to optimizing the contribution of these staff are removed and incentives to maximize opportunities are put in place.

6. Given the restructuring of the hospital sector and decreased levels of admissions due to COVID-19 since 2020, transition of hospital staff to PHC-level facilities to strengthen the PHC workforce could be considered, depending on the situation in each oblast.

7. Monitoring of the PHC nursing workforce (including workforce size, distribution, demographics, hours of work and skill-mix) should be improved. This may require some initial research to be commissioned to establish a baseline; the data for this currently are missing.

8. A professional register of medical PHC personnel should be maintained.

4.2.2 Education and training

9. Curricula for undergraduate and postgraduate education should be aligned with education systems in the EU to increase the digital and cybersecurity skills of all health workers and use of evidence-based medicine and rational pharmacotherapy approaches. Mechanisms for accrediting postgraduate trainers and university courses need to be developed.

10. Exposure to general practice experience should increase during training across professions. It will be important to involve PHC practitioners in the training of medical workers at undergraduate and postgraduate stages and to use PHC facilities as training bases.

4.2.3 Expanding skills

11. PHC staff should be encouraged to undertake CPD activity through a system of registration, incentives and a network of accredited content and providers.
12. Programmes should be introduced to develop skills in nondirective approaches to counselling and new types of consultation procedures (such as effective communication skills, promotion of respect and dignity, motivational interviewing, reporting bad news, family planning, decrease of stress and reinforcing social support, and reinforcing engagement in daily activities), supported by flexible appointment systems and the ability to schedule different durations of consultations.

13. A multidisciplinary approach should be developed to strengthen collaboration among family doctors, nurses, midwives, psychiatrists and specialist practitioners in areas such as NCD management (including mental health), rehabilitation and palliative care, dentistry, physiotherapy, social work, nutrition, pharmacy and administration, with appropriate financial arrangements, monitoring and accountability. This can be taken forward in person where facilities allow, but also virtually.

14. Nurses’ roles should be expanded to include prevention, patient monitoring, patient self-management skills and the delivery of an extended range of treatments. Nurses can also play a key role in improving engagement with patients and their support systems.

15. Sustainable models for service provision (such as mobile services and/or telemedicine support) should be developed to take these services to hard-to-reach areas. The introduction of incentives will improve quality of services, particularly in rural areas. Training programmes should be delivered to expand health professionals’ competencies and improve their skills, and additional and new roles should be introduced to enable expansion of the workforce and reduce pressure on existing staff. Incentives should be considered for PHC workers in areas close to front lines or in areas retaken by the Government of Ukraine.

4.2.4 Strengthening coordination and collaboration with public health

16. PHC workers’ skills in providing prevention, counselling and health education should be expanded, aligning individual care with population-based health promotion, disease prevention and health protection services acting at community level. In particular, PHC provision of screening and routine management of HIV/AIDS, TB, viral hepatitis and most common chronic diseases should be increased and inputs into vaccination and healthy lifestyle advice strengthened. Reflecting new threats related to the war, a training course on the management of chemical, biological, radiological and nuclear hazards should be scaled-up.

17. The responsibilities of PHC doctors to prescribe psychotropic medicines for common mental health conditions should be extended.
4.3 | Patient pathways and referrals

18. Patients and the public need information about the new role and scope of PHC and on how PHC services can work closely with social and community services to help coordinate ongoing care. This could include developing a wide communication strategy (that includes schools and communities) around how patients can improve their health literacy and ability to provide self-care and self-treatment through the use of digital tools.

19. Referral pathways should continue to be monitored using the e-health suite of tools and quality indicators for primary care provided by hospitals and, where appropriate, act to deal with potential distortions in behaviour as a result of their ownership model.

20. Defined care pathways that are based on evidence-based guidelines and protocols should be developed and adapted to local specifics of each oblast, mitigating the risk of bypassing the gatekeeping role of PHC.

4.4 | Physical infrastructure

21. A national review and comprehensive investment programme are recommended to bring PHC facilities up to a modern standard and to create safe spaces (with the availability of equipped basements in the event of military attack) in outpatient departments and polyclinics. The investment programme for PHC should be part of the national investment plan on health network recovery and be aligned with hospital network development and implementation. The plan should aim to reduce shortages in diagnostic and other equipment, with adjustments for geographic variations (such as areas retaken by the Government of Ukraine and those close to front lines). Investment plans need to follow clear governance arrangements, given the decentralization features of the health system (24).

4.5 | Medicines and other health products

22. National registers for chronic disease patients should be developed to enable assessment of the coverage and effectiveness of the AMP programme within the PMG and identification of areas for improvement in patient management. The availability of storage for critical medicines and distribution through the pharmacy network should be ensured.
23. As a long-term goal, funding to back-up the medicine package should be extended to support improved management of common chronic conditions (such as heart disease, cancers, arthritis, osteoporosis, chronic obstructive pulmonary disease, asthma and chronic kidney disease).

4.6 | PHC financing

4.6.1 PHC budget allocation and out-of-pocket payments

24. Systems should be established to ensure that health spending is directed towards the most cost-effective branches of the health sector — primary care and public health. For example, a budgetary mechanism could be established to fix minimum allocations to PHC to prevent it losing share in the overall PMG budget compared to secondary and tertiary care levels. Utility costs and capital investment financing mechanisms should be reviewed to reduce fragmentation and ensure adequate levels of funding.

25. Public spending on PHC should be increased over the long term to allow gradual expansion of the scope of PHC services. Consideration should be given to increasing the scope and scale of outpatient medicines benefits to ensure that necessary medicines are available and affordable to all patients in need with no (or minimal) co-payments and without causing financial hardship.

4.6.2 Contracting and payment mechanisms

26. Capitation should be adjusted to account for differences in the costs of group and solo practices, increase efficiency and reward multidisciplinary approaches.

27. A process for regular revision of payment mechanisms should be developed to reflect any increases in input costs (due to, for example, inflation or salary increases) and changes in the scope of services in the PHC package, supported by robust costing methodologies. Costing of the PHC package will inform negotiations for scaling-up PHC benefits under the PMG.

28. Payment and contracting mechanisms should encourage expanded roles, the development of larger multidisciplinary units, longer appointment durations when required and different appointment modalities, and ensure supply of additional equipment that is necessary to develop the capability of primary care to manage common chronic diseases. Financial incentives could be used to improve motivation to build group practices (especially in urban areas) and better reflect rurality issues, morbidity, age and other factors related to population demand.

29. Pay-for-performance mechanisms should be further developed but should only form a small proportion of the total payment. They should include payment and quality monitoring systems to reward effective management of major chronic
30. The incentives of primary and secondary care providers should be aligned, with strategies developed to motivate hospitals to support and reward PHC in taking on outpatient work and additional duties. A clearer specification of the role of PHC, functioning of teams and relationships with other parts of the health-care system and alignment with clinical guidelines and patient pathways are needed to achieve this.

31. Policies and capacities in the NHSU to systematically monitor PHC care-related aspects such as geographical and timely access to PHC, compliance with PHC contract terms, fraud detection, prescribing behaviour and quality of care should be developed.

4.7 | Digital technologies for health

4.7.1 Implementing the e-health and digital strategy

32. Universal uptake of e-health systems should be ensured in all PHC services. The systems should incorporate care pathways for common conditions, have the capability for e-prescribing of all necessary medicines, support telephone and web-based consultations, and facilitate remote monitoring (including in areas retaken by the Government of Ukraine, areas close to front lines, and rural and hard-to-reach areas).

33. The e-health system needs to be a tool for clinicians, not only an administrative system for the NHSU. In the longer term, it is recommended that decision-support modules be developed to support PHC, motivate family doctors to use e-health and ensure that all vendors are able to incorporate the systems into the desktops of PHC professionals.

34. E-health usability issues should be reviewed and addressed regularly to support PHC providers. Improvements should be designed with data workload to be done by providers in mind. Continuing to ensure interoperability will be important (including interoperability with medical information systems in EU countries), given the reliance on independent vendors.

35. The ICPC-2 classification system used in electronic medical records (to start monitoring need, demand and prevalence of conditions) and local e-health systems should be further developed to capture information on interactions between patients, PHC and e-prescribing data. Systems for capturing coding for activities done by nurses and other professions should be incorporated into wider systems. ICPC-2 classifications should be combined with nursing classifications, such as diagnoses developed by NANDA International, interventions from the Nursing Interventions Classification and outcomes from the Nursing Outcomes Classification.
36. Public health information systems, prescribing and hospital data should be linked to PHC to support population health management by creating information systems that allow patients in need of early intervention or support to be identified through techniques such as risk stratification and algorithms.

37. The public must be comfortable with arrangements for data-sharing and analysis.

4.8 | Systems for improving the quality of care

38. A national agency on health-care quality and safety should be set up to ensure routine external evaluation of facilities’ performance. The Ministry of Health should define desired outcomes and the NHSU should develop a monitoring and evaluation system to investigate variations in quality of care and care outcomes among providers. Additional external quality control will be provided through licence-updating, institution-accreditation and doctor-certification processes, but this can guarantee only a minimum standard.

4.8.1 Guidelines and evidence-based medicine

39. A study to review existing PHC service compliance with evidence-based medicine should be conducted to restrict the use of technologies and medicines with unproven effectiveness.

40. Disease management guidelines for common chronic diseases and mental health conditions should be implemented. These will need to be reviewed to ensure they can be applied in the Ukrainian context.

41. Investment should be made in the development of clinical governance to trace who care has been delivered to, identify the clinical decisions taken and determine if care was delivered to defined standards and norms. Investment is also needed in multilevel quality-improvement instruments, including assessment of medical records, audits, inspection, production of annual reports, making audit results available to health authorities and patients, video assessment and involving patients in setting clinical governance priorities and evaluations.

4.8.2 Other quality-improvement and national PHC monitoring

42. Greater competition based on the quality of health-care service provision should be encouraged among PHC providers to improve the quality and accessibility of PHC for patients on the basis of their free choice. This may also help address the issue of attracting PHC workers to sparsely populated areas.
4.9 | Governance

4.9.1 Policy-making

43. PHC policy-making and implementation planning should be aligned with ongoing hospital district network development and implementation. It is important that the PHC network is linked to the hospital cluster approach, leading to the harmonized health-care network locally.

44. A legal framework for rebuilding and developing infrastructure should be in place, based on specific criteria with defined functional and technical requirements. These should be aligned with the functions and the basket of services of PHC and reflect the recovery context and sustainability of facilities.

45. Mechanisms for PHC and public health information exchange and mutual support for community health needs should be strengthened. This would include assistance to develop effective disease prevention and management strategies, including vaccination and prevention of suicides.
Before the conflict in Ukraine escalated into a war in February 2022, significant and rapid progress in PHC had been seen, with substantial parts of the population enrolled with a family doctor. Important steps had also been taken to align other policies, such as medical guarantees and medicines policy, with the development of primary care.

The direction of travel was clear and supporting policies were being put in place to prepare for further developments, such as digital and workforce development. A number of significant challenges nevertheless remain.

More needs to be done to set out a clear and compelling vision for the future of primary care in a way that will capture the imagination of the public and of professionals. A clear statement of the benefits that will come from the changes is needed, including the following.

5.1 | Structure and process

There is a need for:
• care that is comprehensive, affordable and easy to access
• high-quality and evidence-based care provided in modern facilities
• rapid access to specialists and diagnostics when required
• continuity of care for patients who need it
• management of chronic diseases
• support for mental health problems
• close integration with public health services
• underpinning purchasing, payment, regulation, workforce and education policies.
5.2 | Outcomes

Services should aim to:
• improve healthy life expectancy
• reduce admissions to hospital
• increase public confidence in services
• increase health literacy among the population
• offer an attractive career for clinical professionals
• increase the efficiency of public spending on health.

5.3 | Workforce

The workforce required to support a new vision of primary care needs to be developed through expanding the skills and capabilities of the existing workforce and training new professionals in medicine, nursing and the wide range of disciplines required to support multidisciplinary working. Building a strong CPD programme will be necessary to ensure that new skills are spread and maintained.

5.4 | Infrastructure

The infrastructure supporting primary care — physical and digital — will need to be strengthened. Over time, Ukraine can achieve the goal of fully integrated patient records. This will allow the introduction of much more proactive models of primary care and more effective approaches to prevention.

An approach to planning, quality and performance monitoring, quality, improvement and further development will also be required. The Government should consider how to purposefully manage market forces and competition to address existing inequities, particularly in rural areas.
5.5 | Policy

The NHSU and Ministry of Health need to develop strong teams with expertise in primary care policy and implementation to deliver the strategy for primary care. Their tasks will be to continue to challenge the system to develop and ensure that the right supporting policies and processes are in place. It will be particularly important to ensure that the primary care components of policy for payment mechanisms, professional education and training, information systems and hospital care are properly reflected as the policies are being developed.

Policy-makers and opinion leaders in government and the health system need to explain the role of primary care, how it is changing and its importance to the wider health-care system. The legacy of the past means there is a need to invest in the reputation and credibility of primary care and to improve public understanding of its role.
REFERENCES


2 All references accessed 20 August 2022.


The assessment process was two-phased and included an assessment phase and Recommended actions. The details of these are provided below.

**Assessment**

To undertake an assessment of Ukraine’s primary health care (PHC) system, elements from two assessment frameworks, the WHO Operational Framework for PHC (1) and the Primary Health Care Impact, Performance and Capacity tool (2), were combined to cover the domains in Table A1.1. The two (longer) frameworks were adapted through a consensus approach among the project team by first blending the frameworks, deleting overlaps and then deleting topics that were less relevant or important.

**Table A1.1. Framework used to assess the Ukrainian PHC system**

<table>
<thead>
<tr>
<th>Domains</th>
<th>Topics/themes to examine in the assessment</th>
</tr>
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</table>
| 1. Number and types of PHC providers (including patient enrolment) | a) Number of registered patients  
b) Number of PHC providers and sites |
| 2. Workforce availability, scope, skills and multidisciplinary teams | a) Scope of PHC services  
b) Moving away from hospital-focused care  
c) Presence of integrated health services (including mental health)  
d) Multidisciplinary care  
e) Registered lists/rostering/declarations  
f) Primary care selection of services (such as identifying needs via population stratifications, preventive care, diagnostic procedures, treatment, management of diseases, patient engagement)  
g) Primary care design (such as referral system, shared care pathways, different access modes, developing shared care plans)  
h) Organization of services (such as practice population, out-of-hours operations, primary care teams, collaborations between primary care and specialists)  
i) Management of services (such as autonomy in staffing PHC, population health management)  
j) Utilization of services (such as overall utilization of PHC services) |
Table A1.1 contd

<table>
<thead>
<tr>
<th>Domains</th>
<th>Topics/themes to examine in the assessment</th>
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<tbody>
<tr>
<td></td>
<td>k) Continuity of care (such as treatment, follow-up care, longitudinal continuity of care, informational continuity of care)</td>
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<td></td>
<td>l) Coordination of care</td>
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<td>m) Comprehensiveness of primary care (such as resolution capacity of generalist medical practitioners)</td>
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<td></td>
<td>n) Patient centredness (such as patient experience/satisfaction, shared decision-making)</td>
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<td></td>
<td>o) Access to primary care (such as same-day appointments, waiting time for appointments, barriers due to treatment costs, access to medicines)</td>
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<td>3. Patient pathways and referral processes</td>
<td>a) Gatekeeping</td>
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<td></td>
<td>b) Number and type of referrals</td>
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<tr>
<td>4. Physical infrastructure</td>
<td>a) State of key elements of physical facility infrastructure</td>
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<tr>
<td>5. Medicines and other health products</td>
<td>a) Appropriateness, availability and affordability of medicines</td>
</tr>
<tr>
<td>6. Purchasing and payment systems</td>
<td>a) Adequate funding flowing through PHC system</td>
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<td></td>
<td>b) Out-of-pocket payments</td>
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<tr>
<td></td>
<td>c) Payment methods in primary care (such as provider payments, employment status and remuneration of generalist medical practitioners, pay-for-performance; support for caregivers/family carers)</td>
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<td></td>
<td>d) Managing primary care facilities (such as the degree of autonomy in budgeting)</td>
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<tr>
<td>7. Digital technologies for health</td>
<td>a) Digital health literacy</td>
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<tr>
<td></td>
<td>b) Digital health policies (such as national policies or strategies for e-health, telemedicine or digital health)</td>
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<tr>
<td>8. Systems for improving the quality of care</td>
<td>a) Interventions to improve quality (such as evidence-based medicine)</td>
</tr>
<tr>
<td></td>
<td>b) National or regional primary care performance assessment (such as patient experience measures, job satisfaction)</td>
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<tr>
<td></td>
<td>c) Practice-level quality-improvement mechanisms (such as quality of care processes, safety incidents reporting)</td>
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<td></td>
<td>d) External accountability for quality of care and continuous professional development (such as external accountability for quality of care delivered by PHC providers)</td>
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Once the framework was developed, 15 internal WHO documents were reviewed and available data populated against the framework’s themes. Where external documents were referenced (such as legislation, reports, briefings and academic publications), they were included. Relevant meetings were held and additional information gathered from internal WHO Country Office in Ukraine and WHO Regional Office for Europe presentations.

Findings in each section were validated with WHO Country Office staff and national stakeholders, including groups such as the Prime Minister's Office, Ministry of Health, National Health Service of Ukraine and Primary Health Care Association.
Recommended actions

A suggested implementation timeline for recommended actions are covered in Annex 3. After the assessment was complete, one project team member developed a series of policy recommended actions. The project team added to and validated them and then collectively developed timelines for the recommended actions.

Limitations to the approach

While the aim was to be comprehensive in the assessment, some aspects were unable to be captured. For example, a number of technical officers had heard reports in the field about the reasons for particular trends, but there was no rigorously collected data to support the anecdotes being shared. For this reason, those particular areas are highlighted in the recommended actions, suggesting that more formal work should be carried out to identify causes.

References


3 All references accessed 20 August 2022.
Annex 2. Summary of the main findings of the primary health care assessment

Number and types of primary health care (PHC) providers and patient enrolment

The assessment found:

- an increased number of PHC facilities and equal distribution of registered population per doctor in rural and urban settings;
- a rapid increase in new solo practices set up by private individual entrepreneurs;
- hospitals are increasingly registering as PHC facilities, with high volumes of referrals for specialized hospital services; and
- the contracting mechanism is broad and uniform and does not allow purchasers to use selective contracting or introduce incentives.

Workforce availability, scope and skills, and multidisciplinary approach

The assessment found:

- the PHC workforce is composed of family doctors (66%), therapists (20%) and paediatricians (14%);
- nurses are not considered as specialists and therefore have no specified role or patient ratios, and the number of nurses in PHC is not monitored;
- half of doctors are over 50 years old, with one quarter of the medical workforce beyond retirement age;
- local government is responsible for covering utility costs and is often the only source of capital investment, leading to large differences in funding and equipping of facilities across the country;
- the medical education of PHC doctors is shorter than those of European Union countries, and the Ministry of Health has accepted the World Organization of Family Doctors competencies for the Ukrainian health system;
• the scope of practice of nurses is by regulation quite broad but in practice is limited to administration and documentation;
• multidisciplinary approaches are evident in areas such as community mental health services;
• most chronic care is being managed by outpatient specialists in hospitals where patients tend to seek care and PHC providers do not often record behavioural risk factors; and
• mental health and social care are not within the scope of PHC practice, nor are they aligned to it.

Patient pathways and referrals

The assessment found:
• many people still access secondary care directly and without referrals;
• not all patients are registered with a PHC provider, although the numbers are increasing steadily;
• clear referral pathways are obligatory for three priority conditions — stroke, myocardial infarction and COVID-19; and
• e-health provides a powerful tool for monitoring and enforcing referral pathways.

Physical infrastructure

The assessment found:
• PHC centres evolved from the reorganization of polyclinics and most PHC doctors are co-located within the same building/establishment;
• local government has discretionary powers to fund local health institutions, their development and equipment, leading to geographical differences in PHC facilities with variable access to diagnostics; and
• the President’s initiative provided funding for reconstruction and equipping of PHC clinics located in small settlements and remote villages.

Medicines and other health products

The assessment found:
• the number of medicines that can be prescribed by PHC doctors and are fully reimbursed through the single purchaser is steadily increasing and covers medicines for the main noncommunicable diseases (NCDs);
• although the number of patients with NCDs is not fully known, the e-health system collects detailed information on patient identification, referrals, and medicine prescription and reimbursement;
• people tend to self-treat many conditions but access PHC for prescriptions of medicines covered by the Affordable Medicines Programme (AMP) — around 60% of PHC visits entail prescriptions; and

• the COVID-19 pandemic might have affected health-seeking patterns — use of the AMP is low compared to the NCD burden in the country.

**Purchasing and payment systems**

The assessment found:

• spending on PHC has been increasing since 2014, but its share in the Programme of Medical Guarantees package has flattened since 2020;

• simple age-adjusted capitation budgets based on enrolment reinforces the principle of money following the patient, with a maximum limit beyond which the payment decreases;

• utility and capital costs predominantly are paid by local government;

• PHC providers are autonomous organizations that can decide on the level of salaries, staffing, equipment or other decisions on how to use funds from a single purchaser;

• although the population is eligible for free PHC services, 48% of patients reported making informal payments for receiving PHC services;

• patients choose to forego referred services in some instances and access care directly, leading to out-of-pocket payments; and

• there is no systematic costing of PHC services.

**Digital technologies for health**

The assessment found:

• a strong e-health system has recently been introduced, which includes electronic registration of patients and providers, electronic prescriptions, an e-referral system, sick leave, COVID-19 vaccination certificates and other features;

• most of the data were publicly available on the National Health Service of Ukraine (NHSU) website in the form of dashboards to inform patients, providers and local administrations;

• some paper-based reporting systems persist, leading to double work;

• the e-health system is sometimes not operational, causing delays in data submissions and additional workloads;

• the e-health system has no clinical decision-support function and is perceived only as an administrative system for payment; and

• the potentials of telemedicine and teleconsultation are not fully being realized, although many doctors report being in touch with patients through other communication platforms.
Systems for improving the quality of care

The assessment found:

- the Ministry of Health Order and NHSU conditions set minimum organizational requirements for PHC, but no quality standards or processes are defined or enforced;
- international standards have not been adapted to the Ukrainian context; and
- the NHSU has initiated the introduction of internal quality measures for PHC performance of contracted providers.
Annex 3. Suggested implementation timeline for recommended actions

Table A3.1 presents a suggested implementation timeline.

Table A3.1. Suggested implementation timeline for Recommended actions

<table>
<thead>
<tr>
<th>Recommended actions</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Years 3–5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Number and types of primary health care (PHC) providers and patient enrolment</strong></td>
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<tr>
<td>To incorporate the PHC provider network model to the broader investment plan for health-care network recovery</td>
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<td>To set the criteria for hospitals to be permitted to provide PHC</td>
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<tr>
<td>To increase patient enrolment and access to services, including in rural areas, areas retaken by the Government of Ukraine and areas close to the front line</td>
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<tr>
<td><strong>2. Workforce availability, scope and skills, and multidisciplinary approach</strong></td>
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<tr>
<td>To develop a PHC workforce strategy that includes nursing and continuous professional development (CPD), with a particular focus on a multidisciplinary approach to strengthen collaboration between PHC and public health centres, noncommunicable disease management, and social and community services</td>
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<tr>
<td>To perform a baseline assessment on nursing, with results being used for routine monitoring and evaluation of the PHC nursing workforce</td>
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<tr>
<td>To expand the roles of nurses to include prevention, patient monitoring, patient self-management skills and the delivery of an extended range of treatments</td>
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<td>To establish, maintain and regularly update a professional register of medical PHC personnel.</td>
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<td>To develop mechanisms for accrediting postgraduate trainers and university courses, with the curricula for undergraduate and postgraduate education aligned with education systems in the European Union</td>
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<tr>
<td>To strengthen university departments of PHC</td>
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<td>To create systems to ensure an efficient CPD programme</td>
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<tr>
<td>To develop sustainable modalities for service provisions in hard-to-reach areas (rural, retaken by the Government of Ukraine, close to front line)</td>
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<tr>
<td>To extend responsibilities of PHC doctors to prescribe psychotropic medicines for common mental health conditions</td>
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### Table A3.1 contd

<table>
<thead>
<tr>
<th>Recommended actions</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Years 3-5</th>
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<tbody>
<tr>
<td><strong>3. Patient pathways and referrals</strong></td>
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<tr>
<td>To develop and implement a wide communication strategy aiming to inform patients on PHC scope and interaction with social and community services, and explaining how patients can improve their health literacy and ability to provide self-care and self-treatment through the use of digital tools</td>
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<tr>
<td>To develop defined care pathways based on evidence-based guidelines and protocols adopted to the local specifics of each oblast, with relevant monitoring using e-health</td>
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<td><strong>4. Physical infrastructure</strong></td>
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<tr>
<td>To create minimum standards for PHC facilities and ensure PHC network recovery is aligned with hospital network planning and national recovery programme, with geographical variations</td>
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<tr>
<td><strong>5. Medicines and other health products</strong></td>
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<tr>
<td>To develop a national register for chronic disease patients to assess coverage and effectiveness of the Affordable Medicines Programme within the Programme of Medical Guarantees and identify areas for improvement in patient management</td>
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<tr>
<td>To ensure the availability of storage for critical medicines and their distribution in the pharmacy network</td>
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<tr>
<td>To extend funding to back-up the medicine package to support improved management of common chronic conditions (such as heart disease, cancers, arthritis, osteoporosis, chronic obstructive pulmonary disease, asthma and chronic kidney disease)</td>
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<td><strong>6. Purchasing and payment systems</strong></td>
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<tr>
<td>To secure public spending on PHC and public health</td>
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<tr>
<td>To align incentives of primary and secondary care providers and develop strategies to motivate hospitals to support PHC to take on outpatient work, with PHC rewarded for taking on additional duties</td>
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<tr>
<td>To increase public spending on PHC to allow step-by-step increases in the scope of PHC services</td>
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<td><strong>7. Digital technologies for health</strong></td>
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<tr>
<td>To ensure universal uptake of e-health systems in all PHC services, incorporating care pathways for common conditions and having the capability to enable e-prescribing of all necessary medicines, and support telemedicine and remote monitoring</td>
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<tr>
<td>To develop decision-support modules to support PHC, motivate family doctors to use e-health and ensure that all vendors are able to incorporate the systems into the desktops of PHC professionals</td>
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<tr>
<td>To combine in electronic records ICPC-2 classifications with nursing classifications, such as diagnoses developed by NANDA International, interventions from the Nursing Interventions Classification and outcomes from the Nursing Outcomes Classification</td>
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### Table A3.1 contd

<table>
<thead>
<tr>
<th>Recommended actions</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Years 3-5</th>
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<tbody>
<tr>
<td>To link PHC, public health information systems, prescribing and hospital data to support population health management that allows risk stratification and early intervention support</td>
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<tr>
<td>To enable patients’ access to their medical electronic records according to data-sharing policy</td>
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<td><strong>8. Systems for improving the quality of care</strong></td>
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<tr>
<td>To establish a national agency on health-care quality and safety, ensuring routine external evaluation of facilities’ performance</td>
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<tr>
<td>To conduct a study to review existing PHC services’ compliance with evidence-based medicine and restrict the use of technologies and medicines with unproven effectiveness</td>
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<tr>
<td>To develop a clinical governance/audit system for PHC doctors</td>
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<td><strong>9. Governance</strong></td>
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<td>To ensure a legal framework for recovery, rebuilding and developing health-care infrastructure is aligned with the functions and basket of services of PHC</td>
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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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