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SERVICE DELIVERY INDICATORS HEALTH SURVEY FOR UKRAINE

SURVEY REPORT

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SDI
SERVICE DELIVERY INDICATORS
HEALTH SURVEY PROGRAM

MINISTERUL SĂNĂTĂȚII
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Acronyms

AMP	Affordable Medicines Program
AMR	Antimicrobial resistance
ART	Antiretroviral therapy
CAPI	Computer-assisted personal interview
BCG	Bacillus Calmette-Guérin
CI	Confidence interval
EHRs	Electronic health records
e-MIS	Electronic medical information system
FOP	Individual entrepreneur (*Fizichba osoba-pidpriyemets*)
Hib	*Haemophilus influenza* type b
HIV	Human immunodeficiency virus
ICT	Information and communications technology
IDPs	Internally displaced persons
IPC	Infection prevention and control
IQR	Interquartile range
IV	Intravenous
LMIS	Logistics management information system
NCD	Noncommunicable disease
NHSU	National Health Service of Ukraine
OOP	Out-of-pocket
PA	Public announcement
PHC	Primary health care
PHCPI	Primary Health Care Performance Initiative
PMG	Program of Medical Guarantees
PMTCT	Prevention of Mother-to-Child Transmission (of HIV)
PTSD	Post-traumatic stress disorder
QI	Quality improvement
SDI	Service Delivery Indicators
SOPs	Standard operating procedures
SRH	Sexual and reproductive health
STIs	Sexually transmitted infections
TB	Tuberculosis
UAH	Ukrainian hryvnia
UHC	Universal health coverage
USCR	Ukrainian Center for Social Reform
WaSH	Water, Sanitation, and Hygiene
WHO	World Health Organization

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Executive Summary

The Service Delivery Indicators (SDI) Health Survey in Ukraine is intended to provide policy-relevant evidence to enable governments, citizens, and other stakeholders to identify successes and bottlenecks in health service delivery, monitor progress over time, and make cross-country comparisons. The results of the assessment are intended to inform actions to improve population health outcomes.

The Ukraine SDI Health Survey was conducted through a partnership of the Ministry of Health of Ukraine, the National Health Service of Ukraine, and the World Bank, with funding from the Swiss Agency for Development and Cooperation. Data collection was conducted in 378 primary health care (PHC) facilities between April and July 2024. A total of 1,547 health care providers and 2,490 patients were interviewed during the survey. The survey covered PHC facilities in 18 of the 24 oblasts in Ukraine and the city of Kyiv. Because of Russia's invasion of Ukraine, the sample frame was restricted to areas that were not actively contested during the survey planning and implementation period.[1] This restriction has implications for some of the findings in the report, because areas most affected by the invasion are not represented.

The SDI Health Survey covers three broad and complementary PHC service delivery areas, which it evaluated through structured questionnaires:

- **Health service delivery foundations:** This domain covered the workforce's presence, qualifications, training, workload, and job satisfaction. To understand the provider's context, the survey also evaluated the availability of essential medicines, equipment, (medical and non-medical), supplies, and the information systems that support health care.

- **Processes of care:** This domain evaluated the knowledge and ability of providers to diagnose, treat, and counsel patients. The effective coordination of patient care encompasses many factors; the survey evaluated the frequency, flow, continuity, and integration of the referral systems. Care also requires infection prevention and control and the readiness and capacity to respond to emergencies. Finally, care is for patients: the survey assessed the accessibility of services and the levels of respect and autonomy that patients experience when seeking care.

- **Person-centered outcomes:** This domain focused on the experiences and outcomes of those seeking care by (1) measuring their satisfaction with the services received and (2) examining the factors influencing the use of care and patient retention. Additionally, it measured both direct and indirect costs that patients incurred while seeking care.

The specificity of the SDI survey resides in its ability to provide a holistic view of primary health care across the three domains in each facility. This approach allows policy makers and stakeholders to account for multiple confounding factors and make more informed policy formulations and evaluations. The

[1] For ease of reading, the report will refer to "Ukraine" rather than "the oblasts or regions covered by the survey."

remainder of this summary presents key findings that are detailed further in the report, which is organized around the three broad domains discussed.

METHODS AND LIMITATIONS

Questionnaire adaptation and field work. The SDI methodology consists of three modules: facility, provider, and patient. These were reviewed and adapted with the Ministry of Health and the NHSU to adequately assess the PHC situation in Ukraine in 2023 and revised prior to the field work (April–July 2024). The Ukraine Center for Social Reform (USCR) led the data collection.

Sampling, bias risk, and implementation. The sample frame was designed from data provided by the NHSU with probability proportional to the size of the registered population. The sample was powered such that full-sample responses would have a relative margin of error of 6 percent for health facilities, with lower margins observed for providers (4 percent) and patients (3 percent). There were relatively higher refusal rates in private facilities, particularly for-profit than in other strata. Econometric analysis suggests that this was likely due primarily to patient volumes and provider workload. To ensure representativeness, all survey sample weights are based on probability of selection and include correction factors for non-response.

Provider knowledge. Clinical case simulations ("vignettes") in which the providers proceed as in a normal patient visit and receive standard responses to questions related to the patient's condition, including physical and laboratory examinations, were used (Das and Hammer 2005). The providers are aware that this approach serves to evaluate clinical knowledge and that they must provide their diagnosis and treatment plans. Five simulations for high-prevalence conditions were used, with a maximum of two per provider.

Limitations. For security and access reasons, with guidance from the Ministry of Health, eight oblasts were partially or entirely excluded from the sample frame. The oblasts of Mykolaiv, Kherson, Dnipropetrovsk, Zaporizhzhia, Donetsk, and Luhansk, the autonomous republic of Crimea, and the city of Sevastopol were entirely excluded. In Sumy and Kharkiv oblasts, certain localities close to the front lines and to the north near the Russian border were excluded. Thus, the sample is designed to draw inference of PHC facilities in non-excluded areas only and is too small to permit oblast-level disaggregations. The limitation of only two vignettes per provider reduces the sample size and the possibility of disaggregation.

CONCLUSIONS

RESILIENCE OF PHC SERVICE DELIVERY

The system has been under tremendous pressure due to damage, forced displacement, access constraints, and resource constraints.[2] However, the system has shown great resilience, although there are signs of strain. This resilience is summarized across the financial, material, and human resource dimensions.

Resource flows, whether financing or in kind, are generally uninterrupted, with only 11.1 percent of facilities noting delays in anticipated medical supply deliveries and 5.1 percent reporting delays in the disbursement of central government funds since February 24, 2022. Beyond government, humanitarian organizations have supported health facilities; 71.7 percent reported the reception of medicines or medical supplies, primarily for public (81.0 percent) and rural (81.3 percent) facilities compared to private (27.3 percent) and urban (59.9 percent) facilities.

Facilities, despite the invasion largely had functional infrastructure the day of the survey; 86.4 percent of facilities had electricity, internet, and water simultaneously the day of the survey. However, over the reference period, less than three-quarters of facilities had functioning and uninterrupted water (74.7 percent), electricity (69.4 percent), and internet (67.1 percent). Preparedness for emergencies is a relatively weak area. Although more facilities have protocols for activated alert signals (71.2 percent) and reported conducting fire safety and prevention drills in the past two years (68.8 percent), there is lower availability of protocols to address threats of violence to staff or patients by armed groups (31.2 percent) or to communicate with security authorities (32.8 percent).

Providers are under significant pressure, yet they do not avail themselves of support. Although 6 in 10 facilities (60.9 percent) have services to address staff burnout, only three-quarters of providers at those facilities (76.3 percent) report awareness of these services, and only about 3 in 10 (28 percent) who are aware of the services reported using them at any point the year preceding the survey.

PROVIDER EXPERIENCE AND CAPACITY

Providers are experienced, with a median tenure in clinical service of 12 years for doctors and 21 years for nurses. Workloads are split between patient care (65.3 percent), clinical administrative tasks (13.9 percent), and e-MIS data entry (9.9 percent). Absence does not appear to be a significant issue in Ukraine's PHC system, with 11.6 percent of providers (15.0 percent of doctors and 8.8 percent of nurses) reported as absent during an unannounced visit. Nearly all absences were for authorized reasons. The median absence-adjusted number of daily outpatient visits was 12.9 patients in the three months prior to the survey. Providers are nearly uniformly satisfied with their jobs (99.1 percent), although significantly less are satisfied with their pay (67.7 percent). Work demands are generally acceptable (87.0 percent), although doctors (82.2 percent) were significantly less satisfied than nurses (95.0 percent).

[2] This is documented in the series of Rapid Damage and Needs Assessments produced by the Government of Ukraine, the World Bank, the United Nations, and the European Commission. The fourth, and latest, is here.

DIAGNOSIS AND TREATMENT OF HIGH-BURDEN AND PRIORITY CONDITIONS

Diagnosis and treatment. On average, one-half of providers (52.3 percent) gave the correct and complete diagnosis and treatment. Providing the correct pair requires recognizing signs of comorbidity (like obesity with diabetes type II), ruling out complications (for example, drug resistance with tuberculosis), and correctly assessing severity (for example, moderate rather than mild or severe depression). Providers did better on diabetes (92.2 percent), tuberculosis (85.4 percent), and hypertension (82.5 percent) than on pneumonia (67.1 percent) and depression (41.1 percent, significantly worse).

Guidelines. There is a positive and significant correlation between the use of standard operating procedures (SOP), guidelines, and quality of treatment. Correct primary and specific treatments across administered vignettes were significantly higher among providers who reported using a guideline (74.5 percent for primary, 58.0 percent for complete) than those who did not (47.3 percent primary, 27.2 percent complete). Providers in facilities with SOPs detailing the use of national or international guidelines report using these guidelines significantly more often (88.4 percent) than those in facilities without SOPs (76.4 percent). On average, 85.7 percent of providers use at least one national or international guideline, and 14.3 percent use none.

PATIENT SATISFACTION

The patient experience is generally very positive, despite the invasion. Patients report receiving their intended care (99.8 percent) on the day of the survey; they said they would return for further care (95.8 percent) and that they always or often receive care in the same facility (85.1 percent) and with the same providers (96.4 percent). Patients appreciate providers' communication and attitude (95.6 percent "good" or better), responses to questions (95.8 percent), and the patients' strong involvement in decisions (94.5 percent). However, only 67.7 percent reported feeling safe seeking care where they were interviewed, and 11.8 percent reported delaying care at least once in the past year for safety concerns.

EXPERIENCES OF DISADVANTAGED GROUPS

The health system is an important component of Ukraine's evolution to a more inclusive society. The survey shows areas of relative strength—as well as areas for improvement—particularly for those who have physical (mobility, visual) impairments, those who are internally displaced, those who have mental health concerns, and those who are women and girls.

Infrastructure for the disabled. Five key disability items were assessed as part of the survey, with only 23.7 percent of facilities having verified availability of all infrastructure items.[3] Less than one-half of the facilities had toilets that are handicapped-accessible (49.9 percent) and tactile flooring (45.4 percent); less than three in five (58.2 percent) had assistive technology for visually impaired patients. Among facilities with steps or an incline to enter the facility or within the facility, most had a ramp (91.8 percent); about one-fifth (19.7 percent) had a lift.

[3] Allowing for the ramp and lift to be pairwise substitutes.

Internally displaced persons (IDPs) made up one in twenty (5.4 percent) outpatient visits in the week preceding the survey, yet three in four providers (76.4 percent) reported consulting an IDP in the week preceding the survey; providers reported that 2 in 5 IDPs (42.7 percent) consulted did not hold an active registration. Based on provider reporting, the proportion of IDPs among all outpatient visits was significantly higher in private (8.0 percent) than in public facilities (5.1 percent) in the week prior to the survey.

Mental health is an increasingly important issue because of the invasion's effect on the population. Although 9 in 10 providers (92.9 percent) felt confident in their ability to provide supportive mental health services to patients, and 4 in 5 patients (79.7 percent) felt comfortable discussing the topic with a provider, facilities had less than 70 percent availability for the following services: alcohol abuse disorder, anxiety, depression, post-traumatic stress disorder (PTSD), and non-alcohol substance abuse disorder.

Women and girls often must deal with the challenge of referral for reproductive health questions, primarily because family medicine practitioners tend to refer patients to specialists (Dumcheva 2025). At the PHC level, only 1 in 9 (10.9 percent) facilities had a toilet for female patients; 1 in 8 (12.4 percent) had a toilet with menstrual hygiene facilities. Women are the group most directly affected by gender-based violence, yet only one-half of facilities (52.5 percent) were able to offer screening or counseling. In terms of sexual or domestic violence, 8 in 10 providers (83.3 percent) felt confident in their ability to care for patients who had experienced this violence, and 65 percent had received training to support survivors of sexual or domestic violence in the 2 years prior to the survey.

DIGITAL HEALTH

Progress toward digital health is mixed. The electronic management information system, e-MIS, is functional in 93.1 percent of facilities and facilities with an e-MIS have staff trained in its use. However, the logistics management information system showed distinct gaps: 53.6 percent of facilities mix digital and paper, 31.7 percent have neither, and a further 14.6 percent use either digital or paper exclusively. Telemedicine is an example of the potential and challenge of digital health. Although providers were generally confident that they could deliver similar care online (83.9 percent), fewer felt they had the necessary resources to do so without interruption (73.7 percent). Patients had a different view: less than one-half reported they would be willing to receive services via telemedicine (41.9 percent), and only one-fourth (26 percent) felt confident they would receive equivalent care using telemedicine services. Providers reported that telemedicine represented approximately one-fifth (20.2 percent) of all outpatient consultations in the week preceding the survey.

RECOMMENDATIONS

The Ministry of Health should return to a more prescriptive position on guidelines. A reform in 2017 allowed providers to use any guidelines rather than solely the Ukrainian ones. However, the patient case simulations show that clinical quality has room to improve and is statistically significantly weaker among providers who do not use guidelines. As noted in the 2024 health financing report (WHO 2024), there is the potential to link purchasing to the use of revised guidelines. Currently, the capitation-based system does not require information about the care provided, which could be part of redeveloping of the e-Health database to include clinical decision support information over a period of two years. Necessary shorter-term actions could include a formal decision on the redevelopment of Ukrainian guidelines or which international guidelines to recommend or require. The NHSU e-Academy system, which has already provided de facto guidelines in certain areas, could serve as the platform for expanded content for providers. As in other countries, there could be annual continuing education requirements linked to the e-Academy courses to allow for development of content over time. This in-service training could be complemented by reforms to the medical education content and approaches in conjunction with the planned development of university hospitals.[4]

Increased support for socially and physically vulnerable groups is important for better health outcomes. These groups include those requiring mental health support, those experiencing gender-based violence, those who are disabled, and those seeking sexual and reproductive health services.

- **Mental health.** While most facilities mentioned that they offered at least one mental health service (96.8 percent), they were, on average, only able to offer approximately two-thirds of measured mental health services (68.0 percent), despite 80 percent of patients showing interest in such support and 93 percent of providers reporting confidence in provision of such care. The Ministry of Health is developing a capable network for mental health inpatient care and should consider strengthening telemedicine capacity to complement outpatient and mobile care in conjunction with increased provider training given the diagnostic specificity problem in the mental health vignette. Since the development of mental health support in facilities will neither happen uniformly nor immediately, the development of remote consultations could be piloted in facilities which will have the new infrastructure first to start earlier by leveraging the staff and to go beyond a traditional outreach campaign.

- **Physical infirmity.** Due to both the invasion and the impact of NCDs, this area should be better addressed for more inclusive access to health care. The focus on building back better and EU accession is an opportunity to revise the Ministry's requirements for buildings, beyond the Ukrainian norms, by requiring that all bathrooms in facilities receiving public funds are both handicapped accessible and menstrual-hygiene friendly and that facilities develop a minimum package of accessibility features for disabled persons, including ramps, flooring, and signage. The first steps

[4] The planned investment is described at https://www.dream.gov.ua/pip-pipeline/DREAM-UA-180824-F0AF1587.

could be (1) to evaluate the situation across facilities receiving public funds, (2) to develop a policy outline, (3) to convene a stakeholder group with representatives of the owners and patients to review and confirm the policy, (4) to adopt the policy, and (5) to provide guidance and support in the implementation of all civil works in the health sector beyond simple window repairs/painting. These efforts align with the Government's national 'Barrier-Free Environment' initiative, which promotes universal accessibility and inclusion across public services and infrastructure.

- **SRH services.** Although pregnancy care was added to the set of PMG packages as an outpatient service in 2021, PHC facilities, on average, offered only 59.9 percent of measured pregnancy services, and 36.7 percent of broader SRH services. The ongoing selective contracting of higher-volume hospitals for deliveries should be complemented by broad access to basic services to better screen for risks and to manage them earlier. Depending upon the education provided to nurses, this might be an area for task-shifting or for requirements to provide these services as part of the basic PHC package. The Ministry may wish to review how it procures such services as part of the PHC package; individual entrepreneurs (FOPs) provide statistically-significantly less SRH and pregnancy services than public or private-for-profit facilities, yet their share of total contracts rose from 6 to 34 percent between 2018 and 2024 (WHO 2024).

Given the importance of vaccines, the observed gaps call for further action. The third most-frequent reason for health facility visits is childhood immunization, yet facilities have only 63.5 percent of all vaccines available on average. Even excluding Bacillus Calmette-Guérin (BCG), which is often given in the maternity facilities, there is insufficient vaccine availability. There are statistically significant differences: rural facilities have less than urban ones, FOPs have less than other categories, and private-for-profit ones have more than other categories when excluding the BCG vaccine. Vaccine procurement is centralized; the strategic purchasing of PHC services is a hybrid model with bonuses for public health elements such as vaccination and may need to be evaluated. The presence of a logistics management information system (LMIS) is not statistically significantly correlated with higher vaccine availability, only with the systematic tracking of stock levels when controlling for location, facility type, and LMIS type (paper, electronic, and hybrid). Yet, the evidence is clear that higher levels of vaccination are achievable in Ukraine; the performance-based condition in the Health Enhancement and Lifesaving Ukraine Project led to more than five million verified inoculations in two years (World Bank 2025). The Ministry of Health should review the vaccine logistics management chain, with a special focus on the LMIS presence, functionality, procedures, and use and consider strengthening pharmaceutical and vaccine management at the facility level.

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Chapter 1. Introduction

The Service Delivery Indicators (SDI) Health Survey in Ukraine will provide policy-relevant evidence to enable governments, citizens, and other stakeholders to identify successes and bottlenecks in health service delivery, monitor progress over time, and make cross-country comparisons. The results of the assessment should inform policy to improve population health outcomes.

The Ukraine SDI Health Survey was a partnership of the Ministry of Health of Ukraine, the National Health Service of Ukraine (NHSU), and the World Bank, with funding from the Swiss Agency for Development and Cooperation. Data were collected in 378 primary health care (PHC) facilities between April and July 2024. A total of 1,547 health care providers and 2,490 patients were interviewed during the survey. The survey covered primary health care (PHC) facilities in 18 of the 24 oblasts in Ukraine and the city of Kyiv. Because of the invasion, the sample frame was restricted to areas that were not actively contested during the survey planning and implementation period. [5] This restriction has implications for some of the findings in the report, because areas most affected by the invasion are not represented.

This report organization is as follows. Chapter 1 presents an overview of Ukraine and the context within which the primary health care system is situated. Chapter 2 summarizes the methodology used for all phases of research, from design to data analysis. Chapter 3 provides an in-depth view into the foundations domain. Chapter 4 presents the processes of care domain. Chapter 5 presents the person-centered outcome domain, focusing on the patient experience to evaluate the health care system from the end-user perspective. Chapter 6 presents the concluding remarks.

1.1 HEALTH SECTOR CONTEXT IN UKRAINE

The health system in Ukraine is financed through general taxation and strives to achieve universal health coverage. The Ministry of Health provides strategic direction and regulatory oversight, while the NHSU serves as the single purchaser of publicly financed health services under the Program of Medical Guarantees (PMG). The PMG defines a guaranteed package of services delivered free of charge at the point of care, including primary care, emergency services, selected outpatient and inpatient services, maternal health services, palliative care, rehabilitation, and reimbursed medicines under the Affordable Medicines Program (AMP).

The structure of service delivery has three tiers: primary, secondary (specialized outpatient and inpatient care), and emergency and tertiary (highly specialized services). PHC is the entry point to the system and is central to patient pathways and referrals. Patients must first contact their declared PHC provider (typically a family doctor), who then refers them to specialists or hospital-based care, as necessary. Exceptions exist for emergencies and some direct-access specialties (for example, gynecology, psychiatry, and dentistry).

The NHSU contracts with providers across all ownership types, based on standardized criteria and

[5] For ease of reading, the report will refer to "Ukraine" rather than "the regions (oblasts) covered by the survey."

service specifications for 54 packages.[6] These contracts stipulate service scope, quality requirements, and reporting obligations, enabling transparent purchasing and performance monitoring across the country. Health services covered under the PMG are free of charge, as defined by the Law on State Financial Guarantees (Law 2168).[7] Providers may charge for extras such as improved conditions or shorter waiting times.[8] Informal payments also occur, including voluntary gifts to doctors or formal charitable contributions, especially in inpatient care.[9]

1.2 KEY CHALLENGES FACING PHC

Over the past decade, Ukraine has made significant strides in enhancing the accessibility, quality, and transparency of PHC. In 2017, the enactment of the Law on State Financial Guarantees of Health Services (Law 2168) was a pivotal step that positioned PHC as a fundamental component of the health care system. This law established the Program of Medical Guarantees (PMG) and designated the NHSU as the single purchaser of services, thereby ensuring equitable access and improved financial protection for households. These reforms are aligned with global standards, such as the Astana Declaration, emphasizing PHC as essential for achieving universal health care (UHC).

Building on these reforms, Ukraine's 2030 National Health Strategy prioritizes PHC, particularly in rural and hard-to-reach areas.[10] The strategy aims to expand essential services, integrate PHC with social services, and enhance financial protection to reduce out-of-pocket (OOP) expenditures. The transformation of patient pathways (documents outlining patient courses of care) and the strengthening of a multidisciplinary care model are central to these efforts, emphasizing prevention, healthy lifestyles, and reduced dependency on hospital-based care.

Despite these advances, four challenges continue to hinder equitable health care access and financial protection:

- **Demographic and Epidemiological Transitions:** Ukraine faces a rising age dependency ratio, largely driven by an aging population (31 dependents over age 64 per 100 working-age population ages 15–64 in 2023).[11] This demographic shift, combined with an increased burden of noncommunicable diseases (NCDs),[12] underscores the need for preventive services within PHC to address prevalent risk factors such as hypertension, high cholesterol, and unhealthy lifestyles. These shifts highlight the necessity for PHC to effectively manage chronic conditions and support healthier population outcomes over the long term.

[6] An example of an NHSU report for services purchased under the PMG (third quarter of 2024) is available at https://edata.e-health.gov.ua/storage/files/report-nhsu-quater-3.pdf?1750165090.

[7] https://zakon.rada.gov.ua/laws/show/2168-19#Text.

[8] https://zakon.rada.gov.ua/laws/show/781-2024-%D0%BF#Text.

[9] https://healthindex.com.ua/HI_Report_UA_2023_EN.pdf.

[10] Ministry of Health of Ukraine, https://moz.gov.ua/uk/strategija, accessed December 10, 2024.

[11] World Bank Group. World Bank Open Data, https://data.worldbank.org, accessed September 18, 2024.

[12] IHME (Institute for Health Metrics and Evaluation), accessed August 28, 2024, https://www.healthdata.org/ukraine, accessed August 28, 2024.

- **Impact of Russia's Invasion of Ukraine:** The ongoing security situation has devastated the health care infrastructure; at the time of the survey more than 1,242 facilities (12.5 percent of all facilities) had been partially or fully damaged, and health care delivery across the country had been impacted. The invasion has exacerbated financial strains, with GDP contracting nearly 29 percent in 2022, further limiting public health resources.[13] Additionally, mass displacement has disrupted the continuity of care, especially for those registered within the PHC system, posing challenges to Ukraine's patient-centered financing model.

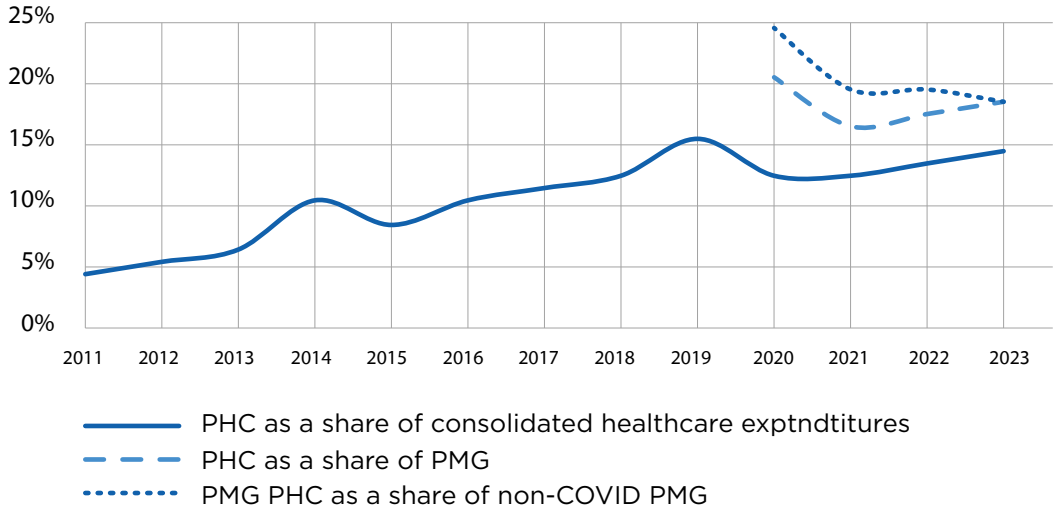
- **Funding Allocation and Service Prioritization:** The PMG's introduction supports improved allocative efficiency in health spending, particularly through a focus on PHC. From 2020 to 2023, PMG service prioritization policies included measures to optimize the service mix for maximum health impact. At a system level, this approach entailed a focus on PHC and a shift in resources to prevention and early intervention. A notable increase in PHC funding in 2019 elevated its share of the health budget and establishing a foundation for enhanced primary care services (Figure 1). However, PHC's share subsequently declined with the emergence of new priorities, such as COVID-19 response efforts and expansions in inpatient and outpatient care. In 2024, the Council of Ministers increased the PHC capitation rate.

- **Structural Barriers to Allocative Efficiency:** Despite PMG's intention to enhance resource allocation, there are structural barriers at the provider level that undermine this goal. Key among these is the absence of a system ensuring provider adherence to evidence-based clinical guidelines, which reduces the effectiveness of preventive services.

Barriers to Access and Service Continuity: Despite the PMG's role in expanding health care coverage, challenges to equitable access persist, particularly for those in rural or remote areas. Physical access challenges arise where PHC facilities are damaged or destroyed, and displaced individuals in affected areas may struggle to secure continuity of care due to local health care capacity constraints. Additionally, financial access remains constrained; while PHC services are free under the PMG, additional costs related to medication not covered by the Affordable Medicines Program (AMP) still pose barriers.

[13] Ukraine Rapid Damage and Needs Assessment, February 2022 – February 2023 (based on the global poverty line of US$6.85 per person per day).

FIGURE 1. Share of PHC spending of total health and PMG budget



Source: NHSU, State Treasury Service of Ukraine, Ministry of Finance BOOST, 2024.

1.3 PRIMARY HEALTH CARE REFORM IN UKRAINE

PHC reform initiated in 2017 by Law 2168 introduced a new financing model. Under this framework, the NHSU serves as the sole purchaser of publicly financed health care services, including PHC, and contracts with both public and private health care providers are based on unified criteria. This system aims to empower patients to choose their preferred PHC doctors and ensure access to a comprehensive benefit package at no cost to them.

1.3.1 Key Components of PHC Reform

The 2017 reforms brought significant shifts to PHC delivery, particularly to enhance patient choice, align provider incentives, and ensure equitable access across the country:

- **Patient Choice and Provider Flexibility:** Ukrainians can now freely choose their PHC physicians, regardless of residence or whether the providers operate in the public or private sector.

- **Capitation-Based Financing:** PHC providers are reimbursed via capitation payments adjusted by age and administrative location and incentivizing a proactive, patient-focused approach to care.

- **NHSU Contracting Standards:** The NHSU contracts with both public and private PHC providers, holding them to uniform standards. These contracts seek to ensure that all patients, including internally displaced people (IDPs), receive the same quality of care.

- **AMP:** Integrated into the broader PMG, the goal of the AMP is to provide affordable access to essential medications for chronic conditions and enhance the quality and reach of PHC services.

1.3.2 PHC Service Delivery and Integration

The reforms were designed to improve the delivery of PHC services to make them more accessible, patient-centered, and integrated with the broader health system. One of the critical shifts in service delivery has

been to empower family doctors to act as gatekeepers to the health system. The standardized financing and contracting mechanisms set by the NHSU facilitate more uniform delivery of PHC across the country and make services accessible to all patients, irrespective of socioeconomic status or geographical location.

Order No. 504 by the Ministry of Health of Ukraine defines a PHC provider as "a health care institution of any organizational and legal form, including municipal non-profit enterprises, or individual entrepreneurs who have obtained a license to carry out business activities in the area of health."[14] In practice, three primary types of PHC providers deliver these services: public non-profit providers, private for-profit providers, and individual entrepreneurs (also known as "FOPs"). PHC services are primarily delivered by family doctors, general practitioners, and pediatricians; family doctors represent the majority at 75.3 percent of PHC physicians, followed by general practitioners and pediatricians at 14.1 percent and 10.1 percent, respectively.[15] These professionals serve as the primary points of contact within the PHC model, operating under a regulated framework that sets patient-to-provider thresholds to ensure quality of care. Family physicians, for instance, are recommended to manage up to 1,800 patients; therapists and pediatricians are capped at 2,000 and 900 patients, respectively.[16] Nurses and mid-level medical staff also play essential roles in service delivery, although their responsibilities are generally limited to non-clinical tasks; ongoing efforts are focused on expanding the role of nurses in response to emerging needs, such as NCDs and mental health support.

There are two levels of PHC services:

- **The legal entity:** the administrative unit, which may include multiple group or individual PHC practices
- **The divisions:** the physical locations where PHC services are delivered.

Smaller private providers often operate both the legal entity and division from a single facility. Group practices, comprising two or more PHC providers under a joint activity agreement, are increasingly common, while individual practices, typically with single providers, continue to play an essential role. As of October 2024, the PHC system included over 31 million active patient declarations, with 2,787 PHC providers (that is, legal entities) and 25,330 PHC physicians across the country. Most patients (approximately 88 percent) hold declarations with providers at public facilities. Table 1 presents an overview of PHC providers in 2024, illustrating the distribution of providers and patient declarations by legal status.

[14] https://zakon.rada.gov.ua/laws/show/z0348-18#Text.

[15] National Health Service of Ukraine, "NHSU Dashboards," https://edata.e-health.gov.ua/e-data/dashboard/declar-stats. Accessed October 2024.

[16] https://zakon.rada.gov.ua/laws/show/z0348-18#Text.

TABLE 1. Number of PHC providers, active declarations, and doctors by legal status, October 2024

Provider type	Number of active declarations (percent)	Number of PHC Providers (legal entities; percent)	Number of PHC physicians (percent)
Public	27,782,555 (88.0)	1,330 (47.7)	21,269 (84.0)
Private for-profit	1,911,700 700 (6.1)	504 (18.1)	2,713 (10.7)
FOP	1,860,541 (5.9)	953 (34.2)	2,127 (8.4)
Total	**31,554,796**	**2,787**	**25,330**

Source: NHSU.

The PHC benefit package covers essential services such as consultations, diagnostics, preventive screenings, vaccinations, antenatal care, child development monitoring, emergency care, palliative care, and care for common and chronic conditions with explicit definitions of the content of care. PHC services have also expanded to meet new health demands, incorporating COVID-19 vaccination and testing during the pandemic, as well as mental health support to address needs resulting from the ongoing security situation. This adaptability has allowed the PHC system to respond effectively to urgent public health challenges while maintaining essential services for the population.

1.3.3 Digital Health Integration

The Ministry of Heath made the digitalization of PHC, including the use of electronic health records (EHRs) and electronic prescriptions, a priority in its 2030 National Health Strategy. The strategy aims to streamline service delivery, promote better care coordination and timely referrals, and enhance monitoring of providers to ensure they meet NHSU standards.

1.4 MOTIVATION FOR THE UKRAINE SERVICE DELIVERY INDICATORS SURVEY

The COVID-19 pandemic and invasion could have significantly disrupted PHC provision. PHC providers face increased administrative and clinical burdens, including managing care for IDPs, coordinating humanitarian aid, and addressing more complex health cases. Workforce shortages from displacement or emigration have further strained the system, increasing the risk of burnout among the health care staff who remain in the country. Despite these challenges, the PHC system has shown resilience, although access remains difficult in invasion-affected areas. Assessments, such as the Service Delivery Indicators (SDI) Survey, will be crucial for identifying areas for improvement to ensure that the PHC system remains resilient and capable of providing high-quality care to all. The SDI health survey in Ukraine provides a structured approach to the measurement of PHC, capturing information that is immediately relevant and actionable for policy makers and development partners as they plan further investments in, and programming for, health systems strengthening and PHC service delivery.

1.5 HOW THE SDI HEALTH SURVEY MEASURES PRIMARY HEALTH CARE

The first step in measuring the quality of health service delivery is to define the concept. "Quality of care" is a multidimensional concept. Perhaps the most canonical definition was proposed by Donabedian (1988),

who defined quality-of-care along three domains: structure, process, and outcomes of care. Building on this definition and other work, The Lancet Global Health Commission on High Quality Health System proposed an updated definition that articulates high-quality health system as "one that optimizes health care in a given context by consistently delivering care that improves or maintains health outcomes, by being valued and trusted by all people, and by responding to changing population needs." (Kruk et al. 2018).

The new generation of SDI health survey is based on The Lancet Global Health Commission on High Quality Health Systems findings. These emphasize the lack of and need for measuring quality of care along three domains, namely, foundations, processes of care, and quality impacts. The guiding framework of the SDI health survey (Figure 2) builds from these axes, with measures organized into the domains. The SDI framework also draws from other relevant frameworks, such as the Primary Health Care Performance Initiative (PHCPI), which describes the critical components of a strong primary health care system along five key areas: systems, inputs, service delivery, outputs, and outcomes. A table providing illustrative indicators from each of the SDI analytic domains is also included below (Table 2). In-depth results for each analytic domain are presented in subsequent report chapters and further descriptive details on the primary analytic domains and related subdomains for the SDI health survey are in Annex 4.

FIGURE 2. Overview of the Service Delivery Indicator Domains of Assessment

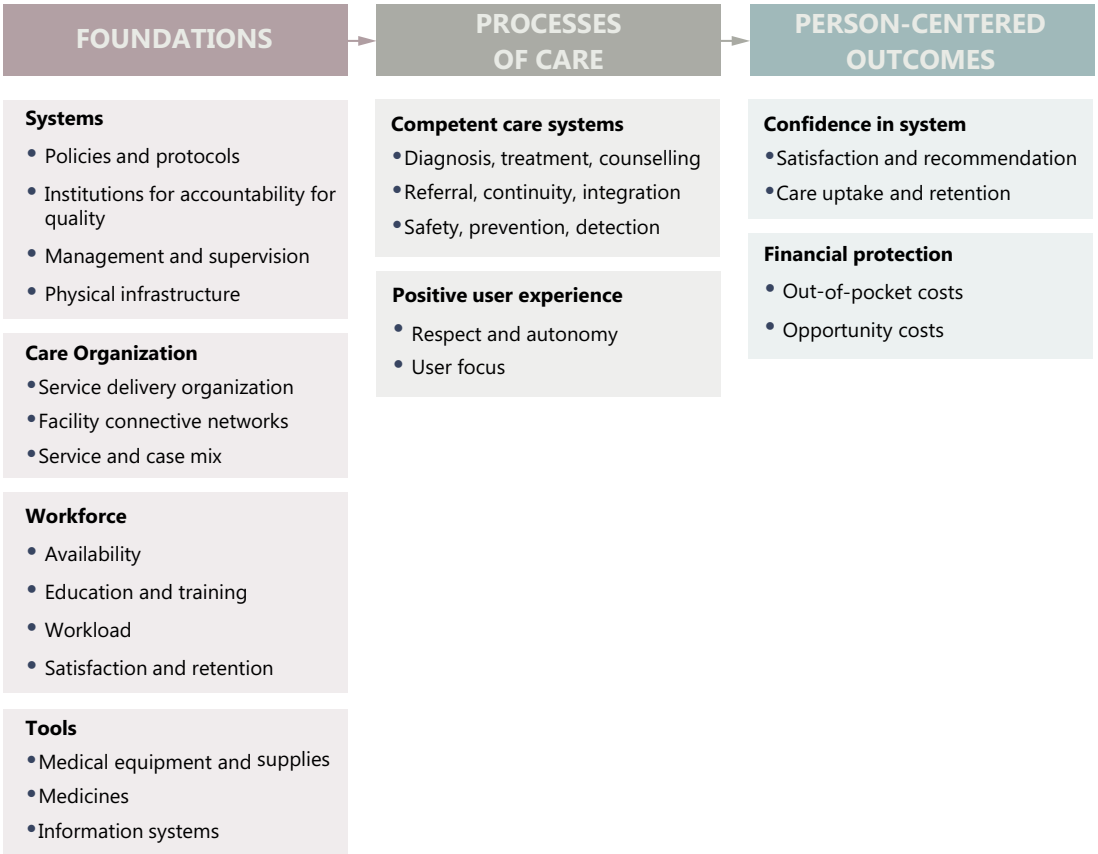


TABLE 2. Illustrative indicators across SDI analytic domains

Domain	Sub-domain	Element	Indicator	Overall	Location		Ownership		Private facility subsamples	
				Ukraine	Rural	Urban	Public	Private	FOP	Private for-profit
Foundations	Systems	Policies and protocols	Facilities with SOP for national or international clinical resource use (%)	73.8	73.1	47.7	73.2	76.8	75.7	78.6
Foundations	Systems	Institutions for accountability and quality	Facilities with at least one supportive supervision visit January-December 2023	37.1	39.2	34.5	**42.9**	**9.3**	9.3	9.3
Foundations	Systems	Institutions for accountability and quality	Facilities with supportive supervision visits which reported all supportive supervision criteria January-December 2023	32.6	30.7	35.4	32.8	29.1	20.9	42.4
Foundations	Systems	Management and supervision	Facilities using clinical record reviews to assess staff performance	41.5	42.8	40.0	41.3	42.7	34.4	56.0
Foundations	Systems	Financing	Central government (NHSU/PMG) share of total revenues	81.8	77.5	87.2	79.9	90.3	95.0	81.3
Foundations	Systems	Physical infrastructure	Functioning power, water, and internet the day of the survey	86.4	**77.2**	**97.8**	**84.0**	**97.5**	96.6	99.0
Foundations	Systems	Physical infrastructure	Functioning, uninterrupted power October-December 2023	69.4	66.1	73.4	71.0	61.7	62.1	71.0
Foundations	Systems	Physical infrastructure	Functioning, uninterrupted internet October-December 2023	67.1	60.7	75.0	65.4	75	73.7	77.0
Foundations	Systems	Physical infrastructure	Functioning, uninterrupted water October-December 2023	74.7	**61.7**	**90.7**	**71.3**	**90.7**	92.1	88.3
Foundations	Care organization	Service delivery organization	Facility registered population (median)	2,247	1,772	5,314	2,305	1,753	1,491	2,401
Foundations	Care organization	Facility connective networks	Emergency transport capacity	50.1	**60.3**	**37.6**	**56.8**	**18.2**	11.3	29.5
Foundations	Care organization	Service and case mix	Absence-adjusted median daily outpatient visits/doctor	12.9	12.8	13.1	14.4	7.5	9.3	6.2
Foundations	Workforce	Availability	Doctors and nurses per facility (median)	5	5	10	5	5	3	7

Domain	Sub-domain	Element	Indicator	Overall	Location		Ownership		Private facility subsamples	
				Ukraine	Rural	Urban	Public	Private	FOP	Private for-profit
Foundations	Workforce	Education and training	Provider years of experience (median)	21	21	21	22	14	13	14
Foundations	Workforce	Workload	Proportion of health care provider's time spent on direct patient care in their most recent typical work week	65.3	64.7	65.5	65.4	64.4	63.1	65.4
Foundations	Workforce	Satisfaction and retention	Median net change in facility providers in 2023	-1	-1	1	-1	1	1	2
Foundations	Workforce	Satisfaction and retention	Facility-reported availability of services to address staff burnout	60.9	58.8	63.5	61.0	60.4	61.6	58.6
Foundations	Tools	Medical equipment and supplies	Proportion of available and functional essential equipment and supplies (%)	94.3	95.4	92.9	94.4	93.4	92.1	95.6
Foundations	Tools	Medicines	Proportion of unexpired medicine available (%)	88.7	90.7	86.3	88.7	89.0	87.8	91.0
Processes of care	Competent care systems	Diagnosis, treatment, and counseling	Diagnostic and treatment accuracy across all conditions, primary (%)	70.5	76.0	68.6	70.4	71.7	67.7	74.9
Processes of care	Competent care systems	Diagnosis, treatment, and counseling	Diagnostic accuracy across all conditions, primary (%)	82.5	82.0	82.8	82.8	80.8	80.9	80.8
Processes of care	Competent care systems	Diagnosis, treatment, and counseling	Treatment accuracy across all conditions, primary (%)	71.8	75.0	70.6	70.9	77.4	73.1	80.8
Processes of care	Competent care systems	Diagnosis, treatment, and counseling	Diagnostic and treatment accuracy across all conditions, specific and complete (%)	52.3	51.8	53.6	52.4	51.3	48.7	53.3
Processes of care	Competent care systems	Diagnosis, treatment, and counseling	Diagnostic accuracy across all conditions, specific and complete (%)	66.3	61.0	68.2	66.2	67.1	69.2	65.4
Processes of care	Competent care systems	Diagnosis, treatment, and counseling	Treatment accuracy across all conditions, specific and complete (%)	55.0	50.1	56.8	54.4	58.7	55.3	61.4
Processes of care	Competent care systems	Referral, continuity, integration	Provider-reported rates of electronic information transmission for outpatient referrals (%)	42.9	49.2	40.2	43.1	41.2	46.8	36.7

Domain	Sub-domain	Element	Indicator	Overall	Location		Ownership		Private facility subsamples	
				Ukraine	Rural	Urban	Public	Private	FOP	Private for-profit
Processes of care	Competent care systems	Safety, prevention, detection	Facilities reporting all five surveillance and IPC measures[1] (%)	38.0	42.4	32.6	40.5	25.8	26.1	25.3
Processes of care	Positive user experience	Respect and autonomy	Patients reporting "good" or "very good" ratings for all of 5 measured experiential respect and autonomy components[2]	88.2	84.2	89.5	**87.4**	**94.1**	94.5	93.7
Processes of care	Positive user experience	User focus	Patient-reported median wait times (minutes)	5	5	5	5	2	2	2
Person-centered outcomes	Confidence in system	Satisfaction and recommendation	Patients who would recommend the facility (%)	93.8	92.7	94.2	**93.4**	**96.7**	95.5	97.7
Person-centered outcomes	Confidence in system	Care uptake and retention	Patients who delayed seeking care in the past year (%)	11.8	8.7	12.9	11.9	11.5	11.7	11.2
Person-centered outcomes	Financial protection	OOP costs	Patients incurring cost seeking health care (%)	42.7	**26.9**	**47.9**	**41.0**	**55.6**	48.8	61.4
Person-centered outcomes	Financial protection	Opportunity costs	Median time to reach facility as reported by patients (minutes)	15	12	15	15	15	15	15

Notes:

Values colored in orange indicate statistically significant differences at a level of alpha = 0.05.

(1) The five IPC components assessed include whether the facility (i) tests for and reports national notifiable diseases, (ii) maintained a cleaning record for at least one point of care in the week preceding the survey, (iii) Maintains a record of antibiotics prescribed and dispensed, (iv) has at least one staff who has received training on AMR or antibiotic stewardship in the two years preceding the survey, and (v) has at least one provider wo received in-service training on IPC in the two years prior to the survey.

(2) The five satisfaction components assessed included (i) provider attitude, (ii) visual privacy, (iii) auditory privacy, (iv) provider communication clarity, and (v) involvement in decisions about own health care.

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Chapter 2. Methods

2.1. SURVEY DEVELOPMENT

Per the SDI methodology, the survey consisted of three primary interview tools: one questionnaire for health facility managers, one for health providers, and one for patients. All components of the questionnaires were reviewed by clinical experts—in partnership with the Ministry of Health of Ukraine and the NHSU—to best reflect and assess the primary health care system in the country. Data collection was led by the Ukraine Center for Social Reform (UCSR), a local survey research firm. Further details on the components measured under each domain and subdomain of the SDI analytical framework presented in Figure 2 can be found in Annex 1.

2.2. SAMPLE DESIGN

The Ukraine SDI survey gathered information from outpatient PHC facilities across 18 oblasts, as well as the city of Kyiv. Data were collected from both public (Комунальна in Ukrainian) and private facilities, with further designation of private facilities into private for-profit (Приватний заклад ПМД in Ukrainian) and individual entrepreneurs (FOP or ФОП in Ukrainian) facilities. A sample frame was provided to the SDI survey team by the NHSU, and facilities were selected based on probability proportional to the size of their registered population.

The sample was powered such that full-sample responses would have a relative margin of error of 6 percent for health facilities, with lower margins observed for providers (4 percent) and patients (3 percent). The sample allocation and field results are summarized in Table 3 (facilities) and Table 4 (patients and providers). Margins of error for disaggregate estimates for full-sample indicators, also assuming maximum variance, were powered to produce relative margins of error no larger than 10 percent. The survey used a design effect of 1.5, assumed maximum variance with probability equal to 0.5, and a confidence level of 95 percent. Survey strata were largely based on facility type (listed hereafter as public, private for-profit, and FOP), location (urban or rural), and ownership (public or private). The "public" ownership category and the "public" categories reflect the same facilities. Although not always shown in tables and figures (although mentioned in the text if significant), patient-centered results were also analyzed by patient sex. Similarly, due to the large make-up of rural facilities being public, where differences by location were statistically significant, results were further analyzed across urban and rural public facilities. Further details on sample design are presented in Annex 2.

TABLE 3. Facility sampling design and implementation

Strata	Facilities required	Facilities selected	Facilities interviewed	Facility response rate (%)
Facility type				
Public	193	234	193	82.5
FOP	104	129	105	81.4
Private for-profit	103	123	80	65.0
Ownership				
Public	193	234	193	82.5
Private	207	253	185	73.4
Location				
Urban	268	326	246	75.5
Rural	132	160	132	82.5
Total	**400**	**486**	**378**	**77.8**

2.3. REFUSALS AND POTENTIAL SELECTION BIAS

Table 3 presents the response rates by strata; response rates in private-for-profit facilities were particularly low. Two factors may have contributed to this. First, while providers have reporting requirements under their NHSU contracts, these do not include surveys leaving them with the right to refuse without consequences despite the Ministry of Health. Second, since February 2022, numerous partners (for example, WHO, UNICEF, USAID, UNDP) have done PHC-related surveys. Combined with a lengthy SDI questionnaire, staff shortages, overlapping power outages, and other factors, providers may have felt fatigue from survey participation. Private providers whose individual facilities are "divisions" had to refer to their legal entities, which added time and increased the risk of refusal by the divisions.

To address selection bias, probit models of participation with explanatory variables related to rural/urban, facility ownership (public/private), and patient/provider volume were tested. With a specification using the ratio of patients per provider, only that variable was significant with an average marginal effect (AME) of 0.0002 ($p < 0.0001$). This impact is minuscule when the unweighted median number of patient declarations per provider was 1,043 among target facilities. Introducing patient and provider volume independently yielded the result that for-profit (AME: -0.18) and urban (AME: -0.13) facilities, as well as patient (AME: 0.00002), and provider (AME: -0.13) volumes, were significantly associated with participation. Facilities with greater patient volumes and fewer doctors (greater workloads) were less likely to participate, as were urban and private ones. Standard survey weighting procedures for the SDI include response-rate adjustments to compensate for underrepresentation across survey strata (Annex 2).

2.4. DATA COLLECTION AND ANALYSIS

Following contextualization efforts earlier in 2023, survey tools were pre-tested in 2 facilities in Kyiv: one public facility and one FOP facility. After making some adjustments to the tools, survey enumerators received training on the core set of tools, as well as expectations for fieldwork management, including an overview of safety protocols for field staff and interviewees. Fieldwork began in mid-February 2024 due to heightened activity in late December 2023 and early January 2024, as well as some further identification of areas to streamline the tools. Enumerators received formal refresher training before the study pilot from February 12 to 29, 2024. The pilot was conducted in three facilities to leverage the experiences in the pre-test. Main data collection activities began in April 2024 and continued through the end of July 2024. Throughout the field activities, high frequency checks of data were conducted at least twice per week, and backchecks with facilities began in May. Backchecks were conducted both via telephone and via in-person visits, covering 10 percent and 2.5 percent, respectively, of all facilities interviewed.

As summarized in Table 3, 77.8 percent of facilities approached for interviews agreed and completed surveys. Participation was highest in public facilities; private facilities, particularly private for-profit facilities, agreed to participate less often in the survey. By the end of the fieldwork, 378 facilities were interviewed out of the 400 initially intended; 22 facilities that refused or were no longer eligible were not able to be replaced. Although response rates among private for-profit facilities (65 percent) were lower than anticipated, the relative margin of error for full-sample estimates, assuming maximum variance in this strata subgroup, is approximately 10.9 percent; this is 9 percent higher than the target margin of error for survey substrata. Reporting against this substratum is retained throughout the survey. Relative margins of error for all other substrata were below the 10 percent target; the overall relative margin of error for facilities also remained below 6 percent.

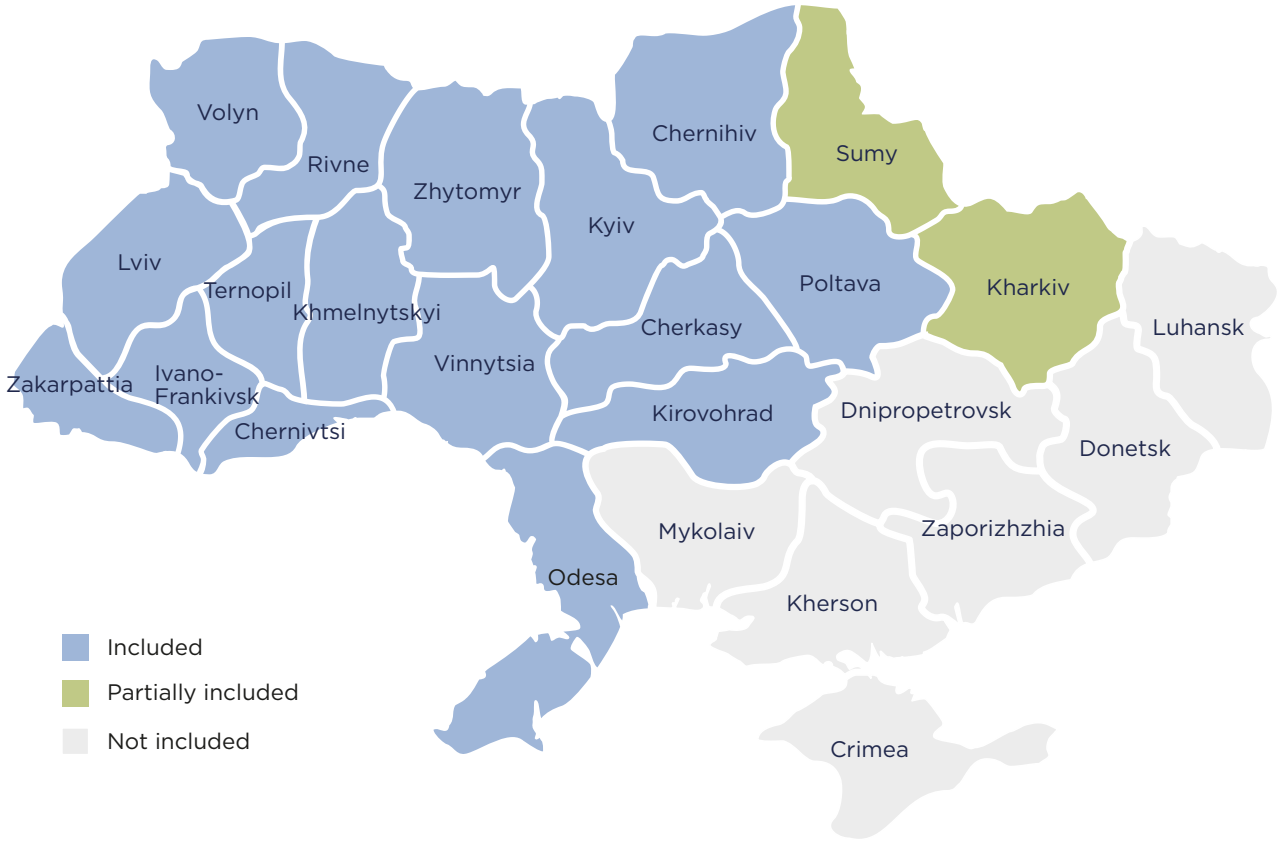
Table 4 provides details on the number of health care providers and patients selected and interviewed for the SDI survey. Overall, 97.3 percent of providers and 87.5 percent of patients agreed to participate in the survey. The response rate did not seem to vary significantly by facility type or ownership; however, the response rate among patients was approximately nine percent higher in rural areas (93.3 percent in rural compared to 84.4 percent in urban facilities). The sampling step for patient interviews was determined based on information from the facilities regarding outpatient visits during the three days preceding the survey; accordingly, it was possible from the outset that slightly more or fewer patient interviews may be conducted in any given facility, depending on the actual outpatient volume observed on the day of the survey. Overall, 2,490 patients were interviewed, which was approximately 8 percent higher than the 2,300 targeted for the survey. Most of the target providers were interviewed: 1,547 out of 1,601 in the target sample interviewed (approximately 97 percent). The margins of error for providers and patients were thus aligned with the planned sample power for the survey.

TABLE 4. Summary of providers and patients interviewed

Strata	Providers				Patients			
	Required	Selected or available	Interviewed	Response rate (%)	Required	Selected or available	Interviewed	Response rate (%)
Facility type								
Public	834	823	797	96.8	1,206	1,513	1,348	89.1
FOP	392	392	382	97.4	650	684	586	85.7
Private for-profit	375	375	368	98.1	444	649	556	85.7
Ownership								
Public	834	823	797	96.8	1,206	1,513	1348	89.1
Private	767	767	750	97.8	1,094	1,333	1142	85.7
Location								
Urban	1,084	1,082	1,062	98.2	1,475	1,871	1580	84.4
Rural	517	508	485	95.5	825	975	910	93.3
Total	**1,601**	**1,590**	**1,547**	**97.3**	**2,300**	**2,846**	**2,490**	**87.5**

Figure 3 shows the situation of individual oblasts for the Ukraine SDI survey. For security and access reasons, with guidance from the Ministry of Health, eight oblasts were partially or entirely excluded from the sample frame. The oblasts of Mykolaiv, Kherson, Dnipropetrovsk, Zaporizhzhia, Donetsk, and Luhansk, the autonomous republic of Crimea, and the city of Sevastopol were entirely excluded. In Sumy and Kharkiv oblasts, certain localities close to the front lines and to the north near the Russian border were excluded. Thus, the sample is designed to draw inference of PHC facilities in non-excluded areas only and is too small to permit oblast-level disaggregations.

FIGURE 3. Oblasts of Ukraine, by presence in the SDI sample



All results presented in the following chapters were obtained using cleaned data sets, applying the relevant survey weights. Survey weights are applied to ensure the representativeness of measurements. This process ensures that indicators accurately reflect PHC facilities and the providers offering primary health care, as well as that patient-level indicators represent those seeking such care across the included oblasts and the city of Kyiv. Further details on survey weights, sample size determination, and potential sources of bias are available in Annex 2. Data were cleaned using Stata 17 software and analyzed using R software in RStudio.[17] A summary of the SDI survey analytic domains and corresponding indicator definitions is included in Annex 3 and Annex 4.

The results for binary and categorical variables are presented using proportions with accompanying confidence intervals when relevant. Continuous variables underwent a normality test (Shapiro-Wilk test), with summaries of normally distributed data presented as means (and applicable confidence intervals), and non-normally distributed data presented using the median and interquartile range. Throughout the report, 95 percent confidence intervals are visualized for indicators capturing a proportion of responses, and the interquartile range values (that is, 25th and 75th percentiles) are visualized for indicators that present a median estimate. Caution should be exercised in drawing conclusions about the significance of differences between group means or proportions in such cases. As an approximation, however, non-overlapping confidence intervals between two statistics suggest they are significantly different at

[17] Hadley Wickham, Winston Chang, Lionel Henry, Thomas Lin Pedersen, Kohske Takahashi, Claus Wilke, Kara Woo, et al. 2016. "Ggplot2: Elegant Graphics for Data Analysis," ggplot2, https://ggplot2.tidyverse.org/.

$\alpha <= 0.05$. Conversely, overlapping confidence intervals do not definitively imply a lack of significance. Significance was checked for cases of non-overlapping confidence intervals; any significant differences in the report are noted in the text, representing results that yielded an α value at or below 0.05. The results are presented by facility type, location, and ownership. In some cases where statistical significance was found, patient sex is presented for indicators collected from the outpatient interviews. Further, where there are statistically significant differences in indicators by location, further analysis of public facilities is conducted (not visualized) to detect any differences between rural and urban public facilities.

Chapter 3. Foundations

This chapter presents findings that assess the foundational strength of high-quality primary health care. Most data are from interviews with facility managers, although some have been analyzed using data collected from patients and health care providers. High-quality primary care foundations (inputs) include subdomains related to systems, care organization, workforce, and tools—critical enablers for ensuring the delivery of primary care services that meet the needs and expectations of the population. The foundations of high-quality primary health care include four key subdomains described. These foundations are the necessary pillars of a strong PHC system, yet they are not sufficient to ensure high-quality PHC. For this reason, the SDI health survey provides additional measurements of processes of care and person-centered outcomes. Box 1, below, provides a summary of the key findings of this chapter.

- **Systems:** policies and protocols, institutions for accountability for quality, management and supervision, financing, and physical infrastructure.

- **Care organization:** systematically investigated along the subdomains: service delivery organization, facility connective networks, and service and case mix. Appropriate care organization—which entails a balanced mix of facility and provider types, connectivity across facilities, and case mix—is critical for optimizing resource allocation and outcomes.

- **Workforce:** availability, education and training, workload, and satisfaction and retention. The SDI health survey views health care providers as both agents and subjects of the health system; it attempts to measure not only the workforce's availability and credentials but also factors that might be affecting performance, such as workload and satisfaction with work.

- **Tools:** medical equipment and supplies, medicine, and information systems.

BOX 1. Key observations on primary health care foundations in Ukraine

Systemic resilience. Only one in nine facilities (11.1 percent) reported experiencing a delay in anticipated medical supply deliveries since February 24, 2022. Furthermore, only one in twenty (5.1 percent) facilities reported any delay in disbursement of central government funds in the year preceding the survey. Providers were generally present, with one in nine absent (11.6 percent), but nearly all for authorized reasons.

Vulnerable groups: access to, and offer of, services. Approximately one facility in two had a handicapped-accessible toilet (49.9 percent) or tactile flooring (45.4 percent), less than three in five had assistive technology for the visually impaired (58.2 percent). Among facilities with steps or an incline at the entrance, more than nine in ten (91.8 percent) had a ramp. Although 93.5 percent of facilities had improved, functioning, accessible, and private toilets, only 20.9 percent of facilities had a toilet specifically for females, and only 12.4 percent had a toilet with menstrual hygiene facilities.

The availability of sexual and reproductive health (36.7 percent of 10 measured services), infectious disease (56.4 percent of 9 measured services), mental health (68 percent of 11 measured services), and pregnancy services (59.9 percent of 9 measured services) were low across the country.

Vaccines. Vaccine availability was constrained by low levels of four vaccines: influenza (19.8 percent; not the season); COVID-19 (47.3 percent); BCG (28.6 percent); and a multicomponent vaccine for polio, diphtheria, pertussis, hepatitis B, tetanus, and Hemophilus influenzae type b (Hib) (43.4 percent)

Quality of care/guidelines. Clinical resources and guidelines were neither universally available nor used in facilities. Only 73.8 percent of facilities reported having a standard operating procedure for the use of either national or international clinical resources, and 77.5 percent had at least one verified clinical pathways document available on the day of the survey. Fully 14.3 percent of providers (9.9 percent of doctors and 17.9 percent of nurses) reported that they do not use any national or international clinical resources to guide decisions for patient care.

3.1. CARE ORGANIZATION

This section provides an overview of (1) facility connective network strength, (2) service and case mix (outpatient volume by service type and provision of required and specialized services), and (3) service delivery organization (facility connectivity to patients, facility operating hours, and registered population).

3.1.1. Facility connective networks

In many cases, service delivery can be strengthened by connective networks among health facilities that allow for interfacility communication and enable patient linkages for continued care across facilities. These networks include links among facilities and pharmacy and laboratory services. In some cases, health facilities may be part of formal, designated networks that share staff and infrastructure or part of formal referral systems. Health facilities may also be connected in that they have systems for communicating with one another during emergencies or have ambulances or other forms of transportation on-site that can transport patients to other facilities, particularly in cases where required services are not available at the initial point of care.

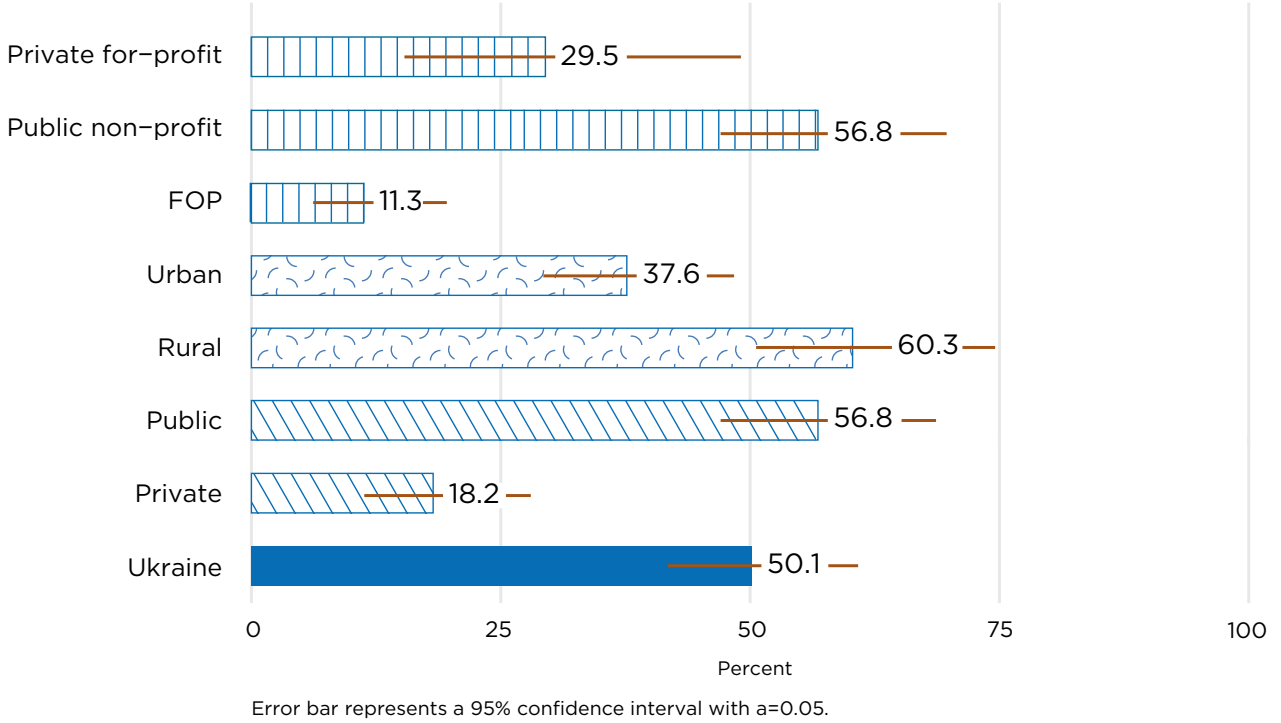
Connectivity with Laboratory

Connectivity of clinical services with laboratory and pharmacy services can promote patient-centered care by facilitating information transfer and creating a one-stop shop for care delivery. Most facilities in the country offer at least one laboratory service (94.3 percent; CI: 89.3–97.0), irrespective of facility type, location, or ownership. The depth and breadth of the available laboratory capacity are detailed in the next subdomain, service, and case mix.

Emergency Transport Capacity

Emergency transport availability refers to facility ownership of at least one motor vehicle for this purpose that is functional, has fuel, and has authorized staff available to drive it at the time of the survey. Figure 4 presents the proportion of facilities with emergency transport available at the time of the interview, by facility type, ownership, and location. Overall, 50.1 percent (CI: 41.8–58.5) of facilities had emergency transport capacity. Private facilities (18.2 percent; CI: 11.3–28.0) had a significantly lower rate of emergency transport capacity than public facilities (56.8 percent; CI: 47.0–66.1). Emergency transport capacity was also significantly higher in rural (60.3 percent; CI: 47.7–71.6) than in urban facilities (37.6 percent; CI: 29.3–46.8).

FIGURE 4. Health facilities with emergency transport capacity, by facility type, location, and ownership (%)



Note: Error bars represent a 95 percent confidence interval at α = 0.05. The sample size is 378.

3.1.2. Service and case mix

This component captures the number and types of primary care services that were available at the facility, including the availability of required laboratory services. The key indicators in this component include outpatient volume (overall and by service type), the availability of required and specialized services, and the availability of specific laboratory services. Data in this section refer to the period from October–December 2023.

Outpatient Volume

The median daily outpatient visits at health facilities totaled 21.6 visits (Table 5).[18] Over the same period, the median number of daily outpatient visits per provider was 11.0 (IQR: 5.9–16.9). This number increased slightly when adjusted for provider absence rates within the facilities; the median absence-adjusted estimate for daily outpatient visits was 12.9 (IQR: 7.6–18.7).

TABLE 5. Median number of outpatient visits per day over a three-month period from October–December 2023, by facility type, location, and ownership

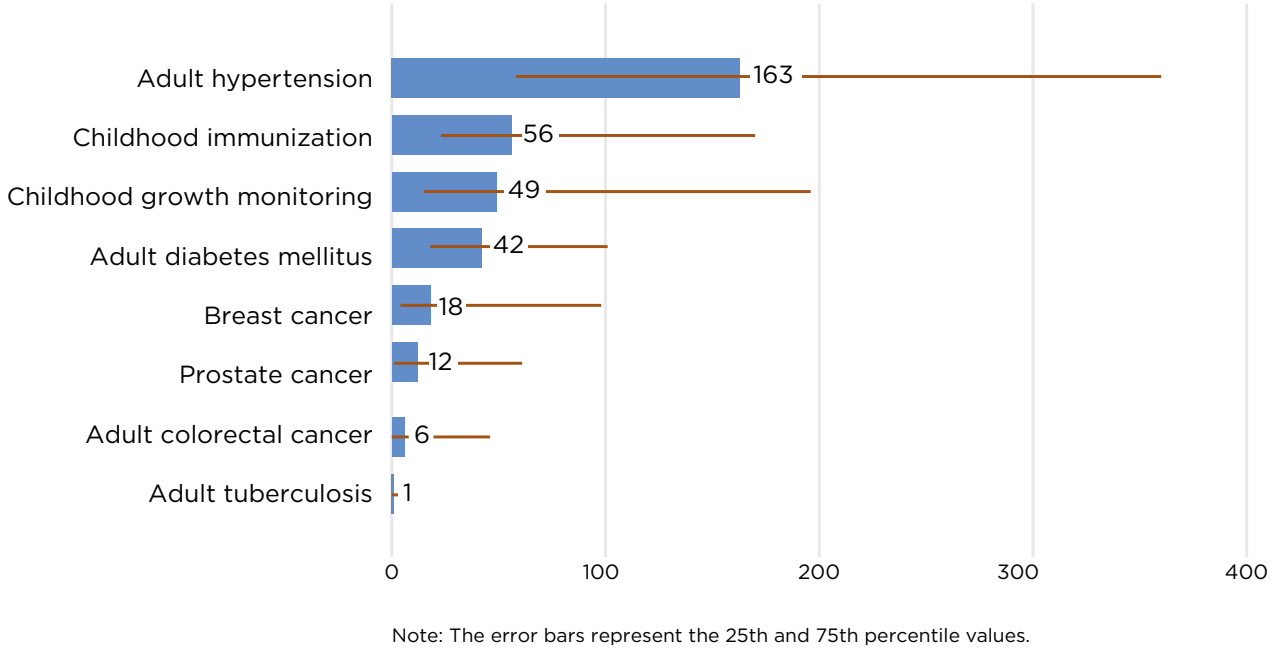
Type	Median number of outpatient visits per day	Median number of doctors in facility	Median number of daily outpatient visits per doctor	Median number of daily outpatient visits per doctor (absence-adjusted) *
Facility Type				
FOP	12.2 [6.8–24.8]	2.0 [1.0–3.0]	8.7 [5.5–12.6]	9.3 [5.5–14.3]
Public	23.7 [12.0–68.4]	2.0 [1.0–5.0]	11.8 [6.0–17.4]	14.4 [9.3–19.2]
Private for-profit	24.2 [13.6–41.2]	4.0 [3.0–6.0]	5.8 [4.2–9.5]	6.2 [4.2–11.2]
Ownership				
Private	17.3 [9.7–30.3]	3.0 [1.0–4.0]	7.0 [4.4–11.7]	7.5 [4.4–12.6]
Public	23.7 [12.0–68.4]	2.0 [1.0–5.0]	11.8 [6.0–17.4]	14.4 [9.3–19.2]
Location				
Rural	17.2 [10.8–23.9]	2.0 [1.0–2.0]	9.4 [5.9–17.2]	12.8 [6.9–17.8]
Urban	62.6 [23.7–117.2]	5.0 [3.0–9.0]	11.7 [7.4–16.0]	13.1 [8.0–19.3]
Ukraine	**21.6 [11.9–61.1]**	**2.0 [1.0–5.0]**	**11.0 [5.9–16.9]**	**12.9 [7.6–18.7]**

Note: Values in brackets represent the 25th and 75th percentile values.
**This indicator was multiplied by the inverse of the proportion of providers present in the facility the day of the unannounced visit to adjust outpatient volume per provider for the estimated number of providers physically present on a given day in the facility rather than the number listed on the staff roster. The sample size is 378.*

Figure 5 provides insights into the median aggregate outpatient volume per facility for selected service types. The most common outpatient visits were for adult hypertension (163 visits), child immunization (56 visits), childhood growth monitoring (49 visits), and adult diabetes mellitus (42 visits). Outpatient visits for breast cancer screenings (18 visits), prostate cancer screenings (12 visits), adult colorectal cancer screenings (six visits), and adult tuberculosis (one visit) were the least frequently reported.

[18] Outpatient visits" refer to visits to a health facility by a patient seeking screening, preventative, diagnostic, or therapeutic services. These visits may comprise multiple patient contacts if the patient receives diagnostic or therapeutic services, examinations, or consultations from multiple health care providers during the same visit to the health facility. This indicator reflects the counts of visits (not individual patients), meaning that the same patient returning multiple times over the three-month period is counted multiple times.

FIGURE 5. Median outpatient visits over a three-month period from October–December 2023, by service type (visit counts)



Note: Error bars represent the 25th and 75th percentile values. The sample size is 378.

Primary care service provision: Availability of measured services

Table 6 shows the proportion of measured PHC services by category that was offered across facility types, location, and ownership, as reported by facility managers.[19] Values in parentheses under the "service category" column represent the number of services measured within each service category. A full itemization of services is available in Annex Table 1 in Annex 3. Although there were many areas where service availability was generally high, the proportion of measured services for SRH (36.7 percent), infectious disease (56.4 percent), mental health (68 percent), and pregnancy (59.9 percent) were relatively low. Disability assessment services were also uncommon; few facilities conducted assessments for disability (50.4 percent) or rehabilitative medicine and equipment needs (63.6 percent).

Services for SRH and pregnancy

Generally, SRH services for screening and family planning commodity distribution were the least available. These include collecting materials for human papillomavirus (9.7 percent) and pap smears (14.3 percent), screening for gender-based violence (52.5 percent), offering emergency contraceptive pills (12.6 percent) and IUD insertion services (7.7 percent) and prescribing oral contraceptives (23.8 percent).

A similar trend was observed for services available to pregnant women, with screening and counseling services lagging others. Less than one-third of facilities (28 percent) were able to offer cervical cancer screenings. Less than one-half reported that they were able to offer screening for prenatal maternal

[19] A "service being offered" refers to a facility being able to provide the designated service in the three months prior to the survey (regardless of whether the service was effectively utilized by patients in the previous three months). For this indicator, the analysis considered the average proportion of measured services within each service category that the facility reported being able to provide.

depression (43.2 percent), postnatal maternal depression (49.1 percent), or nutritional counseling to HIV-positive pregnant women and their infants for Prevention of Mother-to-Child Transmission of HIV (PMTCT) (47.8 percent).

Mental health services

Few facilities reported being able to screen patients for mental and behavioral health issues, such as alcohol abuse disorder (57.0 percent), anxiety (64.8 percent), depression (66.9 percent), eating disorders (62.2 percent), PTSD (60.1 percent), or non-alcohol substance use disorder (51.9 percent).

Infectious disease services

Support for HIV and sexually transmitted infections (STIs) more generally was limited. Less than one-fourth of the facilities reported the capacity to provide HIV post-exposure prophylaxis (24.6 percent), prescription of antiretroviral therapy (ART) (7.2 percent), or prescription of pre-exposure prophylaxis for at-risk patients not currently diagnosed with HIV/AIDS (13.1 percent). Less than one-half of the facilities (40.8 percent) reported that they were able to provide screening for sexually transmitted infections.

Variance in service availability across survey substrata

The availability of certain services was variable across facility types. FOPs reported a significantly lower availability of the following services compared to public facilities: health education and promotion (84.9 percent of public), palliative care (78 percent), pediatric (78.6 percent), pregnancy (73 percent), sexual and reproductive health (64.3 percent), tuberculosis (TB) (69.5 percent), and vaccination (82.7 percent). Significantly lower rates in FOPs for these services also drove statistical differences when comparing facilities by ownership (that is, public compared to private); significantly lower coverage of services was observed for health education and promotion, palliative care services, TB services, and vaccination services in private compared to public facilities (Table 5). Significant differences between rural and urban facilities were observed for the availability of measured vaccination (85.5 percent in urban and 96.3 percent in rural) and health education and promotion services (87.7 percent in urban and 96.1 percent in rural).

TABLE 6. Measured services offered by health facilities, by service category, facility type, location, and ownership (%)

Service category (services)	Average	Rural	Urban	FOP	Public	Private for-profit	Private	Public
Administrative medical services (3)	83.1 (74.1–92.2)	79.9 (64.3–95.5)	87.1 (83.1–91.2)	79.7 (72.6–86.9)	82.8 (71.9–93.7)	93.1 (88.7–97.4)	84.8 (80.0–89.7)	82.8 (71.9–93.7)
Diagnostic/ examination services (6)	70.7 (67.5–73.8)	69.1 (64.3–73.9)	72.6 (69.0–76.3)	67.0 (60.7–73.4)	70.5 (66.9–74.1)	78.6 (71.8–85.4)	71.4 (66.3–76.6)	70.5 (66.9–74.1)
Disability services (2)	57.0 (49.1–64.9)	50.0 (37.9–62.2)	65.6 (58.8–72.4)	58.8 (47.2–7094.5)	55.4 (46.2–64.6)	73.9 (62.1–85.8)	64.6 (56.0–73.2)	55.4 (46.2–64.6)
Emergency medical care (2)	82.7 (78.5–86.9)	85.7 (79.7–91.7)	79.1 (73.6–84.5)	74.8 (65.7–83.8)	84.3 (79.6–89.1)	75.4 (63.5–87.3)	75.0 (67.8–82.2)	84.3 (79.6–89.1)
Health education/promotion services (6)	92.3 (89.8–94.9)	96.1 (93.2–98.9)	87.7 (83.6–91.8)	78.4 (68.2–88.5)	94.0 (91.3–96.6)	94.3 (90.1–98.5)	84.5 (77.7–91.2)	94.0 (91.3–96.6)
Infectious disease services (9)	56.4 (51.8–60.9)	53.8 (46.6–60.9)	59.6 (55.4–63.8)	54.2 (47.6–60.8)	56.0 (50.7–61.3)	64.6 (55.3–73.9)	58.2 (52.6–63.8)	56.0 (50.7–61.3)
Mental health services (11)	68.0 (64.0–71.9)	70.3 (64.5–76.1)	65.0 (59.6–70.5)	59.0 (50.1–67.8)	68.8 (64.1–73.4)	72.5 (62.7–82.4)	64.2 (57.4–70.9)	68.8 (64.1–73.4)
Mental health supplementary services (16)	56.6 (49.3–63.9)	55.1 (42.9–67.3)	58.5 (53.1–63.8)	51.7 (42.5–60.9)	56.5 (47.8–65.1)	66.0 (54.8–77.2)	57.2 (50.0–64.3)	56.5 (47.8–65.1)
Noncommunicable disease services (20)	86.7 (83.5–89.9)	88.3 (84.0–92.6)	84.8 (79.7–89.8)	81.4 (73.2–89.7)	86.9 (83.2–90.7)	92.3 (87.7–96.8)	85.6 (80.0–91.1)	86.9 (83.2–90.7)
Palliative care services (7)	76.3 (72.0–80.6)	75.4 (68.8–82.0)	77.3 (72.3–82.4)	59.5 (49.8–69.2)	78.9 (74.0–83.9)	69.9 (57.6–82.2)	63.5 (55.6–71.3)	78.9 (74.0–83.9)
Pediatric services (9)	89.3 (86.1–92.5)	93.8 (89.9–97.7)	83.8 (77.9–89.6)	70.2 (57.1–83.2)	91.2 (87.7–94.6)	96.6 (93.8–99.4)	80.3 (71.4–89.1)	91.2 (87.7–94.6)
Pregnancy services (9)	59.9 (54.9–65.0)	64.5 (56.2–72.8)	54.2 (48.7–59.8)	43.7 (35.7–51.8)	61.4 (55.5–67.4)	67.1 (55.2–79.1)	52.7 (45.3–60.0)	61.4 (55.5–67.4)
Sexual and reproductive health services (10)	36.7 (32.8–40.6)	40.2 (34.6–45.9)	32.3 (27.0–37.6)	23.4 (17.6–29.3)	37.8 (33.3–42.3)	43.7 (34.2–53.3)	31.2 (25.4–37.0)	37.8 (33.3–42.3)
Treatment for poisoning (3)	61.4 (53.0–69.9)	62.0 (48.0–76.1)	60.7 (53.1–68.4)	47.3 (35.1–59.5)	62.9 (52.8–73.0)	66.0 (54.0–78.0)	54.4 (45.1–63.8)	62.9 (52.8–73.0)
Tuberculosis services (8)	55.5 (50.8–60.2)	57.1 (50.1–64.1)	53.6 (47.6–59.5)	38.6 (30.5–46.7)	58.2 (52.7–63.8)	48.4 (35.0–61.8)	42.3 (35.0–49.7)	58.2 (52.7–63.8)
Vaccination services (8)	91.5 (89.4–93.6)	96.3 (94.6–98.0)	85.5 (81.7–89.3)	75.7 (67.1–84.2)	93.6 (91.5–95.7)	90.9 (86.7–95.0)	81.5 (75.6–87.3)	93.6 (91.5–95.7)

Note: Values in parentheses represent the 95 percent confidence interval values. The sample size is 378.

Table 7 presents the availability of laboratory services over the 3 months prior to the survey (October–December 2023). The table also presents the proportion of all 11 measured lab services that were available at the facilities. On average, 73 percent of the laboratory services measured were available. The availability of blood count (55.7 percent), urine analysis (64.3 percent), total cholesterol (54.9 percent), and any of three measured TB tests (57.4 percent) were the lowest across facilities. Private providers were significantly less likely to offer laboratory services for "blood counts with leukocyte formula (60 percent of public), urine analysis (64 percent), blood glucose (82.3), and any of three measured TB tests (67.2). FOPs had a significantly lower than average proportion of measured laboratory services available (58.6 percent).

TABLE 7. Facilities offering measured laboratory services, by facility type, ownership, and location (%)

Reason	Ukraine	Rural	Urban	FOP	Public	Private for-profit	Private	Public
Blood count with leukocyte formula	55.7 (47.6–63.8)	53.0 (39.8–66.2)	59.1 (50.5–67.7)	21.9 (12.5–31.3)	59.8 (50.5–69.2)	58.4 (43.4–73.5)	35.9 (26.3–45.4)	59.8 (50.5–69.2)
General urine analysis	64.3 (56.87–1.8)	64.7 (52.9–76.5)	63.8 (55.5–72.1)	32.5 (20.6–44.3)	68.6 (59.9–77.2)	62.3 (47.9–76.7)	43.9 (33.8–53.9)	68.6 (59.9–77.2)
Blood glucose test	85.4 (80.4–90.5)	86.0 (77.9–94.2)	84.7 (79.5–89.9)	71.9 (59.7–84.2)	88.1 (82.4–93.9)	73.4 (60.8–85.9)	72.5 (63.5–81.4)	88.1 (82.4–93.9)
Total cholesterol test	54.9 (46.1–63.7)	49.9 (36.4–63.4)	61.1 (52.2–69.9)	42.9 (29.7–56.1)	55.8 (45.3–66.2)	63.4 (48.9–77.8)	50.7 (40.5–60.9)	55.8 (45.3–66.2)
Rapid pregnancy test	80.7 (74.7–86.6)	83.2 (74.8–91.6)	77.5 (69.5–85.6)	74.7 (61.9–87.6)	80.9 (74.0–87.9)	86.6 (77.6–95.6)	79.3 (70.4–88.1)	80.9 (74.0–87.9)
Troponins rapid test	78.2 (71.9–84.5)	77.0 (67.0–87.0)	79.7 (72.8–86.6)	69.3 (56.2–82.4)	78.9 (71.6–86.3)	83.2 (73.0–93.4)	74.6 (65.4–83.9)	78.9 (71.6–86.3)
HIV rapid test	80.4 (74.2–86.5)	78.7 (69.5–87.8)	82.5 (74.4–90.5)	73.5 (60.9–86.0)	81.0 (73.8–88.2)	83.2 (73.1–93.2)	77.2 (68.4–86.0)	81.0 (73.8–88.2)
Hepatitis B rapid test	79.7 (73.4–85.9)	76.9 (67.2–86.6)	83.1 (75.4–90.8)	67.1 (52.9–81.4)	80.9 (73.7–88.1)	84.6 (75.4–93.8)	73.8 (63.8–83.8)	80.9 (73.7–88.1)
Hepatitis C rapid test	80.3 (74.5–86.1)	76.1 (66.4–85.9)	85.5 (80.2–90.9)	70.1 (57.3–82.8)	81.6 (74.9–88.3)	81.6 (71.5–91.7)	74.5 (65.5–83.4)	81.6 (74.9–88.3)
SARS-CoV-2 test	85.7 (80.6–90.8)	83.7 (75.7–91.7)	88.1 (82.3–93.9)	87.8 (78.1–97.4)	85.6 (79.7–91.6)	83.1 (73.6–92.6)	86.0 (79.1–92.8)	85.6 (79.7–91.6)
Tuberculosis test (any)*	57.4 (49.4–65.5)	59.2 (46.9–71.5)	55.3 (46.2–64.3)	32.8 (21.7–44.0)	60.9 (51.7–70.1)	53.9 (38.2–69.6)	40.9 (30.9–50.8)	60.9 (51.7–70.1)
Biochemical blood test for TB**	11.6 (6.7–16.4)	4.8 (0.0–9.7)	20.0 (11.6–28.4)	8.9 (2.7–15.1)	10.0 (4.5–15.5)	35.8 (17.9–53.8)	19.2 (10.2–28.2)	10.0 (4.5–15.5)
Skin TB test	48.2 (39.6–56.8)	54.1 (41.0–67.1)	40.9 (32.0–49.9)	26.1 (16.1–36.0)	52.6 (42.7–62.6)	28.2 (11.1–45.3)	26.9 (17.9–35.9)	52.6 (42.7–62.6)
Sputum TB test	9.9 (5.4–14.4)	7.6 (1.6–13.5)	12.7 (6.0–19.4)	0.3 (0.0–0.8)	10.6 (5.4–15.8)	16.0 (0.0–34.2)	6.3 (0.0–13.9)	10.6 (5.4–15.8)
Proportion of all lab services (11)	73.0 (68.6–77.3)	71.7 (64.6–78.8)	74.6 (70.2–79.0)	58.6 (50.4–66.8)	74.7 (69.8–79.7)	74.0 (64.9–83.1)	64.5 (57.8–71.1)	74.7 (69.8–79.7)

*Note: *This captures the availability of biochemical blood tests, sputum tests, or skin TB tests and is used in the overall indicator focused on the proportion of measured tests available in facilities.*

***The exact listing of this test per the Ministry of Health is "Biochemical blood test for TB (total protein, albumin, alpha-amylase, alkaline phosphatase, aspartate aminotransferase (AST), alanine aminotransferase (ALT), bilirubin and its fractions (total, direct, indirect), creatinine, urea, uric acid, lactic acid/lactate, electrolytes (potassium, sodium, calcium, magnesium)."*

Values in parentheses are 95 percent confidence interval values. The sample size is 378.

3.1.3. Service delivery organization

This component assesses how primary health care services are delivered and how health facilities are situated to serve their registered populations. This section describes the types of health facilities that deliver primary health care; their locations, including their connectivity to the population through local public transportation and motorable roads; the sizes of the populations they serve; their accessibility to their populations (average time taken for registered population to reach facility); their outreach practices; and their hours of operation.

Facility registered population

Table 8 presents the median registered population of facilities, by facility type, ownership, and location. Overall, the median number of registered patients at facilities was 2,247 (IQR: 1,342–5,170) patients.

TABLE 8. Median number of registered patients per facility, by facility type, ownership, and location

Type	Lower Quartile	Median	Upper Quartile	Min	Max
Facility Type					
FOP	914	1,491	2,161	334	10,688
Public	1,450	2,305	6,076	184	45,523
Private for-profit	1,341	2,401	4,001	448	33,656
Ownership					
Private	1,010	1,753	2,947	334	33,656
Public	1,450	2,305	6,076	184	45,523
Location					
Rural	1,179	1,772	2428,	184	15,142
Urban	2,305	5,314	9,777	334	45,523
Ukraine	**1,342**	**2,247**	**5,170**	**184**	**45,523**

Note: the sample size is 378.

Table 9 shows the proportion of facilities that experienced any change in the registered populations since February 24, 2022. Additionally, the net number of registrations added to facilities is presented as a median estimate in the table. The median number of net registrations was calculated as the difference between new patient registrations and dropped patient registrations among facilities that have seen a change in their registered population since February 24, 2022. Overall, 76.9 percent of facilities reported experiencing any change in their registered population since the invasion. Among facilities reporting any change in their registered population, the median number of net registrations reported was 74 patient registrations. Among facilities with changes in the number of declarations, private facilities are significantly more likely than public ones to have gained declarations.

TABLE 9. Changes in facility registered population, by facility type, ownership, and location

Type	Facilities reporting any change (increase or decrease) in registered population since February 24, 2022 (%) (n = 378)	Median net number of registrations* since February 24, 2022 (n = 216)
Facility Type		
FOP	79.1 (67.6–87.3)	140.0 [14.0–539.0]
Public	76.2 (63.0–85.8)	60.0 [-23.0–304.0]
Private for-profit	81.5 (58.0–93.4)	630.0 [187.0–2,026.0]
Ownership		
Private	80.0 (69.7–87.5)	325.0 [55.0–1,004.0]
Public	76.2 (63.0–85.8)	60.0 [-23.0–304.0]
Location		
Rural	73.2 (54.8–86.1)	66.0 [4.0–200.0]
Urban	81.4 (73.3–87.4)	140.0 [-121.0–987.0]
Ukraine	**76.9 (65.9–85.1)**	**74.0 [-21.0–345.0]**

Note: Values in parentheses represent the 95 percent confidence interval and are comma-separated because of the negative values; values in brackets represent the 25th and 75th percentile.

The net number of registrations was calculated as the number of new patient registrations minus the number of dropped patient declarations for facilities with changes.

**A negative value for this indicator indicates more patients dropping registrations than new registrations being made at a facility. The sample size is 378.*

Health facility operating hours

Table 10 shows the proportion of facilities in operation each day of the week, excluding standard holidays. Overall, nearly all facilities were open Monday to Friday. However, a significantly lower percentage of facilities reported being operational on Saturday (56.3 percent) and Sunday (10.1 percent). Operating hours among urban facilities are slightly lower than rural facilities from Tuesday to Friday; however, a significantly higher proportion of urban facilities are open on Sundays (21.8 percent) than rural facilities (0.6 percent).The SDI additionally measures unscheduled closures among facilities over a three-month period (October–December 2023).[20] Approximately one percent of facilities reported an unscheduled closure between October–December 2023; these were primarily due to invasion-related disruptions.

[20] Unscheduled closures are defined as full days that a health facility is closed on days that they are scheduled to be in operation and that are not national holidays.

TABLE 10. Facilities operating each day of the week, by facility type, ownership, and location (%)

Type	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Facility Type							
FOP	100.0 (100.0–100.0)	99.1 (93.4–99.9)	98.5 (94.2–99.6)	99.1 (93.4–99.9)	98.5 (93.7–99.6)	51.5 (38.2–64.7)	0.0 (0.0–0.0)
Public	100.0 (100.0–100.0)	99.9 (99.2–100.0)	99.9 (99.2–100.0)	98.3 (90.1–99.7)	99.9 (99.2–100.0)	55.7 (45.8–65.1)	10.3 (6.9–15.0)
Private for-profit	100.0 (100.0–100.0)	100.0 (100.0–100.0)	99.4 (95.8–99.9)	100.0 (100.0–100.0)	100.0 (100.0–100.0)	72.0 (56.2–83.8)	23.6 (10.3–45.6)
Ownership							
Private	100.0 (100.0–100.0)	99.4 (95.9–99.9)	98.8 (96.4–99.6)	99.4 (95.9–99.9)	99.1 (96.1–99.8)	59.4 (49.0–69.0)	9.0 (3.8–20.2)
Public	100.0 (100.0–100.0)	99.9 (99.2–100.0)	99.9 (99.2–100.0)	98.3 (90.1–99.7)	99.9 (99.2–100.0)	55.7 (45.8–65.1)	10.3 (6.9–15.0)
Location							
Rural	100.0 (100.0–100.0)	100.0 (100.0–100.0)	100.0 (100.0–100.0)	100.0 (100.0–100.0)	100.0 (100.0–100.0)	50.6 (37.3–63.8)	0.6 (0.1–4.1)
Urban	100.0 (100.0–100.0)	99.6 (98.3–99.9)	99.3 (98.2–99.8)	96.7 (83.5–99.4)	99.4 (98.2–99.8)	63.4 (53.7–72.1)	21.8 (15.2–30.2)
Ukraine	**100.0 (100.0–100.0)**	**99.8 (99.2–100.0)**	**99.7 (99.2–99.9)**	**98.5 (92.1–99.7)**	**99.7 (99.2–99.9)**	**56.3 (48.0–64.3)**	**10.1 (7.0–14.2)**

Note: Values in parentheses represent the 95 percent confidence interval values. The sample size is 378.

Table 11 shows the median number of hours that facilities were open each day of the week. In total, between Monday and Friday, the facilities reported being open for a median of eight and a half hours each day, with minimal variation across facility type, ownership, and location. On Saturday and Sunday, the facilities reported being open for a median of six hours each day.

TABLE 11. Median operational hours among facilities, by day, facility type, ownership, and location (%)

Type	Monday (n = 378)	Tuesday (n = 376)	Wednesday (n = 373)	Thursday (n = 375)	Friday (n = 375)	Saturday (n = 224)	Sunday (n = 40)
Facility Type							
FOP	8.0 [6.5–9.0]	8.0 [7.0–9.0]	8.0 [7.0–9.0]	8.0 [7.0–9.0]	8.0 [7.0–9.0]	4.0 [3.0–6.0]	N.A.
Public	8.5 [8.0–10.0]	8.5 [8.0–10.0]	8.5 [8.0–10.0]	8.5 [8.0–10.0]	8.5 [8.0–10.0]	6.0 [5.0–7.0]	6.0 [4.0–6.0]
Private for-profit	10.0 [9.0–12.0]	10.0 [9.0–12.0]	10.0 [9.0–12.0]	10.0 [9.0–12.0]	10.0 [9.0–12.0]	6.0 [5.0–11.0]	6.0 [6.0–8.5]
Ownership							
Private	9.0 [7.0–10.0]	9.0 [7.0–10.0]	9.0 [7.0–10.0]	9.0 [7.0–10.0]	9.0 [7.0–10.0]	5.0 [4.0–7.0]	6.0 [6.0–8.5]
Public	8.5 [8.0–10.0]	8.5 [8.0–10.0]	8.5 [8.0–10.0]	8.5 [8.0–10.0]	8.5 [8.0–10.0]	6.0 [5.0–7.0]	6.0 [4.0–6.0]
Location							
Rural	8.0 [7.0–9.0]	8.0 [7.0–9.0]	8.0 [7.0–9.0]	8.0 [7.0–9.0]	8.0 [7.0–9.0]	6.0 [5.0–7.0]	5.0 [5.0–5.0]
Urban	10.0 [8.5–11.0]	10.0 [8.5–11.0]	10.0 [8.5–11.0]	10.0 [8.5–11.0]	10.0 [8.5–11.0]	6.0 [5.0–7.0]	6.0 [4.5–6.0]
Ukraine	**8.5 [8.0–10.0]**	**8.5 [8.0–10.0]**	**8.5 [8.0–10.0]**	**8.5 [8.0–10.0]**	**8.5 [8.0–10.0]**	**6.0 [5.0–7.0]**	**6.0 [4.8–6.0]**

Note: Values in brackets are the 25th and 75th percentile values. N.A. is listed for FOPs on Sundays, because no FOPs reported that they provide services on Sundays. The sample size is 378.

Access to facilities

Another critical component of service delivery organization is the presence of physical infrastructure through which the population can access the health facilities. Accordingly, to understand the state of facility access, the survey asked questions regarding connectivity and distance to health facilities (Table 12). Overall, 98.4 percent of the facilities are connected to a motorable road, and 91.6 percent had a public transport station or stop within a 10-minute walk of the facility.

TABLE 12. Facility transit accessibility, by facility type, ownership, and location (%)

Type	Facilities connected to a motorable road	Facilities within a 10-minute walk to public transport station/stop
Facility Type		
FOP	100.0 (100.0–100.0)	94.6 (87.1–97.8)
Public	98.1 (92.3–99.6)	91.0 (84.2–95.0)
Private for-profit	100.0 (100.0–100.0)	94.2 (77.9 –98.7)
Ownership		
Private	100.0 (100.0–100.0)	94.4 (88.1–97.5)
Public	98.1 (92.3–99.6)	91.0 (84.2–95.0)
Location		
Rural	97.2 (88.6–99.3)	89.3 (79.8–94.7)
Urban	100.0 (100.0–100.0)	94.3 (87.9–97.4)
Ukraine	**98.4 (93.6–99.6)**	**91.6 (86.0–95.0)**

Note: Values in parentheses represent the 95 percent confidence intervals. The sample size is 378.

3.2. SYSTEMS

System performance was measured across several components, including facility financing, policies and protocols, institutions tasked with accountability for quality, management and supervision, financing, and physical infrastructure. Examples of key data presented in this section include the presence of up-to-date clinical and operational guidelines; information on facility accountability mechanisms, such as frequency and sources of feedback on facility performance, and feedback dissemination frequency and audience; staff performance assessment; and the presence of key physical infrastructure including, for example, accessibility for individuals with disabilities, auditory and visual privacy, and information and communications technology (ICT).

3.2.1. Financing

Financing systems in health facilities have implications for facility-level and provider-level incentives, efficiency, and accountability. Information on financing at the facility level includes the sources and amounts of revenue generated by the facility. Table 13 shows the distribution of funds received by facilities in 2023, by source of funding. FOPs reported a significantly higher proportion of their funds coming from the NHSU (95.0 percent) than average (81.8 percent). Further, the proportion of funds coming from local governments was significantly higher in public facilities (16.2 percent) than in FOPs (0.0 percent) or private for-profits (1.0 percent). Public facilities reported minimal income from diagnostic tests, laboratory tests, specialist consultations, or other paid services, with less than 1 percent of revenue reported from these sources combined.

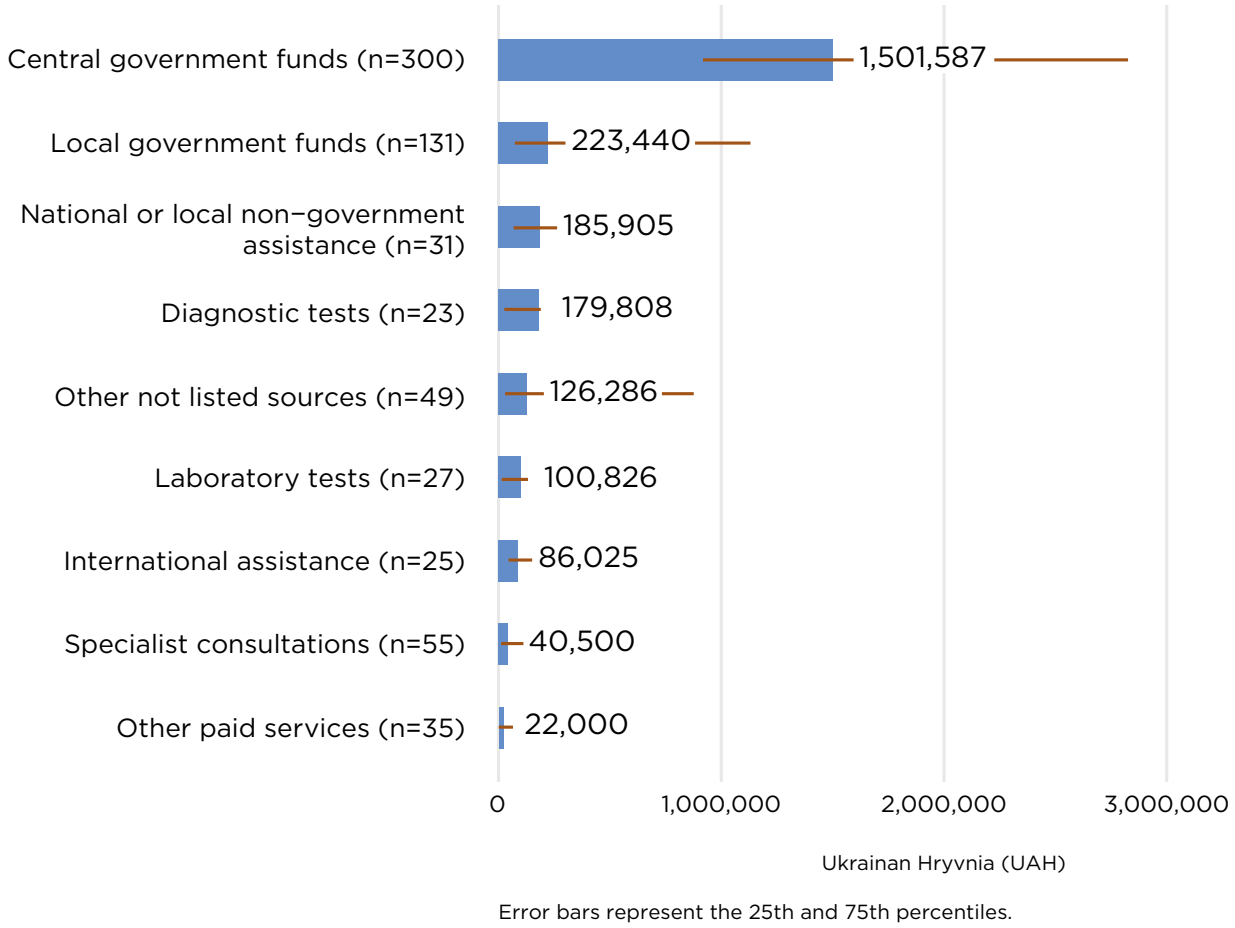
TABLE 13. Total revenue by facilities (January–December 2023), by facility type, ownership, location, and funding source

Type	Central government funds (NHSU)	Diagnostic tests	International assistance (incl. humanitarian relief)	Laboratory tests	Local government funds	National or local non-government assistance (incl. humanitarian relief)	Other not listed sources	Other paid services	Specialist consultations
Facility Type									
FOP	95.0 (89.0–97.9)	0.2 (0.1–0.8)	0.3 (0.1–1.1)	0.5 (0.1–1.5)	0.0 (0.0–0.1)	0.0 (0.0–0.3)	2.8 (0.8–8.9)	0.3 (0.1–1.0)	0.8 (0.3–1.8)
Public	79.9 (72.7–85.5)	0.0 (0.0–0.0)	1.6 (0.6–4.5)	0.0 (0.0–0.0)	16.2 (10.7–23.8)	1.7 (0.9–3.1)	0.6 (0.1–2.3)	0.0 (0.0–0.1)	0.0 (0.0–0.0)
Private for-profit	81.3 (53.7–94.2)	0.7 (0.3–1.6)	0.1 (0.0–0.8)	1.9 (0.9–3.8)	1.0 (0.2–4.4)	0.2 (0.0–1.7)	11.3 (1.8–46.2)	1.0 (0.4–2.5)	2.7 (1.5–4.6)
Ownership									
Private	90.3 (79.0–95.8)	0.4 (0.2–0.8)	0.3 (0.1–0.7)	1.0 (0.5–1.7)	0.3 (0.1–1.5)	0.1 (0.0–0.5)	5.7 (1.6–18.8)	0.5 (0.2–1.1)	1.4 (0.9–2.3)
Public	79.9 (72.7–85.5)	0.0 (0.0–0.0)	1.6 (0.6–4.5)	0.0 (0.0–0.0)	16.2 (10.7–23.8)	1.7 (0.9–3.1)	0.6 (0.1–2.3)	0.0 (0.0–0.1)	0.0 (0.0–0.0)
Location									
Rural	77.5 (67.7–85.1)	0.0 (0.0–0.0)	2.2 (0.7–6.7)	0.0 (0.0–0.0)	18.4 (11.0–29.2)	1.1 (0.6–2.3)	0.7 (0.1–3.8)	0.0 (0.0–0.1)	0.0 (0.0–0.0)
Urban	87.2 (82.2–91.0)	0.2 (0.1–0.3)	0.4 (0.1–0.9)	0.4 (0.2–0.7)	6.7 (4.8–9.3)	1.7 (0.7–4.2)	2.6 (0.8–8.4)	0.3 (0.1–0.5)	0.6 (0.4–1.0)
Ukraine	**81.8 (75.6–86.7)**	**0.1 (0.0–0.2)**	**1.4 (0.5–3.7)**	**0.2 (0.1–0.3)**	**13.3 (8.6–20.0)**	**1.4 (0.8–2.5)**	**1.5 (0.5–4.1)**	**0.1 (0.1–0.2)**	**0.3 (0.2–0.4)**

Note: Values in parentheses represent the 95 percent confidence intervals. The sample size is 378.

Figure 6 shows the median revenue (in Ukrainian Hryvnia) received by facilities that reported receiving any revenue from each source between January–December 2023 and had visually verifiable records for each revenue source. Not surprisingly, the largest median value among revenue categories was for central government funds with facilities that had verified records of revenue reporting a median value of 1,501,587 UAH (IQR: 918,071–4,734,800).[21]

FIGURE 6. Median value of total revenue received by facilities in 2023, by source (UAH)

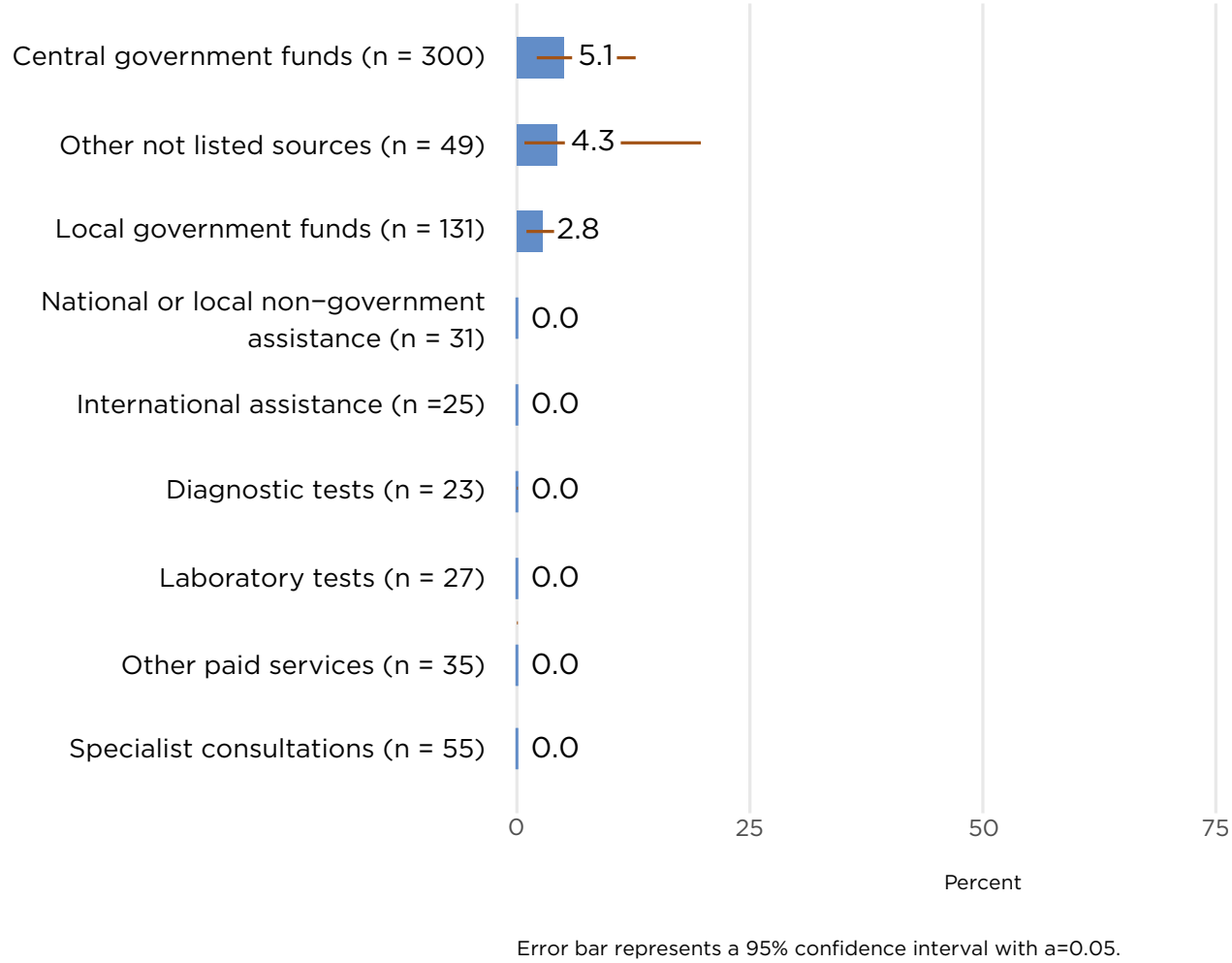


Note: Error bars represent the 25th and 75th percentiles. The sample size is 378.

In the calendar year 2023, facilities faced some delays in receiving expected funds (Figure 7). Among facilities that had verified records of revenue received by each respective source and reported delays, the rates were 5.1 for central government funding (CI: 2.13–11.5) and 2.8 percent (CI: 1.0-7.4) for local government funding. In addition, 4.3 percent (CI: 0.81–19.7) mentioned reported delays in the receipt of funds from other anticipated funding sources, but the survey did not gather information on these exact sources.

[21]This represents $41,062 (IQR: $25,105–$129,477) converted at the exchange rate of 36.5686 UAH/US$ used in the RDNA3 report.

FIGURE 7. Health facilities reporting delay in fund disbursement in 2023, by source (%)



Error bars represent a 95 percent confidence interval with α = 0.05. The sample size is 378.

Overall, 7.9 percent of facilities reported that they received revenue from patient fees (Table 14). Private for-profit facilities reported a significantly higher proportion (25.8 percent) than average. In aggregate, private facilities (19.4 percent) also reported higher rates of receiving revenue from patient fees than public facilities (5.4 percent). Among facilities that reported receiving any revenue from patient fees that were able to report a specific revenue amount (35 facilities in total), the median annual revenue from patient fees was 73,394 UAH (IQR: 3,510–702,467).[22]

[22]This represents $2,007 (IQR: $96–$192,10). converted at the exchange rate of 36.5686 UAH/US$ used in the RDNA3 report.

TABLE 14. Health facilities that received revenue from patient fees, by facility type, ownership, and location

Type	Facilities receiving revenue from patient fees (%)	Median patient fee revenue in UAH (n = 35)[23]
Facility Type		
FOP	15.5 (7.7–28.7)	33,669 [5,600.0–1,018,386]
Public	5.4 (2.8–10.4)	15,390 [2,747.0–2,232,354]
Private for-profit	25.8 (12.5–46.0)	702,467 [209,758–702,467]
Ownership		
Private	19.4 (11.8–30.3)	214,640 [30,000–702,467]
Public	5.4 (2.8–10.4)	15,390 [2,747–22,354]
Location		
Rural	4.7 (2.1–10.5)	3,510 [390–15,390]
Urban	11.7 (7.0–19.0)	702,467 [33,669–1,018,386]
Ukraine	**7.9 (5.0–12.1)**	**73,934.0 [3,510–702,467]**

Note: Values in parentheses represent the 95 percent confidence interval; values in brackets represent the 25th and 75th percentiles. The sample size is 378 unless otherwise stated.

Among facilities reporting specific valuations of in-kind revenue (147 facilities in total) in 2023, government contributions were the majority (78.5 percent; not shown) and the rest were nongovernmental sources (Table 15).[24] Across sources, the highest median in-kind revenue was related to vehicles and non-medical equipment. Nearly 4.5 times as many facilities reported and had verified records of in-kind medical equipment revenue from nongovernment than government sources.

[23] For UAH/USD conversions, the reference value for 2023 is 36.5686 UAH/US$.

[24] These indicators were calculated among facilities that reported receipt of specific types of in-kind revenue during the observed one-year period and that had verified records detailing receipt of each type of in-kind revenue. The availability of verifiable records varied by revenue source; accordingly, source-specific sample sizes are reported in the table. Sample size is 147.

TABLE 15. Median amount of in-kind revenue (in UAH) received by facilities in 2023, by source

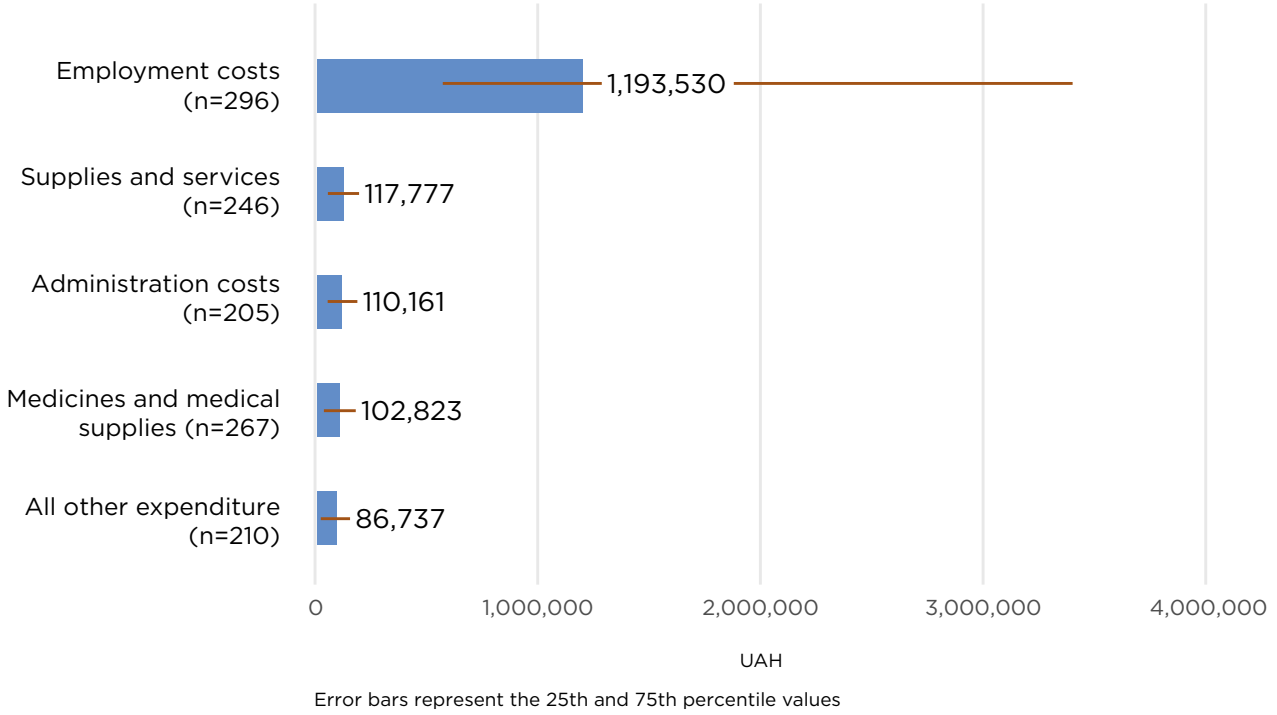
Source	Median in-kind revenue (UAH), among facilities reporting any revenues
Government	
Vehicles and non-medical equipment (n = 34)	102,143 [51,072–920,721]
Medical equipment (n = 27)	44,712 [2,200–102,143]
Medical and general furniture (n = 47)	51,071 [37,800–77,000]
Medicines and supplies (n = 34)	86,840 [51,618–479,825]
Other resources (n = 12)	69,482 [17,303–568,390]
Nongovernment	
Vehicles and non-medical equipment (n = 11)	102,141 [33,534–155,590]
Medical equipment (n = 121)	51,071 [9,047–102,141]
Medical and general furniture (n = 50)	48,362 [34,038–57,000]
Medicines and supplies (n = 20)	96,516 [32,479–287,555]
Other resources (n = 17)	36,251 [10,000–161,908]

Note: Values in brackets represent the 25th and 75th percentiles. Median values were calculated only among facilities that reported receiving each type of in-kind revenue by source. The sample size is 174.

Median expenditure by spending category was only calculated among facilities that both reported expenditure of each respective type and that had expenditure records available for verification by the data collection team (Figure 8). The availability of verifiable records varied by expenditure category, and sample sizes are noted in the figure. Most expenditures can be attributed to employment costs (1,193,530 UAH; IQR: 565,005–3,393,452).[25] One challenge highlighted during data collection centered around the difficulty that facilities faced in procuring financial information at the facility level rather than at the administrative center (that is, legal entity) level.

[25] This represents $32,638 (IQR: $15,451–$92,797). converted at the exchange rate of 36.5686 UAH/US$ used in the RDNA3 report.

FIGURE 8. Median expenditure in 2023 (UAH), by expenditure category



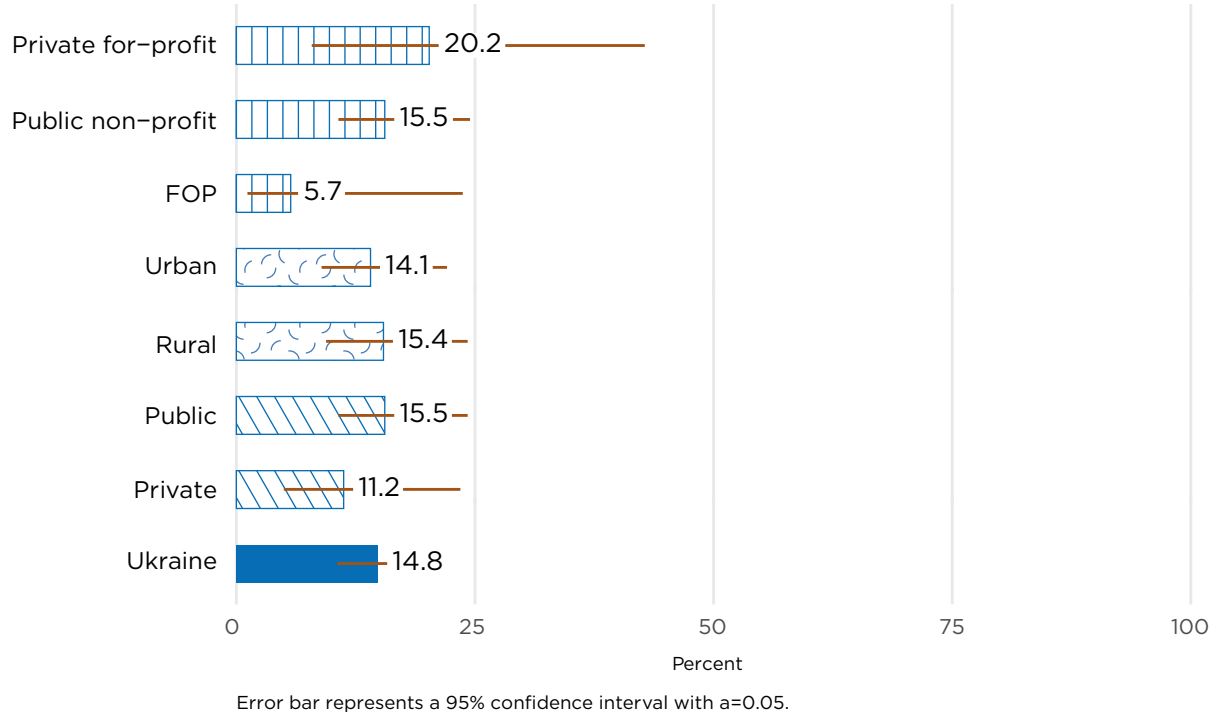
Note: Error bars represent the 25th and 75th percentile values. The sample size is 378. For UAH/US$ conversions, the reference value is 36.5686, the value used in the RNDA3 report.

3.2.2. Institutions for accountability for quality

This section captures the frequency of collection, review, and sharing of data on facility-level performance indicators, as well as the methods and frequency of feedback solicitation from the population served by the facilities. Additionally, it describes the institutions and practices in place for external supervision, such as supportive supervision visits from central authorities. Finally, it evaluates the extent to which any supervisory activities adhere to the World Health Organization's (WHO) definition of "supportive:" providing open, 2-way communication; fostering team approaches that facilitate problem-solving; monitoring performance toward achieving goals; using data for decision-making; and establishing regular follow-up to ensure correct implementation. To measure the presence of external supervisory institutions, the survey asked health facilities about community advisory boards and community management committees.[26] These types of groups typically meet to address PHC issues and identify areas for improvement: 14.8 percent (CI: 10.6–20.4) of facilities reported that they had a community advisory board (Figure 9).

[26] A "community advisory board" or "community management committee" refers to a group of individuals representing diverse constituencies within the community, who work together to achieve the common goal of improving health service delivery and health outcomes.

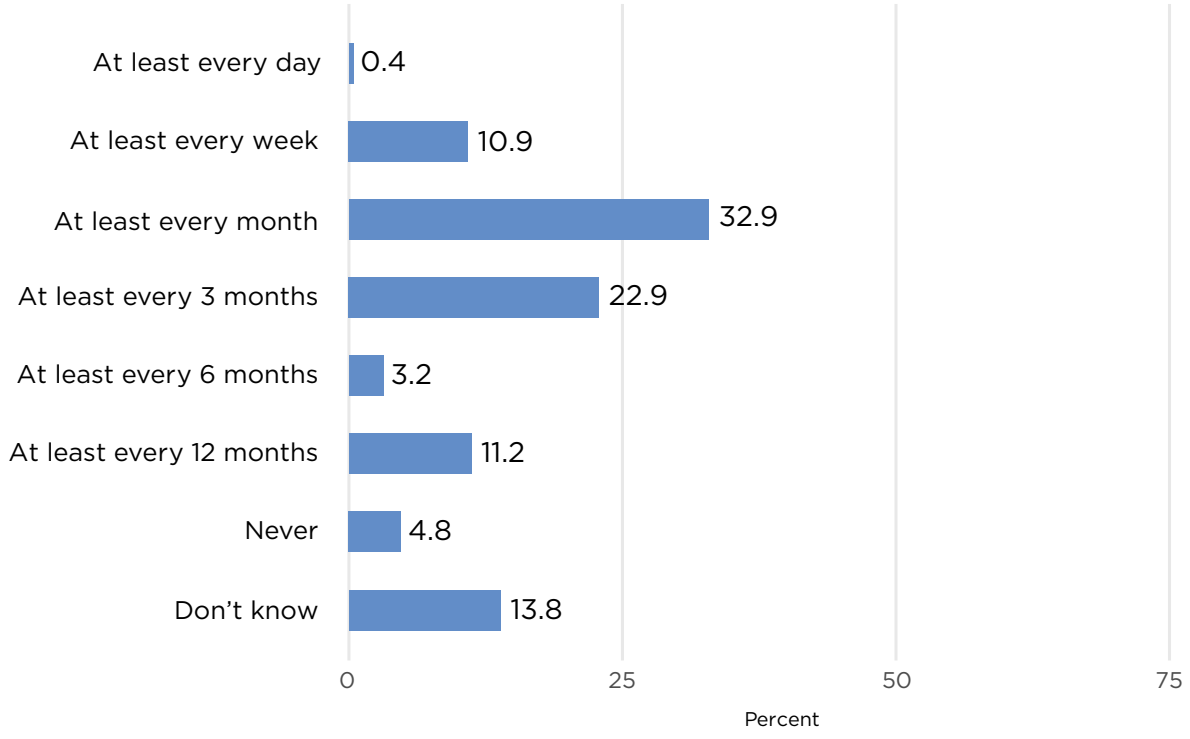
FIGURE 9. Facilities with community advisory boards, by facility type, ownership, and location (%)



Note: Error bars represent a 95 percent confidence interval with α = 0.05. The sample size is 378.

Of the 55 facilities with advisory boards and committee mechanisms to enhance accountability for quality, only 4.8 percent reported that their community advisory boards never meet; 70.3 percent mentioned that their community advisory boards meet at least once every 6 months (Figure 10).

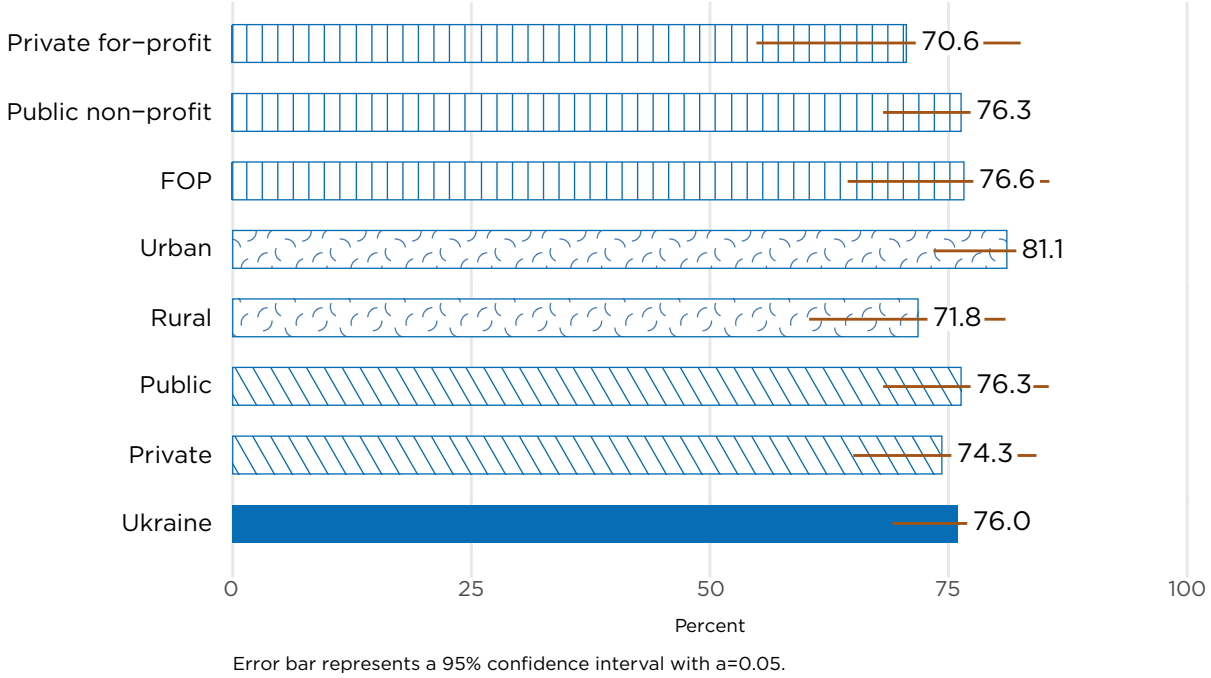
FIGURE 10. Frequency of community board meetings (%)



Note: the sample size is 55.

Beyond community advisory boards, internal tools and processes utilized by health facility management also play important roles in facility performance and quality (Figure 11). An average of 76.0 percent (CI: 69.1–81.7) of facilities reported having quality improvement targets. Overall, 69.6 percent (CI: 62.2–76.2) of facilities reported that they conducted quality improvement (QI) activities in 2023.[27]

FIGURE 11. Health facilities with quality improvement targets, by facility type, ownership, and location (%)



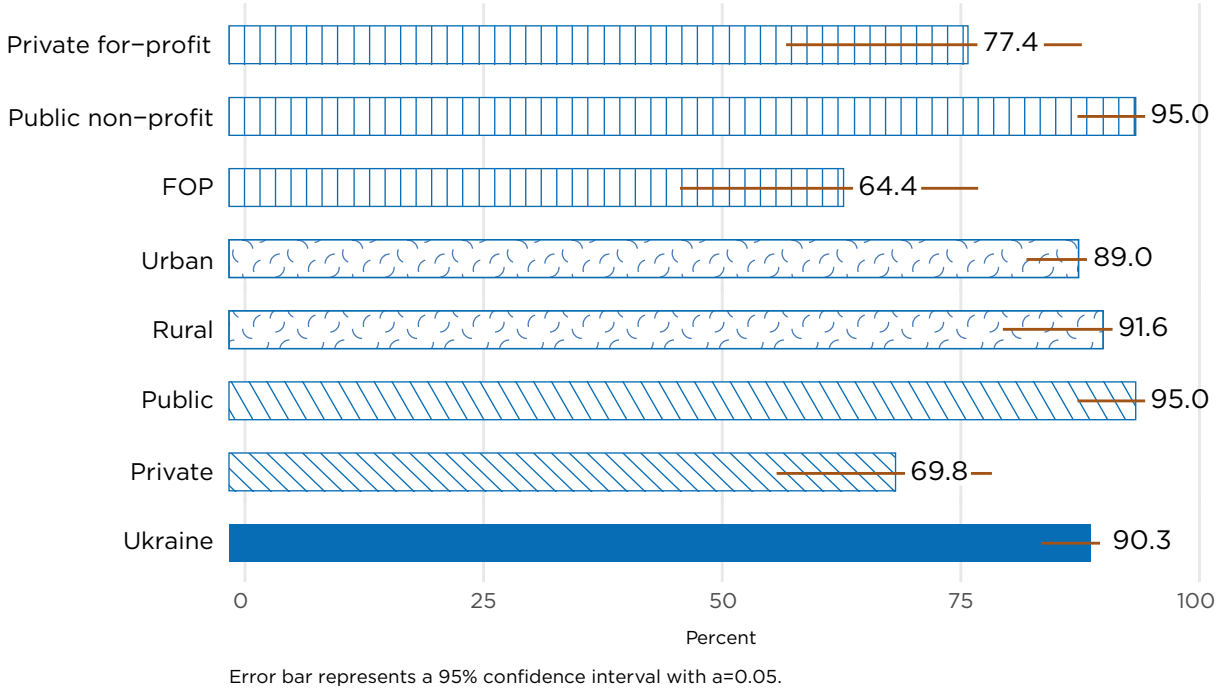
Note: Error bars represent a 95 percent confidence interval with α = 0.05. The sample size is 378.

Figure 12 shows the proportion of facilities conducting QI activities between October and December 2023 that shared quality improvement data with external leadership.[28] On average, 90.3 percent (CI: 85.1–93.8) of facilities that conducted any QI activities reported that they shared QI data with external leadership at least once every 6 months. Data sharing with external leadership was significantly lower in FOPs (64.4 percent; CI: 47.3–78.5) than average (90.3 percent; CI: 85.1–93.8). Public facilities more frequently reported data sharing (95.0 percent; CI: 88.9–97.8) than private facilities (69.8 percent; CI: 57.4–79.9).

[27] Quality improvement activities may include setting and tracking advancements to targets; monitoring performance indicators; implementing decision support tools, clinical protocols, and checklists; benchmarking performance; and promoting patient engagement.

[28] "External leadership" refers to governing authorities, including any local authorities, such as the municipal/oblast government or health office, or national authorities such as the Ministry of Health.

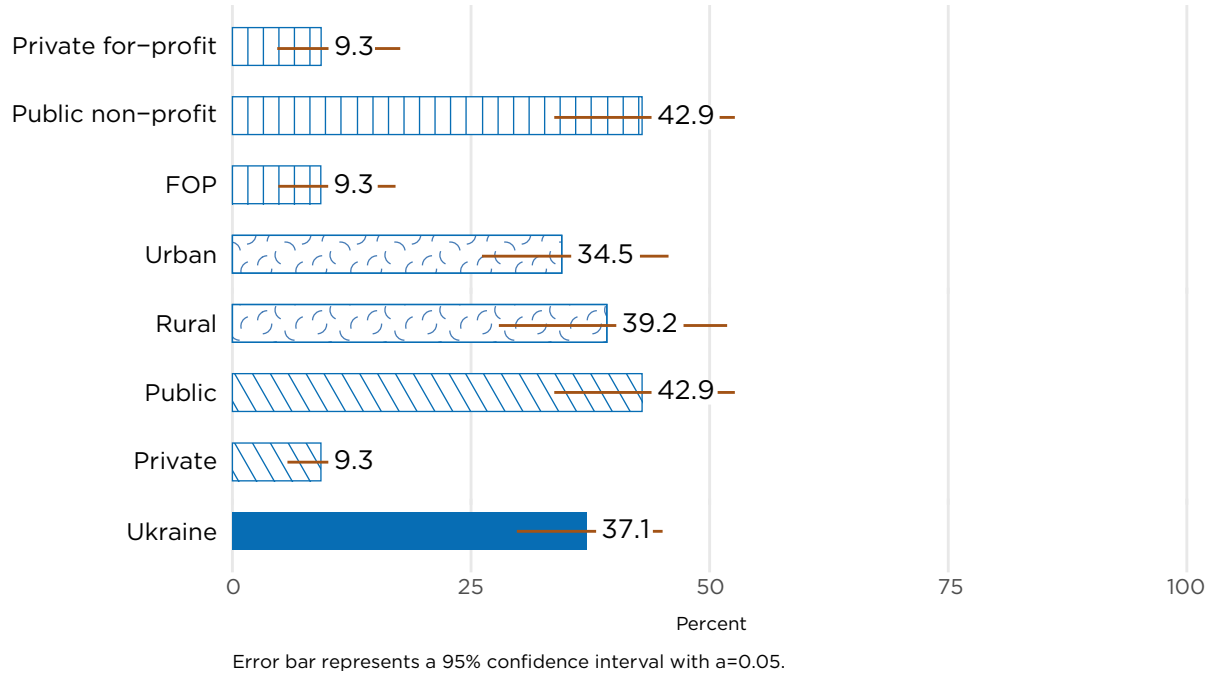
FIGURE 12. Health facilities with quality improvement data shared with external leadership at least every 6 months, by facility type, location, and ownership (%)



Note: Error bars represent a 95 percent confidence interval with α = 0.05. The sample size is 274.

Supportive supervision is complementary to data sharing and reporting (Figure 13). Overall, 37.1 percent (CI: 29.8–45.1) of facilities reported having at least one supervisory visit in 2023. Public facilities reported a significantly higher frequency of supervisory visits (42.9 percent; CI: 33.7–52.6) than private facilities (9.3 percent; CI: 5.8–14.6), with identical averages for FOP and private-for-profit facilities.

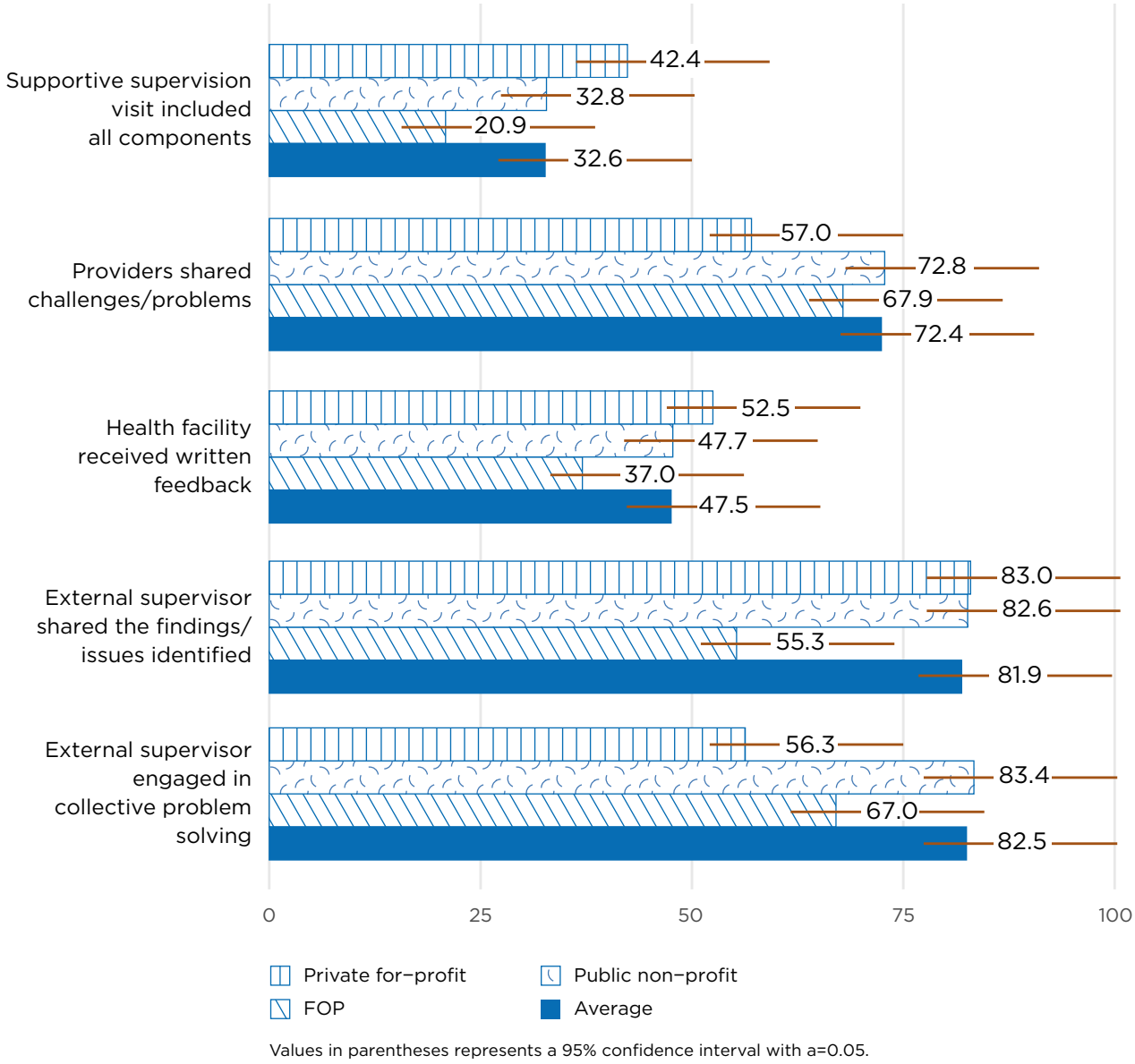
FIGURE 13. Facilities with at least 1 supervisory visit, by facility type, ownership, and location (%)



Note: Error bars represent a 95 percent confidence interval with α = 0.05. The sample size is 378.

Among the 117 facilities that received supportive supervisory visits, only one in three facilities reported all four components of supportive supervision (32.6 percent). Among the individually assessed supportive supervision components, the proportion of health facilities reporting that they received written feedback (47.5 percent) was significantly lower than all other components (Figure 14). Systems and practices of community feedback collection, review, and dissemination are crucial to promote accountability and strengthen facility responsiveness to community needs and go beyond supervision and feedback from central or external leadership. Nearly all facilities (96.4 percent) sought feedback from their registered populations in 2023.

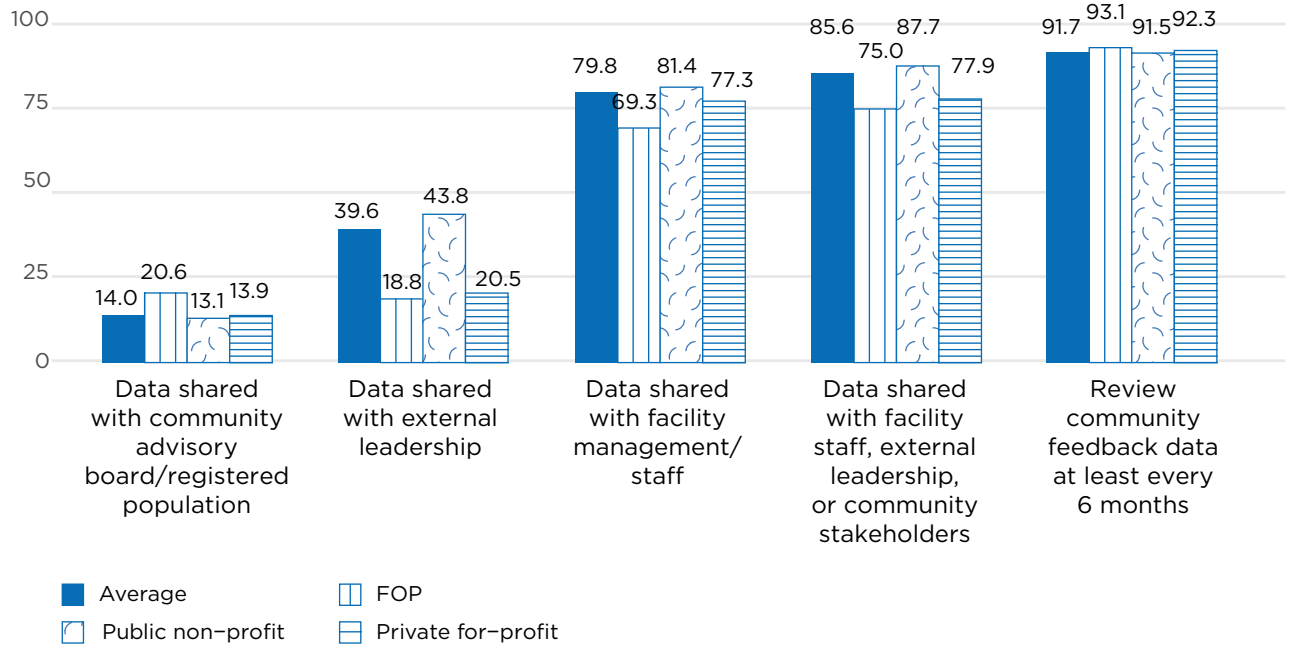
FIGURE 14. Facilities with supportive supervision components (%)



Note : Error bars represent a 95 percent confidence interval with α = 0.05. The sample size is 117.

Among facilities that reported collecting community feedback data (363 facilities), 91.7 percent (CI: 87.0–94.8) reported reviewing feedback at least once every 6 months (Figure 15). When assessing any internal or external data sharing activity, more than 4 in 5 facilities (85.6 percent; CI: 79.4–90.2) reported sharing community feedback with facility employees, community stakeholders, or external leadership. Facilities largely shared data internally with facility management/staff (79.8 percent); significantly fewer shared data with external leadership (39.6 percent) or with a community advisory board or their registered populations (14.0 percent).

FIGURE 15. Facilities reviewing and sharing community feedback data, by facility type (%)



Error bar represents a 95% confidence interval with a=0.05.

Note: Error bars represent a 95 percent confidence interval with α = 0.05. The sample size is 363.

Among facilities that had areas for improvement (37 excluded), the most common area listed for improvement was specialized services or care availability (32.1 percent), followed by the clinical competence of providers (10.9 percent) and the availability and functioning of required equipment, supplies, or medicine (10.2 percent; Table 16). When assessed by facility ownership, private facilities in aggregate mentioned that they received feedback on improving clinical competence of providers at significantly higher rates (23.2 percent) than in public facilities (8.4 percent).

TABLE 16. Top 5 areas for improvement in facility (facility-reported based on patient feedback), by facility type (%)

Average	FOP	Private for-profit	Public
Specialized services or care availability (32.1%)	Specialized services or care availability (22.8%)	Clinical competence of health care providers (26.3%)	Specialized services or care availability (34.5%)
Clinical competence of health care provider(s) (10.9%)	Clinical competence of health care provider(s) (21.3%)	Specialized services or care availability (16.8%)	Availability and functioning of required equipment, supplies, or medicine (11.2%)
Availability and functioning of required equipment, supplies, or medicine (10.2%)	Days facility is open/ hours of operation (14.3%)	Good infrastructure, amenities, and/or cleanliness (including disability-friendly infrastructure, comfort of waiting area) (15.6%)	Clinical competence of health care providers (8.4%)
Good infrastructure, amenities, and/or cleanliness (including disability-friendly infrastructure, comfort of waiting area) (8.3%)	Safety procedures to protect patients from adverse events (e.g., shelling, real or perceived violence) related to invasion (11.4%)	Level of respect/courtesy from health facility staff (13.6%)	Good infrastructure, amenities, and/or cleanliness (including disability-friendly infrastructure, comfort of waiting area) (8.1%)
Level of respect/courtesy from health facility staff (7.0%)	Good infrastructure, amenities, and/or cleanliness (including disability-friendly infrastructure, comfort of waiting area) (5.8%)	Days facility is open/ hours of operation (5.9%)	Clear communication (listening or explaining) with health care providers (6.9%)

Note: The sample size is 326.

The survey also asked health facility managers about the most common positive feedback received from the registered population and/or patients. Table 17 summarizes the manager-reported top five favorable aspects of the health facility, according to community feedback. The top 3 were the clinical competence of providers (45.2 percent), the respect and courtesy from facility staff (17.8 percent), and the availability of specialized services and care (12.7 percent).[29]

[29] Facilities that reported no positive feedback (8 facilities) were excluded from this indicator.

TABLE 17. Top 5 positive feedback points (facility-reported based on patient feedback), by facility type (%)

Average	FOP	Private for-profit	Public
Clinical competence of health care providers (45.2%)	Clinical competence of health care providers (33.2%)	Clinical competence of health care provider (53.5%)	Clinical competence of health care providers (46.2%)
Level of respect/courtesy from health facility staff (17.8%)	Specialized services or care availability (21.9%)	Specialized services or care availability (14.9%)	Level of respect/courtesy from health facility staff (18.7%)
Specialized services or care availability (12.7%)	Level of respect/courtesy from health facility staff (15.9%)	Level of respect/courtesy from health facility staff (9.7%)	Specialized services or care availability (11.3%)
Clear communication (listening or explaining) with health care providers (7.0%)	Clear communication (listening or explaining) with health care providers (15.2%)	Good infrastructure, amenities, and/or cleanliness (including disability-friendly infrastructure, comfort of waiting area) (7.5%)	Clear communication (listening or explaining) with health care provider(s) (6.2%)
Availability and functioning of required equipment, supplies, or medicine (5.4%)	Good infrastructure, amenities, and/or cleanliness (including disability-friendly infrastructure, comfort of waiting area) (6.3%)	Availability and functioning of required equipment, supplies, or medicine (6.8%)	Availability and functioning of required equipment, supplies, or medicine (5.7%)

Note: The sample size is 355.

Overall, 41 percent of facilities reported they did not take any action based on patient feedback in 2023 (Table 18). Significantly more facilities reported actions related to positive (45.8 percent) than negative feedback (20.2 percent). This trend was significant across private and public facilities in aggregate, with particularly significant differences observed between public and private for-profit facilities.

TABLE 18. Facilities acting based on calendar 2023 patient feedback, by facility type, ownership, and location (%)

Type	Acted based on negative feedback	Acted based on positive feedback	Took no action based on feedback
Facility Type			
FOP	22.1 (13.5–34.1)	38.2 (25.5–52.7)	37.9 (26.2–51.2)
Public	20.7 (14.4–29.0)	46.4 (36.1–57.1)	42.0 (32.6–52.1)
Private for-profit	10.4 (4.5–22.3)	51.0 (34.4–67.3)	33.7 (20.9–49.5)
Ownership			
Private	17.7 (11.7–26.0)	43.0 (32.9–53.7)	36.3 (27.3–46.4)

Type	Acted based on negative feedback	Acted based on positive feedback	Took no action based on feedback
Public	20.7 (14.4–29.0)	46.4 (36.1–57.1)	42.0 (32.6–52.1)
Location			
Rural	17.4 (10.0–28.5)	41.6 (27.6–57.2)	46.5 (33.3–60.2)
Urban	23.5 (16.8–32.0)	50.9 (41.5–60.2)	34.6 (25.8–44.5)
Ukraine	**20.2 (14.8–27.0)**	**45.8 (37.1–54.9)**	**41.0 (33.1–49.4)**

Note: Values in parentheses represent the 95 percent confidence interval values. Indicators were calculated in aggregate among facilities that reported collecting patient feedback and that the totals may not sum to 100 percent, as this was part of a multiple-select question. The sample size is 363.

3.2.3. Management and supervision

The broader accountability architecture influences the quality of primary care service delivery, as does the domain of direct management and supervision of staff members. This domain focuses on the internal procedures and practices within a health facility to review staff performance and provide feedback and support for improvement. Key indicators in this section include how often staff are provided with feedback on their performance, as well as the protocols and metrics used to measure performance and conduct internal staff evaluations. Given the impact of management capacity on provider and facility performance, additional information is also collected on facility manager credentials. Most facilities reported that they conduct provider performance reviews (95.3 percent), support staff performance reviews (92.2 percent), and use assessment tools as part of staff performance assessments (91.1 percent). FOPs reported significantly lower prevalence of performance reviews for support staff (64.1 percent) than public (94.4 percent) and private for-profit facilities (97.8 percent; Table 18). This trend carried over when comparing private facilities in aggregate (79.4 percent) to public facilities (94.4 percent).

TABLE 19. Components of facility management capacity, by facility type, ownership, and location (%)

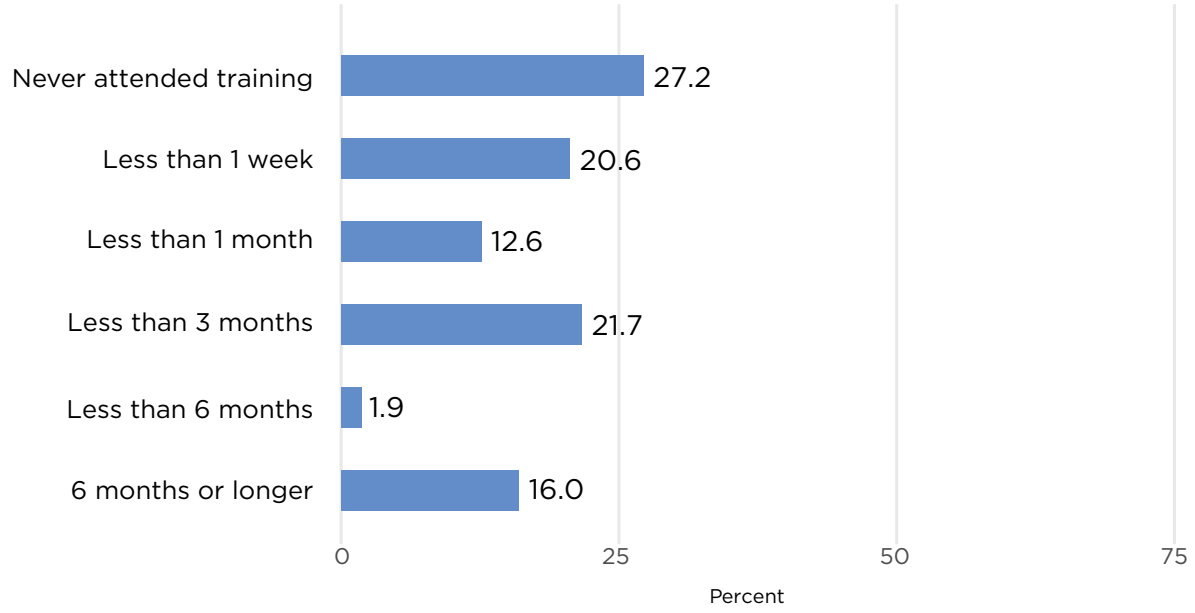
Type	Facility conducts provider performance reviews (n = 375)	Facility conducts support staff performance reviews (n = 357)	Facility uses assessment tools as part of staff performance assessment	Manager has a degree in Management	Manager has attended management training
Facility Type					
FOP	93.7 (84.1–97.6)	64.1 (48.1–77.5)	90.5 (81.7–95.3)	55.6 (42.4–68.1)	62.7 (49.5–74.2)
Public	95.2 (89.6–97.8)	94.4 (88.9–97.3)	90.8 (84.6–94.6)	68.3 (59.1–76.2)	73.2 (64.4–80.5)
Private for-profit	100.0 (100.0–100.0)	97.8 (90.2–99.5)	96.1 (86.4–99.0)	81.3 (66.2–90.6)	83.5 (69.0–92.0)

Type	Facility conducts provider performance reviews (n = 375)	Facility conducts support staff performance reviews (n = 357)	Facility uses assessment tools as part of staff performance assessment	Manager has a degree in Management	Manager has attended management training
Ownership					
Private	96.1 (90.2–98.5)	79.4 (68.7–87.2)	92.6 (86.8–96.0)	65.4 (55.7–74.0)	70.7 (61.1–78.7)
Public	95.2 (89.6–97.8)	94.4 (88.9–97.3)	90.8 (84.6–94.6)	68.3 (59.1–76.2)	73.2 (64.4–80.5)
Location					
Rural	94.9 (86.6–98.2)	93.7 (85.6–97.4)	88.2 (79.3–93.6)	69.6 (57.7–79.3)	72.1 (60.5–81.3)
Urban	95.9 (90.9–98.2)	90.2 (84.4–94.0)	94.6 (89.9–97.2)	65.6 (56.3–73.8)	73.6 (64.4–81.2)
Ukraine	**95.3 (90.9–97.7)**	**92.2 (87.6–95.2)**	**91.1 (86.1–94.4)**	**67.8 (60.1–74.6)**	**72.8 (65.4–79.1)**

Note: Only facilities with more than 1 health care provider or support staff are eligible for staff performance review related indicators. Values in parentheses represent 95 percent confidence interval values. The sample size is 378.

As highlighted in Table 19, approximately 27.2 percent (CI: 20.6–33.9) of facility managers did not attend any management training (Figure 16).

FIGURE 16. Duration of longest management training attended (%)



Note: The sample size is 378.

The most prevalent performance assessment tool was assessment by the facility supervisor (61.6 percent; Table 20). The least prevalent assessment tools were clinical record review (41.5 percent) and knowledge assessments (43.7 percent); facilities reported these significantly less often than supervisor assessments. These differences were particularly noted in public facilities.

TABLE 20. Facilities using staff performance assessment tools (multi-select), by facility type, ownership, and location (%)

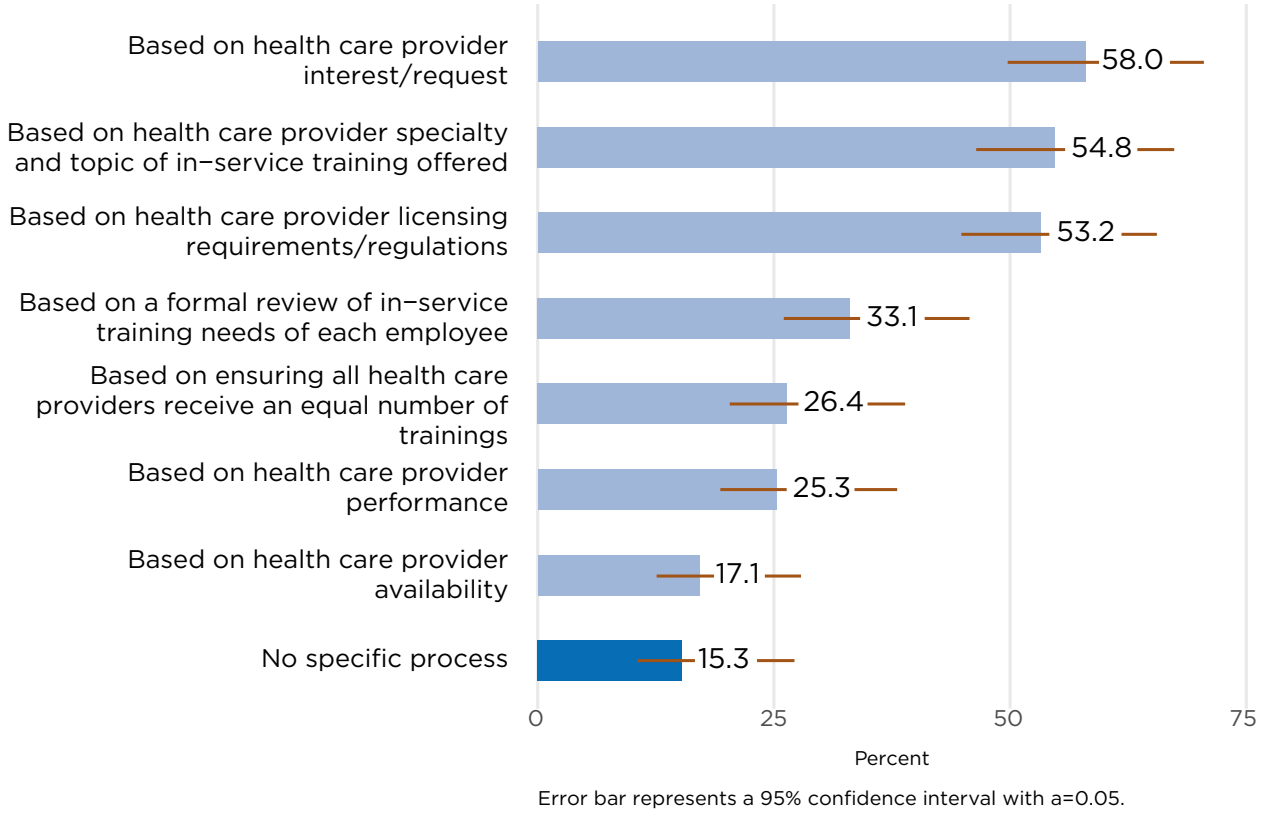
Type	Clinical record review	Knowledge assessments	Peer assessments	Registered population/ patient assessments	Self-assessments	Supervisor/ in-charge assessments
Facility Type						
FOP	34.4 (22.9–48.1)	42.7 (29.6–56.9)	42.1 (29.6–55.7)	34.4 (23.7–46.9)	57.6 (44.1–70.0)	47.0 (34.0–60.3)
Public	41.3 (31.1–52.3)	42.5 (32.4–53.2)	46.2 (36.2–56.5)	52.2 (42.2–62.0)	49.4 (39.3–59.5)	63.0 (53.7–71.5)
Private for-profit	56.0 (39.9–70.9)	59.8 (43.7–74.0)	55.8 (39.7–70.8)	54.0 (38.1–69.2)	57.1 (41.3–71.6)	66.7 (51.8–78.9)
Ownership						
Private	42.7 (32.8–53.1)	49.2 (39.0–59.5)	47.3 (37.2–57.7)	41.9 (32.3–52.2)	57.4 (47.2–67.1)	54.5 (44.2–64.4)
Public	41.3 (31.1–52.3)	42.5 (32.4–53.2)	46.2 (36.2–56.5)	52.2 (42.2–62.0)	49.4 (39.3–59.5)	63.0 (53.7–71.5)
Location						
Rural	42.8 (29.2–57.5)	36.9 (23.4–52.8)	41.3 (27.9–56.2)	52.3 (39.1–65.2)	47.7 (34.3–61.4)	59.7 (47.2–71.1)
Urban	40.0 (31.6–49.1)	52.0 (42.7–61.2)	52.6 (43.2–61.8)	48.0 (38.9–57.3)	54.6 (45.2–63.6)	63.9 (54.4–72.4)
Ukraine	**41.5 (32.9–50.7)**	**43.7 (35.1–52.6)**	**46.4 (37.9–55.1)**	**50.4 (41.9–58.9)**	**50.8 (42.3–59.2)**	**61.6 (53.6–68.9)**

Note: Values in parentheses represent 95 percent confidence interval values. The sample size is 378.

In addition to facility managers' use of tools for staff performance assessment, the processes that facilities put in place to select staff for training can impact staff performance and opportunities for growth. Ideally, a careful review of each provider's specific training needs (supported by information on performance and areas of growth) would guide training decisions. In-service training and continuing medical education play crucial roles in keeping health care workers well-informed and up to date on the latest advancements in medical care and treatment.[30] The most common selection criteria (Figure 17) were as follows: (1) health care provider interest/request (58.0 percent), (2) health care provider licensing requirements or regulations (53.2 percent), and (3) health care provider specialties and topics of in-service training offered (54.8 percent). Approximately 1 in 7 facilities (15.3 percent) said that they had no specific process for determining provider selection for training. Providers were also asked if they were satisfied with the support they received from their direct supervisors. Across the country, 97.1 percent (CI: 95.5–98.1) of providers reported being satisfied with direct supervisor support.

[30] Any training received by health care providers during their employment after completing their pre-service education and training.

FIGURE 17. Selection criteria for identifying staff for training (%)



Note: Error bars represent a 95 percent confidence interval with α = 0.05. The sample size is 378.

3.2.4. Physical infrastructure

This component measures the availability and functioning of key physical infrastructure required for the daily operation of health facilities and for its successful operation in cases of emergency. It captures the characteristics of the infrastructure of the facility itself, rather than the infrastructure in the surrounding area or other infrastructure such as public transport required to reach the facility. It also omits medical equipment, which is covered in a subsequent section.

This component includes the following:

- **Availability and functioning of infrastructure to facilitate the use of services by individuals with disabilities**, such as ramps, lifts, tactile flooring, toilets for clients with limited mobility, and assistive technologies for visually impaired clients.

- **Availability of other infrastructure items required for safe and respectful care**, such as provisions for auditory and visual privacy for patients consulting with providers; improved, functioning, accessible, and private toilet facilities; and handwashing facilities.

- **Availability of other key aspects**, such as uninterrupted electricity; ambient temperature management infrastructure, such as heaters and air conditioners and fans; refrigerators for vaccine and blood storage; functioning fire safety infrastructure, such as alarms and extinguishers; and ICT, including telephones, radios, computers, and internet access.

Accessibility for individuals with disabilities

This section presents the availability of various accessibility features for people with disabilities by facility type and location, respectively (Table 21). Although verified, only the presence of each respective accessibility feature was captured as part of the survey; the results presented do not reflect the quality of the accessibility features for people with disabilities. Moreover, facilities that stated that ramps or lifts were "not applicable" were excluded from analysis. Overall, 11.0 percent of facilities had all 5 accessible infrastructure items concurrently. Most facilities reported that they have a ramp (91.8 percent), and few mentioned that they had a lift (19.7 percent). These 2 accessibility features serve a similar purpose, insofar as they support patients with limited mobility to go up or down inclines within or at the entrance to the health facility. The availability of lifts was significantly more prevalent in urban (32.2 percent) than in rural health facilities (9.2 percent). Assistive technology for visually impaired patients was present in 58.2 percent of facilities; approximately one-half of facilities had a toilet accessible for patients with limited mobility (49.9 percent) or had tactile flooring (45.5 percent). Finally, the availability of toilets for patients with limited mobility was higher in private for-profit facilities (73.3 percent) than average (49.9 percent).

TABLE 21. Proportion of health facilities with accessibility features for people with disabilities, by facility type, ownership, and location (%)[31]

Type	Assistive technology for visually impaired patients	Lift (n = 331)	Ramp (n = 368)	Tactile flooring	Toilet accessible for patients with limited mobility	All five assessed components*
Facility Type						
FOP	53.4 (40.1–66.2)	11.9 (6.3–21.3)	85.2 (74.1–92.1)	36.4 (24.8–49.7)	36.9 (25.4–50.2)	3.6 (1.4–9.1)
Public	59.8 (50.2–68.7)	19.8 (13.8–27.7)	92.3 (85.4–96.1)	46.5 (37.0–56.3)	49.7 (40.1–59.4)	12.2 (8.0–18.3)
Private for-profit	45.5 (30.5–61.4)	30.0 (16.6–48.0)	95.7 (85.5–98.8)	46.3 (31.2–62.1)	73.3 (58.9–84.1)	7.8 (3.3–17.3)
Ownership						
Private	50.4 (40.1–60.6)	18.9 (12.3–27.9)	89.2 (81.9–93.8)	40.2 (30.9–50.2)	50.9 (40.9–60.8)	5.2 (2.7–9.6)
Public	59.8 (50.2–68.7)	19.8 (13.8–27.7)	92.3 (85.4–96.1)	46.5 (37.0–56.3)	49.7 (40.1–59.4)	12.2 (8.0–18.3)
Location						
Rural	52.9 (39.7–65.8)	9.2 (4.1–19.5)	89.3 (79.0–94.9)	39.1 (27.9–51.6)	35.4 (24.9–47.5)	6.9 (3.0–15.4)
Urban	64.7 (55.8–72.6)	32.2 (23.9–41.8)	95.0 (91.6–97.0)	53.2 (44.0–62.2)	67.9 (59.6–75.1)	16.0 (10.8–23.0)
Ukraine	**58.2 (50.0–65.9)**	**19.7 (14.4–26.3)**	**91.8 (86.3–95.3)**	**45.4 (37.4–53.6)**	**49.9 (41.8–58.1)**	**11.0 (7.4–16.0)**

Note: Facilities reporting that a ramp or lift was not applicable were considered to have those items for the purpose of constructing this indicator. Values in parentheses represent 95 percent confidence interval values. The sample size is 378.

Infrastructure for patient comfort and privacy

Beyond the accessibility of health facilities, additional key infrastructure needs include provisions for auditory and visual privacy for patients consulting with providers; improved, functioning, accessible, and private toilet facilities; and handwashing facilities. Across the country, the average proportion of facilities with at least one consultation room with auditory and visual privacy (Figure 18) was 98.4 percent (CI: 95.5–99.5).

[31] "Assistive technology for visually impaired patients" is defined as technologies, such as signage with Braille, to help those who are blind or visually impaired to read information about the health facility.

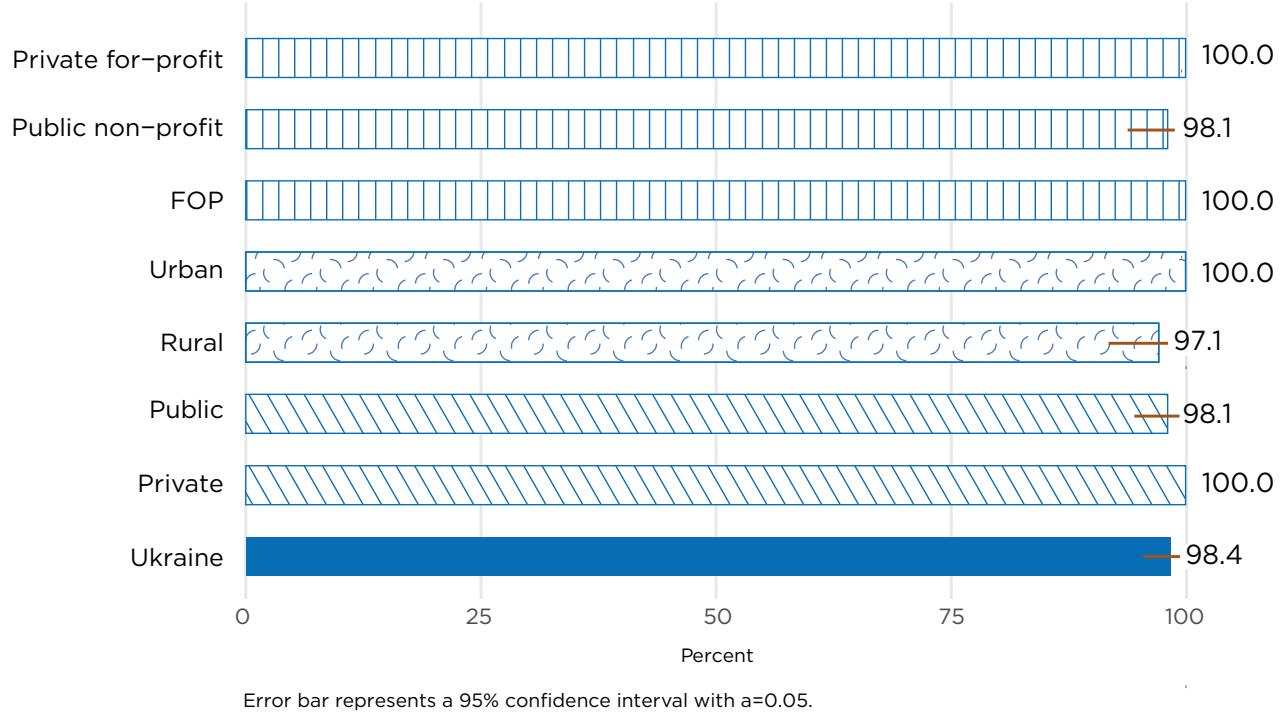
A "handicap-accessible toilet" is defined as a toilet that can be accessed without stairs or steps, has handrails for support that are attached either to the floor or sidewalls, has a door that is at least 80 cm wide, and has a door handle and seat that are within reach of people who are using wheelchairs or crutches/sticks.

A "lift" is defined as a functional lift for people with limited mobility to go up or down inclines within or at the entrance to the health facility.

A "ramp" is defined as a functional ramp for people with limited mobility to go up or down inclines within or at the entrance to the health facility.

"Tactile flooring" is defined as floor surfaces that is textured to alert persons with disabilities about the presence of obstacles and the beginning and end of ramps and stairs, and to provide a sense of direction.

FIGURE 18. Facilities with at least one consultation room with auditory and visual privacy, by facility type, ownership, and location (%)

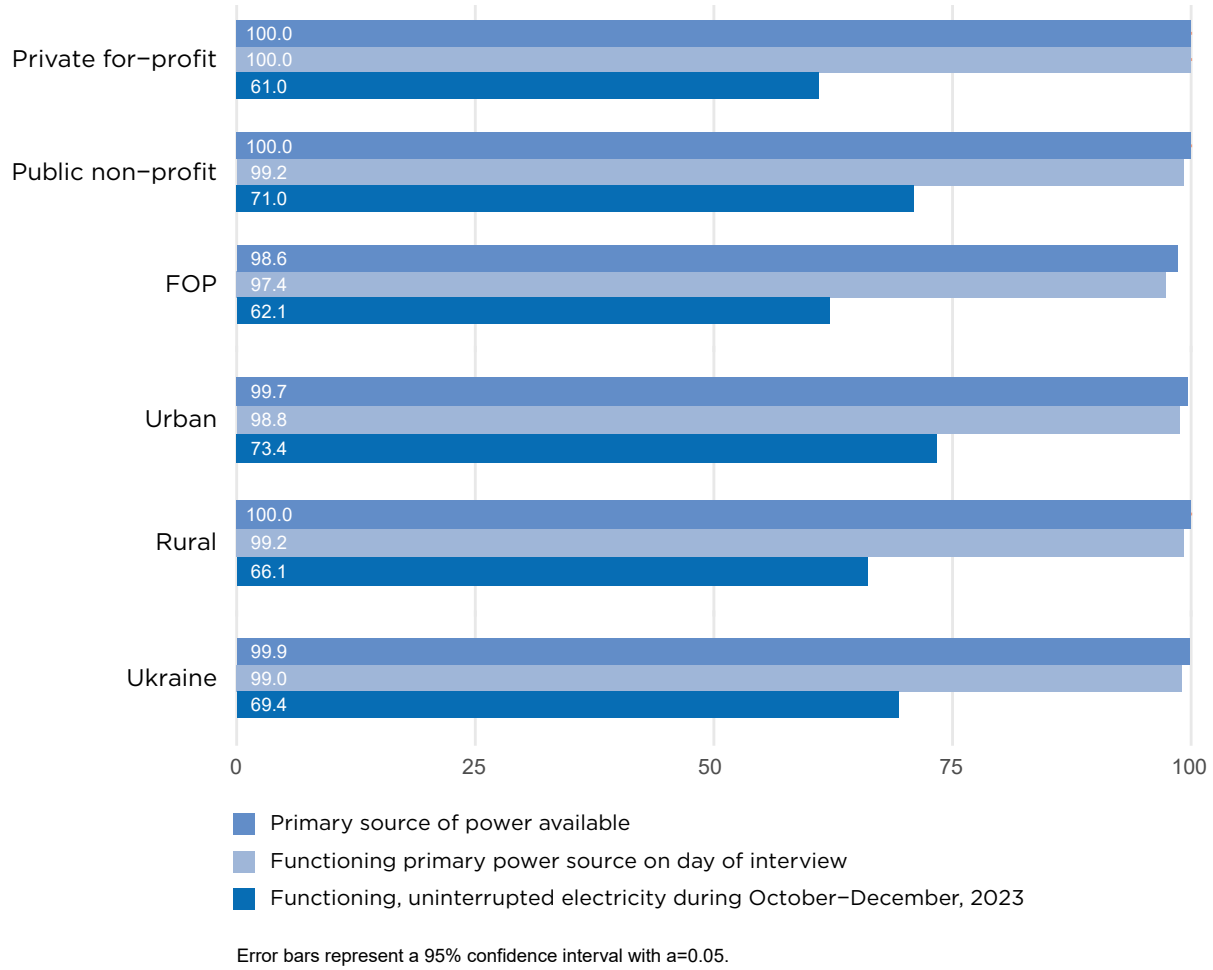


Note: Error bars represent a 95 percent confidence interval with α = 0.05. The sample size is 378.

Availability of electrification and electricity-dependent infrastructure

Almost all facilities had a primary source of power available (99.9 percent; CI: 98.9–99.9), and 99.0 percent had a functioning primary power source on the day of the interview (Figure 19). However, only 69.4 percent had functioning, uninterrupted electricity over the 3-month period. Across all survey strata there was a significant drop in electricity availability when requiring uninterrupted access.

FIGURE 19. Facilities with electricity, by facility type and location (%)



Note: Error bars represent a 95 percent confidence interval with α = 0.05. The sample size is 378.

Approximately one-fourth of health facilities (25.2 percent) reported that they experienced a power interruption in the 3 months preceding the survey (Table 22). Although 63.6 percent of facilities had a functional auxiliary power source the day of the survey, the proportion of facilities experiencing interruptions did not significantly vary between facilities that did and did not have a functional auxiliary power source the day of the survey (not shown). Facilities that experienced an interruption estimated that 68.6 percent of the interruptions were attributed to invasion-related reasons. The median number of interruptions was 4, with a median duration of 4 hours. Electricity interruptions can have a direct impact on service delivery and service availability, for example, vaccines require refrigeration between 2 and 8 degrees Celsius. Facilities were assessed for the availability and functioning of refrigerators to store vaccines, with the temperature of refrigerators physically verified by thermometer. Across the country, 95.9 percent of facilities had a functional vaccine refrigerator, with all testing in the appropriate temperature range (not shown).

TABLE 22. Frequency and duration of power interruptions, by facility type, ownership, and location

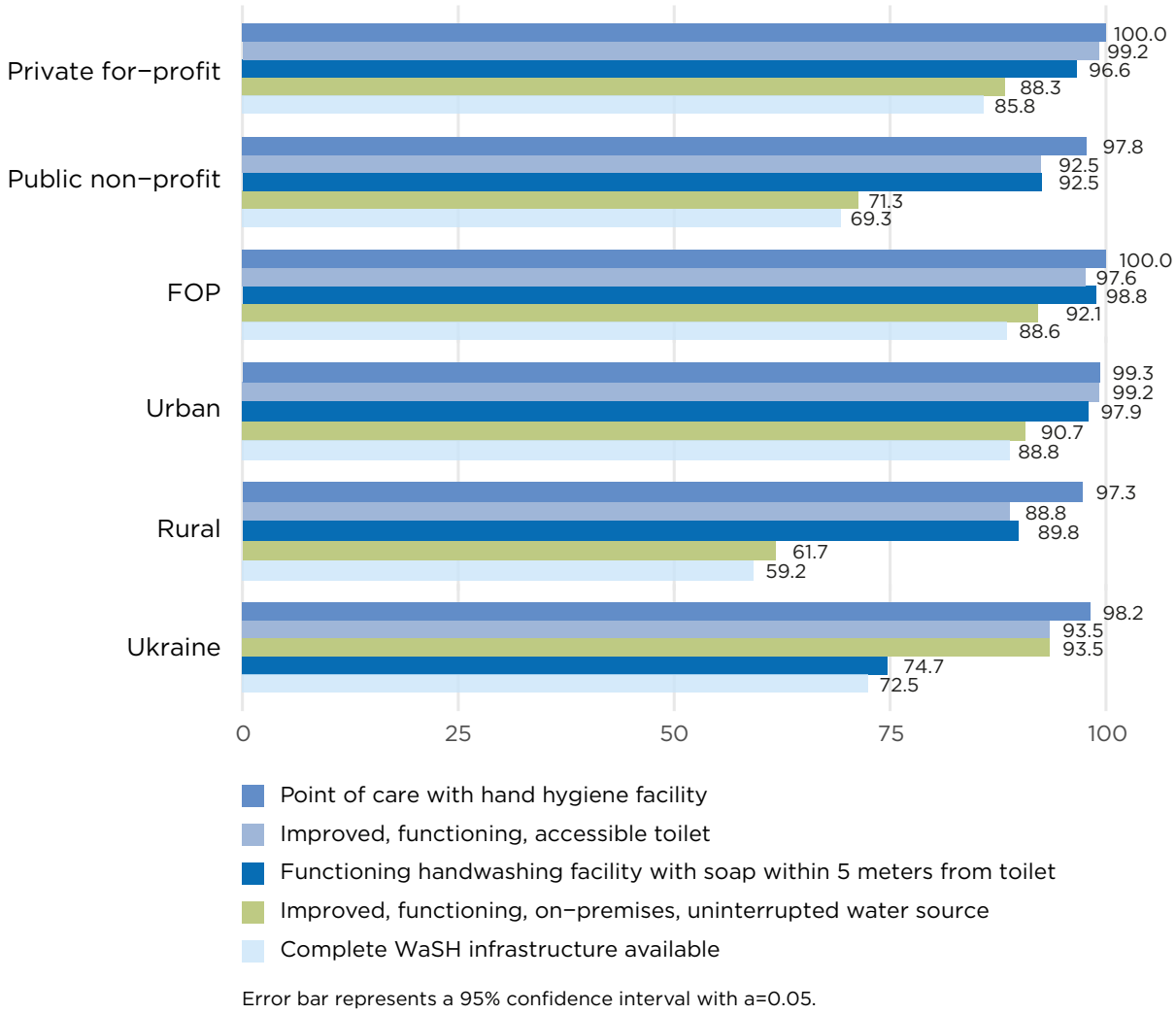
Type	Facilities that experienced an interruption (%)	Median number of interruptions (n = 101)	Proportion of interruptions reported as related to invasion (n = 94) *	Median length of interruptions in hours (n = 101)
Facility Type				
FOP	33.1 (21.3–47.4)	3.0 [1.0–12.0]	83.6 [63.3–100.0]	3.0 [2.0–4.3]
Public	23.6 (17.2–31.5)	4.0 [2.0–10.0]	64.8 [50.4–79.2]	4.0 [3.0–7.0]
Private for-profit	32.9 (19.9–49.3)	5.0 [3.0–10.0]	79.7 [54.1–100.0]	3.0 [0.5–5.0]
Ownership				
Private	33.0 (23.9–43.6)	4.0 [2.0–12.0]	82.1 [66.1–98.1]	3.0 [1.0–5.0]
Public	23.6 (17.2–31.5)	4.0 [2.0–10.0]	64.8 [50.4–79.2]	4.0 [3.0–7.0]
Location				
Rural	26.9 (18.1–37.9)	4.0 [2.0–10.0]	61.8 [44.6–78.9]	4.0 [3.0–24.0]
Urban	23.2 (16.9–30.9)	5.0 [2.0–11.0]	78.8 [64.2–93.3]	4.0 [1.0–6.0]
Ukraine	**25.2 (19.5–32.0)**	**4.0 [2.0–10.0]**	**68.6 [56.9–80.4]**	**4.0 [2.5–6.0]**

*Note: Values in parentheses represent 95 percent confidence interval values, while values in brackets represent the 25th and 75th percentile values. *Facilities that could not provide a specific number of interruptions are excluded. The sample size is 378.*

Water, Sanitation, and Hygiene (WaSH) infrastructure

Another important component of facility infrastructure includes the availability of WaSH infrastructure within facilities (Figure 20). Across the country, 72.5 percent of facilities had complete WaSH infrastructure available. The availability of an improved, functioning, on-premises, and uninterrupted water source was the largest inhibiting factor for complete WaSH infrastructure. When assessed by facility location, significant differences were observed in the availability of complete WaSH infrastructure; urban facilities (88.8 percent) were 50 percent more likely to have complete WaSH infrastructure than rural ones (59.2 percent). Among public facilities, those in urban areas (89.6 percent) were 51 percent more likely to have WaSH infrastructure than those in rural areas (59.2 percent).

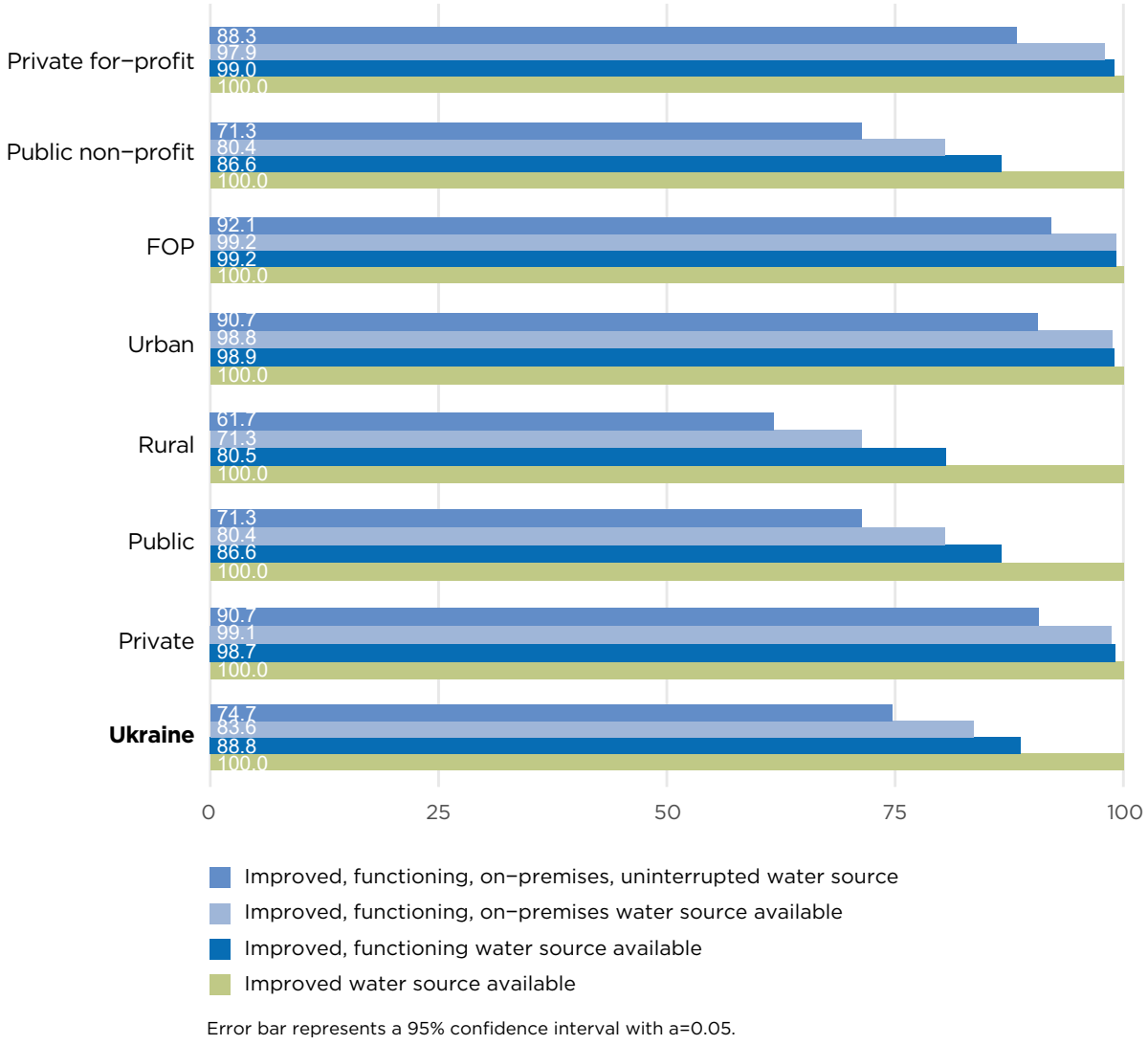
FIGURE 20. Facilities with WaSH infrastructure , by facility type and location (%)



Note: Error bars represent a 95 percent confidence interval with α = 0.05. The sample size is 378.

Overall, approximately three-quarters of the facilities had an improved water source that was on-premises, functional the day of the survey, and uninterrupted between October and December 2023, hereafter referred to as "uninterrupted water access (Figure 21). Broadly, lack of functioning on the day of the survey and interruptions over the 3-month reference period had the largest effects on uninterrupted water access. Uninterrupted water access varied significantly by facility ownership and location; facilities in urban areas (90.7 percent) reported better coverage than those in rural areas (61.7 percent), and private facilities (90.7 percent) reported better coverage than public facilities (71.3 percent). Among public facilities (not shown), those in urban areas (90.6 percent) were significantly better than those in rural areas (61.7 percent).

FIGURE 21. Facilities with water availability, by facility type and location



Note: Error bars represent a 95 percent confidence interval with α = 0.05. The sample size is 378.

In the fourth quarter of 2023, 6.9 percent of facilities reported that they experienced interruptions to their water supplies (Table 23). Among facilities that experienced interruptions, the median number of interruptions was 2.0 (IQR: 1.0–3.0) with a median duration of 6.0 hours (IQR: 2.0-48.0). Facilities reporting interruptions estimated that 44.8 percent of interruptions were attributable to the invasion.

TABLE 23. Frequency and duration of water interruptions, by facility type, ownership, and location

Type	Facilities that experienced an interruption (%)	Median number of interruptions (n = 29)	Interruptions reported as related to invasion (n = 24) *	Median length of interruptions in hours (n = 26) *
Facility Type				
FOP	5.6 (2.5–12.1)	3.0 [2.0–3.0]	54.5 (12.7–96.3)	24.0 [5.0–48.0]
Public	7.1 (4.0–12.3)	2.0 [1.0–3.0]	44.6 (9.9–79.3)	4.0 [2.0–48.0]
Private for-profit	6.2 (2.3–15.8)	1.0 [1.0–2.0]	37.3 (0.0–84.9)	4.0 [2.0–24.0]
Ownership				
Private	5.8 (3.1–10.6)	2.0 [2.0–3.0]	46.1 (13.0–79.1)	9.0 [4.0–48.0]
Public	7.1 (4.0–12.3)	2.0 [1.0–3.0]	44.6 (9.9–79.3)	4.0 [2.0–48.0]
Location				
Rural	7.2 (3.4–14.5)	2.0 [1.0–3.0]	42.0 (0.0–92.1)	4.0 [2.0–48.0]
Urban	6.5 (3.4–11.8)	2.0 [1.0–3.0]	47.1 (13.5–80.7)	24.0 [3.0–48.0]
Ukraine	**6.9 (4.2–11.1)**	**2.0 [1.0–3.0]**	**44.8 (15.5–74.2)**	**6.0 [2.0–48.0]**

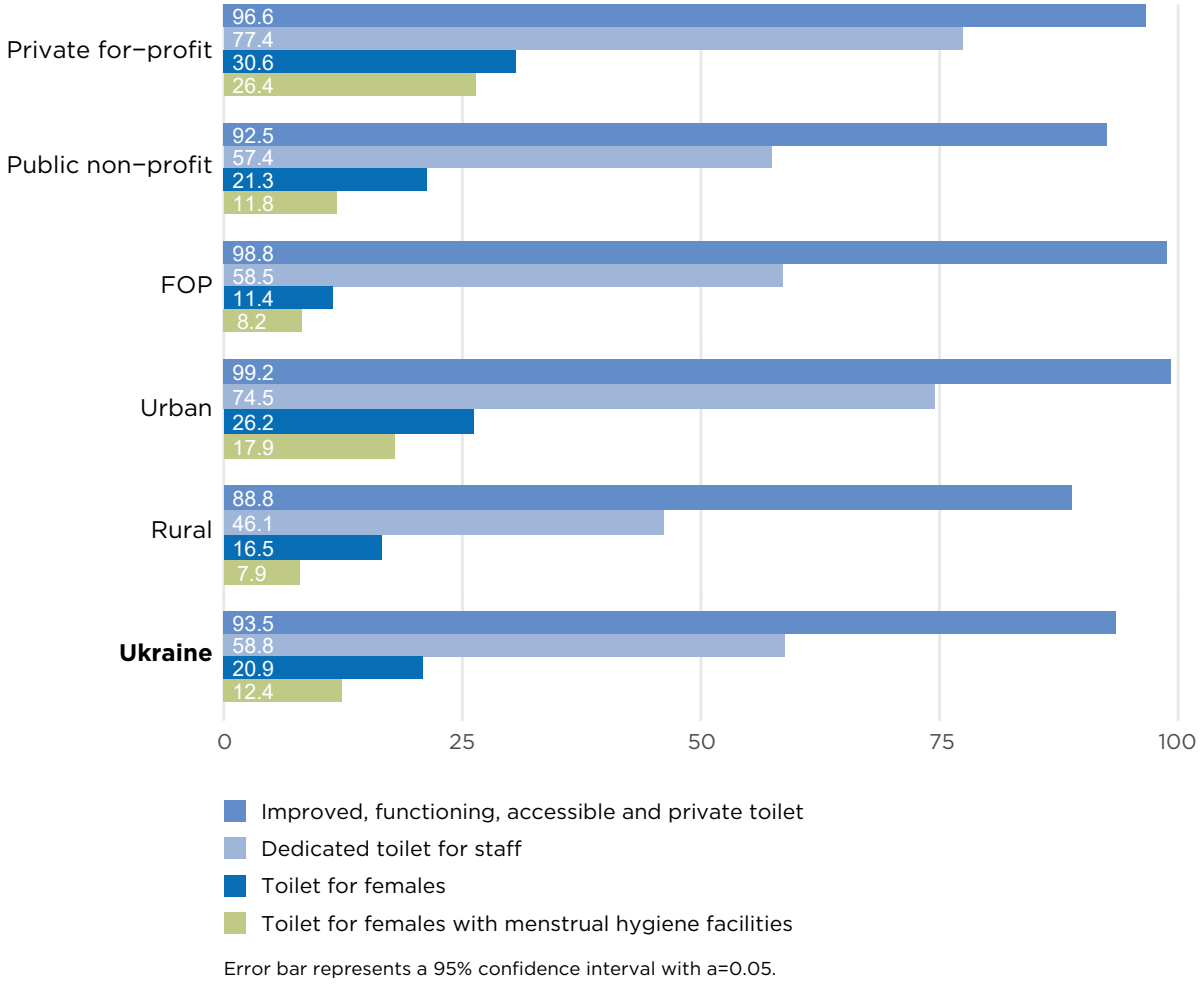
Note: Values in parentheses represent the 95% confidence interval values, while those in brackets represent the 25th and 75th percentile values.

**Facilities that could not provide a specific number or length of interruptions are excluded. The sample size is 378.*

Globally, 93.5 percent of facilities had an improved, functioning, accessible, and private toilet (Figure 22).[32] Approximately 6 in 10 (58.8 percent) had a dedicated toilet for staff. Women were less well served; only one in five (20.9 percent) had a toilet for females, and one in eight (12.4 percent) had a toilet for females with menstrual hygiene facilities. Availability of improved, functioning, accessible, and private toilets was significantly more common in urban (99.2 percent) than rural (88.8 percent) facilities. Among public facilities (not shown), these toilets were universally available in urban areas, but only 88.8 percent of rural facilities had improved, functioning, accessible, and private toilets. Urban facilities also had significantly higher availability of toilets dedicated for staff (74.5 percent) than rural facilities (46.1 percent). Among public facilities (not shown), these toilets were significantly more available in urban (79.8 percent) than in rural facilities (46.1 percent).

[32]A toilet is considered improved if it is a flush/pour-flush toilet to sewer connection, tank, or pit; pit latrine with slab; or composting toilet. A toilet is in functioning condition when the hole or pit is unblocked, water is available for flush/pour-flush toilets, and there are no cracks or leaks in the toilet structure. A toilet is accessible when it is unlocked or can be unlocked by an available key. A toilet is considered private if it has doors that can be locked from the inside, and there are no large gaps or holes in the structure.

FIGURE 22. Facilities with toilets with various characteristics, by facility type and location (%)



Note: Error bars represent a 95 percent confidence interval with α = 0.05. The sample size is 378.

Safety and Infection prevention and control infrastructure

The survey measured the availability of key infection prevention and control infrastructure: (1) the presence of physical barriers at one or more points of initial patient contact, (2) the presence of designated sites for patient isolation, (3) a separate entrance for patients with suspected contagious diseases, (4) at least one functional hand hygiene facility at a point of patient care, and (5) adequate waste disposal system for infectious waste (Table 24).[33] This section of the report focuses on infrastructure, while subsequent sections contain additional details regarding infection prevention and control practices.

Across the country, only 36.0 percent of facilities had all 5 assessed infectious disease prevention and control measures. For the assessed components listed, the results were as follows: (1) 46.6 percent of facilities had a physical barrier at one or more points of initial patient contact; (2) 83.4 percent of facilities had at least 1 designated site for patient isolation; (3) 85.9 percent of facilities had at least 1 separate entrance for patients with contagious diseases; (4) 98.2 percent of facilities had at least 1 point of care with hand hygiene facility; and (5) 88.6 percent of facilities had adequate waste disposal. More urban (51.9

[33]Infectious waste is adequately disposed if it is not visible or is visible in a protected area.

percent) than rural (23.2 percent) facilities reported having all 5 assessed infectious disease prevention and control measures. Among public facilities (not shown), those in urban areas (64.9 percent) were 2.79 times as likely to have all assessed measures than rural ones (23.2 percent).

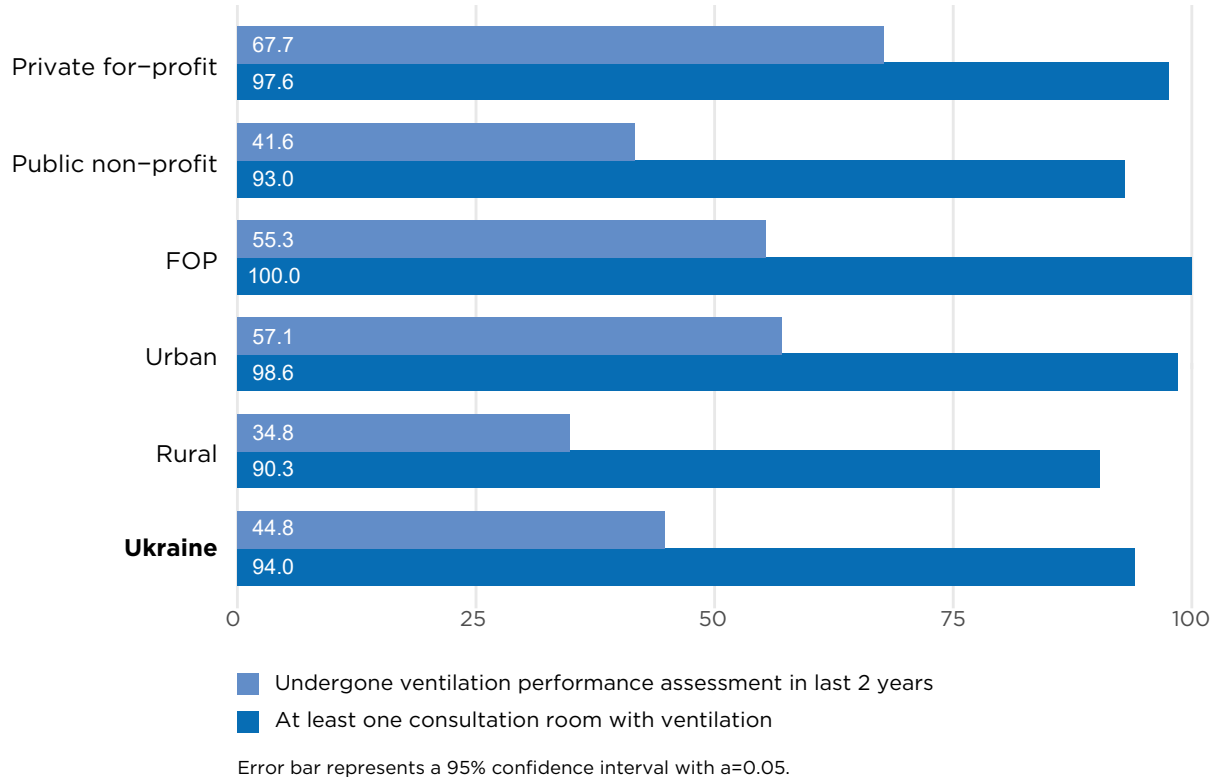
TABLE 24. Facilities with infection prevention and control measures, by facility type (%)

Type	Adequate waste disposal	At least one designated site for patient isolation	At least one point of care with hand hygiene facility	At least one separate entrance for patients with contagious disease	Physical barrier at one or more points of initial patient contact	All 5 assessed infectious disease prevention and control measures
Facility Type						
FOP	80.8 (68.7–88.9)	65.9 (52.9–76.9)	100.0 (100.0–100.0)	67.2 (54.4–77.9)	38.9 (26.8–52.5)	22.0 (12.7–35.4)
Public	89.9 (83.8–93.9)	85.9 (78.8–90.9)	97.8 (92.6–99.4)	88.5 (82.6–92.6)	45.6 (36.7–54.7)	37.1 (29.0–46.1)
Private for-profit	85.4 (73.3–92.6)	79.9 (63.4–90.1)	100.0 (100.0–100.0)	83.2 (68.3–91.9)	72.5 (58.6–83.1)	45.2 (29.5–62.0)
Ownership						
Private	82.5 (74.2–88.6)	71.3 (61.5–79.3)	100.0 (100.0–100.0)	73.3 (64.0–80.9)	51.7 (41.7–61.6)	30.9 (21.9–41.6)
Public	89.9 (83.8–93.9)	85.9 (78.8–90.9)	97.8 (92.6–99.4)	88.5 (82.6–92.6)	45.6 (36.7–54.7)	37.1 (29.0–46.1)
Location						
Rural	89.2 (80.9–94.1)	85.5 (76.7–91.4)	97.3 (89.0–99.4)	86.6 (78.3–92.0)	26.7 (18.0–37.8)	23.2 (15.1–34.0)
Urban	87.9 (81.4–92.4)	80.8 (72.3–87.1)	99.3 (95.0–99.9)	85.0 (79.0–89.5)	71.2 (63.6–77.8)	51.9 (42.9–60.7)
Ukraine	**88.6 (83.6–92.3)**	**83.4 (77.5–88.0)**	**98.2 (93.9–99.5)**	**85.9 (80.9–89.7)**	**46.6 (39.0–54.4)**	**36.0 (29.1–43.6)**

Note: Values in parentheses represent the 95% confidence interval values. The sample size is 378.

Adequate ventilation infrastructure is important in preventing infection transmission for airborne microbes with environmental ventilation; it includes natural ventilation through windows/doors, and mechanical ventilation, such as window fans or air ducts, or a combination of both. Figure 23 shows the proportion of facilities that conducted a ventilation assessment in the 2 years preceding the study from January 2022–December 2023. An average of 44.8 percent (CI: 36.8–53.0) of facilities had undergone ventilation performance assessment in that period; 94 percent (CI: 90.2–96.4) had at least 1 consultation room with ventilation. Urban facilities (57.1 percent; CI: 47.8–65.9) were significantly more likely to have had a ventilation assessment in the past 2 years than rural facilities (34.8 percent; CI: 24.3–47.1).

FIGURE 23. Proportion of health facilities with ventilation, by facility type (%)



Note: Error bars represent a 95 percent confidence interval with α = 0.05. The sample size is 277.

Fire safety requires functional smoke detectors, fire extinguishers, and signage guiding patients and staff in case of fire emergencies (Table 25). These elements must be complemented by a fire vulnerability assessment and regular fire drills. However, less than 1 facility in 2 (45.2 percent) had all 5 reported fire safety elements. Urban facilities (60.9 percent) had significantly higher availability than rural facilities (32.3 percent). Among public facilities (not shown), urban (68.6 percent) had higher availability than rural (32.3 percent).

TABLE 25. Facilities with fire safety infrastructure, by facility type and location (%)

Type	Functional fire alarm/ smoke detector	Functional fire extinguisher	Sign visible to patients and staff with guidance in case of fire	Conducted assessment of fire vulnerability	Conducted at least one fire drill in the past 2 years	All 5 components available/ reported
Facility Type						
FOP	93.9 (85.9–97.5)	100.0 (100.0–100.0)	89.5 (78.4–95.3)	67.7 (54.3–78.8)	56.6 (43.3–69.1)	42.5 (29.6–56.6)
Public	70.4 (61.5–78.0)	98.0 (90.3–99.6)	86.7 (68.5–95.1)	77.3 (69.1–83.9)	70.5 (58.3–80.3)	44.6 (35.4–54.2)
Private for-profit	99.1 (95.6–99.8)	100.0 (100.0–100.0)	88.5 (53.9–98.1)	78.1 (64.8–87.3)	67.4 (48.6–81.8)	56.9 (40.0–72.4)

Type	Functional fire alarm/ smoke detector	Functional fire extinguisher	Sign visible to patients and staff with guidance in case of fire	Conducted assessment of fire vulnerability	Conducted at least one fire drill in the past 2 years	All 5 components available/ reported
Ownership						
Private	95.9 (91.0–98.2)	100.0 (100.0–100.0)	89.1 (76.4–95.4)	71.7 (62.0–79.7)	60.8 (50.2–70.3)	48.1 (37.9–58.4)
Public	70.4 (61.5–78.0)	98.0 (90.3–99.6)	86.7 (68.5–95.1)	77.3 (69.1–83.9)	70.5 (58.3–80.3)	44.6 (35.4–54.2)
Location						
Rural	62.5 (49.8–73.8)	97.0 (85.9–99.4)	80.7 (56.3–93.1)	70.3 (58.4–80.0)	64.1 (48.1–77.5)	32.3 (22.4–44.0)
Urban	89.9 (84.1–93.8)	100.0 (100.0–100.0)	94.7 (89.1–97.5)	83.8 (77.4–88.6)	74.6 (67.0–81.0)	60.9 (52.1–69.0)
Ukraine	**74.8 (67.5–80.9)**	**98.3 (92.0–99.7)**	**87.1 (72.3–94.6)**	**76.3 (69.5–82.1)**	**68.8 (58.9–77.2)**	**45.2 (37.3–53.3)**

Note: Values in parentheses represent the 95 percent confidence interval values. The sample size is 378.

Information and communications technology (ICT) infrastructure

ICT infrastructure evaluated as present and functioning on the day of the survey included a telephone (landline/mobile/smartphone), an internet connection, a computer, and a printer. Table 26 reports statistically significant gaps between public and private facilities and within public facilities (rural versus urban). All privately owned and urban facilities had a functioning computer, internet, and printer on the day of the survey, while rural and public facilities had less than 97 percent. A functional facility telephone was significantly more present in urban (91.8 percent) than rural (64.9 percent) facilities and in privately owned (91.7 percent) than publicly owned (73.8 percent) facilities.

TABLE 26. Availability of ICT infrastructure, by facility type, ownership, and location (%)

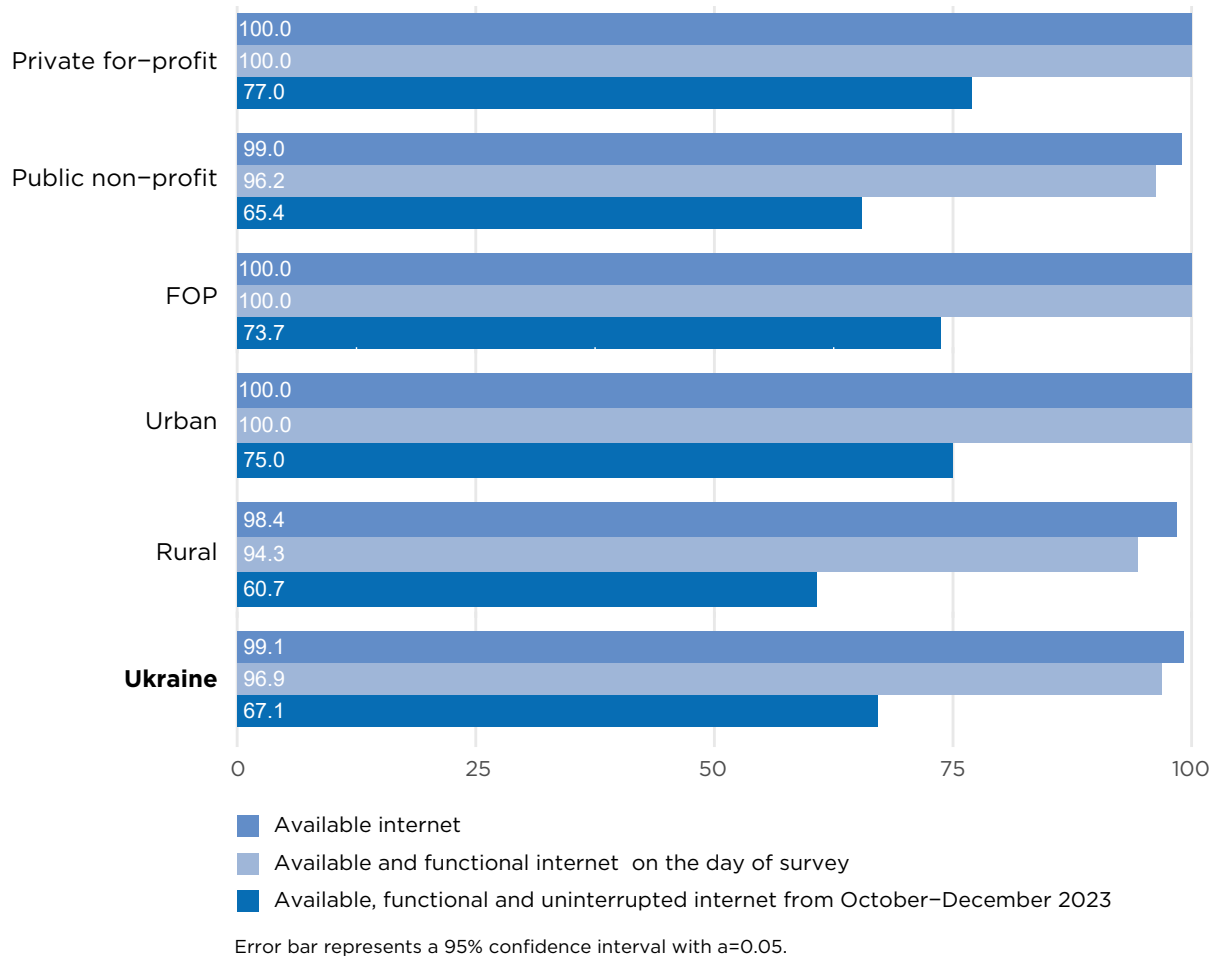
Type	Computer	Internet	Printer	Telephone (landline, mobile, smartphone)
Facility Type				
FOP	100.0 (100.0–100.0)	100.0 (100.0–100.0)	100.0 (100.0–100.0)	90.3 (81.6–95.1)
Public	95.6 (88.4–98.5)	96.2 (89.2–98.7)	96.2 (89.1–98.7)	73.8 (65.0–81.1)
Private for-profit	100.0 (100.0–100.0)	100.0 (100.0–100.0)	100.0 (100.0–100.0)	93.9 (83.0–98.0)
Ownership				
Private	100.0 (100.0–100.0)	100.0 (100.0–100.0)	100.0 (100.0–100.0)	91.7 (85.6–95.3)
Public	95.6 (88.4–98.5)	96.2 (89.2–98.7)	96.2 (89.1–98.7)	73.8 (65.0–81.1)

Type	Computer	Internet	Printer	Telephone (landline, mobile, smartphone)
Location				
Rural	93.5 (82.9–97.7)	94.3 (84.1–98.1)	95.9 (84.3–99.0)	64.9 (52.4–75.6)
Urban	100.0 (100.0–100.0)	100.0 (100.0–100.0)	98.1 (92.1–99.5)	91.8 (85.0–95.6)
Ukraine	**96.4 (90.3–98.7)**	**96.9 (91.0–99.0)**	**96.9 (90.9–99.0)**	**76.9 (69.5–82.9)**

Note: The sample size is 378.

Across the country, 99.1 percent (CI: 94.1–99.9) of facilities had internet access, and 96.9 percent (CI: 91.0–99.0) had functional internet on the day of survey (Figure 24). However, only 67.1 percent (CI: 59.4–74.0) had available, functional, and uninterrupted internet from October–December 2023. Facilities reporting internet interruptions estimated that 86.6 percent (CI: 77.1–96.1) of interruptions were attributable related to the invasion (not shown).

FIGURE 24. Proportion of health facilities with internet, by facility type and location (%)

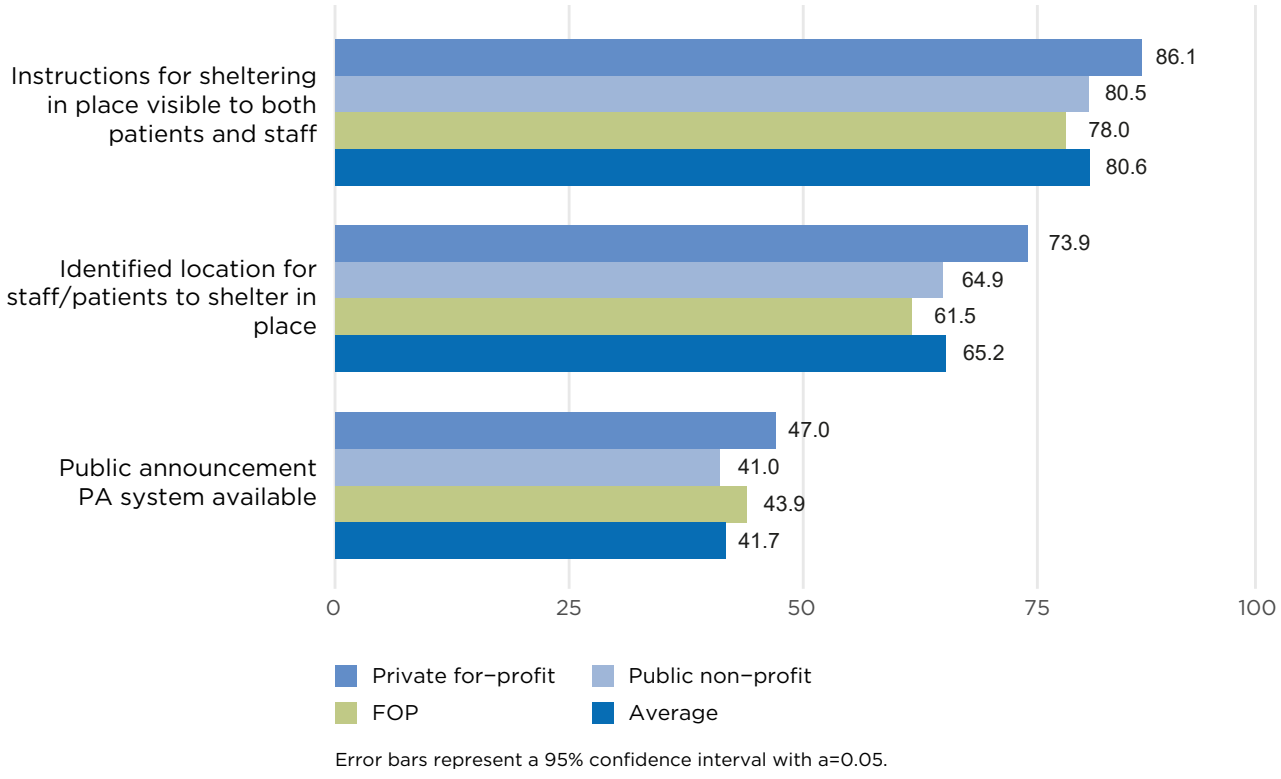


Note: Error bars represent a 95 percent confidence interval with α = 0.05. The sample size is 378.

3.2.5. Policies and protocols

The successful operation of a facility relies on adherence to operational and process guidelines, including safety and human resource protocols—and high-quality clinical care aligned with international and local clinical guidelines for patient examination/consultation, diagnosis, and treatment. Across the country, an average of 98.5 percent (CI: 94.9–99.6) of health facilities had any infection prevention and control (IPC) guidelines (not shown). No statistically significant differences were observed by facility type, ownership, and location. While the appropriate implementation of, and adherence to, guidelines can be difficult to measure, adherence can be facilitated by ensuring that the guidelines are easily available for staff to reference. This section includes information on the physical verification of the presence of key guidelines on operations, processes, and clinical practice in such areas as infection, prevention and control (IPC), waste management, emergency preparedness, human resources, and diagnosis and treatment of high-priority conditions. Across the country, an average of 98.5 percent (CI: 94.9–99.6) of health facilities had up-to-date IPC guidelines. Overall, 80.6 percent of facilities (CI: 74.2–85.7) had instructions for sheltering in place visible to both patients and staff; 65.2 percent of facilities (CI: 57.4–72.2) had an identified location for staff/patients to shelter in place; and 41.7 percent of facilities (CI: 34.0–49.8) had public announcement (PA) systems available (Figure 25).

FIGURE 25. Facilities with infrastructure and processes to guide patients and staff during emergencies, by facility type (%)



Note: Error bars represent a 95 percent confidence interval with α = 0.05. The sample size is 378.

Standard operating procedures

Four in five facilities (80.6 percent) reported having a verified standard operating procedure (SOP) (Table 27) for collecting specimens and handling samples; less than 87.1 percent had SOPs for analyzing and interpreting laboratory tests. However, fewer facilities reported having guidance related to specimen storage (70.9 percent), specimen transportation (73.7 percent), internal quality control for specimen collection (74.2 percent), or external quality assessment of laboratory tests (62.8 percent). Private facilities (6.2 percent) were significantly less likely to have an SOP for test analysis and interpretation than public facilities (89.3 percent). The availability of SOPs was not universal; non-intravenous medicine administration (92.0 percent) was the highest, and venous blood sampling (73.5 percent) was the lowest. Public facilities (91.5 percent) were 15 percent more likely to have an SOP related to techniques for IV medicine administration than private facilities (79.3 percent). SOPs for the operation and maintenance of vaccine refrigerators and freezers were common (90.6 percent), but only 83.2 percent of facilities had an SOP for the operation of respiratory medical devices, such as nebulizers or oxygen concentrators.

TABLE 27. Facilities with verified standard operating procedure (SOP) documents, by facility type, ownership, and location (%)

SOP name	Ukraine	Rural	Urban	FOP	Public	Private for-profit	Private	Public
Collection of specimens and samples	80.6 (74.0–85.9)	77.6 (65.9–86.0)	84.4 (78.7–88.8)	65.5 (52.0–77.0)	82.7 (74.7–88.5)	78.9 (64.9–88.4)	70.7 (60.8–78.9)	82.7 (74.7–88.5)
Transportation of specimens and samples	73.7 (66.4–79.9)	70.7 (58.5–80.5)	77.5 (70.0–83.5)	57.0 (43.5–69.5)	75.8 (67.2–82.8)	74.1 (59.5–84.8)	63.5 (53.4–72.5)	75.8 (67.2–82.8)
Test analysis/interpretation guidelines (e.g., glucose, cholesterol, troponin, hepatitis, HIV)	87.1 (82.1–90.8)	86.9 (78.3–92.4)	87.3 (81.9–91.3)	79.9 (68.2–88.0)	89.3 (83.4–93.3)	70.3 (55.0–82.0)	76.2 (67.3–83.3)	89.3 (83.4–93.3)
Internal quality control for specimen collection	74.2 (67.2–80.1)	72.4 (60.8–81.6)	76.5 (68.9–82.7)	58.1 (44.6–70.5)	76.5 (68.2–83.2)	71.2 (56.2–82.7)	63.1 (53.0–72.2)	76.5 (68.2–83.2)
External quality assessment of laboratory tests	62.8 (54.9–70.1)	60.0 (47.2–71.6)	66.3 (58.0–73.7)	54.3 (40.9–67.1)	64.3 (55.0–72.7)	57.8 (42.0–72.1)	55.6 (45.4–65.4)	64.3 (55.0–72.7)
Venous blood sampling	73.5 (66.4–79.5)	68.5 (56.5–78.5)	79.6 (72.7–85.1)	64.4 (51.5–75.5)	74.4 (66.0–81.3)	76.3 (61.5–86.6)	68.9 (59.4–77.1)	74.4 (66.0–81.3)
Capillary blood sampling	82.5 (76.7–87.1)	80.0 (70.0–87.3)	85.6 (79.8–89.9)	72.8 (60.3–82.5)	84.4 (77.5–89.4)	74.4 (59.8–85.0)	73.4 (64.2–80.9)	84.4 (77.5–89.4)
Techniques for IV medicine administration	89.4 (84.8–92.7)	89.3 (81.1–94.2)	89.5 (84.8–92.8)	75.8 (63.6–84.9)	91.5 (85.9–95.0)	84.9 (71.6–92.6)	79.3 (70.6–85.9)	91.5 (85.9–95.0)
Techniques for non-intervenus administration (e.g., intramuscular, subcutaneous, intradermal)	92.0 (87.8–94.8)	90.8 (83.0–95.2)	93.5 (90.1–95.8)	87.1 (78.0–92.8)	93.0 (87.9–96.1)	86.5 (73.3–93.7)	86.9 (79.9–91.7)	93.0 (87.9–96.1)
Operation and maintenance of refrigerator/freezer for vaccines	90.6 (86.0–93.8)	87.9 (79.4–93.2)	93.8 (90.5–96.1)	89.6 (80.9–94.7)	91.2 (85.6–94.8)	83.9 (69.9–92.1)	87.4 (80.4–92.2)	91.2 (85.6–94.8)
Operation of respiratory medical devices (e.g., nebulizer, oxygen concentrator)	83.2 (77.0–88.0)	81.6 (71.0–88.9)	85.3 (78.7–90.1)	74.5 (62.7–83.6)	84.2 (76.7–89.6)	85.2 (72.3–92.7)	78.6 (70.2–85.1)	84.2 (76.7–89.6)

Note: The sample size is 378.

Nearly four in five facilities (77.5 percent) had at least one visually verified clinical pathway document; the median was 12 (IQR:6-33) as shown in Table 28. This was higher than the facilities with an SOP for the use of national (65.5 percent) or international (53.9 percent) resources and the facilities with an SOP for national or international clinical resource use (73.8 percent).

TABLE 28. Facilities with verified clinical pathways and clinical resource guidelines, by facility type, ownership, and location (%)

Type	Facilities with SOP for the use of national resources to guide provider service provision (%)	Facilities with SOP for use of international resources to guide provider service provision (%)	Facilities with SOP for national or international clinical resource use (%)	Facilities with any verified clinical pathways document (%)	Median number of verified clinical pathways documents (n = 288)
Facility Type					
FOP	68.5 (55.9–78.9)	59.4 (45.9–71.6)	75.7 (63.5–84.8)	78.2 (65.3–87.2)	15.0 [5.0–35.0]
Public	64.4 (55.0–72.7)	52.9 (42.6–63.0)	73.2 (64.5–80.3)	77.5 (69.4–83.9)	11.0 [6.0–33.0]
Private for-profit	75.5 (61.7–85.5)	57.0 (41.3–71.5)	78.6 (65.4–87.7)	76.3 (61.7–86.5)	15.0 [10.0–35.0]
Ownership					
Private	71.2 (62.0–78.9)	58.5 (48.3–68.0)	76.8 (68.1–83.7)	77.5 (68.2–84.6)	15.0 [5.0–35.0]
Public	64.4 (55.0–72.7)	52.9 (42.6–63.0)	73.2 (64.5–80.3)	77.5 (69.4–83.9)	11.0 [6.0–33.0]
Location					
Rural	65.2 (53.2–75.5)	51.7 (38.1–65.1)	73.1 (62.1–81.7)	73.9 (62.7–82.7)	10.0 [5.0–17.0]
Urban	66.0 (56.1–74.7)	56.5 (47.1–65.5)	74.7 (64.9–82.5)	81.9 (74.3–87.6)	17.0 [9.0–44.0]
Ukraine	**65.5 (57.7–72.6)**	**53.9 (45.1–62.4)**	**73.8 (66.6–79.9)**	**77.5 (70.8–83.0)**	**12.0 [6.0–33.0]**

Note: Values in paratheses represent the 95 percent confidence interval; values in brackets represent the 25th and 75th percentiles. The sample size is 378.

There are many guidelines, whether national or international, to guide the provision of primary health care. In the aggregate (Table 29), 84.6 percent of providers reported that they used at least one national guideline, and 34.9 percent reported that they used at least one international guideline. One in three providers (33.8 percent) reported using both national and international guidelines, while one in seven providers (14.3 percent) used no guidelines. Where facilities had SOPs, providers were 15 percent more likely to use clinical guidelines (88.4 percent) than providers in facilities without SOPs (76.4 percent).

TABLE 29. Providers using national and international clinical resources, by facility type, ownership, location, and provider type (%)

Type	Does not use any guideline	Uses at least one international guideline	Uses at least one national guideline	Uses at least one national and one international guideline
Facility Type				
FOP	16.7 (10.8–22.7)	1.5 (0.3–2.7)	35.0 (27.2–42.8)	46.8 (36.5–57.1)
Public	14.3 (7.1–21.6)	0.9 (0.0–2.1)	52.1 (43.9–60.3)	32.7 (27.4–38.0)
Private for-profit	12.4 (8.2–16.6)	4.0 (0.0–9.2)	43.1 (31.8–54.4)	40.4 (28.5–52.3)
Ownership				
Private	14.3 (10.8–17.9)	2.9 (0.0–5.8)	39.5 (32.4–46.7)	43.3 (35.2–51.3)
Public	14.3 (7.1–21.6)	0.9 (0.0–2.1)	52.1 (43.9–60.3)	32.7 (27.4–38.0)
Location				
Rural	22.0 (2.4–41.7)	0.2 (0.0–0.4)	42.6 (34.6–50.5)	35.3 (27.0–43.5)
Urban	11.0 (7.1–14.9)	1.5 (0.0–3.1)	54.3 (44.3–64.3)	33.2 (27.3–39.1)
Provider type				
Doctor	9.9 (3.8–15.9)	0.4 (0.1–0.6)	44.7 (37.2–52.1)	45.1 (38.8–51.4)
Nurse	17.9 (10.3–25.4)	1.7 (0.0–3.7)	55.6 (47.1–64.2)	24.8 (19.1–30.5)
Ukraine	**14.3 (7.8–20.9)**	**1.1 (0.0–2.2)**	**50.8 (43.4–58.2)**	**33.8 (29.0–38.6)**

Note: The sample size is 1,547.

Table 30 shows the top 3 international guidelines that providers reported using most often, with details by provider type. Among all providers, the most used guideline was the American Academy of Family Physicians (28.0 percent), followed by the Finnish Medical Society Duodecim (26.2 percent), and "Up To Date" (24.4 percent). This pattern remained largely consistent by provider type (doctor and nurse).

TABLE 30. Top 3 most used international guidelines, by provider type (%)

All providers (N = 659)	Doctor (N = 475)	Nurse (N = 184)
American Academy of Family Physicians (28.0%)	Finnish Medical Society Duodecim (31.5%)	No specific guideline named (31.4%)
Finnish Medical Society Duodecim (26.2%)	Up To Date (30.6%)	American Academy of Family Physicians (30.3%)
Up To Date (24.4%)	American Academy of Family Physicians (26.3%)	Finnish Medical Society Duodecim (18.9%)

Note: If providers could not name a specific international guideline, their response was coded as "No specific guideline named." The sample size is 95.

The SDI survey assessed elements along the supply chain, from the use of formal orders or requisitions for medicine and medical supply inventory (indenting"), the presence of protocols and guidelines for regular and emergency indenting, and the duration of both types of indenting (Table 31). Most facilities reported that they have all 3 of the measured inventory quality inspection components (84.8 percent) and that they indent medicine and medical supply inventory (91.2 percent). However, only two facilities in five (40.8 percent) reported that they have an emergency indenting protocol. The median length between indent and receipt of medicines or supplies was 2 weeks for normal indents and less than 1 week (that is, 0 weeks) for emergency indents, reflecting the general responsiveness of the system in addressing the emergency supply needs of facilities. The resilience of the supply system is reflected in the finding that only one in nine facilities (11.1 percent) reported any delays in medicine or medical supply delivery since the invasion.

TABLE 31. Guidelines and processes for facility supply chain management, by facility type, ownership, and location

Type	Facilities reporting all measured inventory quality inspection components* (%)	Facilities that indent medicine and medical supply inventory (%)	Facilities with an emergency indenting protocol (%)	Median length (in weeks) between indent and receipt of medicines (N = 330)	Median length (in weeks) between emergency indent and receipt of supplies (n = 128)	Facilities reporting delays in medicine/ supply delivery since February 24, 2022 (%)
Facility Type						
FOP	74.3 (61.3–84.1)	72.0 (59.3–82.0)	31.7 (21.0–44.6)	2.0 [1.0–4.5]	0.0 [0.0–1.0]	12.2 (6.6–21.4)
Public	86.4 (80.0–91.0)	93.9 (87.7–97.1)	42.5 (33.2–52.4)	2.0 [1.0–4.5]	0.0 [0.0–1.0]	10.2 (6.6–15.6)
Private for-profit	81.5 (67.9–90.2)	87.9 (73.8–94.9)	34.7 (19.8–53.4)	1.0 [1.0–4.5]	0.0 [0.0–0.0]	20.6 (11.5–34.1)
Ownership						
Private	77.1 (67.8–84.3)	78.1 (69.0–85.1)	32.8 (23.7–43.4)	2.0 [1.0–4.5]	0.0 [0.0–1.0]	15.4 (10.2–22.6)

Type	Facilities reporting all measured inventory quality inspection components* (%)	Facilities that indent medicine and medical supply inventory (%)	Facilities with an emergency indenting protocol (%)	Median length (in weeks) between indent and receipt of medicines (N = 330)	Median length (in weeks) between emergency indent and receipt of supplies (n = 128)	Facilities reporting delays in medicine/ supply delivery since February 24, 2022 (%)
Public	86.4 (80.0–91.0)	93.9 (87.7–97.1)	42.5 (33.2–52.4)	2.0 [1.0–4.5]	0.0 [0.0–1.0]	10.2 (6.6–15.6)
Location						
Rural	84.7 (76.0–90.6)	92.0 (82.8–96.5)	41.1 (29.3–54.0)	2.0 [1.0–4.5]	0.0 [0.0–1.0]	8.8 (4.7–16.1)
Urban	84.9 (77.8–90.1)	90.1 (85.7–93.3)	40.5 (31.4–50.4)	2.0 [1.0–4.5]	0.0 [0.0–1.0]	13.9 (9.5–19.9)
Ukraine	84.8 (79.4–89.0)	91.2 (86.4–94.4)	40.8 (33.0–49.2)	2.0 [1.0–4.5]	0.0 [0.0–1.0]	11.1 (7.8–15.6)

Note: Values in paratheses represent the 95 percent confidence interval; values in brackets represent the 25th and 75th percentiles. The sample size is 378.

**This represents facilities that have a (1) quality inspection protocol, (2) a "first-expired, first-out" protocol, and (3) physically separate and dispose of damaged/expired inventory.*

3.3. TOOLS

3.3.1 Information systems

TThe use of information systems to record and manage relevant data is essential for making data-driven decisions, whether for tracking patient history or for managing the supply of medical items. Such facility-level data, when aggregated at a macro level, provide important insights into the health system in the country, including about the country's current disease burden. Overall, 96.7 percent (CI: 92.4–98.6) of health facilities had an available e-MIS, and 93.1 percent (CI: 87.2–96.4) had a functional e-MIS on the day of the survey. In facilities with an e-MIS system, training of at least 1 provider in its use was universal (99.98 percent of facilities). The availability of e-MIS systems, their functionality, and related training of providers did not vary across survey strata (not shown). The availability of information on facilities supplies depends on the presence and functionality of a logistics information management system (LMIS) to aggregate, analyze, validate, and display data that may be used to manage facility supplies (Table 32). Half of the facilities (53.6 percent) used a hybrid (mix of digital and paper formats) format for their LMIS, but nearly one-third of facilities (31.7 percent) did not have an LMIS system.

TABLE 32. Availability and format of LMIS in health facilities, by facility type, ownership, and location (%)

Type	No LMIS System	Electronic	Paper-based	Hybrid
Facility Type				
FOP	47.9 (32.1–63.7)	16.4 (2.1–30.6)	2.1 (0.0–4.8)	33.6 (23.2–44.1)
Public	29.2 (21.2–37.1)	7.2 (2.8–11.7)	6.0 (1.6–10.5)	57.5 (42.8–72.3)
Private for-profit	37.5 (21.7–53.3)	21.4 (1.3–41.5)	4.7 (0.0–10.2)	36.3 (22.2–50.5)
Ownership				
Public	29.2 (21.2–37.1)	7.2 (2.8–11.7)	6.0 (1.6–10.5)	57.5 (42.8–72.3)
Private	43.9 (32.5–55.4)	18.3 (6.6–30.0)	3.1 (0.4–5.8)	34.7 (26.3–43.1)
Location				
Rural	25.8 (17.1–34.6)	5.3 (0.0–10.9)	8.4 (1.9–14.9)	60.4 (39.7–81.2)
Urban	39.0 (28.1–49.9)	13.9 (7.7–20.1)	2.0 (0.1–3.9)	45.1 (35.3–55.0)
Ukraine	**31.7 (24.9–38.6)**	**9.1 (5.0–13.3)**	**5.5 (1.8–9.2)**	**53.6 (41.3–65.9)**

Note: The sample size is 378.

Humanitarian organizations provide support to the provision of care, including through medicines and medicinal supplies (Table 33). On average, 71.7 percent of health facilities reported receiving donations from humanitarian organizations. Public facilities had a significantly higher percentage reporting donations (81.0 percent) than FOPs (20.6 percent) or private for-profit facilities (38.1 percent). Similarly, rural facilities (81.3 percent) showed higher support levels than urban facilities (59.9 percent). Among facilities that reported receiving donations from humanitarian organizations, the most common accounting method across facilities was paper-based (61.6 percent), followed by the MedData e-system (51.1 percent). A small proportion (15.7 percent) used other electronic systems; only 2.7 percent reported using no accounting system. Although the MedData system is recommended by the Ministry of Health for the accounting of humanitarian contributions, there was no difference in the actual reporting by public and private facilities. Rural facilities (71.7 percent) were significantly more likely to use paper-based accounting than urban ones (44.7 percent).

TABLE 33. Medicines and medical supplies provided by humanitarian organizations, by facility type, ownership, and location (%)type, ownership, and location (%)

Type	Facilities reporting donations from humanitarian organizations (%) (N = 378)	Accounting system: MedData e-system (%)	Accounting system: Other electronic system (%)	Accounting system: Paper-based system (%)	Accounting system: No accounting system (%)
Facility Type					
FOP	20.6 (13.0–31.1)	41.6 (21.5–64.9)	11.8 (3.5–33.5)	52.3 (29.7–73.9)	7.7 (1.6–30.7)
Public	81.0 (73.2–87.0)	51.0 (39.6–62.4)	16.2 (10.1–24.8)	63.0 (52.4–72.4)	2.6 (0.9–7.2)
Private for-profit	38.1 (23.0–56.0)	62.3 (33.9–84.2)	5.0 (0.9–23.3)	33.5 (13.7–61.7)	0.0 (0.0–0.0)
Ownership					
Private	27.3 (19.2–37.2)	52.7 (33.8–70.8)	8.2 (3.1–20.0)	42.3 (25.4–61.1)	3.6 (0.8–15.2)
Public	81.0 (73.2–87.0)	51.0 (39.6–62.4)	16.2 (10.1–24.8)	63.0 (52.4–72.4)	2.6 (0.9–7.2)
Location					
Rural	81.3 (71.5–88.3)	45.5 (29.9–62.1)	12.8 (6.3–24.4)	71.7 (58.6–81.9)	2.3 (0.5–9.6)
Urban	59.9 (51.5–67.8)	60.5 (48.1–71.7)	20.4 (11.9–32.7)	44.7 (32.8–57.3)	3.3 (1.0–10.4)
Ukraine	**71.7 (65.0–77.6)**	**51.1 (40.4–61.8)**	**15.7 (10.0–23.7)**	**61.6 (51.6–70.7)**	**2.7 (1.0–6.8)**

Note: Values in paratheses represent the 95 percent confidence interval. The sample size is 209 unless otherwise indicated.

3.3.2 Medical equipment and supplies

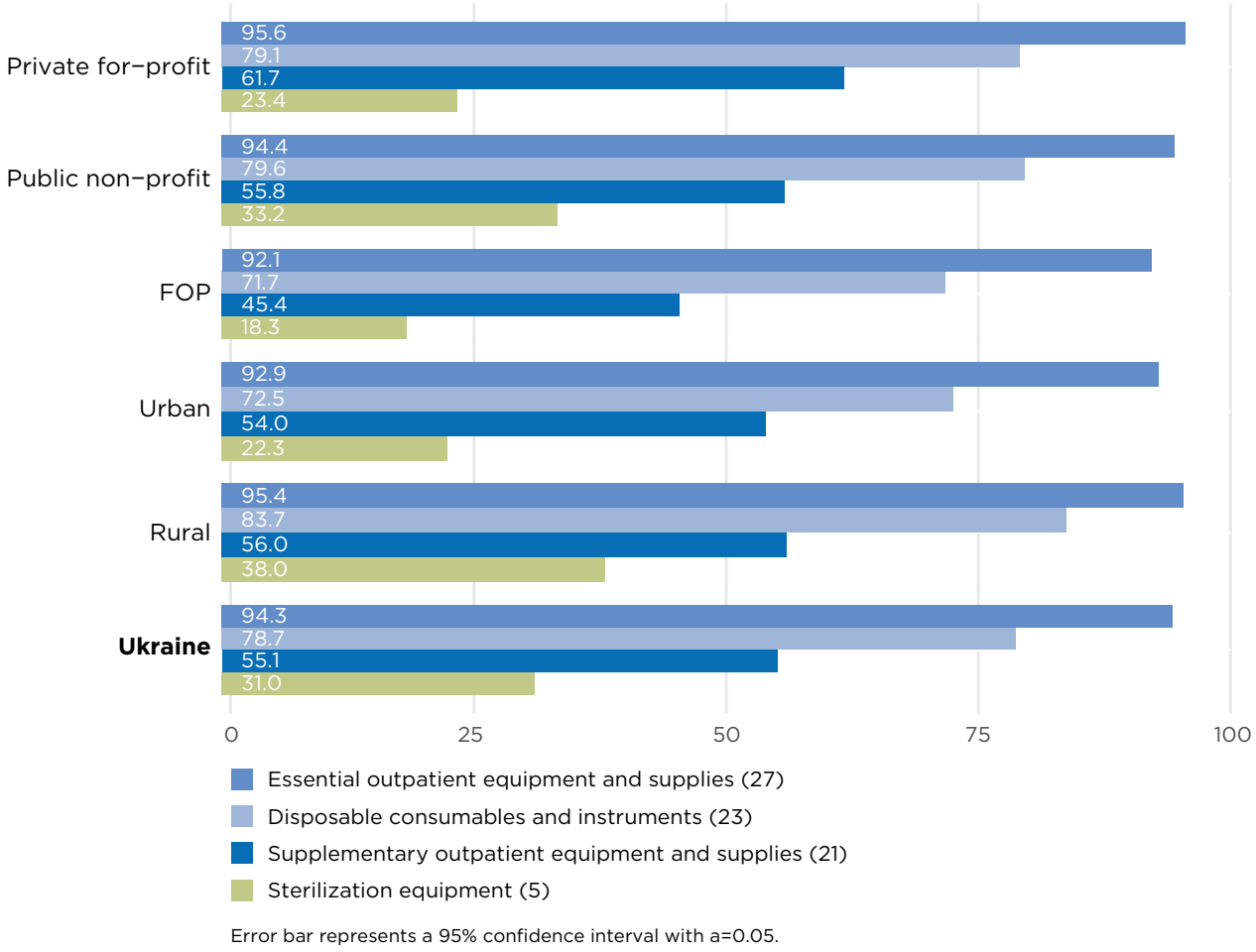
This component covers the availability of functional essential medical equipment and supplies required for primary care services. Shortages of equipment or supplies can impact patient trust and continuity of care. In this section, the indicators reflect the presence of at least one item. The results, which are not meant to capture the entire volume of medical equipment and supplies, cover four broad categories (Figure 26): (1) essential outpatient equipment and supplies (27 items); (2) supplementary outpatient equipment and supplies (21 items); (3) disposable consumables and instruments (23 items); and sterilization equipment (5 items).[34] Annex table A.2 provides further details on the specific items included in each category, as well as the availability of specific items.

Across the country, facilities had most of the 27 measured essential outpatient equipment and supplies (94.3 percent; CI: 93.1–95.4) and approximately 78.7 percent of the measured disposable consumables

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and instruments (CI: 76.1–81.3). Facilities had slightly more than one-half of the measured supplementary outpatient equipment and supplies (55.1 percent; CI: 52.2–57.9) and less than one-third of the measured sterilization items (31.0 percent; CI: 26.7–35.3), on average. Statistically significant differences were observed by facility type; FOPs had a significantly lower proportion of measured supplementary outpatient supplies (45.4 percent; CI: 41.2–49.6) compared to private for-profit (61.7 percent; CI: 56.5–66.8) or public facilities (55.8 percent; CI: 52.4–59.2). The proportion of sterilization items was also significantly lower in FOPs (18.3 percent; CI: 12.4–24.2) than average, and it was lower in urban (22.3 percent; CI: 16.1–28.5) compared to rural (38.0 percent; CI: 32.2–43.8) facilities.

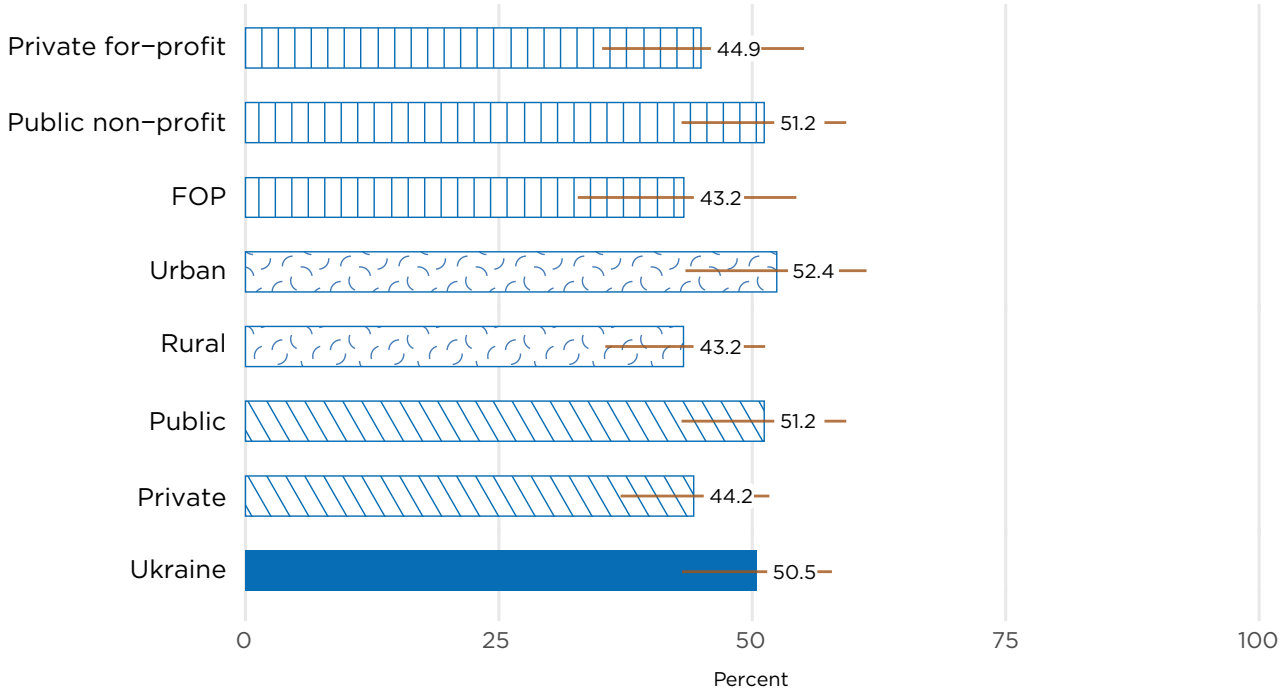
FIGURE 26. Available and functional equipment, by facility type, location, and equipment category (%)



Note: Error bars represent a 95 percent confidence interval with α = 0.05. The sample size is 378.

From the patient perspective, Figure 27 shows the proportion of patients who received all the recommended tests among those who were recommended tests by their providers on the day of the survey. Across the country, approximately one-half (50.5 percent; CI: 43.1–57.9) of patients received all tests recommended by their providers on the day of the survey.

FIGURE 27. Patients who received all tests recommended by their providers on day of survey, by facility type, ownership, and location (%)



Note: Error bars represent the 95 percent confidence with α = 0.05. The sample size is 1,057.

3.3.3 Medicines

This section covers the availability of the essential medicines and vaccines required for primary care service delivery at PHC facilities. As in the previous section, the data in this section are not intended to capture the exact volume of supply but rather the presence of at least one item; the availability of 19 essential medicines and 10 essential vaccines was assessed through direct observation (Table 34). A medicine or vaccine was deemed "available" if at least one unexpired dose was present at the facility on the day of the survey. Annex table A.3 provides detailed information about the measured medications and vaccines, including the availability of each specific medicine and vaccine. Only 38.6 percent of facilities had at least one dose of all required medicines; only 6.5 percent had at least one dose of each measured vaccine. Facilities generally had a high proportion of required medicines available (88.7 percent); however, the proportion of measured vaccines available was significantly lower (63.5 percent). Medicines that were least often in stock were Amiodarone (62.3 percent;), Epinephrine (76.0 percent), Heparin (64.6 percent), and Propranolol (75.2 percent). The availability of vaccines for influenza (19.8 percent); COVID-19 (47.3 percent); BCG (28.6 percent); and a multicomponent vaccine for polio, diphtheria, pertussis, hepatitis B, tetanus, and *Haemophilus influenzae* type b (Hib) (43.4 percent) were the lowest among the 10 assessed vaccines.

TABLE 34. Availability of unexpired medicine and vaccines, by facility type and location (%)

Type	All medicines available (%)	Oral medicines available (%)	All vaccines available (%)	Vaccines available (%)
Facility Type				
FOP	42.4 (30.2–55.6)	87.8 (82.8–91.5)	8.4 (4.4–15.5)	54.1 (45.6–62.4)
Public	37.5 (28.8–47.1)	88.7 (85.9–90.9)	6.4 (3.7–10.8)	64.2 (59.7–68.5)
Private for-profit	46.2 (31.0–62.2)	91.0 (86.0–94.3)	5.9 (1.3–22.5)	69.5 (61.8–76.2)
Ownership				
Private	43.9 (34.2–54.0)	89.0 (85.6–91.7)	7.5 (4.0–13.5)	60.0 (53.5–66.1)
Public	37.5 (28.8–47.1)	88.7 (85.9–90.9)	6.4 (3.7–10.8)	64.2 (59.7–68.5)
Location				
Rural	38.8 (27.4–51.5)	90.7 (88.2–92.6)	5.9 (2.9–11.8)	61.3 (55.2–67.0)
Urban	38.4 (30.0–47.6)	86.3 (82.0–89.8)	7.3 (4.2–12.6)	66.2 (61.6–70.6)
Ukraine	**38.6 (31.1–46.7)**	**88.7 (86.4–90.7)**	**6.5 (4.2–10.2)**	**63.5 (59.6–67.2)**

Note: Values in paratheses represent the 95 percent confidence interval. The sample size is 378.

On the day of the survey, 66.9 percent (CI: 55.0–77.0) of patients received their prescription (not shown). These were primarily paper prescriptions (44.0 percent), followed by electronic prescriptions (35.9 percent). Patients least often reported receiving a mix of paper and electronic prescription formats (20.1 percent; Table 35).

TABLE 35. Format of prescriptions received by patients the day of the survey, by facility type, ownership, and location (%)

Type	Electronic	Paper	Paper and electronic
Facility Type			
FOP	29.8 (21.3–38.3)	47.3 (29.7–65.0)	22.9 (15.5–30.2)
Public	36.4 (28.3–44.5)	44.1 (33.6–54.6)	19.5 (14.3–24.8)
Private for-profit	34.3 (21.0–47.5)	40.0 (17.7–62.4)	25.7 (15.5–35.9)
Ownership			
Public	36.4 (28.3–44.5)	44.1 (33.6–54.6)	19.5 (14.3–24.8)

Type	Electronic	Paper	Paper and electronic
Private	32.1 (24.1–40.1)	43.6 (29.3–57.9)	24.3 (18.0–30.7)
Location			
Rural	32.1 (24.0–40.2)	47.7 (35.9–59.4)	20.2 (13.0–27.4)
Urban	37.1 (27.9–46.3)	42.8 (30.9–54.7)	20.1 (14.3–25.9)
Ukraine	**35.9 (28.7–43.1)**	**44.0 (34.6–53.4)**	**20.1 (15.4–24.8)**

Note: The sample size is 1,238.

3.4. WORKFORCE

This component captures the available human resources at surveyed health facilities. Key indicators in this section include the following: the number of staff of different cadres, the number of staff providing only outpatient care or both outpatient and inpatient care, and the number of administrative/support staff. This section outlines information on provider absences from the facility (for authorized or unauthorized reasons), as well as information on the number of facilities with at least one provider offering specific services.

3.4.1 Availability

Health care providers are health professional staff who are licensed to provide diagnostic or therapeutic services to patients. These include doctors and nurses but exclude pharmacists and technicians. Both regular and contract staff are included. Clinical support staff include technicians. Administrative support staff are administrative and clerical staff who coordinate and facilitate patient care; this category includes receptionists, record keepers, drivers, and janitorial and maintenance staff. The median total number of staff at facilities was 7 (IQR: 5.0–14.0): 5 health care providers (IQR: 3.0–12.0), 1 clinical support staff member (IQR: 0.0–2.0), and 1 administrative support staff member (IQR: 0.0–2.0). There was a median of 2.3 health care providers (IQR: 1.6–3.4) and 3.1 total staff (IQR: 2.3–4.5) per 1,000 individuals served (Table 36).

TABLE 36. Median number of staff, by staff type, facility type, ownership, and location (%)

Type	Healthcare providers (N = 378)	Clinical support staff (N = 375)	Administrative support staff (N = 372)	Total staff (N = 373)	Healthcare providers per 1,000 population (N = 378)	Total staff per 1000 population (N = 373)
Facility Type						
FOP	3.0 [2.0–4.0]	0.0 [0.0–0.0]	0.0 [0.0–1.0]	3.0 [2.0–5.0]	2.0 [1.3–3.5]	2.2 [1.4–3.8]
Public	6.0 [4.0–12.0]	1.0 [0.0–2.0]	1.0 [1.0–3.0]	8.0 [5.0–17.0]	2.2 [1.7–3.3]	3.1 [2.4–4.5]

Type	Healthcare providers (N = 378)	Clinical support staff (N = 375)	Administrative support staff (N = 372)	Total staff (N = 373)	Healthcare providers per 1,000 population (N = 378)	Total staff per 1000 population (N = 373)
Private for-profit	8.0 [5.0–13.0]	1.0 [1.0–3.0]	2.0 [1.0–3.0]	12.0 [8.0–22.0]	3.2 [2.1–4.6]	4.6 [2.9–8.8]
Ownership						
Private	4.0 [2.0–8.0]	0.0 [0.0–1.0]	0.0 [0.0–2.0]	5.0 [3.0–11.0]	2.3 [1.4–3.9]	3.1 [1.7–5.6]
Public	6.0 [4.0–12.0]	1.0 [0.0–2.0]	1.0 [1.0–3.0]	8.0 [5.0–17.0]	2.2 [1.7–3.3]	3.1 [2.4–4.5]
Location						
Rural	5.0 [3.0–6.0]	1.0 [0.0–2.0]	1.0 [1.0–2.0]	5.0 [5.0–8.0]	2.5 [1.7–4.0]	3.7 [2.7–5.1]
Urban	12.0 [5.0–19.0]	1.0 [0.0–3.0]	2.0 [0.0–3.0]	14.0 [7.0–26.0]	2.1 [1.4–2.9]	2.6 [1.8–3.5]
Ukraine	**5.0 [3.0–12.0]**	**1.0 [0.0–2.0]**	**1.0 [0.0–2.0]**	**7.0 [5.0–14.0]**	**2.3 [1.6–3.4]**	**3.1 [2.3–4.5]**

Note: Values in brackets represent the 25th and 75th percentile values.

The survey allows for disaggregation by the provider cadre types (Table 37). The median number of doctors was 2.0 (IQR: 1.0–5.0), and the median number of nurses was 3.0 (IQR: 2.0–5.0). The median number of doctors was 2.5 times higher in urban facilities than in rural facilities; the median number of nurses was approximately 1.7 times larger in urban areas than in rural facilities. Further analysis (not shown) conducted to assess the median number of doctors and nurses in urban and rural public facilities revealed a stark gap within public facilities. Urban public facilities had a median of 7 doctors (IQR: 4.0–11.0) and 9 nurses (IQR: 5.0–12.0), while rural public facilities had a median of 2 doctors (1.0–2.0) and 3 nurses (2.0–3.0).

TABLE 37. Median number of doctors and nurses per facility, by facility type, ownership, and location

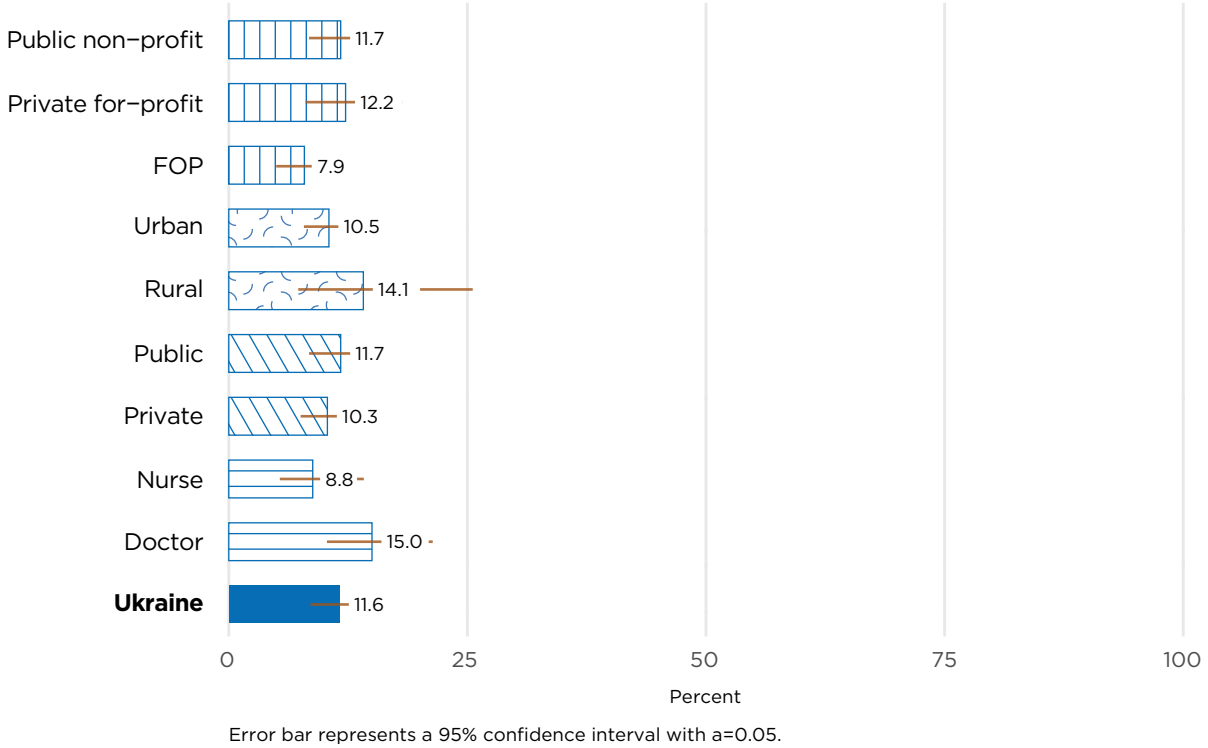
Type	Doctors	Nurses
Facility Type		
FOP	2.0 [1.0–3.0]	1.0 [1.0–2.0]
Public	2.0 [1.0–5.0]	3.0 [2.0–6.0]
Private for-profit	4.0 [3.0–6.0]	3.0 [2.0–4.0]
Ownership		
Private	3.0 [1.0–4.0]	2.0 [1.0–3.0]
Public	2.0 [1.0–5.0]	3.0 [2.0–6.0]

Type	Doctors	Nurses
Location		
Rural	2.0 [1.0–2.0]	3.0 [2.0–3.0]
Urban	5.0 [3.0–9.0]	5.0 [2.0–11.0]
Ukraine	**2.0** **[1.0–5.0]**	**3.0** **[2.0–5.0]**

Note: Values in brackets represent the 25th and 75th percentile values. The sample size is 378.

Absences from the facility were assessed based on an unannounced follow-up visit to facilities at a random interval of 2 to 7 days from the initial interview date (Figure 28). Providers could be absent from the facility due to authorized reasons, such as being off duty, on training, on call, or due to unauthorized reasons. Across the country, an average of 11.6 percent (CI: 8.6–15.5) of providers were absent on the day of the survey.

FIGURE 28. Provider absence rates, by facility type, location, ownership, and provider type (%)



Note: Error bars represent the 95 percent confidence with α = 0.05. The sample size is 576.

The top 5 provider absence reasons listed in Table 38 do not include providers being off shift, on call, or not scheduled to work in the facility that day to best highlight the reasons that doctors were absent on days of planned attendance in-facility. Overall, provider absence was largely authorized, with less than 1 percent being absent for unapproved reasons. Among all providers, the top 2 reasons for absence were maternity/paternity/family leave (37.8 percent) and planned/earned leave (37.7 percent).

TABLE 38. Top 5 reasons for absence from the facility on day of survey, by provider type (%)

All providers (N = 95)	Doctor (N = 67)	Nurse (N = 28)
Maternity/paternity/family leave (37.8%)	Maternity/paternity/family leave (51.0%)	Planned/earned leave (39.2%)
Planned/earned leave (37.7%)	Planned/earned leave (36.6%)	Medical leave (31.9%)
Medical leave (18.7%)	Medical leave (9.3%)	Maternity/paternity/family leave (19.3%)
Training/seminar/ meeting (3.2%)	Conducting patient home visits (2.1%)	Training/seminar/ meeting (7.7%)
Fired/resigned (1.3%)	Fired/resigned (0.8%)	Fired/resigned (2.0%)

Note: Providers marked absent due to having a scheduled day off or being on call were excluded. The sample size is 95.

3.4.2 Education and training

This component measures not only the preservice education level of providers at each facility but also the proportion of facilities with at least one provider trained in required and specialized services. This section presents the distribution of the educational attainment and training of health care providers. Table 39 shows that the median tenure for all providers in their current position was 18 years (IQR: 9.0–29.0), with a total clinical service median of 21 years (IQR: 11.0–32.0).

TABLE 39. Median years of experience, by provider cadre, facility type, ownership, and location

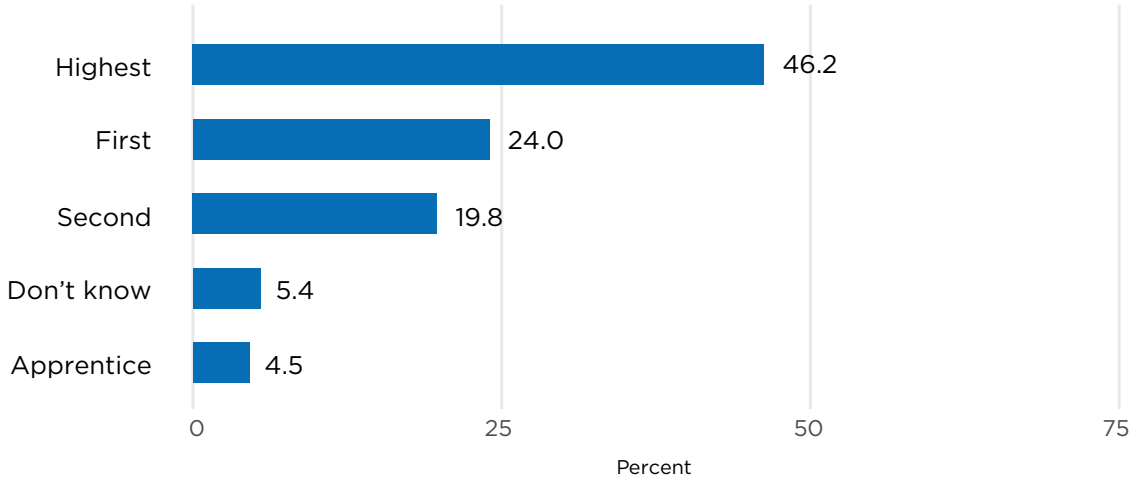
Type	Years in current position	Years in clinical service
Facility Type		
FOP	10.0 [4.0–20.0]	13.0 [6.0–24.0]
Public	19.0 [9.0–30.0]	22.0 [12.0–33.0]
Private for-profit	10.0 [5.0–20.0]	14.0 [7.0–23.0]
Ownership		
Private	10.0 [5.0–20.0]	14.0 [7.0–23.0]
Public	19.0 [9.0–30.0]	22.0 [12.0–33.0]
Location		
Rural	19.0 [9.0–26.0]	21.0 [14.0–33.0]
Urban	18.0 [8.0–30.0]	21.0 [11.0–32.0]
Provider type		
Doctor	12.0 [5.0–22.0]	17.0 [9.0–34.0]

Type	Years in current position	Years in clinical service
Nurse	21.0 [12.0–31.0]	23.0 [15.0–32.0]
Ukraine	**18.0 [9.0–29.0]**	**21.0 [11.0–32.0]**

Note: Values in brackets represent the 25th and 75th percentile values. The sample size is 1,547.

In Ukraine, doctors take examinations approximately every 5 years; these are used to renew or increase their professional grade. Accordingly, the professional grades largely align with tenure in clinical services; doctors who hold the "Highest" professional grade generally having the most tenure in clinical services, followed by those with "First," "Second," and finally "Apprentice" professional grades (Figure 29). Nearly one-half (46.2 percent) of PHC doctors held a "Highest" professional grade, followed by 24.0 percent at the "First" grade and 19.8 percent at the "Second" grade.

FIGURE 29. PHC Doctor professional grade (%)



Note: the sample size is 852.

Provider availability and level of education is a means to the objective of service delivery. Educational attainment as reported by providers was nearly universally in line with expectations for doctors and nurses; nearly all nurses (98.0 percent) reported completing at least grade 12 and earning a 2- to 3-year medical certification. Similarly, 99.1 percent of doctors attended 6 years of university and completed internships. The survey evaluated facilities on the availability of a trained provider to deliver a set of services during the October–December 2023 period (Table 40).[35] Disadvantaged groups are most affected with the following: (1) weak availability of SRH services (22.2 percent) and pregnancy (34.2 percent) care for women; (2) low availability of mental health services (53.5 percent) and supplemental mental health services (46.3 percent) for those in need; (3) services (37.6 percent) for disabled persons; and (4) infectious disease care (40.0 percent).

[35] Further details on the availability of trained providers for each specific service are included in Annex Table A.4.

TABLE 40. Services for which facilities have a trained health provider able to offer services (%), by service category, facility type, ownership, and location

Reason	Average	Rural	Urban	FOP	Public	Private for-profit	Private	Public
Administrative services (3)	49.9 (42.1–57.7)	49.5 (37.2–62.0)	50.4 (42.3–58.5)	46.5 (35.5–57.9)	49.8 (40.6–59.0)	57.0 (40.8–71.8)	50.5 (41.5–59.6)	49.8 (40.6–59.0)
Diagnostic/ examination services (6)	44.6 (38.0–51.4)	41.8 (31.5–52.9)	48.0 (42.1–53.9)	38.6 (30.8–47.1)	45.1 (37.2–53.1)	48.4 (35.0–62.1)	42.4 (35.3–49.8)	45.1 (37.2–53.1)
Disability services (2)	37.7 (31.0–45.0)	35.4 (25.4–47.0)	40.6 (33.0–48.6)	39.3 (27.0–53.1)	36.8 (29.0–45.3)	47.3 (32.3–62.8)	42.3 (32.8–52.5)	36.8 (29.0–45.3)
Emergency services (2)	57.0 (48.7–65.0)	56.5 (42.6–69.4)	57.7 (50.5–64.6)	52.7 (40.9–64.2)	57.9 (47.9–67.3)	53.8 (37.3–69.5)	53.1 (43.5–62.5)	57.9 (47.9–67.3)
Health education/ promotion services (6)	56.7 (50.2–62.9)	56.8 (46.8–66.3)	56.5 (48.7–64.0)	47.1 (35.2–59.4)	57.9 (50.2–65.2)	56.2 (40.0–71.2)	50.6 (41.0–60.1)	57.9 (50.2–65.2)
Infectious disease services (9)	40.0 (35.8–44.4)	37.8 (31.8–44.2)	42.7 (37.2–48.4)	32.2 (25.0–40.5)	40.1 (35.2–45.2)	50.9 (38.5–63.1)	39.3 (32.3–46.8)	40.1 (35.2–45.2)
Mental health services (11)	53.5 (48.8–58.1)	56.8 (50.5–62.9)	49.3 (42.5–56.2)	42.5 (35.1–50.2)	55.1 (49.6–60.5)	50.6 (37.0–64.1)	45.6 (38.8–52.5)	55.1 (49.6–60.5)
Mental health supplementary services (16)	46.3 (39.7–53.0)	46.3 (35.4–57.5)	46.4 (40.7–52.2)	36.9 (28.5–46.2)	47.0 (39.1–55.0)	53.7 (40.3–66.6)	43.3 (35.8–51.2)	47.0 (39.1–55.0)
Non-communicable disease services	61.1 (53.2–68.6)	59.7 (46.6–71.5)	62.9 (55.8–69.5)	58.2 (47.5–68.2)	61.3 (51.8–70.0)	64.3 (47.5–78.1)	60.5 (51.5–68.8)	61.3 (51.8–70.0)
Palliative care services (7)	54.9 (49.1–60.6)	55.9 (47.2–64.2)	53.7 (46.3–61.0)	37.7 (28.8–47.6)	56.7 (49.9–63.2)	60.4 (46.0–73.2)	46.4 (37.9–55.2)	56.7 (49.9–63.2)
Pediatric services (8)	61.1 (52.5–69.0)	60.6 (46.2–73.3)	61.8 (54.3–68.7)	49.7 (38.2–61.2)	62.0 (51.7–71.4)	68.0 (49.9–82.0)	56.7 (47.0–65.9)	62.0 (51.7–71.4)
Poisoning services (3)	39.1 (32.1–46.7)	41.1 (29.9–53.2)	36.7 (29.1–45.1)	26.2 (18.1–36.3)	40.6 (32.1–49.6)	41.4 (28.5–55.6)	32.0 (24.7–40.2)	40.6 (32.1–49.6)
Pregnancy services (9)	34.2 (28.5–40.5)	36.9 (27.2–47.8)	31.0 (26.1–36.3)	24.7 (18.3–32.5)	35.3 (28.4–42.9)	36.0 (25.9–47.5)	29.0 (23.5–35.3)	35.3 (28.4–42.9)
Sexual and reproductive health services (9)	22.2 (18.0–27.1)	23.4 (16.8–31.6)	20.8 (16.5–25.8)	13.0 (8.5–19.4)	23.2 (18.2–29.1)	24.5 (16.7–34.4)	17.4 (13.2–22.6)	23.2 (18.2–29.1)
Tuberculosis services (8)	37.1 (31.2–43.5)	35.9 (26.7–46.3)	38.6 (32.5–45.1)	24.7 (17.7–33.3)	38.7 (31.6–46.4)	37.2 (23.6–53.2	29.5 (22.2–37.9)	38.7 (31.6–46.4)
Vaccination services (20)	72.5 (63.2–80.3)	73.3 (56.1–85.5)	71.6 (65.3–77.1)	62.7 (52.1–72.3)	74.3 (62.6–83.3)	66.5 (49.4–80.2)	64.2 (55.2–72.3)	74.3 (62.6–83.3)

Note: Values in parentheses represent the 95 percent confidence interval. The sample size is 378.

Providers retain and expand their skills through in-service training; the SDI survey used January 2022 to December 2023 as the reference period with a primary focus on the NHSU Academy electronic platform (Table 41). Attendance for any training was relatively consistent; coverage rates for any given course were approximately 50–60 percent. The most attended course was "Treatment of common mental disorders in primary care using mhGAP guidelines"; 74.7 percent of facilities reported that they had at least 1 provider who attended this training.

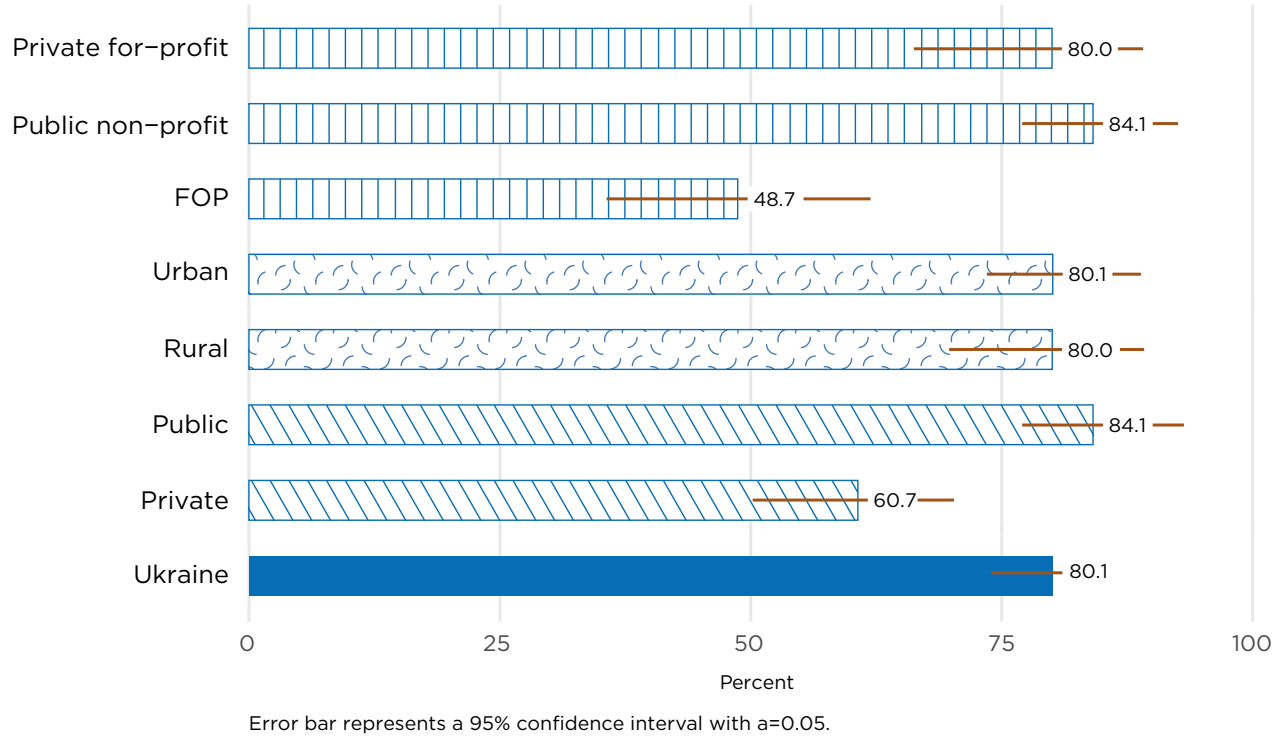
TABLE 41. Providers taking various in-service training courses through the NHSU academy e-platform, by training type (%)

Training category	Providers with no training	Providers trained through NHSU Academy e-platform	Providers trained through non-NHSU platforms
Integrated management of newborn and child illnesses (IMNCI)	49.6	42.3	8.1
Noncommunicable disease management using PEN protocol	41.5	47.4	11.1
Sexual and domestic violence	35.0	54.8	10.2
Adult infectious disease training	17.6	66.9	15.5
HIV	36.3	51.8	11.9
Tuberculosis	28.7	59.5	11.8
Basic life support or emergency first aid	21.8	49.6	28.6
Mental health	11.0	78.1	10.9

Note: The sample size is 378.

Facilities are offering training to staff focused on addressing invasion-related risks of harm to patients, providers, or support staff (Figure 30. Overall, 80.1 percent of facilities reported that they provided staff with training on invasion-related emergencies. This finding differed significantly by facility type. FOP facilities reported a lower prevalence of such training (48.7 percent; CI: 35.6–61.9) compared to private for-profit (80.0 percent; CI: 66.2–89.1) and public (84.1 percent; CI: 77.0–89.3) facilities. In general, this finding also meant that the prevalence of training on invasion-related emergencies was significantly lower in private facilities in aggregate (60.7 percent; CI: 50.2–89.3) than public facilities.

FIGURE 30. Facilities that provided staff with training on invasion-related emergencies, by facility type, ownership, and location (%)

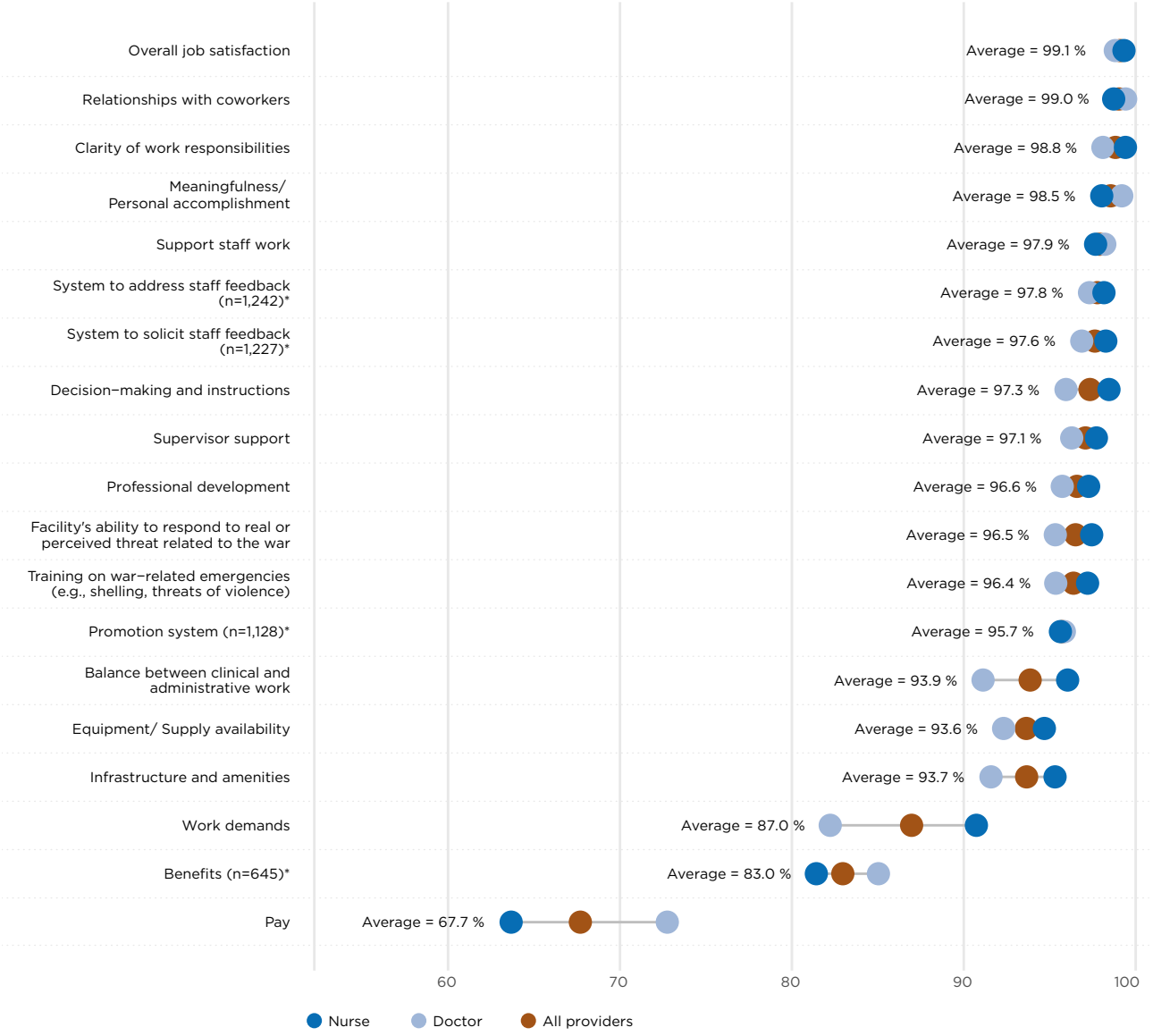


Note: Error bars represent a 95 percent confidence interval with α = 0.05. The sample size is 378.

3.4.3 Satisfaction and retention

To capture the self-reported job satisfaction of interviewed primary care providers, respondents were asked whether they strongly agreed, agreed, disagreed, or strongly disagreed with a series of positive statements (Figure 31). Provider satisfaction was high overall (99.1 percent; CI: 98.0–99.6), although satisfaction with work demands (87.0 percent; CI: 84.2–89.2), benefits (83.0 percent; CI: 77.4–87.4), and pay (67.7 percent; CI: 63.6–71.6) were significantly lower. Notably, doctors (82.2 percent; CI: 78.0–85.8) were significantly less satisfied than nurses (95.0 percent; CI: 87.0–93.5) regarding work demands.

FIGURE 31. Providers reporting being satisfied across different aspects of work (%)



Note: "All providers" points that are not visible in the figure are obscured by other points that have very similar values.
*Assessed among providers in facilities offering each item.

*Note: "All providers" points that are not visible in the figure are obscured by other points that have very similar values. *Assessed among providers in facilities offering each item. The sample size is 1,547 unless otherwise indicated.*

Job satisfaction is also related to being paid in full and on time (Table 42). During 2023, on average, 17.9 percent of providers experienced salary disbursement delays; only 4.2 percent of providers who experienced any delay cited invasion-related causes.

TABLE 42. Providers reporting delays in salary disbursement in 2023, by facility type, ownership, and location

Type	Any delay in salary disbursement (%)	Delay in salary disbursement due to invasion-related disruption (n = 319)
Facility Type		
FOP	25.3 (19.3–32.3)	5.8 (1.7–17.9)
Public	17.4 (13.2–22.6)	3.5 (1.3–9.3)
Private for-profit	19.0 (14.4–24.7)	12.6 (5.3–27.1)
Ownership		
Private	21.8 (18.1–26.0)	9.1 (4.6–17.0)
Public	17.4 (13.2–22.6)	3.5 (1.3–9.3)
Location		
Rural	23.5 (17.2–31.2)	3.7 (0.9–14.1)
Urban	15.4 (11.1–21.1)	4.5 (1.8–10.8)
Ukraine	**17.9 (14.0–22.4)**	**4.2 (1.9–8.8)**

Note: The sample size is 1,547 unless otherwise indicated.

Facilities may provide services to address the risk and prevalence of staff burnout (Table 43). On average, three in five facilities (60.9 percent) provided burnout services, and 66.8 percent of providers were aware of these services. However, only 23.7 percent of providers utilized burnout support. When providers did utilize burnout services, they attended a median of 2 times (IQR: 1.0–2.0) in 2023.

TABLE 43. Availability and use of services to address staff burnout, by facility type, ownership, and location

Type	Facilities providing any services to support staff burnout (%) (n = 378)	Providers who are aware of services to address staff burnout at facilities offering services (%) (n = 987)	Providers who report ever using services to address burnout, among those aware of services (%) (n = 793)	Median number of times providers report using burnout services between January–December 2023 (n = 245)
Facility Type				
FOP	61.6 (48.5–73.2)	79.9 (65.1–89.5)	40.0 (31.6–49.0)	1.0 [1.0–2.0]
Public	61.0 (51.3–69.9)	76.1 (68.6–82.3)	27.1 (19.4–36.4)	2.0 [1.0–2.0]
Private for-profit	58.6 (42.4–73.0)	74.9 (62.1–84.4)	32.2 (22.2–44.2)	2.0 [1.0–12.0]
Ownership				
Private	60.4 (50.3–69.7)	77.1 (67.6–84.5)	35.8 (29.0–43.2)	1.0 [1.0–5.0]
Public	61.0 (51.3–69.9)	76.1 (68.6–82.3)	27.1 (19.4–36.4)	2.0 [1.0–2.0]
Location				
Rural	58.8 (45.8–70.6)	74.7 (60.0–85.3)	35.3 (22.4–50.7)	2.0 [1.0–2.0]
Urban	63.5 (54.0–72.1)	76.9 (69.3–83.1)	24.9 (17.2–34.6)	2.0 [1.0–4.0]
Ukraine	**60.9 (52.7–68.5)**	**76.3 (69.5–81.9)**	**28.0 (20.9–36.3)**	**2.0 [1.0–2.0]**

Note: Values in parentheses represent the 95 percent confidence interval; values in brackets represent the 25th and 75th percentiles.

There is the potential for staff turnover in an environment with higher burnout and dissatisfaction risk. The survey looked at changes in staffing for the calendar year 2023 (Table 44). Overall, 37.9 percent of facilities reported any changes in the number of health care providers on staff in 2023. The changes were significantly more prevalent in private (58.9 percent) than in public (33.6 percent) facilities. The proportion of facilities reporting a change in the number of health care providers on staff was significantly higher in urban (58.0 percent) than in rural (21.7 percent) facilities.

TABLE 44. Change in number of health care providers, by facility type, ownership, and location in 2023

Type	Facilities reporting any change in the number of health care providers on staff (%) (n = 378)	Median net number of providers joining the facility between January–December 2023 (n = 186) *
Facility Type		
FOP	54.5 (41.1–67.2)	1.0 [1.0, 2.0]
Public	33.6 (26.0–42.1)	-1.0 [-1.0, 1.0]
Private for-profit	66.0 (50.4–78.8)	2.0 [1.0, 5.0]
Ownership		
Private	58.9 (48.7–68.3)	1.0 [1.0, 3.0]
Public	33.6 (26.0–42.1)	-1.0 [-1.0, 1.0]
Location		
Rural	21.7 (14.1–31.9)	-1.0 [-1.0, -1.0]
Urban	58.0 (48.4–67.1)	1.0 [-1.0, 1.0]
Ukraine	**37.9 (31.0–45.4)**	**-1.0 [-1.0, 1.0]**

Note: Values in paratheses represent the 95 percent confidence interval; values in brackets represent the 25th and 75th percentiles.

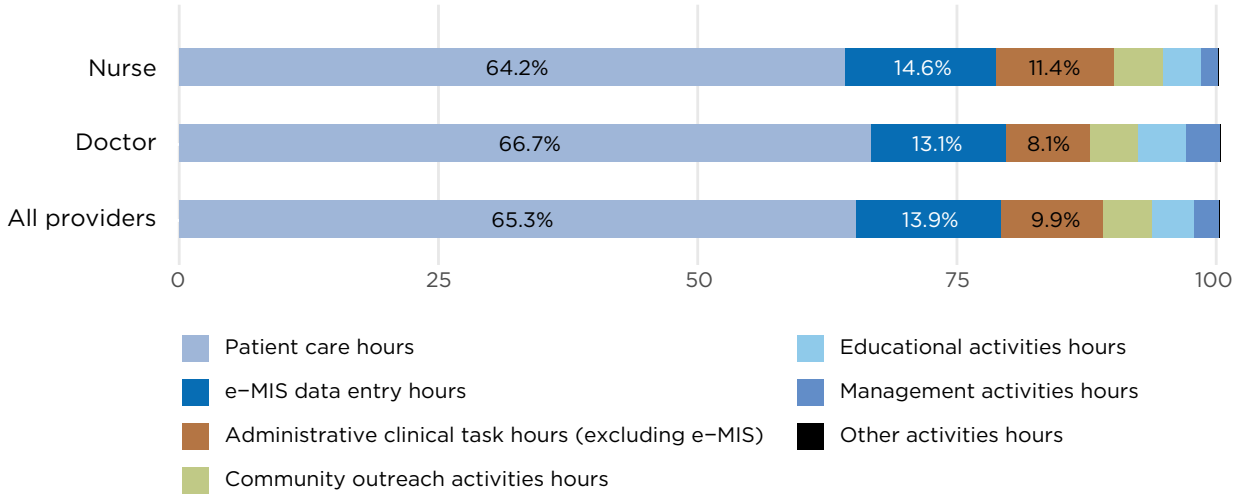
**This indicator is calculated among facilities that reported any change in the number of providers working at the facility. The net number of providers joining the facility was calculated as the number of providers who joined the facility minus the number who left the facility in 2023. A negative value for this indicator reflects a reduction in the number of health care providers at facilities.*

3.4.4 Workload

In general, as shown in Figure 32, the providers spent approximately 65.3 percent of their time on patient care (66.7 percent for doctors and 64.2 percent for nurses).[36] More than 20 percent of the providers' time was spent on clinical administrative tasks (14.6 percent for nurses and 13.1 percent for doctors) and e-MIS data entry (11.4 percent for nurses and 8.1 percent for doctors). In this context, e-MIS data entry is not included in clinical administrative tasks.

[36] This reflects their most recent typical work week.

FIGURE 32. Time spent by providers across different activities in the most recent work week, by cadre (%)



Note: The categories without value labels in the graph represent less than 5 percent of cases each.

Note: Taken individually, the categories without value labels in the graph represent less than five percent of cases. The sample size is 1,547.

Providers worked a median of 40.0 hours (IQR: 37.0–40.0) per week and had 18.0 (IQR: 15.0–23.0) outpatient contacts per day (Table 45). On average, 6.1 percent of providers are dissatisfied with the balance between clinical and administrative work.

TABLE 45. Provider workload in the most recent typical work week (self-reported), by facility type, ownership, and location

Type	Median hours worked per week	Median outpatient contacts per day	Percentage of providers dissatisfied with the clinical and administrative work balance
Provider type			
Doctor	40.0 (37.0–40.0)	19.0 (15.0–24.0)	8.9 (6.5–12.0)
Nurse	40.0 (37.0–40.0)	18.0 (15.0–22.0)	4.0 (2.4–6.6)
Facility type			
FOP	40.0 (30.0–40.0)	15.0 (10.0–20.0)	2.7 (1.3–5.4)
Public	40.0 (37.0–40.0)	18.0 (15.0–23.00	6.3 (4.7–8.4)
Private for-profit	40.0 (36.0–40.0)	15.0 (10.0–20.0)	6.1 (3.0–12.1)
Ownership			
Private	40.0 (35.0–40.0)	15.0 (10.0–20.0)	4.6 (2.6–7.9)

Type	Median hours worked per week	Median outpatient contacts per day	Percentage of providers dissatisfied with the clinical and administrative work balance
Public	40.0 (37.0–40.0)	18.0 (15.0–23.0)	6.3 (4.7–8.4)
Location			
Rural	39.0 (35.0–40.0)	15.0 (12.0–20.0)	6.0 (4.0–9.0)
Urban	40.0 (37.0–40.0)	20.0 (15.0–24.0)	6.2 (4.4–8.7)
Ukraine	**40.0 (37.0–40.0)**	**18.0 (15.0–23.0)**	**6.1 (4.7–8.0)**

Note: Values in brackets are 25th and 75th percentile values. Values in parentheses are 95 percent confidence intervals. The sample size is 1,547.

On average, 91 percent of providers reported that they only work at the facility where they were interviewed (Table 46). This proportion was significantly lower in private (83.1 percent) than public (91.9 percent) facilities. Most (89 percent) providers reported that they work full-time at the health facility where they were interviewed, with the remainder reporting that they work a part-time schedule. This finding was significantly lower than average in FOPs (80.3 percent) and in rural facilities (78.4 percent). Similarly, public providers (50.2 percent) were more likely to have on-call requirements than private providers (29.1 percent). Nearly one-half (48.0 percent) of providers in Ukraine reported having on-call duty obligations.

TABLE 46. Provider contracting and work modality (%), by facility type, ownership, location, and provider type

Type	Providers who work full-time at facility (%)	Providers who work only at this facility (%)	Providers reporting on-call duty obligations (%) (N = 1,452)*
Provider type			
Doctor	88.4 (85.0–91.1)	84.1 (77.9–88.8)	54.5 (48.8–60.0)
Nurse	89.5 (85.9–92.2)	96.5 (93.5–98.2)	42.7 (35.8–49.9)
Facility type			
FOP	80.3 (74.3–85.1)	79.6 (73.6–84.6)	35.2 (28.2–42.8)
Public	89.5 (86.9–91.7)	91.9 (88.2–94.6)	50.2 (45.2–55.3)
Private for-profit	87.7 (82.6–91.5)	86.0 (80.6–90.0)	24.5 (18.4–32.0)
Ownership			
Private	84.4 (80.6–87.6)	83.1 (79.2–86.5)	29.1 (24.3–34.5)

Type	Providers who work full-time at facility (%)	Providers who work only at this facility (%)	Providers reporting on-call duty obligations (%) (N = 1,452)*
Public	89.5 (86.9–91.7)	91.9 (88.2–94.6)	50.2 (45.2–55.3)
Location			
Rural	78.4 (72.2–83.4)	87.4 (77.5–93.3)	57.9 (49.7–65.8)
Urban	93.6 (91.0–95.4)	92.6 (90.0–94.6)	43.5 (38.3–48.8)
Ukraine	**89.0 (86.6–91.0)**	**91.0 (87.7–93.5)**	**48.0 (43.4–52.6)**

Note: Figures in parentheses represent the 95 percent confidence intervals.
**Measured among providers who reported that the facility they work in offers on-call services. The sample size is 1,547 unless otherwise stated.*

References

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Chapter 4: Processes of Care

This chapter describes the health care services provided in primary health care facilities. The primary sources of data for this chapter are physicians and patients in individual interviews and are completed with information from the interviews with the facility managers. From the broadest perspective, this domain aims to understand a country's primary health care service delivery system and gauge the competence of providers and accessibility of services to patients. "Processes of care" refers to the actual delivery or receipt of care in a facility setting; it can be assessed along two unique but interrelated subdomains: competent care systems and positive user experience. The SDI health survey measures the competency of health care systems in delivering high-quality care along three dimensions:

- **The first dimension is diagnosis, treatment, and counseling** to understand the knowledge and clinical competency of health care providers through clinical case simulations.

- **The second dimension is referral, continuity, and integration** to understand how referral systems work and patients' willingness to continue seeking care from the same health facility/ health care providers.

- **The third dimension is safety, prevention, and detection to determine** if practices are in place to prevent health care-acquired infections and to detect and prevent the spread of contagious diseases in a timely manner.

The survey employs three categories of indicators to assess patients' experiences in receiving care. Box 4 summarizes the findings of this chapter.

- **Respect and autonomy** to measure health care practices that foster respect and autonomy in patients.

- **User focus** to understand the systems in place that prioritize patients' needs in every step of service delivery.

- **Responsiveness to the feedback** provided by patients to facilities.

BOX 2. Key observations on the primary health care processes in Ukraine

Access of vulnerable groups to services. Three-quarters of providers (76.4 percent) reported at least one IDP consultation in the week preceding the survey. Two in five IDPs (42.7 percent) did not have an active registration with the providers. IDPs represented a significantly higher fraction of consultations in the private sector (8.0 percent of all outpatient visits) than in the public (5.1 percent).

Quality of care/guidelines. The correct complete diagnosis and treatment was provided in 52.3 percent of cases, although doctors mentioned the correct primary diagnosis in 82.5 percent of cases and the correct primary treatment in 71.8 percent of cases. Providers who reported using any clinical guideline were significantly more likely to provide the correct primary (74.5 and 47.3 percent, respectively) and specific (58.0 and 27.2 percent, respectively) treatment than those who do not. Correct primary diagnosis and treatment were highest for hypertension (82.5 percent), diabetes (92.2 percent), and tuberculosis (85.4 percent) vignettes, while those for depression (41.1 percent) and pneumonia (60.8 percent) were significantly lower. The latter are attributable to incorrect treatments with non-prescription of antidepressants (67.1 percent of these cases/total cases) and the use of an antipyretic for fever (81.5 percent) but not antibiotics (69.2 percent) for pneumonia.

Service provision for children, as reported by caregivers. Clinical encounters delivered a median of seven out of ten measured services. Questions about the symptoms (99.9 percent of cases) and the illness (94.9 percent) were the highest; the children's ages (43.3 percent), immunization histories (62.9 percent), and maternal health (57.0 percent), or if this was the first or a follow-up visit (58.3 percent), were considerably lower.

Service provision for NCD care, as reported by patients. Those seeking treatment for diabetes or hypertension reported a median of 20 out of 22 measured services. Questions about alcohol (78.6 percent) and tobacco (77.8 percent of patients) were most frequent, and eyes (69.4 percent) and feet (53.9 percent) were often examined. However, women were significantly less likely to be asked about tobacco use (92.2 percent of male and 71.5 percent of female patients) or advised on limiting tobacco use (86.6 percent of male and 61.4 percent of female patients).

4.1. COMPETENT CARE SYSTEMS

The first domain—competent care systems—grants greater insight into the clinical and interpersonal competencies of primary health care providers in the country. To comprehensively understand quality and competence, this section provides an overview of diagnosis; treatment; and counseling quality; as well as referrals; continuity procedures; and processes for safety, detection, and prevention.

4.1.1. Diagnosis, treatment, counseling

This subsection reviews the knowledge and clinical competencies of health care providers, specifically their ability to competently deliver diagnostic services and provide adequate treatment and counseling to patients. This section is based on provider performance on clinical case simulations, as well as on the experiences of patients receiving care as reported through outpatient exit interviews. The former highlights health care provider performance on clinical assessments; the latter corroborates the information from the patients' perspectives of receiving care.

Diagnosis, treatment, counseling as measured through clinical vignettes

Health care provider capacity to correctly diagnose and treat common health conditions is integral to high-quality primary care service delivery. There are many ways to assess clinical competency—by direct observation, chart review, standardized patient, and written assessments—all of which have strengths and weaknesses. The SDI health survey uses vignettes: clinical simulation cases involving two enumerators and one health care provider. One enumerator presents a clinical case and acts as the patient, and the other enumerator records the provider's questions and actions. The provider, who is aware that this is a clinical competency assessment, asks questions of the patient enumerator, who provides standardized responses on patient presentation and history. The provider diagnoses the case via the results of medical history, a physical examination, and diagnostic/screening/laboratory tests. The provider also offers treatment and counseling as required. The evaluation of the actions taken and the diagnosis is performed once the data are cleaned.

These clinical competency assessments capture information on both correct and incorrect responses, including the level of completeness and specificity of the diagnoses and treatments proposed. For example, some clinical cases have a primary condition, such as hypertension, and comorbidities, such as obesity and dyslipidemia. Analyzing the resulting data can shed light on the comprehensiveness of the provider's assessment of the simulated case. Information on common incorrect diagnoses and treatments, such as an incorrect diagnosis of extra-pulmonary TB instead of pulmonary TB, can inform intervention and policy design to ensure providers are adequately supported with up-to-date training and clinical guidance.

In SDI surveys, clinical vignette topics are selected for international comparability and country-specific disease burden and priorities. They are adapted based on each country's clinical context and guidelines. In Ukraine, participating PHC physicians (family doctors, internal medicine doctors, and pediatricians) were each administered a random selection of 2 out of 5 available vignettes (adult cases were diabetes type II, TB, depression, and hypertension; the child case was pneumonia). Pediatricians were only administered the vignette related to childhood pneumonia, and nurses were not administered clinical vignettes.

The clinical case simulations have four primary results (Table 47): (1) the correct primary diagnosis; (2) complete, specific diagnosis; (3) primary treatment; and (4) complete, specific treatment. Performance on diagnosis and treatment has been split into primary and complete categories to reflect real-world clinical scenarios and offer flexibility in understanding the clinical competency of providers. The ideal-performing

provider would be able to offer all diagnoses in the complete diagnosis categories; this is often not entirely realistic in a simulated scenario and does not necessarily indicate that care by providers or their clinical knowledge is poor quality. Complete diagnoses and treatments for hypertension and diabetes are meant to account for diagnosis and treatment of comorbidities present in the clinical vignettes. The complete diagnosis and treatment specifications for depression were meant to more strictly assess non-pharmacological interventions employed by doctors when interacting with patients. The clinical case for adult TB is unique, because providers who mention treatment rather than provide referrals—as is the Ministry of Health policy—are deemed to have provided incorrect treatment. In Ukraine, treatment for TB is to be directed by a TB specialist; accordingly, it is recommended that family medicine doctors refer patients for specialized care follow-up. Similarly, the use of Doxycycline and Ciprofloxacin has not been included as part of the correct response for the child pneumonia vignette, because these medications are generally considered as treatment for complex conditions or where other, safer antibiotic alternatives are not available.

TABLE 47. Correct diagnosis and treatment by clinical vignette case for each of the 5 adult and child cases

Primary Diagnosis	Complete, Specific Diagnosis	Primary Treatment	Complete, Specific Treatment
Hypertension	Hypertension, obesity, and hyperlipidemia/ dyslipidemia/ hypercholesterolemia	Anti-hypertensive drugs	Anti-hypertensive drugs (any dose/frequency) and either statin (any dose/frequency) or nutrition counseling*
Diabetes type 2/ Diabetes mellitus type 2	Diabetes type 2/ diabetes mellitus type 2 and obesity	Metformin	Metformin (specific dose/ frequency) and statin (any dose/ frequency)
Pneumonia	Not applicable	Amoxicillin or other antibiotic (excluding Doxycycline and Ciprofloxacin) and paracetamol or other anti-pyretic	Amoxicillin (specific dose/ frequency) and paracetamol (specific dose/frequency)
Pulmonary, drug-susceptible, or non-specific TB (excluding drug-resistant, multi-drug-resistant, extra-pulmonary, or latent TB)	Pulmonary, drug-susceptible, or non-specific TB. Provider penalized for selecting drug-resistant, multi-drug-resistant, extra-pulmonary, or latent TB.	Referral to a TB specialist	Referral to a TB specialist. Providers are penalized for prescribing anti-TB medication
Depression (non-specific or moderate severity), excluding mild or severe depression	Moderate depression	Consultation about antidepressants and any psychoeducation or counseling	Consultation about antidepressants and select psychoeducation or counseling**

Notes:

**Nutrition/lifestyle counselling included counselling to avoid tobacco or alcholol, increase physical activity, lose weight, eat a low-salt diet, eat 5 or more servings of vegetables/fruits per day, use healthy oils, eat nuts, legumes, whole grains, and foods rich in potassium, limit rice and potato consumption, limit red meat consumption, eat food rich in omega 3 fatty acids, or avoid sweets/added sugar.*

***Psychoeducation/counselling included explanation of the disease, advice on stigma and misconceptions, advice to reduce stress and strengthen social relationships, advice on structuring the day, advice on engaging in physical activity, advice on involvement in community life, and offering to schedule a follow-up visit with the patient. .*

Overall clinical diagnostic accuracy was generally high (Table 48). Providers correctly selected 82.5 percent of the correct primary diagnoses for their assigned vignettes; 66.3 percent correctly selected the correct specific diagnosis for their assigned vignettes. When assessing performance in individual vignettes, providers also mostly selected the correct primary diagnoses for hypertension (83.3 percent;), diabetes (96.2 percent;), TB (87.0 percent), and pneumonia (82.5 percent). Selection of the correct primary diagnosis for depression was lowest (65.0). When considering stricter diagnostic criteria, statistically significant results were observed for the specific diagnosis rates for the hypertension (45.6 percent) and diabetes (61.7 percent) vignettes; these rates were significantly lower than the primary diagnosis specifications for these vignettes. There were no observed statistically significant differences in the rates of correct primary or specific diagnostic rates by facility type, ownership, or location, or based on provider-reported use of clinical guidelines.

TABLE 48. Clinical knowledge: Diagnostic accuracy (%), by facility type, ownership, and location

Type	Hypertension (N = 374)		Diabetes (N = 288)		Depression (N = 251)		Tuberculosis (N = 191)		Pneumonia (N = 491)	**Overall* (N = 873)**	
	Primary	Specific	Primary	Specific	Primary	Specific	Primary	Specific	Primary	Primary	Specific
Facility Type											
FOP	84.4 (71.9–92.0)	58.9 (45.1–71.5)	90.2 (77.2–96.2)	52.8 (36.9–68.1)	62.8 (46.7–76.4)	49.2 (30.9–67.7)	72.5 (53.8–85.6)	65.2 (46.8–79.9)	85.0 (71.3–92.8)	80.9 (74.5–87.3)	69.2 (61.9–76.5)
Public	82.8 (75.6–88.2)	45.5 (35.6–55.6)	96.7 (92.4–98.6)	62.1 (51.5–71.7)	67.0 (54.2–77.7)	55.1 (41.1–68.2)	87.5 (76.9–93.6)	69.8 (54.1–82.0)	81.8 (74.0–87.6)	82.8 (78.8–86.9)	66.2 (61.0–71.3)
Private for-profit	89.4 (77.4–95.4)	37.3 (25.4–50.8)	93.0 (80.8–97.7)	62.9 (45.3–77.6)	48.9 (25.7–72.6)	34.4 (17.5–56.3)	89.9 (75.6–96.2)	84.0 (66.0–93.5)	89.0 (71.9–96.2)	80.8 (72.4–89.2)	65.4 (58.3–72.5)
Ownership											
Private	87.2 (79.4–92.4)	46.6 (37.3–56.2)	91.6 (83.9–95.8)	57.9 (46.3–68.8)	54.4 (36.9–70.8)	40.2 (26.1–56.2)	84.4 (72.1–91.9)	78.1 (63.4–88.0)	87.1 (77.4–93.0)	80.8 (75.4–86.3)	67.1 (61.9–72.3)
Public	82.8 (75.6–88.2)	45.5 (35.6–55.6)	96.7 (92.4–98.6)	62.1 (51.5–71.7)	67.0 (54.2–77.7)	55.1 (41.1–68.2)	87.5 (76.9–93.6)	69.8 (54.1–82.0)	81.8 (74.0–87.6)	82.8 (78.8–86.9)	66.2 (61.0–71.3)
Location											
Rural	83.0 (72.7–90.0)	29.4 (19.3–42.0)	94.7 (85.5–98.2)	56.0 (42.3–68.9)	68.8 (46.0–85.0)	62.1 (37.7–81.6)	85.1 (65.9–94.4)	76.9 (53.4–90.6)	79.2 (65.2–88.5)	82.0 (75.5–88.4)	61.0 (51.0–71.1)
Urban	83.4 (75.1–89.3)	52.5 (41.3–63.4)	96.8 (92.4–98.7)	64.1 (52.0–74.6)	63.1 (50.7–74.0)	47.9 (36.1–60.0)	88.1 (76.9–94.3)	67.6 (52.1–80.0)	83.5 (75.6–89.2)	82.8 (78.5–87.0)	68.2 (63.2–73.3)
Use of clinical guidelines (self-reported)											
Provider uses either national or international guideline	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	82.5 (78.8–86.2)	66.1 (61.7–70.4)
Provider uses no guideline	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	82.9 (69.8–96.1)	68.5 (47.9–89.1)
Ukraine	**83.3 (77.0–88.1)**	**45.6 (36.8–54.6)**	**96.2 (92.6–98.1)**	**61.7 (52.2–70.3)**	**65.0 (53.7–74.9)**	**52.7 (40.5–64.6)**	**87.0 (78.2–92.6)**	**71.1 (57.7 81.5)**	**82.5 (75.9–87.7)**	**82.5 (79.0–86.1)**	**66.3 (61.8–70.8)**

*Note: *Overall diagnostic accuracy was calculated based on all vignettes administered to the provider. This would be two vignettes for all PHC doctors selected for vignettes and only the pneumonia vignette for pediatricians. Values in parentheses represent the 95 percent confidence interval values. Data in cells marked with "n.a." are not presented due to sample size constraints for disaggregation by use of clinical guidelines across individual vignettes. Rather, data are presented for the overall performance of providers across their assigned vignettes.*

Diagnostic performance can be nuanced by the number of diagnoses mentioned by the provider (Table 49).[37] Although 89 percent of providers were able to diagnosis diabetes mellitus type II, only 64.7 percent were able to diagnose obesity as a secondary comorbidity in the diabetes vignette. Similarly, in the hypertension vignette, 83.3 percent of providers were able to accurately diagnose hypertension, but fewer mentioned diagnoses for secondary conditions of obesity (63.6 percent) and hyperlipidemia (61.7 percent); nearly one in 10 (9.9 percent) thought the patient was healthy. For the depression vignette, while providers mostly recognized that the main symptom of the vignette was depression, only 56.0 percent specifically mentioned a diagnosis of moderate depression. Finally, for the TB vignette, providers seemed to seldom mention the non-indicated forms of TB, of which the most mentioned was multi-drug-resistant TB (11.5 percent) and drug-resistant TB (9.8 percent); the least commonly mentioned was extra-pulmonary TB (6.9 percent) and latent TB (6.5 percent).

TABLE 49. Diagnoses selected by providers, by vignette (%)

Diagnosis	Providers (%)	Diagnosis	
		Primary	Specific
Diabetes Type 2 vignette			
Diabetes Mellitus Type II	89.0	+	+
Obesity	64.7		✓
Diabetes (non-specific)	50.6		
Tuberculosis vignette			
Tuberculosis/TB	78.3	+	+
Pulmonary tuberculosis/PTB smear positive	54.6	+	+
Drug-susceptible tuberculosis/TB (DS-TB)	46.6	+	+
Multidrug-resistant tuberculosis/TB (MDR-TB)	11.5		x
Drug-resistant tuberculosis/TB (DR-TB)	9.8		x
Extra-pulmonary tuberculosis/TB (EPTB)	6.9		x
Latent tuberculosis/TB infection (LTBI)	6.5		x
Chronic obstructive pulmonary disease (COPD)	5.4		
Depression vignette			
Depression	61.3	+	
Moderate depression	56.0	+	✓
Mild depression	23.8		x
Anxiety	19.9		
Stress (acute, chronic, or adjustment stress disorders)	13.4		
Somatoform vegetative dysfunction	7.0		

[37] Providers were able to select multiple diagnoses; accordingly, the values under each vignette do not sum to 100 percent. Across all vignettes, the primary diagnosis was the one most often cited by providers who took part in that respective vignette. Details of all selections are provided in Annex Table A.6, which presents only diagnoses with 5 percent or more.

Diagnosis	Providers (%)	Diagnosis	
		Primary	Specific
Neurasthenia	5.5		
Hypertension vignette			
Hypertension	83.3	+	+
Obesity	63.6		✓
Hyperlipidemia/dyslipidemia/hypercholesterolemia	61.7		✓
Metabolic syndrome	37.3		
Patients do not have any disease/patient is healthy	9.9		
Diabetes	6.6		
Pneumonia vignette			
Pneumonia	82.5	+	+
Upper respiratory tract infection	17.5		
Bronchitis	9.0		

Notes:

1. At least one of the options marked (+) must have been selected by the provider to count for the primary diagnosis.

2. All checked (✓) options and at least one of the options marked (+) must have been selected by the provider to count for complete diagnosis.

3. Diagnoses marked with an "x" denote penalizations for TB diagnoses that are clinically incorrect. None of the information in the vignettes suggested drug-resistance, latent infection, or extra-pulmonary TB.

4. The sample size is 873.

Treatment accuracy is based on correctly identifying the primary and complete treatment protocols for the conditions presented (Table 50). This is done without conditioning on the correct diagnosis (primary or complete) of the case. Although diagnostic rates were rather uniform for providers across the country, starker differences were observed when considering primary and complete treatment accuracy across vignettes. Overall treatment accuracy for primary treatments was 71.8 percent and 55.0 percent for complete treatment accuracy across vignettes. Most providers selected the correct primary treatments for hypertension (90.4 percent), diabetes (93.2 percent), and TB (97.1 percent). However, fewer mentioned the correct primary treatments for depression (66.7 percent) and pneumonia (66.3 percent). Most providers also mentioned the correct treatments aligned with the specific hypertension treatment definition (89.9 percent).

When assessing vignette treatment responses from providers using the stricter criteria, significant differences were observed for all vignettes aside from the hypertension vignette; 60.1 percent of providers mentioned treatments aligned with the specific treatment definition for diabetes, 35.5 percent for depression, 32.9 percent for TB, and 52.0 percent for pneumonia. There was a significantly higher rate of providers mentioning the correct treatment for depression in private (89.0 percent) compared to public (62.5 percent) facilities. This finding seemed to be largely driven by above-average performance in this indicator within private for-profit facilities (91.9 percent) that had a higher proportion of providers mentioning the correct primary treatment for depression than average. When results were

further investigated based on provider-reported use of clinical guidelines, the results for the correct specification of primary and specific treatments across administered vignettes were significantly higher among providers who reported that they use either an international or national guideline (74.5 percent for primary and 58.0 percent for specific treatment identification, respectively) compared to those who reported not using any guidelines (47.3 percent for primary and 27.2 percent for specific treatment identification, respectively).

TABLE 50. Clinical Knowledge: Treatment accuracy, by facility type, ownership, location, and clinical guideline use (%)

Type	Hypertension (N = 374)		Diabetes (N = 288)		Depression (N = 251)		Tuberculosis (N = 191)		Pneumonia (N = 491)		**Overall* (N = 873)**	
	Primary	**Specific**	**Primary**	**Specific**	**Primary**	**Specific**	**Primary**	**Specific**	**Primary**	**Specific**	**Primary**	**Specific**
Facility Type												
FOP	88.6 (78.4–94.3)	88.6 (78.4–94.3)	84.5 (73.0–91.6)	45.9 (32.1–60.4)	84.7 (68.2–93.5)	36.5 (21.1–55.3)	91.6 (75.4–97.5)	26.9 (15.1–43.4)	72.2 (59.6–82.0)	59.7 (47.1–71.1)	73.1 (64.4–80.3)	55.3 (47.2–63.2)
Public	90.6 (85.0–94.2)	90.0 (84.4–93.8)	93.5 (88.2–96.5)	61.7 (52.4–70.3)	62.5 (45.5–76.9)	33.2 (22.7–45.6)	97.5 (91.0–99.3)	31.8 (19.3–47.5)	65.6 (58.0–72.5)	51.0 (43.3–58.6)	70.9 (65.9–75.4)	54.4 (48.7–60.0)
Private for-profit	89.7 (79.3–95.1)	89.7 (79.3–95.1)	96.7 (89.8–99.0)	48.4 (34.4–62.7)	91.9 (81.1–96.7)	56.1 (33.0–76.8)	97.1 (90.0–99.2)	44.9 (16.2–77.5)	69.0 (58.6–77.8)	56.9 (45.8–67.3)	80.8 (74.4–85.9)	61.4 (52.1–70.0)
Ownership												
Private	89.2 (82.5–93.5)	89.2 (82.5–93.5)	90.7 (84.5–94.6)	47.2 (37.2–57.4)	89.0 (80.1–94.2)	48.3 (31.9–65.1)	95.3 (88.7 –98.2)	39.3 (17.5–66.4)	70.6 (62.7–77.3)	58.2 (50.0–66.1)	77.4 (72.0–81.9)	58.7 (52.3–64.9)
Public	90.6 (85.0–94.2)	90.0 (84.4–93.8)	93.5 (88.2–96.5)	61.7 (52.4–70.3)	62.5 (45.5–76.9)	33.2 (22.7–45.6)	97.5 (91.0–99.3)	31.8 (19.3–47.5)	65.6 (58.0–72.5)	51.0 (43.3–58.6)	70.9 (65.9–75.4)	54.4 (48.7–60.0)
Location												
Rural	91.7 (83.0–96.1)	91.7 (83.0–96.1)	92.5 (83.3–96.8)	44.6 (32.0–57.8)	51.2 (24.1–77.6)	22.0 (9.9–41.8)	97.4 (88.3–99.5)	22.9 (9.4–45.8)	62.6 (50.7–73.2)	56.2 (44.5–67.2)	75.0 (67.1–81.6)	50.1 (38.7–61.5)
Urban	89.9 (83.5–94.0)	89.2 (82.7–93.4)	93.5 (87.6–96.7)	66.7 (56.8–75.3)	74.5 (62.9–83.5)	42.4 (31.6–54.1)	97.0 (89.4–99.2)	38.9 (25.6–54.0)	67.4 (59.7–74.3)	50.8 (43.0–58.6)	70.6 (65.2–75.5)	56.8 (51.6–61.8)
Use of clinical guidelines (self-reported)												
Provider uses either national or international guideline	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	74.5 (69.6–79.3)	58.0 (53.0–63.1)
Provider uses no guideline	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	47.3 (33.4–61.3)	27.2 (7.6–46.9)
Ukraine	**90.4 (85.5–93.8)**	**89.9 (85.0–93.4)**	**93.2 (88.6–96.0)**	**60.1 (51.8–67.9)**	**66.7 (51.3–79.2)**	**35.5 (25.8–46.6)**	**97.1 (92.4–99.0)**	**32.9 (21.3–46.9)**	**66.3 (59.8–72.3)**	**52.0 (45.4–58.6)**	**71.8 (67.4–75.8)**	**55.0 (50.0–59.9)**

*Note: *Overall treatment accuracy was calculated based on all vignettes administered to the provider. This would be two vignettes for all PHC doctors selected for vignettes and only the pneumonia vignette for pediatricians. Values in parentheses represent the 95 percentile confidence interval values. Data in cells marked with "n.a." are not presented due to sample size constraints for disaggregation by use of clinical guidelines across individual vignettes. Rather, data are presented for the overall performance providers had across their assigned vignettes.*

Multiple diagnoses were possible. Annex Table A.7 shows the distribution of clinical vignette treatments mentioned by the providers interviewed for each respective vignette. The doctors were able to mention any treatments that were subsequently recorded by survey enumerators. In the diabetes vignette, all doctors who prescribed metformin (93.2 percent) also gave a specific dose or frequency to patients; however, fewer mentioned prescribing any statin (63.6 percent). For the TB vignette, nearly all doctors (97.1 percent) mentioned that they referred the patient to a TB specialist; however, doctors were heavily penalized in the complete treatment specification due to the high rate of doctors recommending that patients should take anti-TB drugs (64.4 percent). The results for both the primary and complete depression vignette treatment specifications were largely driven down by the proportion of doctors who discussed whether anti-depressants would be appropriate for patients (67.1 percent). The only items mentioned less frequently than consultation regarding anti-depressant use were advice for scheduling a follow-up visit (64.5 person) and advice on stigma or misconceptions (63.3 percent). Results for the primary and complete hypertension vignette were nearly identical; however, 69.0 percent of doctors mentioned a statin for the patient, while 98.1 percent mentioned any nutrition/lifestyle counseling; this finding likely reflected the recommendation by providers for both the primary and secondary issues presented in this vignette. For the child pneumonia vignette, most doctors mentioned providing an antipyretic (81.5 percent); 70.1 percent also mentioned receiving a specific dose or frequency of paracetamol. Only 69.2 percent of doctors mentioned any of the target antibiotics; however, amoxicillin was most common, with 67.3 percent of doctors mentioning a specific dose or frequency of amoxicillin.

Across the vignettes that were administered, 70.5 percent of doctors mentioned both the correct primary diagnosis and treatment (Table 51). The proportions of doctors who mentioned the correct primary diagnosis and treatment for hypertension (82.5 percent), diabetes (92.2 percent), and TB (85.4 percent; CI: 76.2) vignettes were highest; however, the proportions of those who mentioned the correct primary diagnosis and treatment for depression (41.1 percent) and pneumonia (60.8 percent) were significantly lower. The overall diagnosis and treatment rate for depression was largely driven by the proportion of doctors who discussed whether anti-depressants would be appropriate with the patients (67.1 percent); for the pneumonia vignette, the results were largely reflective of the lower rate of doctors prescribing antibiotics (69.2 percent), even though many prescribed an antipyretic to manage fever (81.5 percent).

Overall, 52.3 percent of doctors mentioned the correct specific diagnoses and treatments across their administered vignettes, which was significantly different from the selection rate of primary diagnoses and treatments overall. Differences were observed for specific vignettes. A significantly lower proportion of doctors mentioned the correct specific diagnoses and treatments for vignettes focused on hypertension (45.0 percent), diabetes (47.9 percent), depression (17.6 percent; CI: 11.5), and TB (27.6 percent); 47.9 percent of doctors mentioned the correct specific diagnosis and treatments for the pneumonia vignette. However, this did not differ significantly from the selection rates for the primary diagnosis and treatments.

TABLE 51. Clinical knowledge of physicians: Correct diagnosis and treatment, facility type, ownership, and location (%)

Type	Hypertension (N = 374)		Diabetes (N = 288)		Depression (N = 251)		Tuberculosis (N = 191)		Pneumonia (N = 491)		Overall* (N = 873)	
	Primary	Specific	Primary	Specific	Primary	Specific	Primary	Specific	Primary	Specific	Primary	Specific
Facility Type												
FOP	78.6 (65.5–87.7)	58.3 (44.5–70.9)	82.4 (69.1–90.7)	34.4 (20.7–51.3)	53.4 (35.2–70.8)	20.8 (8.5–42.4)	68.0 (49.6–82.1)	16.4 (7.1–33.5)	66.6 (54.3–77.0)	55.4 (42.4–67.7)	67.7 (59.5–75.8)	48.7 (38.1–59.3)
Public	82.3 (75.1–87.8)	44.9 (35.0–55.2)	92.8 (85.4–96.6)	49.1 (38.3–59.9)	39.9 (27.6–53.7)	17.7 (10.8–27.8)	86.1 (75.2–92.6)	26.7 (15.5–42.0)	60.1 (50.8–68.7)	47.0 (37.5–56.8)	70.4 (64.3–76.4)	52.4 (45.6–59.2)
Private for-profit	87.9 (75.9–94.4)	35.8 (24.1–49.5)	93.0 (80.8–97.7)	43.3 (28.2–59.7)	43.1 (22.8–66.0)	14.9 (5.7–33.9)	87.7 (72.3–95.1)	40.0 (11.6–77.2)	63.3 (49.9–74.9)	51.1 (38.7–63.4)	74.9 (66.8–83.0)	53.3 (44.8–61.9)
Ownership												
Private	83.9 (75.8–89.7)	45.5 (36.2–55.2)	87.8 (79.8–92.9)	38.9 (28.4–50.6)	47.2 (31.6–63.4)	17.2 (8.9–30.8)	81.5 (68.3–90.0)	32.6 (11.3–64.7)	64.9 (55.9–72.9)	53.2 (44.2–62.0)	71.7 (66.0–77.4)	51.3 (44.6–58.0)
Public	82.3 (75.1–87.8)	44.9 (35.0–55.2)	92.8 (85.4–96.6)	49.1 (38.3–59.9)	39.9 (27.6–53.7)	17.7 (10.8–27.8)	86.1 (75.2–92.6)	26.7 (15.5–42.0)	60.1 (50.8–68.7)	47.0 (37.5–56.8)	70.4 (64.3–76.4)	52.4 (45.6–59.2)
Location												
Rural	83.0 (72.7–90.0)	29.4 (19.3–42.0)	92.5 (83.1–96.8)	33.9 (22.8–47.0)	28.4 (13.6–50.2)	11.6 (4.4–27.2)	85.1 (66.3–94.3)	18.1 (7.0–39.3)	55.6 (41.2–69.1)	51.2 (37.1–65.1)	76.0 (67.7–84.3)	51.8 (45.0–58.6)
Urban	82.2 (73.9–88.3)	51.6 (40.3–62.8)	92.1 (83.2–96.5)	53.9 (41.7–65.7)	47.5 (35.6–59.6)	20.7 (13.1–31.2)	85.6 (74.2–92.4)	33.3 (20.4–49.3)	62.3 (52.9–70.9)	47.0 (37.3–57.0)	68.6 (62.2–74.9)	53.6 (41.6–65.5)
Use of clinical guidelines (self-reported)												
Provider uses either national or international guideline	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	71.5 (66.6–76.4)	52.7 (47.1–58.4)
Provider uses no guideline	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	61.5 (50.2–72.8)	48.0 (16.7–79.2)
Ukraine	**82.5 (76.1–87.4)**	**45.0 (36.1–54.1)**	**92.2 (86.0–95.8)**	**47.9 (38.3–57.7)**	**41.1 (30.2–52.9)**	**17.6 (11.5–26.2)**	**85.4 (76.2–91.4)**	**27.6 (17.0–41.4)**	**60.8 (52.8–68.2)**	**47.9 (39.7–56.3)**	**70.5 (65.3–75.8)**	**52.3 (46.3–58.2)**

*Note: *Overall diagnostic and treatment accuracy were calculated based on all vignettes administered to the provider. This would be 2 vignettes for all PHC doctors selected for vignettes and only the pneumonia vignette for pediatricians. Values in parentheses represent the 95 percent confidence interval values. Data in cells marked with "n.a." are not presented due to sample size constraints for disaggregation by use of clinical guidelines across individual vignettes. Rather, data are presented for the overall performance providers had across their assigned vignettes.*

Providers were asked to estimate how many patients they saw who were eligible for cancer screenings, and among those eligible, how many patients received a screening. Providers reported 81.2 percent (CI: 76.4–85.3) of their patients were eligible to receive cancer screenings.

Processes of care as experienced by patients

The previous section focused on measuring processes of care through clinical simulation cases for adult and child cases. This section explores this domain from the patients' perspectives. For adult patients seeking care for hypertension or diabetes or for caregivers seeking care for their sick children, survey participants were asked specific questions about their receipt of crucial components of care as part of the services they received today or during a previous visit for the same condition. Patients who came to the facility for diabetes or hypertension treatment reported receiving a median 20 out of 22 measured NCD services at the current or a previous visit; however, only 27.8 percent received all measured services at the current or previous visits (Table 52).[38] The items that most influenced the overall coverage estimate were the proportion of patients advised on tobacco use (69.1 percent) and alcohol use (68.9 percent); the proportion of patients asked about tobacco use (77.8 percent), alcohol use (78.6 percent), or their occupation (68.1 percent); and the proportion of patients who reported that their feet (53.9 percent) or eyes (69.4 percent) were examined. The proportion of patients who reported receiving blood cholesterol profile results was significantly lower in rural (73.1 percent) than in urban facilities (90.6 percent). When the data were analyzed by patient sex, women were significantly less likely to be asked (71.5 percent), or advised (61.4 percent), on tobacco use than men (92.2 percent and 86.6 percent, respectively).

[38] Annex Table A.8 presents the full set of services.

TABLE 52. Selected components of NCD care at current or previous visits, by facility type, ownership, location, and patient sex (%)

Service	Ukraine	Rural	Urban	FOP	Public	Private for-profit	Private	Public	Male	Female
Risk factor assessment										
Asked about alcohol use	78.6 (69.1–85.8)	70.0 (51.8–83.5)	83.6 (73.6–90.3)	82.5 (70.1–90.4)	78.1 (67.5–85.9)	84.4 (72.6–91.7)	83.4 (75.5–89.2)	78.1 (67.5–85.9)	89.6 (81.4–94.5)	73.7 (60.9–83.4)
Asked about tobacco use	77.8 (67.7–85.5)	68.0 (50.4–81.7)	83.6 (71.7–91.1)	89.6 (79.8–95.0)	77.2 (66.0–85.5)	79.3 (63.8–89.3)	84.4 (75.8–90.4)	77.2 (66.0–85.5)	92.2 (85.2–96.0)	71.5 (57.9–82.0)
Physical and biomarker examinations										
Examined eyes	69.4 (55.2–80.7)	75.9 (63.6–85.0)	65.6 (45.1–81.6)	81.9 (68.9–90.3)	68.5 (53.0–80.8)	75.0 (58.4–86.5)	78.4 (68.5–85.9)	68.5 (53.0–80.8)	82.9 (69.6–91.1)	63.4 (46.5–77.6)
Examined feet*	53.9 (42.0–65.3)	57.5 (40.5–72.9)	51.7 (36.2–66.9)	76.3 (63.3–85.7)	52.0 (39.2–64.5)	68.3 (52.1–81.0)	72.3 (62.4–80.4)	52.0 (39.2–64.5)	64.7 (50.7–76.6)	49.0 (35.2–63.0)
Checked blood cholesterol profile	81.6 (74.2–87.3)	75.4 (62.7–84.8)	85.3 (75.8–91.4)	85.1 (73.7–92.1)	81.2 (72.9–87.4)	86.8 (75.4–93.4)	86.0 (78.5–91.1)	81.2 (72.9–87.4)	81.6 (68.0–90.3)	81.6 (72.0–88.4)
Received blood cholesterol profile results	84.1 (77.5–89.0)	73.1 (62.5–81.5)	90.6 (83.2–95.0)	88.1 (78.1–93.9)	83.6 (76.3–89.0)	90.1 (78.1–95.9)	89.1 (82.1–93.6)	83.6 (76.3–89.0)	83.0 (73.1–89.7)	84.6 (75.5–90.8)
Counseling services										
Advised on tobacco use	69.1 (55.3–80.2)	71.7 (58.2–82.1)	67.6 (47.2–83.0)	82.6 (69.8–90.7)	67.8 (52.9–79.9)	81.7 (68.2–90.3)	82.1 (73.4–88.4)	67.8 (52.9–79.9)	86.6 (77.3–92.4)	61.4 (44.8–75.7)
Done all of the above	27.8 (20.4–36.8)	35.2 (22.4–50.6)	23.4 (15.5–33.8)	51.1 (37.2–64.9)	25.8 (17.9–35.7)	45.6 (32.7–59.1)	48.3 (38.9–58.0)	25.8 (17.9–35.7)	36.4 (22.2–53.4)	24.0 (16.2–34.1)
Median number of services conducted (22)	**20.0 [17.0–22.0]**	**20.0 [16.0–22.0]**	**20.0 [17.0–21.0]**	**22.0 [19.0–22.0]**	**20.0 [17.0–22.0]**	**21.0 [17.0–22.0]**	**21.0 [18.0–22.0]**	**20.0 [17.0–22.0]**	**21.0 [18.0–22.0]**	**19.0 [17.0–21.0]**

*Note: *Feet examination is conducted only for patients seeking diabetes care. Values in parentheses are 95 percent confidence interval values; those in brackets represent the 25th and 75th percentile values. The sample size is 434. Data in cells marked with "n.a." are not presented due to sample size constraints for disaggregation by use of clinical guidelines across individual vignettes. Rather, data are presented for the overall performance providers had across their assigned vignettes. The full table is in Annex 3 (Table 8).*

The next area of focus is pediatric health care services (Table 53). Overall, parents of patients reported receiving a median of 7 out of 10 measured services for their children at the current or previous visits; only 10.4 percent (CI: 3.0–17.7) reported that they received all of 10 measured services for their children. Nearly all parents were asked about their children's symptoms (99.9 percent). However, patients less often reported that they were asked about other background information, such as the children's ages (43.3 percent), immunization history (62.9 percent), maternal health (57.0 percent), or if this was the first or a follow-up visit (58.3 percent). The proportion of patients asked about the age of their children was significantly higher than average among those whose children were under 6 months old (83.9 percent). Since 96.7 percent of facilities reported having an e-MIS system, some of this demographic information may be available to providers within that system. Most patients (94.5 percent) reported that the provider informed them of the children's illness at a current or previous visit. Most patients (86.1 percent1) reported that they received counseling on their children's feeding practices; however, fewer reported that they were asked about their children's feeding practices at the current or previous visit (55.5 percent). Discussion of the children's growth was also variable; 51.8 percent of patients reported that providers plotted their children's growth on a chart, and 30.7 percent (CI: 15.5–45.9) reported that they discussed their children's growth with the providers at the current or a previous visit. Discussion of the children's growth was significantly lower among patients whose children were ages 6 months to 2 years old (11.3 percent) than those whose children were less than 6 months old (55.4 percent) or older than 2 years (52.1 percent).

TABLE 53. Sick child care at current or previous visits, by facility type, ownership, location, and patient sex (%)

Services	Between 6 months and 2 years (n = 49)	Under 6 months (n = 65)	Over 2 years (n = 59)	All children (n = 173)
Background information				
Asked age of child	24.0 (2.7–45.3)	83.9 (69.3–98.6)	52.1 (29.6–74.6)	43.3 (23.5–63.2)
Asked about child's symptoms	99.8 (99.4–100.0)	99.8 (99.5–100.0)	100.0 (100.0–100.0)	99.9 (99.6–100.0)
Asked if first or follow-up visit	51.8 (12.3–91.2)	61.7 (40.7–82.6)	69.3 (48.8–89.7)	58.3 (35.0–81.6)
Asked about immunization history	64.1 (27.0–100.0)	71.3 (54.3–88.2)	53.8 (31.1–76.5)	62.9 (41.5–84.2)
Asked about mother's health	58.3 (20.6–96.0)	52.5 (32.2–72.8)	57.8 (34.7–81.0)	57.0 (35.3–78.7)
Nutrition-related and general counseling				
Asked about child's feeding practices	39.8 (2.6–77.1)	68.0 (48.1–88.0)	78.5 (56.7–100.0)	55.5 (32.5–78.5)
Counseled on child's feeding practices	90.9 (77.7–100.0)	91.9 (83.1–100.0)	71.5 (51.2–91.9)	86.1 (76.0–96.1)

Services	Between 6 months and 2 years (n = 49)	Under 6 months (n = 65)	Over 2 years (n = 59)	All children (n = 173)
Discussed the child's weight, height, or growth	11.3 (0.0–23.0)	55.4 (35.3–75.5)	52.1 (29.6–74.6)	30.7 (15.5–45.9)
Child's growth plotted on chart	57.1 (19.3–94.9)	52.7 (32.6–72.8)	39.9 (18.7–61.1)	51.8 (29.7–73.8)
Informed about disease	93.1 (80.8–100.0)	99.7 (99.1–100.0)	93.4 (82.6–100.0)	94.5 (87.4–100.0)
Advised about giving complementary foods*	60.8 (20.2–100.0)	n.a.	n.a.	60.8 (20.2–100.0)
Advised about exclusive breastfeeding**	n.a.	72.9 (48.1–97.8)	n.a.	72.9 (48.1–97.8)
Done all the above (10)***	7.2 (0.0–16.6)	22.6 (4.6–40.6)	7.6 (0.0–15.6)	10.4 (3.0–17.7)
Median number of services conducted (10)* **	**5.0 [5.0–7.0]**	**8.0 [6.0–9.0]**	**7.0 [5.0–9.0]**	**7.0 [5.0–8.0]**

*Note: *Only asked of parents of children between 6 months to 2 years of age.*

**Only asked of parents of children less than 6 months of age.*

****Excludes advice on complementary foods and exclusive breastfeeding, as these are age specific.*

Data in cells marked with "n.a." are not presented due to sample size constraints for disaggregation by use of clinical guidelines across individual vignettes. Rather, data are presented for the overall performance providers had across their assigned vignettes. Values in parentheses are 95 percent confidence interval values; those in brackets represent the 25th and 75th percentile values. The sample size is 434.

4.1.2. Referral, continuity, integration

This subsection provides information on referral patterns between facilities, on patient and provider experiences with the referral process, and on the transfer of patient information among facilities. Patients who received care repeatedly at the same facility and/or from the same health care provider were more likely to enjoy the benefits of care continuity. Patterns of referral may reflect patient needs and expectations for either higher-level care or care that can be managed at a location that is more convenient. Ideally, information about the patients, their medical histories, and reasons for referral would be transferred from one facility or provider to another, without burdening the patients with the role of information transfer. The analysis provides a picture of continuity of care and referral practices and processes in health facilities. First, the frequency of receiving care from the same provider is presented, followed by frequency of patient referral, followed by additional details on referral practices—including the top reasons for referral and patient information flow as part of the referrals.

One measure of the continuity of care is the distribution of frequency with which patients visited the health facility at which they were interviewed when they sought care (Table 54). Overall, approximately 61 percent of patients said they always visited this health facility when they sought health care. Additionally, 20.9 percent of patients mentioned that they bypassed a more geographically convenient health facility

to seek care the day of the survey (not shown). Patients actively register with providers rather than being covered under specific facility catchment populations, as may be the norm for other country PHC systems.

TABLE 54. Frequency with which patients visit this health facility when they seek care, by facility type, ownership, and location (%)

Type	Always	Often	Sometimes	Rarely	Never
Facility Type					
FOP	68.1 (54.2–81.9)	20.3 (14.2–26.5)	9.0 (5.7–12.3)	2.2 (0.7–3.6)	0.4 (0.0–1.0)
Public	60.9 (52.0–69.7)	24.3 (15.4–33.1)	10.8 (2.3–19.4)	3.2 (0.1–6.2)	0.9 (0.1–1.7)
Private for-profit	62.4 (48.0–76.8)	19.7 (14.1–25.2)	10.8 (0.0–25.5)	5.9 (0.0–15.7)	1.2 (0.1–2.4)
Ownership					
Private	65.0 (55.0–75.0)	20.0 (15.8–24.1)	10.0 (1.9–18.1)	4.2 (0.0–9.5)	0.9 (0.2–1.6)
Public	60.9 (52.0–69.7)	24.3 (15.4–33.1)	10.8 (2.3–19.4)	3.2 (0.1–6.2)	0.9 (0.1–1.7)
Location					
Rural	71.7 (59.3–84.1)	21.8 (14.8–28.8)	5.2 (3.1–7.3)	1.1 (0.3–1.9)	0.2 (0.0–0.5)
Urban	57.9 (48.2–67.6)	24.4 (14.3–34.5)	12.5 (2.5–22.6)	4.0 (0.3–7.7)	1.1 (0.2–2.1)
Ukraine	**61.3 (53.4–69.2)**	**23.8 (16.0–31.6)**	**10.7 (3.1–18.3)**	**3.3 (0.5–6.1)**	**0.9 (0.2–1.6)**

Note: Values in parentheses represent the 95 percent confidence intervals. The sample size is 2,490.

A second measure of the continuity of care from the patient's perspective is the percentage of patients who reported always, often, sometimes, rarely, or never seeing the same health care provider, by facility type, ownership, and location (Table 55). Overall, 73.9 percent of patients said they always see the same provider when they visit this health facility; only 2 percent of patients stated that they never or rarely see the same provider.

TABLE 55. Patients reporting seeing the same provider when they visit this health facility, by facility type, ownership, and location (%)

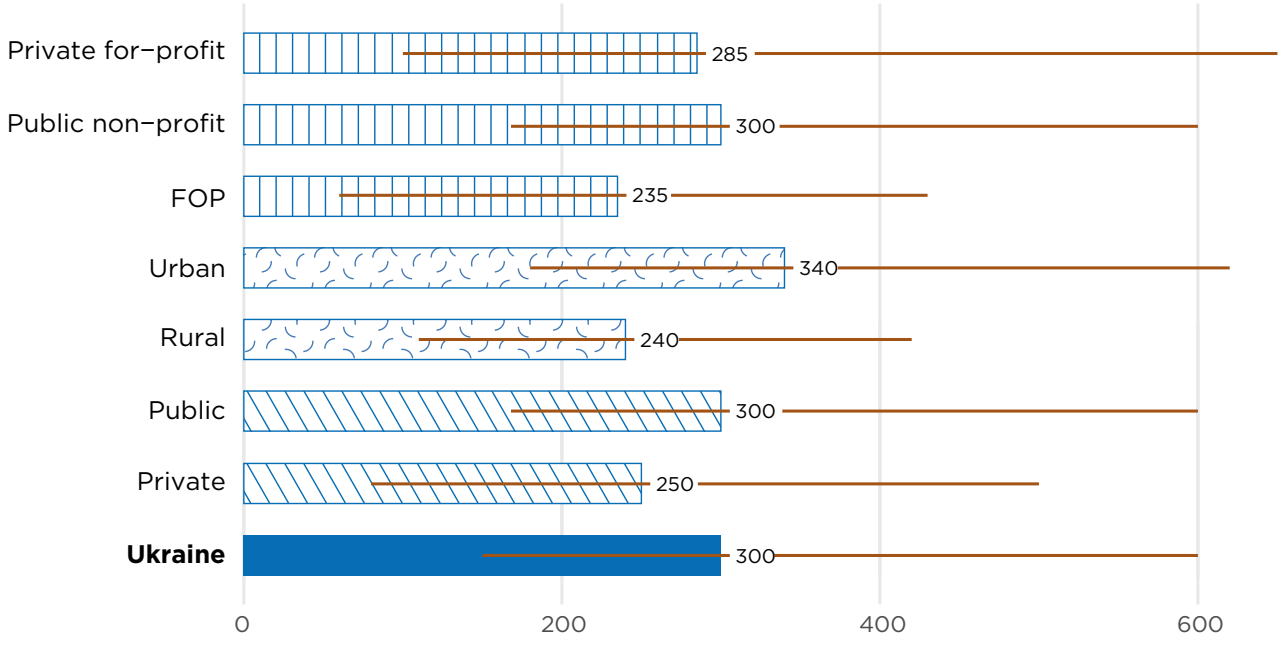
Type	Always	Often	Sometimes	Rarely	Never
Facility Type					
FOP	83.1 (69.8–96.3)	12.6 (6.3–19.0)	3.2 (1.0-–5.3)	0.6 (0.0–1.2)	0.6 (0.0–1.3)
Public	73.3 (64.1–82.5)	23.6 (6.7–40.5)	1.4 (0.6–2.1)	0.9 (0.0–2.0)	0.9 (0.1–1.7)
Private for-profit	74.5 (56.3–92.7)	15.6 (9.5–21.8)	4.0 (0.0–9.0)	5.5 (0.0–15.3)	0.3 (0.0–0.8)

Type	Always	Often	Sometimes	Rarely	Never
Ownership					
Private	78.4 (66.9–90.0)	14.3 (9.8–18.7)	3.6 (0.8–6.5)	3.2 (0.0–8.5)	0.5 (0.0–0.9)
Public	73.3 (64.1–82.5)	23.6 (6.7–40.5)	1.4 (0.6–2.1)	0.9 (0.0–2.0)	0.9 (0.1–1.7)
Location					
Rural	78.7 (66.5–90.8)	19.5 (12.6–26.3)	1.6 (0.6–2.7)	0.1 (0.0–0.2)	0.2 (0.0–0.5)
Urban	72.3 (62.1–82.5)	23.5 (3.8–43.2)	1.6 (0.7–2.6)	1.5 (0.0–3.0)	1.1 (0.2–2.0)
Ukraine	**73.9 (65.6–82.1)**	**22.5 (7.6–37.5)**	**1.6 (0.9–2.4)**	**1.1 (0.0–2.3)**	**0.9 (0.2–1.5)**

Note: Values in parentheses represent the 95 percent confidence intervals. The sample size is 2,490.

An outpatient referral occurs when a health care provider at this health facility recommends that an outpatient seeks additional inpatient or outpatient care at another health facility or from another health care provider (Figure 33) covering the period of October–December 2023. The same outpatient may receive multiple referrals; 220 providers (approximately 14.2 percent of the unweighted sample) were not able to provide a specific count for the number of outpatient referrals that they have given and accordingly are excluded from this figure. On average, 12.8 percent of patients were referred to a provider in the same facility where they were interviewed; 17.3 percent were referred for care at another health facility (further details are provided in Table 55 and Figure 33). The median number of patients referred to another provider within the same health facility across the country was 300 (IQR: 150–600).

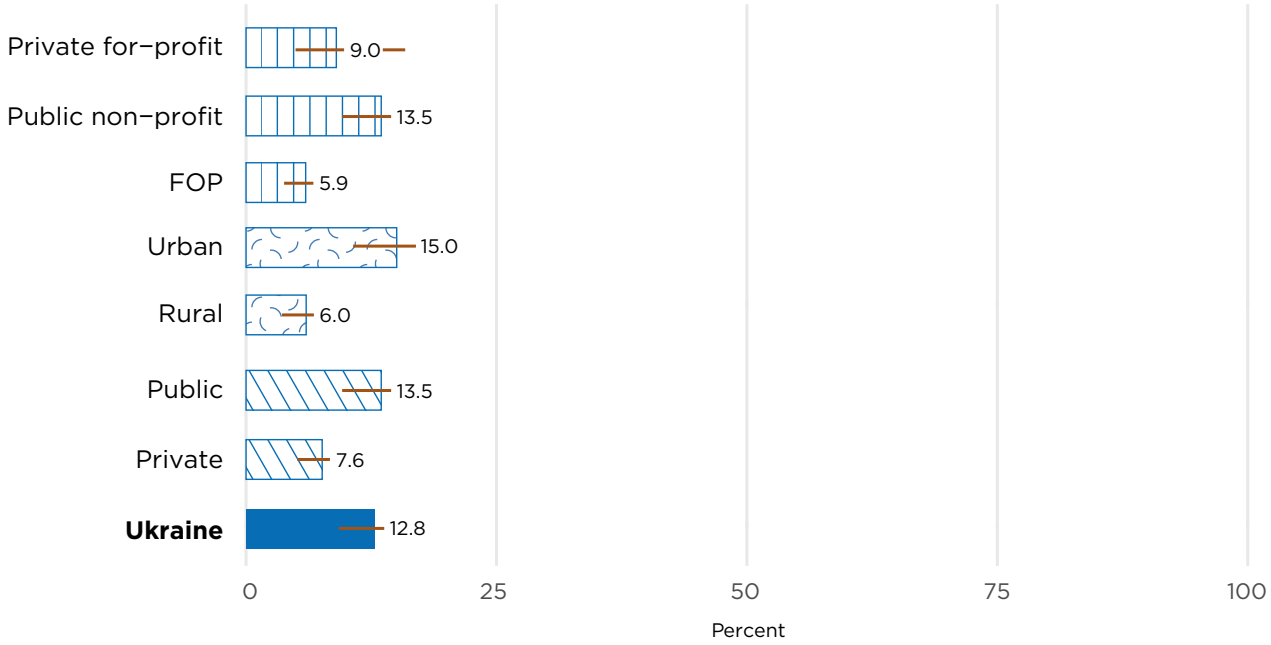
FIGURE 33. Median provider-reported weekly referral counts over a 3-month period (October–December 2023), by facility type, ownership, and location



Note: Error bars represent the 25th and 75th percentile values. The sample is 1,327.

The average share of patients referred for care within the same facility across the country was 12.8 percent (CI: 9.3–17.4; Figure 34). Public facilities (13.5 percent; CI: 9.6–18.7) were significantly more likely to refer within the facility than FOPs (5.9 percent; CI: 3.8–9.2). FOP patients were also less likely to be internally referred than the average Urban patients (15 percent; CI: 10.7–20.7) were also significantly more likely to be referred internally than patients in rural facilities (6.0 percent; CI: 3.6–9.9). This was also true among public facilities, with significantly higher urban (16.4 percent; CI: 11.4–23.0) than rural rates (6.0 percent; CI: 3.6–9.9).

FIGURE 34. Patient referred for care within same facility (patient reported), by facility type, location, and ownership (%)



Note: Error bar represents a 95 percent confidence interval. The sample size is 2,490.

The average proportion of patients referred to another facility across the country was 17.3 percent (Table 56). Public facilities had a statistically higher proportion of referrals (17.9 percent) than FOPs (10.3 percent). Among patients referred to another facility (374 patients), 82.8 percent stated that the reason for referral was because services or specialized care were not available at the current health facility.

TABLE 56. Referral outside facility (patient reported), by facility type, ownership, and location (%)

Type	Patients Referred to Another Facility (n = 2,490)	Among the patients referred, % where reason for referral was services/ specialized care not available from current health facility (n = 374)
Facility Type		
FOP	10.3 (7.7–13.6)	90.3 (77.5–96.2)
Public	17.9 (14.4–22.1)	82.1 (66.9–91.2)
Private for-profit	14.5 (9.1–22.4)	89.8 (78.1–95.6)
Ownership		
Private	12.6 (9.4–16.6)	90.0 (82.1–94.7)
Public	17.9 (14.4–22.1)	82.1 (66.9–91.2)
Location		
Rural	15.2 (12.0–19.1)	85.9 (70.9–93.8)
Urban	18.0 (14.0–22.8)	81.9 (64.3–91.9)
Ukraine	**17.3 (14.1–21.1)**	**82.8 (68.7–91.3)**

Common reasons reported by facility managers for outpatient referrals to another facility were reported consistently across both higher-level and same-level facilities, with the same top five reasons appearing, although the order varied (Table 57). These reasons included (1) services beyond the scope of the facility's care mandate, (2) patient or family requests for referral to another facility, (3) services within the facility's mandate that required a provider who was unavailable or not present, (4) services within the facility's mandate that were accessible at a more convenient facility, and (5) services within the facility's mandate that were unavailable due to stockouts of medicine or the facility being too full or busy.

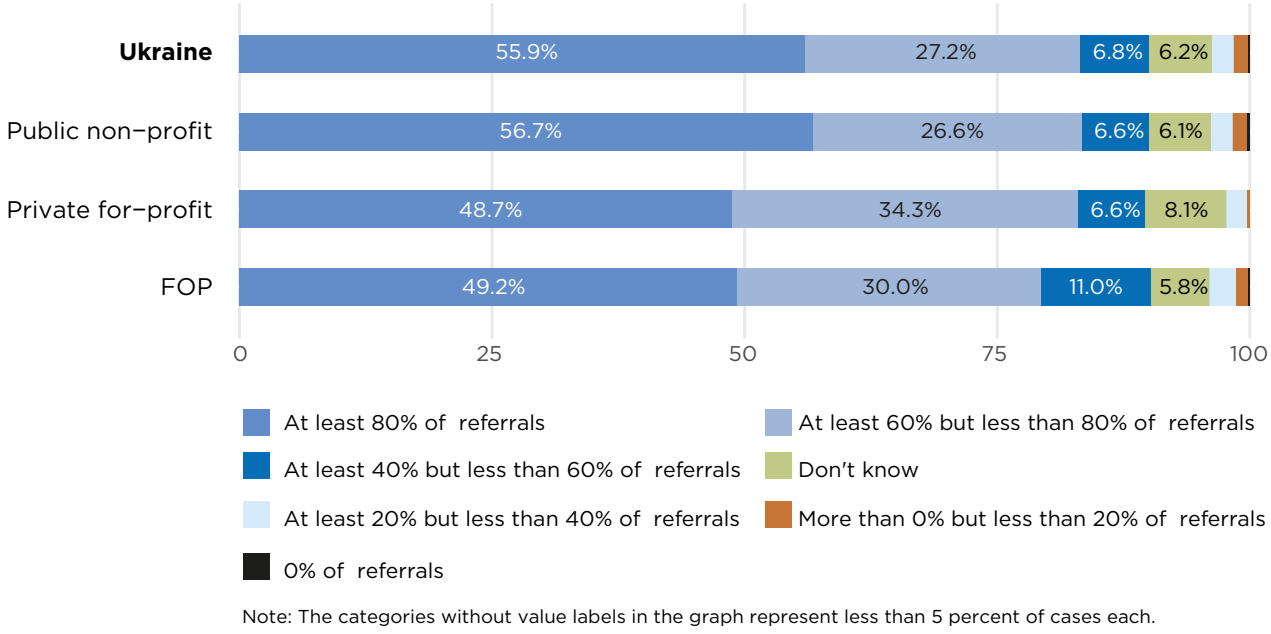
TABLE 57. Reasons for outpatient referral to another facility as reported by facility manager (%)

To higher level (n = 253)	To same level (n = 40)
Services beyond scope of facility's care mandate (96.4%)	Services beyond scope of facility's care mandate (43.0%)
Patient/patient's family requested referral to another health facility (19.0%)	Services within scope of health facility's care mandate, but the needed provider was not available/present (42.7%)
Services within the scope of health facility's care mandate, but they could be accessed at another more convenient facility (15.6%)	Services within the scope of health facility's care mandate, but the facility was too full/busy (12.3%)

To higher level (n = 253)	To same level (n = 40)
Services within the scope of health facility's care mandate, but medicine was not available/stocked out (4.5%)	Patient/patient's family requested referral to another health facility (8.7%)
Services within the scope of health facility's care mandate, but the provider was not available/ present (3.9%)	Services within the scope of the health facility's care mandate, but they could be accessed from another more convenient facility (7.9%)

Health care providers and patients were asked several questions to capture the patient information transfer during the referral process. Health care providers were asked how often the patient referrals that they made from October–December 2023 were completed (that is, patients receiving the referral effectively sought and received the services for which they were referred). Across the country, 83.1 percent (CI: 77.9–87.4) of providers reported that 60 percent or more of the patient referrals they made were completed (Figure 35). Less than 1 percent of providers (0.3 percent; CI: 0.0–0.7) mentioned that none of their patient referrals were completed.

FIGURE 35. Completion rate of patient referrals reported by providers, by facility type (%)



Note: The categories without value labels in the graph represent less than 5 percent of cases each. The sample size is 1,416.

Across the country, 46.9 percent of patient information transfers for outpatient referrals were reported as being done via referral notes, patient handbooks, or patient cards carried by the patients (Table 58). Urban providers (52.9 percent) were more likely to report the use of these documents than their rural counterparts (34.3 percent). Approximately one-half of the providers reported that patient information was sent by facility staff, with electronic transfer as the most common mode used (42.9 percent).

TABLE 58. Patient information transfer mode for outpatient referrals, reported by providers, by facility type, ownership, and location (%)

Type	Health facility staff electronically (such as by email, fax, or secure web portal)	Referral note/patient handbook/ patient card by patient	Health facility staff over the phone	Health facility staff in person	Don't know
Facility Type					
FOP	46.8 (37.9–55.7)	45.7 (37.0–54.4)	4.0 (1.1–6.9)	0.7 (0.0–1.8)	2.8 (0.6–4.9)
Public	43.1 (36.3–49.8)	46.5 (41.0–52.0)	6.1 (4.2–7.9)	1.2 (0.3–2.0)	3.2 (1.8–4.6)
Private for-profit	36.7 (30.9–42.5)	54.8 (40.5–69.2)	1.9 (0.6–3.1)	1.1 (0.0–2.6)	5.5 (0.0–11.2)
Ownership					
Private	41.2 (36.1–46.3)	50.8 (41.9–59.6)	2.8 (1.3–4.3)	0.9 (0.0–1.9)	4.3 (1.0–7.6)
Public	43.1 (36.3–49.8)	46.5 (41.0–52.0)	6.1 (4.2–7.9)	1.2 (0.3–2.0)	3.2 (1.8–4.6)
Location					
Rural	49.2 (32.7–65.8)	34.3 (28.9–39.6)	9.8 (6.2–13.3)	0.8 (0.0–1.7)	6.0 (3.2–8.7)
Urban	40.2 (34.5–45.9)	52.3 (45.1–59.4)	4.0 (2.1–5.9)	1.3 (0.3–2.3)	2.2 (0.8–3.7)
Ukraine	**42.9 (36.5–49.2)**	**46.9 (41.6–52.2)**	**5.7 (4.0–7.4)**	**1.2 (0.4–1.9)**	**3.3 (2.0–4.6)**

Note: Values in parentheses represent the 95 percent confidence intervals. Sample size is 1,416.

Facility managers who had received referrals between October–December 2023 reported that most information came in written form (Table 59). For FOPs, patient information was mostly transferred electronically (47.0 percent) or via referral notes or patient handbooks carried by the patients themselves (41.6 percent). For public facilities, the most common mode of information transfer was via referral notes or patient handbooks carried by patients (81.3 percent). Similarly, private for-profit facilities predominantly relied on patients carrying referral notes or handbooks themselves (95.7 percent).

TABLE 59. Facility reported information transfer mode for outpatient referrals from external facility, by facility type

FOP (n = 16)	Public (n = 33)	Private for-profit (n = 11)
Patient information was transferred by health facility staff electronically (such as by email, fax, or secure web portal) (47.0%)	Patient information was transferred by referral note/patient handbook/ patient card by patient themselves (81.3%)	Patient information was transferred by referral note/patient handbook/patient card by patients themselves (95.7%)
Patient information was transferred by referral note/ patient handbook/patient card by patient themselves (41.6%)	Patient information was transferred by health facility staff electronically (such as by email, fax, secure web portal) (12.5%)	No patient information was transferred (2.4%)
No patient information was transferred (10.0%)	Patient information was transferred by health facility staff over the phone (5.1%)	Patient information was transferred by health facility staff electronically (such as by email, fax, or secure web portal) (1.9%)
Patient information was transferred by health facility staff over the phone (1.5%)	Patient information was transferred by health facility staff in person (1.2%)	

Patients who had been referred were also asked about the transmission of their information. Most patients reported that referral information was transferred by carrying physical referral notes, patient handbooks, or cards themselves (69.3 percent; Table 60). Electronic transfer was reported significantly more often than any other method, including health facility staff transferring information in person (3.1 percent), over the phone (0.9 percent), or being unaware of the method (that is, "Don't know"). Patients were significantly less likely to report the electronic transfer of their information (24.7 percent) than providers (46.9 percent), as reported in Table 57.

TABLE 60. Mode of patient referral information transfer reported by patients, by facility type, ownership, and location (%)

Type	Patient information was transferred by referral note/patient handbook/ patient card by patient themselves	Patient information was transferred by health facility staff electronically (such as by email, fax, or secure web portal)	Patient information was transferred by health facility staff in person	Patient information was transferred by health facility staff over phone	Don't know
Facility Type					
FOP	56.2 (32.2–80.2)	31.8 (17.7–45.9)	3.1 (0.0–7.3)	6.3 (0.0–16.5)	2.6 (0.0–6.2)
Public	69.7 (9.0–100.0)	24.4 (17.3–31.6)	3.1 (0.0–8.6)	0.8 (0.0–1.6)	1.9 (0.2–3.6)
Private for-profit	68.6 (46.1–91.0)	26.2 (13.0–39.4)	1.4 (0.0–4.1)	0.0 (0.0–0.0)	3.9 (0.0–9.4)

Type	Patient information was transferred by referral note/patient handbook/ patient card by patient themselves	Patient information was transferred by health facility staff electronically (such as by email, fax, or secure web portal)	Patient information was transferred by health facility staff in person	Patient information was transferred by health facility staff over phone	Don't know
Ownership					
Private	63.1 (46.7–79.5)	28.7 (19.0–38.3)	2.1 (0.0–4.5)	2.8 (0.0–7.3)	3.3 (0.0–6.8)
Public	69.7 (9.0–100.0)	24.4 (17.3–31.6)	3.1 (0.0–8.6)	0.8 (0.0–1.6)	1.9 (0.2–3.6)
Location					
Rural	44.3 (32.6–55.9)	34.1 (19.5–48.8)	13.4 (0.0–36.7)	2.0 (0.0–4.5)	6.2 (0.0–12.8)
Urban	76.3 (3.8–100.0)	22.1 (14.5–29.7)	0.2 (0.0–0.4)	0.6 (0.0–1.4)	0.8 (0.0–1.7)
Ukraine	**69.3 (12.6–100.0)**	**24.7 (18.0–31.4)**	**3.1 (0.0–8.2)**	**0.9 (0.1–1.8)**	**2.0 (0.4–3.6)**

Note: Values in parentheses represent the 95 percent confidence intervals. The sample size is 470.

Given that these findings highlight the role of patients in transferring referral information, the tools and documents available for patients to keep track of health information are important for the effectiveness of sharing. Table 61 displays the availability of health documents among patients, by facility type, ownership, and location. Across the country, the most reported health record available among patients was the medical card of an outpatient (73.4 percent), followed by the results of preliminary examinations (28.1 percent).

TABLE 61. Health record availability among patients (multiple-select), by facility type, ownership, and location (%)

Type	No record	Medical card of an outpatient	Results of preliminary examinations	Extracts / epicrisis	Prescription for medicine	Referral
Facility Type						
FOP	20.8 (13.8–27.7)	57.2 (46.8–67.7)	24.0 (18.8–29.2)	4.7 (2.5–6.9)	18.3 (11.3–25.3)	7.3 (4.1–10.4)
Public	13.8 (8.6–19.0)	74.4 (67.1–81.6)	28.1 (20.8–35.4)	5.5 (3.6–7.5)	15.1 (10.9–19.3)	6.8 (4.2–9.3)
Private for-profit	12.2 (5.5–18.9)	74.1 (61.8–86.3)	31.2 (23.3–39.1)	5.9 (2.4–9.5)	12.5 (4.9–20.1)	5.4 (2.3–8.5)
Ownership						
Private	16.1 (10.9–21.4)	66.3 (57.2–75.4)	27.9 (23.3–32.4)	5.4 (3.2–7.5)	15.2 (9.8–20.6)	6.3 (4.0–8.5)
Public	13.8 (8.6–19.0)	74.4 (67.1–81.6)	28.1 (20.8–35.4)	5.5 (3.6–7.5)	15.1 (10.9–19.3)	6.8 (4.2–9.3)

Type	No record	Medical card of an outpatient	Results of preliminary examinations	Extracts / epicrisis	Prescription for medicine	Referral
Location						
Rural	19.2 (12.9–25.6)	64.5 (56.4–72.6)	26.0 (20.8–31.2)	5.7 (3.1–8.3)	18.5 (11.9–25.1)	8.8 (5.3–12.4)
Urban	12.4 (6.8–17.9)	76.3 (68.5–84.2)	28.7 (20.2–37.2)	5.5 (3.4–7.6)	14.0 (9.5–18.5)	6.0 (3.4–8.7)
Ukraine	**14.1 (9.5–18.7)**	**73.4 (66.8–80.0)**	**28.1 (21.6–34.5)**	**5.5 (3.8–7.2)**	**15.1 (11.3–18.9)**	**6.7 (4.5–9.0)**

Note: Values in parentheses represent the 95 percent confidence intervals.

Across the country, 76.4 percent of providers reported seeing at least one IDP in the week before the survey (Table 62). The overall median number of IDPs seen was 4.0. The proportion of IDPs seen in the past week without an active registration was 42.7 percent. Public facilities (43.8 percent) had a statistically significantly higher rate than private for-profit facilities (26.8 percent). One in twenty (5.4 percent) of all outpatient visits in the week before the survey involved IDPs. FOP facilities (7.8 percent) had a statistically significantly higher rate than public facilities (5.1 percent). Similarly, private facilities (8.0 percent) had a statistically significantly higher rate than public facilities (5.1 percent).

TABLE 62. Provision of care for internally displaced persons reported by provides, by facility type, ownership, and location

Type	Provider seeing any IDP the week before the survey (%)	Median number of IDPs seen by provider (n = 1,169)	Proportion of IDPs seen in last week that did not have an active registration (%) (n = 1,151)	Proportion of all outpatient visits with IDPs the week before the survey (%) (n = 1,464)
Facility Type				
FOP	77.1 (68.3–84.0)	5.0 [3.0–9.0]	39.8 (32.8–47.3)	7.8 (6.2––9.8)
Public	76.9 (71.4–81.7)	4.0 [2.0–7.0]	43.8 (37.6–50.1)	5.1 (4.4–6.0)
Private for-profit	68.5 (59.5–76.3)	5.0 [2.0–10.0]	26.8 (19.5–35.6)	8.1 (5.7–11.3)
Ownership				
Private	72.3 (65.9–77.9)	5.0 [2.0–10.0]	33.0 (27.8–38.8)	8.0 (6.4–9.8)
Public	76.9 (71.4–81.7)	4.0 [2.0–7.0]	43.8 (37.6–50.1)	5.1 (4.4–6.0)
Location				
Rural	78.8 (69.9–85.7)	3.0 [2.0–6.0]	51.6 (41.1–62.0)	5.9 (4.9–7.0)
Urban	75.4 (69.3–80.6)	4.0 [2.0–7.0]	38.7 (32.6–45.2)	5.2 (4.3–6.3)
Ukraine	**76.4 (71.5–80.8)**	**4.0 [2.0–7.0]**	**42.7 (37.1–48.5)**	**5.4 (4.7–6.2)**

Note: Values in parentheses represent the 95 percent confidence intervals; values in brackets represent the 25th and 75th percentiles. The sample size is 1,547 unless otherwise indicated.

4.1.3. Safety, prevention, detection

This subsection reports on practices in place to detect and prevent the spread of contagious diseases and health care–acquired infections, as well as other metrics of facility-level emergency preparedness. Chapter 3 of this report features facility-level infection prevention and control infrastructure indicators; this section focuses on the practices and protocols in place. Facilities were evaluated on the following set of protocols and infrastructural features for infection prevention and control: (1) test and report national notifiable diseases to higher-level authorities; (2) maintain cleaning records for at least 1 point of care; (3) maintain records to track the antibiotics prescribed and dispensed; (4) have at least 1 staff who received training on AMR or antibiotic stewardship in the 2 years before the survey (January 2022–December 2023); and (5) have at least 1 provider who received in-service training on IPC in the 2 years preceding the survey. The overall percentage of facilities reporting all 5 measured systems and practices was 38.0 percent. Although cleaning records (97.2 percent) were strong, notifiable diseases (87.7 percent), IPC (80.1 percent), and staff training on AMR (71.9 percent) were below 90 percent (Table 63).

TABLE 63. Surveillance and IPC systems and practices, by facility type, ownership, and location (%)

Type	Test and report national notifiable diseases	Maintain cleaning record for at least 1 point of care from past week	Maintain record to track antibiotics prescribed and dispensed	Have at least one staff who received training on AMR or antibiotic stewardship in the past 2 years	Have at least one provider who received in-service training on IPC in the past 2 years	Report all 5 measured systems and practices
Facility Type						
FOP	79.9 (67.6–88.4)	92.9 (84.3–97.0)	43.6 (30.7–57.4)	69.6 (56.8–80.0)	83.3 (71.9–90.6)	26.1 (15.1–41.3)
Public	89.8 (84.6–93.5)	97.8 (93.5–99.3)	55.0 (45.1–64.4)	72.0 (63.4–79.2)	86.4 (79.0–91.4)	40.5 (30.3–51.6)
Private for-profit	73.0 (52.9–86.6)	96.8 (85.2–99.4)	56.2 (40.4–70.7)	74.0 (59.7–84.5)	87.3 (74.8–94.1)	25.3 (13.8–41.7)
Ownership						
Private	77.3 (66.7–85.2)	94.4 (88.6–97.3)	48.4 (38.2–58.8)	71.3 (61.9–79.2)	84.8 (76.8–90.4)	25.8 (17.3–36.7)
Public	89.8 (84.6–93.5)	97.8 (93.5–99.3)	55.0 (45.1–64.4)	72.0 (63.4–79.2)	86.4 (79.0–91.4)	40.5 (30.3–51.6)
Location						
Rural	91.0 (83.9–95.1)	97.3 (90.6–99.3)	57.5 (44.6–69.5)	70.1 (58.4–79.7)	83.7 (73.5–90.5)	42.4 (28.9–57.1)
Urban	83.6 (76.8–88.6)	97.2 (94.1–98.7)	49.3 (40.0–58.6)	74.1 (65.8–80.9)	89.1 (82.1–93.5)	32.6 (24.1–42.3)
Ukraine	**87.7 (83.0–91.2)**	**97.2 (94.1–98.7)**	**53.8 (45.5–62.0)**	**71.9 (64.7–78.1)**	**86.1 (80.1–90.5)**	**38.0 (29.3–47.5)**

Note: Values in parentheses represent the 95 percent confidence interval values. The sample size is 378.

Evaluating emergency preparedness consists of measuring the following: (1) assessments and drills conducted in 2022 and 2023, (2) policies and protocols to access backup resources and supplies, (3) communications with key stakeholders during emergencies, and (4) assessments of protocols for invasion-related emergencies (Table 64).[39] Across the country, 59.5 percent of the 5 measured emergency preparedness assessments and drills were reported. Public facilities (61.7 percent) did significantly better than private ones (48.8 percent), primarily due to the conduct of structural vulnerability assessments (58.8 percent in public and 35.9 percent in private). Seven guidelines and protocols were used to evaluate emergency preparedness; facility managers reported the use of slightly more than one-half (55.3 percent) of these guidelines and protocols. Public facilities (57.7 percent) were significantly more likely to report using the protocols and guidelines than private facilities (43.9 percent), primarily due to the differences in the use of those related to accessing (1) medical buffer stores during an emergency (40.3 percent in public, 17.4 percent in private) and (2) financing (58.0 percent and 24.6 percent, respectively).

TABLE 64. Selected emergency preparedness indicators, by facility type, ownership, and location

Type	FOP	Public	Private for-profit	Private	Public	Rural	Urban	Ukraine
Assessments and drills								
Conducted assessment of structural vulnerability to natural disasters and weather events (past 2 years)	34.8 (23.5–48.0)	58.7 (49.0–67.7)	37.7 (24.4–53.3)	35.9 (27.0–45.8)	58.7 (49.0–67.7)	57.2 (44.3–69.1)	51.8 (42.6–60.8)	54.7 (46.5–62.8)
Proportion of all assessments and drills (5)	**47.4 (37.4–57.7)**	**61.7 (56.3–66.8)**	**51.2 (41.2–61.0)**	**48.8 (41.6–56.1)**	**61.7 (56.3–66.8)**	**57.3 (50.3–63.9)**	**62.2 (56.4–67.6)**	**59.5 (54.0–63.9)**
Guidelines and protocols								
Guidelines/protocols to access backup human resources	76.1 (65.0–84.4)	66.5 (54.7–76.6)	61.1 (43.1–76.4)	70.3 (60.2–78.8)	66.5 (54.7–76.6)	61.8 (46.3–75.2)	73.9 (64.8–81.3)	67.2 (57.3–75.7)
Guidelines/protocols to access essential medicines, consumables, and equipment from medical buffer stores during emergencies	16.2 (9.4–26.5)	40.3 (30.2–51.4)	19.3 (9.9–34.2)	17.4 (11.5–25.4)	40.3 (30.2–51.4)	40.8 (27.2–55.9)	30.9 (23.2–39.8)	36.4 (27.7–46.0)
Guidelines/protocols to access financing during emergencies	19.7 (11.4–32.0)	58.0 (48.4–67.0)	32.6 (18.1–51.3)	24.6 (16.5–35.1)	58.0 (48.4–67.0)	62.9 (50.7–73.7)	39.0 (30.3–48.5)	52.2 (43.9–60.4)
Proportion of all guidelines and protocols (7)	**42.5 (36.1–49.2)**	**57.7 (51.6–63.5)**	**46.1 (39.2–53.1)**	**43.9 (39.1–48.8)**	**57.7 (51.6–63.5)**	**58.8 (50.5–66.7)**	**51.0 (46.3–55.6)**	**55.3 (50.1–60.4)**
Guidelines and protocols (invasion-related)								
Proportion of all invasion-related guidelines and protocols (4)	**36.6 (29.8–43.9)**	**45.4 (40.0–50.8)**	**48.7 (38.2–59.3)**	**41.2 (35.1–47.6)**	**45.4 (40.0–50.8)**	**45.8 (38.8–53.0)**	**43.2 (38.1–48.5)**	**44.6 (40.1–49.3)**

Note: Values in paratheses represent the 95 percent confidence intervals. The sample size is 378. The full table is in Annex 3 (Table 9).

[39] Annex Table 9 contains the full set of emergency preparedness elements.

As with the protocols themselves, training on invasion-related emergency preparedness and response topics since the onset of the invasion was significantly higher in public (92.9 percent) than in private-for-profit (82.6 percent) and FOPs (79.2 percent; Table 65). This also applies to training for threats of violence or harm by an armed group; training in public facilities (51.0 percent) was significantly higher than in FOPs (33.4 percent).

TABLE 65. Providers who reported receiving training on key invasion-related emergency preparedness and response topics since February 24, 2022, by facility type, ownership, and location (%)

Type	Actions for staff and patients to take in the event of an activated alert signal (%)	Actions for staff and patients to take in the event of real or perceived threats of violence/harm by armed groups (%)	Actions for staff in the event of real or perceived threat by patients (%)
Facility Type			
FOP	79.2 (70.4–85.9)	33.4 (25.8–41.9)	42.0 (35.4–48.9)
Public	92.9 (90.4–94.8)	51.0 (44.0–58.0)	52.0 (47.2–56.7)
Private for-profit	82.6 (71.9–89.8)	43.2 (34.4–52.5)	44.1 (36.2–52.3)
Ownership			
Private	81.1 (74.5–86.3)	38.9 (32.9–45.1)	43.2 (37.8–48.6)
Public	92.9 (90.4–94.8)	51.0 (44.0–58.0)	52.0 (47.2–56.7)
Location			
Rural	87.9 (82.5–91.8)	54.2 (42.4–65.5)	58.3 (50.4–65.7)
Urban	93.3 (90.5–95.4)	47.9 (40.5–55.3)	47.9 (42.9–53.0)
Ukraine	**91.7 (89.3–93.6)**	**49.8 (43.4–56.1)**	**51.1 (46.7–55.4)**

Note: Values in parentheses represent the 95 percent confidence intervals. The sample size is 1,547.

Three elements were evaluated for infection prevention and control from potentially infectious sharp materials (Table 66). In the aggregate, 82.8 percent of providers reported encouraging the wound to bleed under running water, with public facilities (84.0 percent) doing significantly better than private facilities (72.7 percent). This finding was independent of whether using medicines available at the facility (48.1 percent) or another facility (19.9 percent).

TABLE 66. Provider-reported actions in cases of incidental skin puncture from potentially infectious sharp materials (%)

Type	Encourage the wound to bleed, ideally holding it under running water	Make an entry in the accident log	Notify head of facility/ facility staff responsible for infection prevention and control	Take post-exposure prophylaxis with medicines available at the facility	Take post-exposure prophylaxis with medicines available at another facility
Facility type					
FOP	73.9 (65.5–80.8)	84.9 (79.0–89.4)	84.3 (74.9–90.7)	56.8 (49.4–63.9)	26.2 (19.4–34.3)
Public	84.0 (79.0–87.9)	83.9 (79.2–87.6)	84.9 (80.4–88.6)	47.6 (41.1–54.1)	19.3 (14.9–24.5)
Private for-profit	71.7 (64.2–78.1)	83.0 (75.5–88.6)	85.6 (76.8–91.4)	48.5 (40.0–57.1)	25.2 (18.1–34.0)
Ownership					
Private	72.7 (67.2–77.5)	83.9 (79.2–87.7)	85.0 (79.0–89.6)	52.2 (46.3–58.1)	25.6 (20.6–31.5)
Public	84.0 (79.0–87.9)	83.9 (79.2–87.6)	84.9 (80.4–88.6)	47.6 (41.1–54.1)	19.3 (14.9–24.5)
Location					
Rural	80.4 (72.2–86.6)	83.4 (76.3–88.7)	84.1 (77.6–89.0)	44.1 (33.3–55.6)	15.0 (10.0–21.9)
Urban	83.9 (78.3–88.2)	84.1 (78.8–88.2)	85.3 (80.0–89.4)	49.8 (43.1–56.5)	22.1 (17.0–28.2)
Ukraine	**82.8 (78.4–86.5)**	**83.9 (79.7–87.3)**	**84.9 (80.9–88.3)**	**48.1 (42.2–54.0)**	**19.9 (15.9–24.6)**

Note: Values in parentheses represent the 95 percent confidence intervals. The sample size is 1,547.

4.2. POSITIVE USER EXPERIENCE

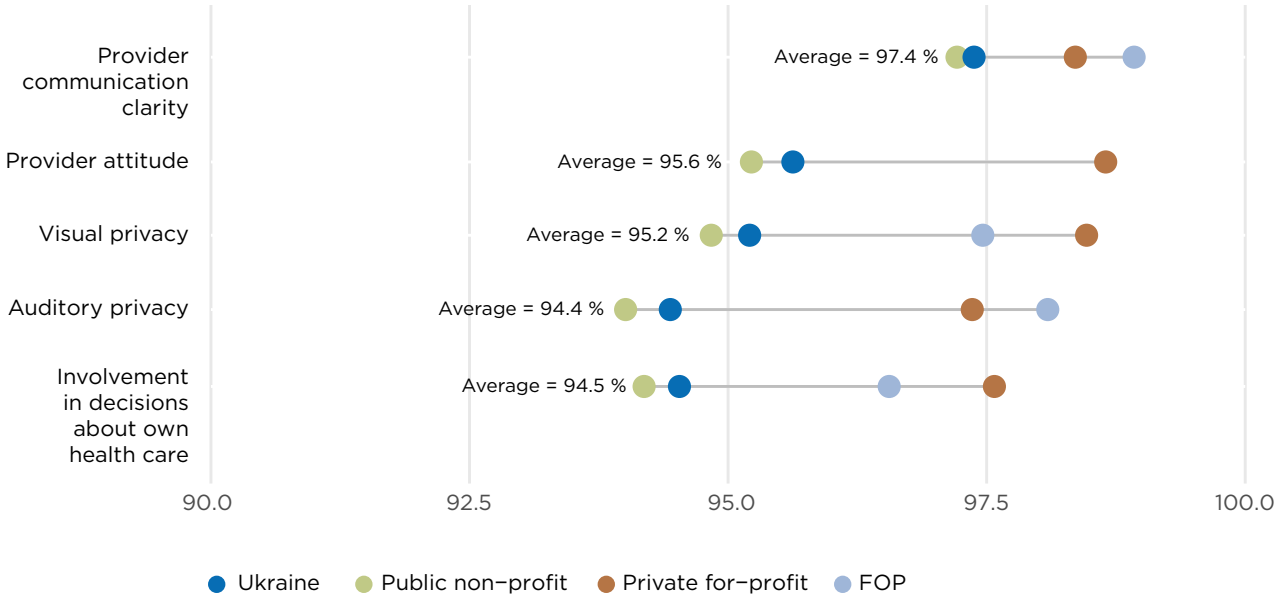
The second domain explored in this chapter is "positive user experience," which gauges patient's experience during visits to facilities. First, the analysis highlights the interpersonal skills of the health care providers and seeks to understand the patient's level of comfort during the consultations. Next, the analysis measures the overall user experience during facility visits, including with wait times and infrastructure.

4.2.1. Respect and autonomy

This subsection explores different indicators that record the patient's review and experience with the aspects of care provided at the health care facility (Figure 36). Nearly all patients rated their provider's

communication clarity as "good" or "very good" (97.4 percent; CI: 95.8–98.4). Most patients rated providers similarly on provider attitude (95.6 percent; CI: 92.2–97.6) Similar trends were observed for ratings related to visual privacy (95.2 percent; CI: 92.5–97.0), auditory privacy (94.4 percent; CI: 91.5–96.4), and patient's level of involvement in decisions about their own health care (94.5 percent; CI: 92.0–96.3). The overall proportion of patients reporting all questions answered during consultation was 98.9 percent (CI: 97.7–99.4).

FIGURE 36. Patients rating different aspects of their experiences as "good" or "very good" (%)



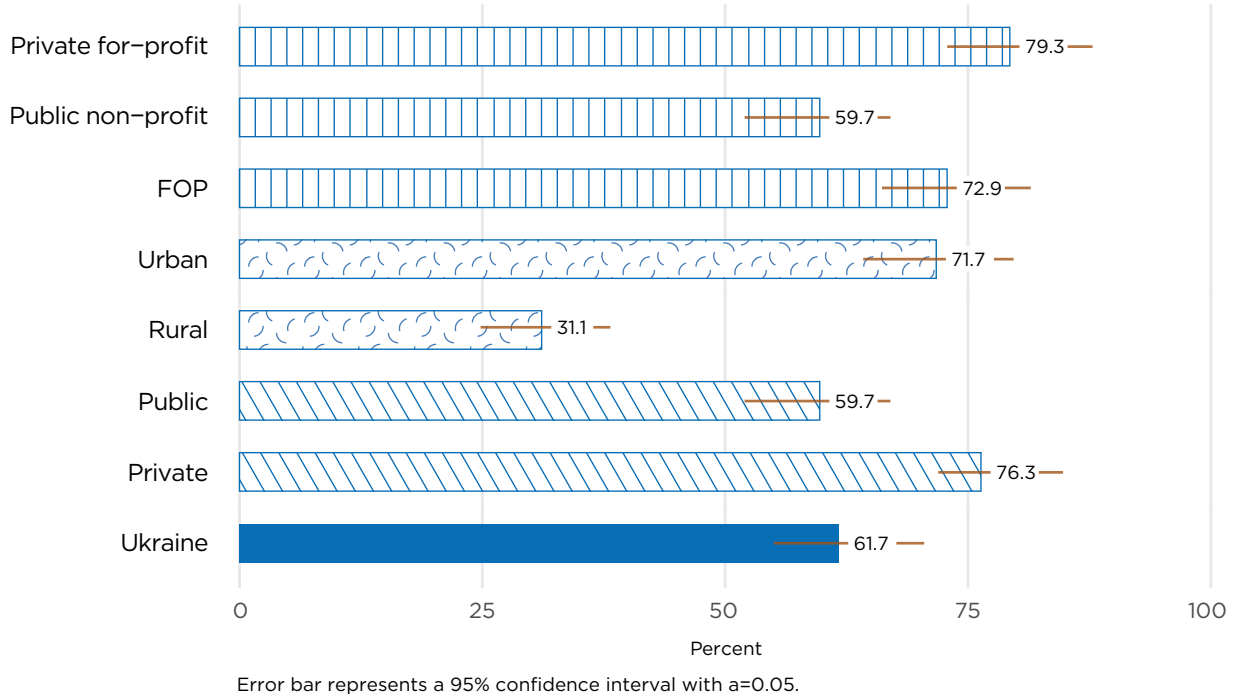
Note: "Ukraine" points that are not visible in the figure are obscured by other points that have very similar values. The sample size is 2,490.

4.2.2. User focus

User-centered health care systems focus on patient needs and preferences to ensure that they can readily receive high-quality care. These systems anticipate the various bottlenecks that can arise from the time that a patient decides to seek care, and they design measures to address those challenges. This section presents key indicators related to user-centered care systems, with particular attention to understanding the experience of patients seeking primary care at health facilities.

Appointment systems can reduce waiting time to be seen by providers, ensure services are available for patients, and improve efficiency and workflows (Figure 37). Overall, 61.7 percent (CI: 55.0–67.9) of patient visits were based on appointments; with significantly higher rates reported by patients in urban facilities (71.7 percent; CI: 64.2–78.2) than in rural facilities (31.1 percent; CI: 24.8–38.2). Appointment-based visits were also significantly more common in private facilities (76.3 percent; CI: 71.9–80.2) than public facilities (59.7 percent; CI: 52.0–67.0). Within private facilities, the for-profit ones (79.3 percent) were significantly higher than the average. Within public facilities (not shown), urban patients (70.8 percent; CI: 61.8–78.6) were significantly more likely than rural ones to have appointments (31.0 percent; CI: 24.7–38.1).

FIGURE 37. Patient-reported visits based on appointments, by facility type, ownership, and location (%)



Note: Error bar represents a 95 percent confidence interval. The sample size is 1,702.

Patient waiting time (Table 67) is relatively low with a median patient-reported waiting time of 5.0 minutes (IQR: 0.0–10.0). The median consultation time was 15.0 minutes (IQR: 15.0–20.0), and the median total time spent at facilities was 20.0 minutes (IQR: 15.0–25.0).[40]

TABLE 67. Patient-reported median wait time and consultation time, by facility type, ownership, and location

Type	Waiting time (in minutes)	Consultation time (in minutes)	Total time at facility (in minutes)
Facility Type			
FOP	2.0 [0.0–5.0]	17.0 [15.0–20.0]	20.0 [15.0–25.0]
Public	5.0 [0.0–10.0]	15.0 [15.0–20.0]	20.0 [15.0–25.0]
Private for-profit	2.0 [0.0–5.0]	20.0 [15.0–25.0]	22.0 [20.0–30.0]
Ownership			
Private	2.0 [0.0–5.0]	20.0 [15.0–20.0]	20.0 [18.0–30.0]
Public	5.0 [0.0–10.0]	15.0 [15.0–20.0]	20.0 [15.0–25.0]

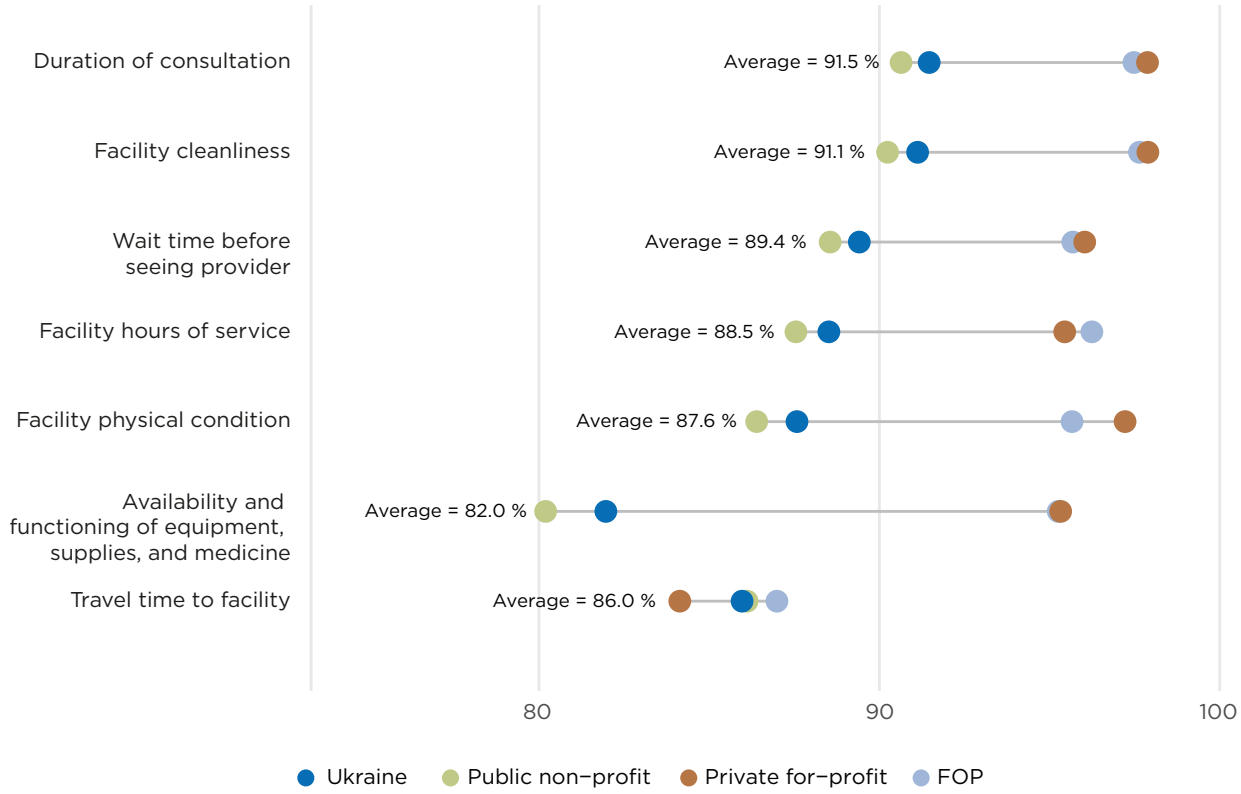
[40] In some cases, the total median time spent at the facility may be slightly different than the sum of the medians for wait and consultation times, as the total time indicator is based on a sum of individual wait times and consultation times rather than the median values.

Type	Waiting time (in minutes)	Consultation time (in minutes)	Total time at facility (in minutes)
Location			
Rural	5.0 [0.0–10.0]	15.0 [15.0–20.0]	20.0 [17.0–25.0]
Urban	5.0 [0.0–10.0]	15.0 [15.0–20.0]	20.0 [15.0–25.0]
Ukraine	**5.0 [0.0–10.0]**	**15.0 [15.0–20.0]**	**20.0 [15.0–25.0]**

Note: Values in brackets represent the 25th and 75th percentile values. The sample size is 2,482.

Generally, patients' rating of different aspects of their visits as "good" or "very good" are above 80 percent (Figure 38).[41] Public facilities had significantly lower ratings than private facilities for all assessed satisfaction items, aside from travel time to the health facility.

FIGURE 38. Patients rating different aspects of their experience as "good" or "very good," by facility type (%)



Note: "Ukraine" points that are not visible in the figure are obscured by other points that have very similar values. The sample size is 2,490.

Telemedicine is an option to address insecurity that may prevent patients from visiting health facilities. Providers reported conducting one in five visits (20.2 percent) by telemedicine over the past week

[41] In some cases, the total median time spent at the facility may be slightly different than the sum of the medians for wait and consultation times, as the total time indicator is based on a sum of individual wait times and consultation times rather than the median values.

(Table 68). This finding is lower than the providers' reported ability to deliver telemedicine-based care: more than four in five providers felt they had the ability to provide the same quality of care remotely (83.9 percent); more than seven in ten (73.9 percent) felt they had the appropriate resources to offer such care without interruptions.

TABLE 68. Volume of and readiness for telemedicine service delivery, by facility type, ownership, and location (%)

Type	Proportion of outpatient visits in the past week conducted using telemedicine (n = 1,265)	Proportion of providers confident in ability to provide the same quality of care to patients using telemedicine compared to in-person consultation	Proportion of providers who agree they have appropriate resources to offer telemedicine without interruption
Facility Type			
FOP	25.5 (20.2–31.7)	86.1 (78.8–91.2)	77.6 (69.4–84.1)
Public	19.6 (16.3–23.5)	84.2 (80.0––87.6)	73.6 (67.6–78.8)
Private for-profit	25.2 (18.3–33.6)	77.7 (69.0–84.6)	71.9 (62.7–79.6)
Ownership			
Private	25.3 (20.7–30.6)	81.5 (75.6–86.2)	74.4 (68.5–79.6)
Public	19.6 (16.3–23.5)	84.2 (80.0–87.6)	73.6 (67.6–78.8)
Location			
Rural	19.2 (14.6–24.8)	83.8 (76.7–89.0)	77.4 (70.7–83.0)
Urban	20.6 (16.8–25.1)	84.0 (79.4–87.7)	72.0 (64.7–78.3)
Ukraine	**20.2 (17.1–23.7)**	**83.9 (80.2–87.1)**	**73.7 (68.3–78.4)**

Note: Values in parentheses represent the 95 percent confidence interval. The sample size is 1,547 unless otherwise indicated.

Providers were also asked about their ability to provide services for patients who had experienced sexual or domestic violence or invasion-related trauma, anxiety, and other mental health conditions (Table 69). More than four in five providers (83.3 percent) felt confident in their ability to provide care for survivors of sexual or domestic violence. Providers in public facilities (84.8 percent) were significantly more confident than those in private facilities (70.7 percent). This was primarily due to providers in private-for-profit facilities, who had the lowest confidence levels (67.5 percent). Providers had higher confidence in their ability to provide care for patients who had experienced invasion-related trauma, anxiety, and other mental health conditions, with more than nine in ten (92.9 percent) responding positively.

TABLE 69. Provider confidence in the ability to provide services for victims of domestic and sexual violence and invasion-related mental health conditions, by facility type, ownership, and location (%)

Type	Proportion of providers confident in their ability to provide care for patients who have experienced sexual or domestic violence	Proportion of providers confident in their ability to provide care for patients experiencing invasion-related trauma, anxiety, or other mental health conditions
Facility Type		
FOP	74.6 (67.1–80.9)	89.4 (84.0–93.2)
Public	84.8 (80.3–88.4)	93.5 (89.5–96.1)
Private for-profit	67.5 (56.4–77.0)	85.8 (79.0–90.7)
Ownership		
Private	70.7 (63.5–76.9)	87.4 (83.0–90.8)
Public	84.8 (80.3–88.4)	93.5 (89.5–96.1)
Location		
Rural	85.4 (77.8–90.7)	92.5 (82.2–97.1)
Urban	82.4 (77.3–86.5)	93.1 (89.7–95.4)
Ukraine	**83.3 (79.3–86.7)**	**92.9 (89.5–95.3)**

Note: Values in parentheses represent the 95 percent confidence intervals. The sample size is 1,547.

Chapter 5: Person-centered outcomes

This chapter presents findings that explore person-centered outcomes to assess whether a patient is at the "center of care," with most data sourced from patient interviews. Person-centered outcomes ensure that patients are empowered to make decisions regarding their own health. This process involves sharing all relevant information and resources with patients so that they can consider their choices and make informed decisions. In understanding how well the health system allows for patient-driven health care, the SDI health survey assesses 2 subdomains covering confidence in the health system and financial protection: (1) care uptake and retention—patients' reasons for receiving and continuing care with the current or another facility; and (2) satisfaction and recommendation— patients' satisfaction with the various aspects of care that they received and the likelihood that they would recommend a health facility or health care provider to others based on their experience. The survey also employs 2 other components for assessing the various financial costs that patients bear in receiving care, namely, out-of-pocket (OOP) costs and opportunity costs, for example, income lost, or time taken away from work in receiving care. The survey does not capture outcomes such as quality of life or functional status due to the complexity of measuring these types of outcomes and the inappropriateness of linking them to a given facility or experience of care as measured by the SDI health survey. Box 3 summarizes messages of this chapter.

BOX 3. Key observations on primary health care person-centered outcomes in Ukraine

Resilience of the system. Approximately two-thirds (67.7 percent) of patients reported that they felt safe seeking care at the facility where they received care the day of the survey, and 11.8 percent reported that they delayed seeking care at least once when needed within the year preceding the survey. Eight in 10 (80 percent) patients mentioned that they would feel comfortable discussing symptoms of anxiety, depression, trauma, or mental health concerns with a provider at the health facility they visited. Less than one-half of patients (41.9 percent) reported that they would be willing to receive care for a similar issue using telehealth services. Further, only one-fourth (26 percent) of patients reported that they felt confident that they could receive a similar quality of care for the service they received using telehealth services.

Patient satisfaction. Nearly all patients (95.6 percent) were satisfied with the quality of care received in the PHC facility and were likely to recommend It to others (93.8 percent). However, both satisfaction (98.5 percent for private and 95.2 percent for public) and recommendations (96.7 percent and 93.4 percent, respectively) were more statistically significantly more likely in private than in public facilities. However, perceptions and reality may differ: FOP providers' levels of inputs were statistically significantly lower than public ones for sterilization, supplemental equipment, and consumables.

5.1. CONFIDENCE IN THE SYSTEM

5.1.1. Care uptake and retention

The first domain explored under "person-centered outcomes" is confidence in the health care system. This section provides an overview of care uptake and retention, that is, the likelihood that patients receive care and continue to receive care at a single health facility versus multiple health facilities and their reasons for doing so. Most patients reported that they received all intended services the day of the interview (99.8 percent) and would return to the same facility for similar care (95.8 percent; Table 70). Few patients reported that they planned to seek a second opinion regarding the issue they came to the health facility for the day of the interview (2.3 percent).

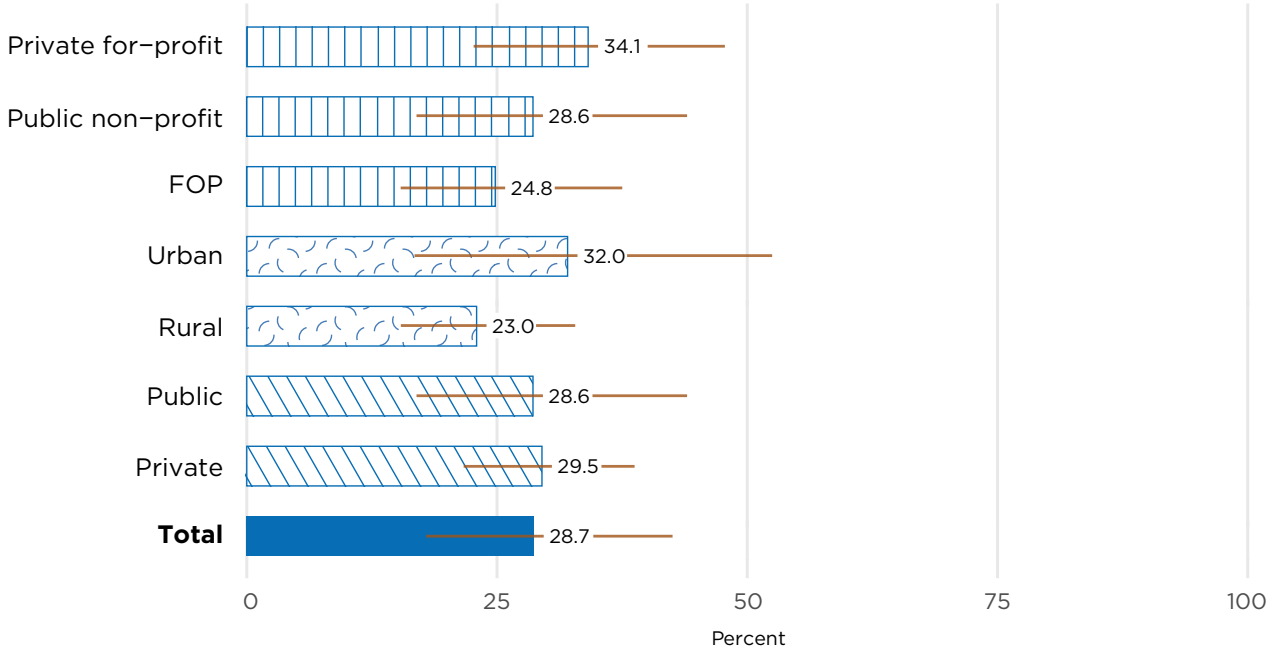
TABLE 70. Patients reporting they received the intended care, intended to seek a second opinion, and indicated they would return to same facility for a similar service, by facility type, ownership, and location (%)

Type	Patients who received all intended services	Patients who report they would return to the facility for similar care	Patients who plan to get second opinion (n = 2,116)
Facility Type			
FOP	98.8 (97.0–99.5)	94.6 (88.8–97.4)	1.1 (0.5–2.5)
Public	99.8 (98.9–100.0)	95.8 (93.5–97.3)	2.4 (1.4–4.1)
Private for-profit	100.0 (99.9–100.0)	96.4 (91.5–98.5)	2.2 (0.9–5.6)
Location			
Rural	99.9 (99.2–100.0)	93.6 (89.4–96.2)	2.0 (0.9–4.6)
Urban	99.7 (98.8–99.9)	96.5 (94.1–97.9)	2.4 (1.3–4.4)
Ownership			
Private	99.4 (98.6–99.8)	95.5 (92.2–97.5)	1.7 (0.9–3.3)
Public	99.8 (98.9–100.0)	95.8 (93.5–97.3)	2.4 (1.4–4.1)
Ukraine	**99.8 (99.1–99.9)**	**95.8 (93.7–97.1)**	**2.3 (1.4–3.8)**

Note: Values in parentheses represent 95 percent confidence interval values.

Diabetes and/or hypertension care may occasion visits to more than one health facility. Overall, 28.7 percent of patients who came to the facility for hypertension or diabetes care reported that they had visited other facilities as well for their condition (Figure 39). The most common facilities that these patients mentioned visiting previously (not shown) were multidisciplinary hospitals (52.4 percent) and state institutions of primary health care (40.4 percent).

FIGURE 39. Patients who visited other health facilities for NCD care, by facility type, ownership, and location (%)



Note: Error bar represents a 95 percent confidence internal with α = 0.05. The sample size is 434.

Patients who sought care for diabetes and/or hypertension at multiple facilities were asked a multiple-select question to understand their reason for seeking care at multiple facilities (Table 71). The most common reasons cited were (1) the services needed or specialized care were not available at the facility (71.3 percent in FOPs, 40.3 percent in public, and 48.0 percent in private for-profit facilities) and (2) the infrastructure, amenities, and/or cleanliness of the facility (11.7 percent FOP, 7.4 percent public, and 9.9 percent private-for-profit).

TABLE 71. Top 5 reasons patients chose multiple points of care for NCD (multiple select) (%)

FOP (n = 97)	Public (n = 253)	Private for-profit (n = 84)
Services needed or specialized care were not available at the health facility (71.3%)	Services needed or specialized care were not available at the health facility (40.3%)	Services needed or specialized care were not available at the health facility (48.0%)
Services needed were unavailable, or the facility was inaccessible due to the invasion, including an air alert (23.3%)	Health care provider(s) was absent/not available (31.7%)	Required equipment/supplies/ medicine were not available/ stocked out or not functional (20.9%)
Preference for a health facility that has good infrastructure, amenities, and/or cleanliness (11.7%)	Required equipment/supplies/ medicine were not available/ stocked out or not functional (13.4%)	Prefers the shortest possible wait time to see a provider (15.0%)
Required equipment/supplies/medicine were not available/stocked out or not functional (6.6%)	Preference for a health facility that has good infrastructure, amenities, and/or cleanliness (7.4%)	Preference for a health facility that has good infrastructure, amenities, and/or cleanliness (9.9%)
Preferences relating to privacy at the health facility (6.3%)	Prefers the shortest possible wait time to see a provider (5.0%) [	Health care provider(s) or facility was too full/too busy (6.9%)

The Ukraine SDI additionally included the assessment of patients' reports of delaying care seeking in 2023 due to concerns over safety related to the invasion. Further, patients were asked whether they felt safe seeking care at the facility where they were interviewed and whether they felt safe seeking care in general (Table 72). Overall, 11.8 percent of patients reported that they delayed seeking care in the past year. Patient-perceived safety of care-seeking was moderate; 67.7 percent reported that they felt safe seeking care at their current facility. In contrast, the overall average proportion of patients who felt safe seeking care in general was 61.2 percent. A significant difference was observed between rural (76.3 percent) and urban facilities (56.3 percent).

TABLE 72. Patient-reported safety seeking care during the invasion, by facility type, ownership, and location (%)

Type	Proportion of patients who delayed seeking care in past year	Patients who felt safe seeking care at current facility	Patients who felt safe seeking care in general
Facility Type			
FOP	11.7 (6.0–21.6)	72.3 (62.6–80.3)	70.4 (60.1–79.0)
Public	11.9 (5.2–24.8)	67.6 (60.4–73.9)	60.6 (49.0–71.1)
Private for-profit	11.2 (4.6–25.2)	66.0 (52.6–77.3)	62.2 (48.9–74.0)
Ownership			
Private	11.5 (6.5–19.3)	68.9 (60.1–76.5)	66.0 (57.0–74.0)
Public	11.9 (5.2–24.8)	67.6 (60.4–73.9)	60.6 (49.0–71.1)
Location			
Rural	8.7 (5.5–13.6)	77.6 (70.0–83.6)	76.3 (68.6–82.6)
Urban	12.9 (5.4–27.8)	64.5 (56.771.5)	56.3 (44.0–67.9)
Ukraine	**11.8 (5.7–22.9)**	**67.7 (61.4–73.4)**	**61.2 (50.9–70.7)**

Note: Values in parentheses represent the 95 percent confidence interval values. The sample size is 2,490.

Patients were further asked about their willingness to receive telehealth services for the same reasons as they visited the health facility the day of the study, as well as about their confidence in receiving a similar quality of care using telehealth services. Patients were also asked how comfortable they would feel discussing symptoms of anxiety, depression, trauma, or mental health concerns with a provider at the health facility they visited (Table 73). Nearly four in five patients felt comfortable discussing mental health concerns with their provider (79.7 percent). Patients seeking care in FOPs were significantly more comfortable speaking about mental health concerns (88.6 percent) than patients in private for-profit facilities (75.9 percent). Approximately two in five patients (41.9 percent) said they would be willing

to use telehealth services for the condition that caused their visit the day they were interviewed. Their confidence in receiving a similar quality of care through telehealth was 26.0 percent. Patients most often listed uncomplicated reasons for visiting the facility the day of the survey. The most common reasons for visiting the facility were cough or sore throat (28.2 percent), runny nose/congestion (21. percent), routine health checkups (15.0 percent), headache or migraine (14.2 percent), and fever (13.6 percent). Many of these conditions can be managed using remote consultation. However, for some commonly mentioned conditions such as hypertension (13.4 percent), back pain (8.9 percent), arthritis and joint pain (8.1 percent), fatigue (6.9 percent), and chest pain (6.2 percent), an in-person consultation is helpful, if not essential, to accurately assess the nature and of the patient's condition. A full listing of reasons that patients came to the health facility is listed in Annex Table 5.

TABLE 73. Patient-reported comfort discussing mental health and willingness to accept telehealth services, by facility type, ownership, and location (%)

Type	Patients who feel comfortable discussing mental health concerns with provider	Patients who report willingness to receive similar services by telehealth	Patients who feel confident that they could receive similar quality of care through telehealth
Facility Type			
FOP	88.6 (83.9–92.1)	53.0 (46.0–60.0)	32.1 (25.5–39.6)
Public	79.4 (71.4–85.7)	41.6 (36.2–47.2)	25.8 (21.2–31.0)
Private for-profit	75.9 (66.5–83.4)	36.3 (23.3–51.7)	23.6 (15.0–35.0)
Ownership			
Private	81.8 (75.4–86.8)	44.0 (34.8–53.7)	27.5 (21.3–34.8)
Public	79.4 (71.4–85.7)	41.6 (36.2–47.2)	25.8 (21.2–31.0)
Location			
Rural	84.7 (79.3–88.9)	45.1 (36.7–53.8)	25.2 (20.8–30.1)
Urban	78.1 (68.5–85.3)	40.9 (35.1–46.9)	26.3 (21.0–32.3)
Ukraine	**79.7 (72.7–85.3)**	**41.9 (37.0–47.0)**	**26.0 (21.9–30.6)**

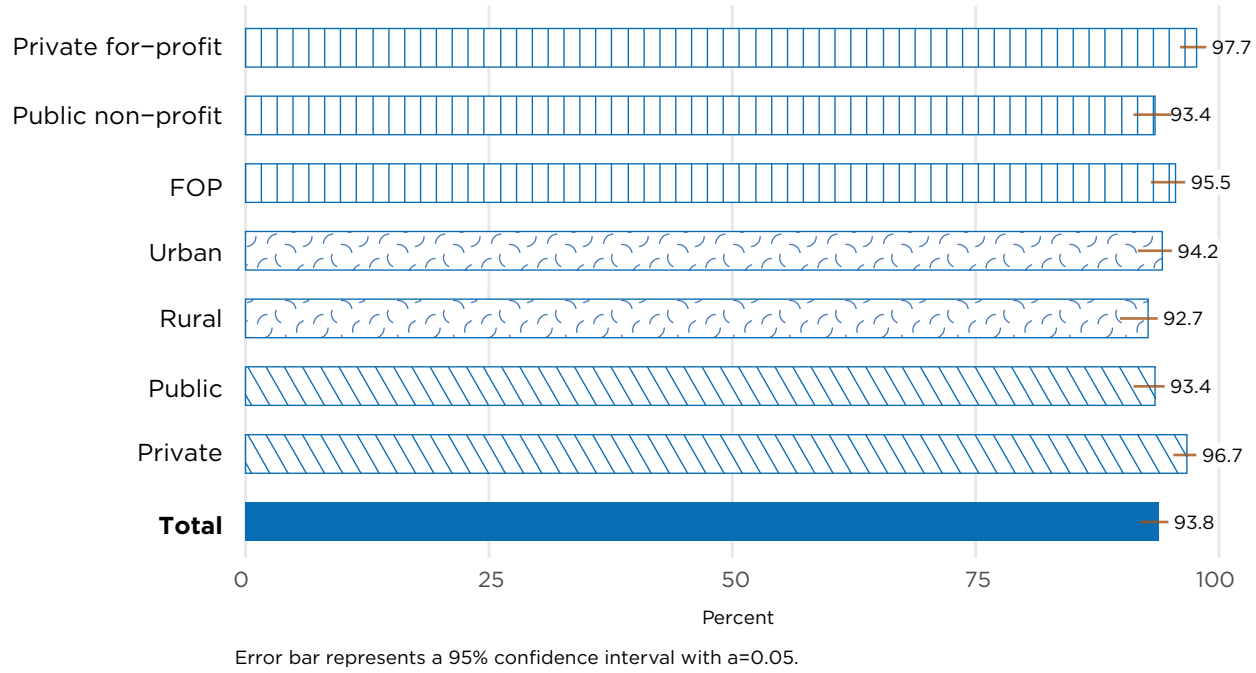
Note: Values in parentheses represent the 95 percent confidence interval values. The sample size is 2,490.

5.1.2. Satisfaction and recommendation

Patients who received care were asked if they would recommend the facility to a friend or a family member (Figure 40). More than nine in ten patients (93.8 percent) said they would recommend the facility

they visited the day of the survey to a friend or family member. Patients in private and private-for-profit facilities reported significantly higher satisfaction than those in public facilities.

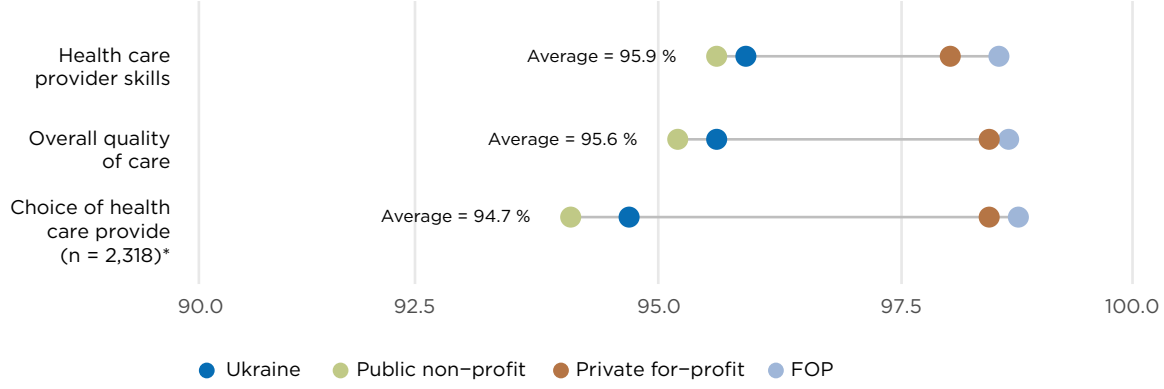
FIGURE 40. Percentage of patients who would recommend the facility, by facility type, ownership, and location (%)



Note: Error bar represents a 95 percent confidence internal with α = 0.05. The sample size is 2,490.

Patients were asked to rate the ease with which they could see a provider of their choice, provider skills, and overall quality of care at the facility on a scale from "very bad" to "very good" (Figure 41). Most patients reported that their experience was "good" or "very good" (95.6 percent; CI: 94.2–97.0), choice of provider (94.7 percent; CI: 93.1–96.2), and perception of provider skills (95.9 percent; CI: 94.5–97.3). Significantly more patients at private facilities rated their experience as "good" or "very good" regarding overall quality of care (98.5 percent in private and 95.2 percent in public), choice of provider (98.5 percent and 94.1 percent in public), and provider skills (98.2 percent in private and 95.6 percent in public).

FIGURE 41. Patient rating of care quality as "good" or "very good," by facility type (%)



Note: Ukraine points that are not visible in the figure are obscured by other points that have very similar values.
**The sample size is 2,490 , however responses about choice of health care provider were limited to patients seeking care in facilities with more than one provider on staff.*

Most patients (97.1%) reported that they held an active registration with a provider at the facility where they were interviewed (Table 74).

TABLE 74. Patients' reasons for choosing providers, by facility type (%)

FOP (n = 561)	Public (n = 1,313)	Private for-profit (n = 534)
Clinical competence of the provider (40.9%)	Clinical competence of the provider (32.8%)	Clinical competence of the provider (55.9%)
Preference to be registered with a provider who works at this facility (16.5%)	Preference to be registered with a provider who works at this facility (27.4%)	Preference to be registered with a provider who works at this facility (20.5%)
The doctor provides specialized services or care (9.8%)	The doctor provides specialized services or care (12.0%)	The doctor spends enough time with the patient during consultations (5.9%)
The doctor communicates clearly with the patient (7.2%)	The doctor has working hours/ appointments at times that are convenient for the patient (7.0%)	The doctor treats the patient with respect (4.3%)
The doctor has working hours/ appointments at times that are convenient for the patient (6.9%)	The doctor communicates clearly with the patient (6.4%)	The doctor provides specialized services or care (4.1%)

Note: The sample size is 2,408.

Given that patients often mentioned preferences for facility-level characteristics, all patients were asked the main reason for choosing to seek care at the facility where they were interviewed (Table 75). Patients who could not provide a specific reason for choosing to seek care at the facility were excluded. Across all facility types, the 2 most common reasons for choosing a provider were the clinical proficiency of the providers and the convenience of traveling to the facility.

TABLE 75. Patients' reasons for choosing the facility, by facility type (%)

FOP	Public	Private for-profit
Clinical proficiency of providers (25.4%)	Convenience of traveling to this health facility (e.g., near a public transit stop, near home/work) (33.4%)	Clinical proficiency of providers (37.0%)
Convenience of traveling to this health facility (e.g., near a public transit stop, near home/work) (22.1%)	Clinical proficiency of providers (29.3%)	Convenience of traveling to this health facility (e.g., near a public transit stop, near home/work) (13.2%)
Specialized services or care availability (11.3%)	Availability of providers who are likely to prescribe medicines or treatments (10.3%)	Clear communication (listening or explaining) with providers (12.2%)
Clear communication (listening or explaining) with providers (9.5%)	Clear communication (listening or explaining) with providers (6.6%)	Availability and functioning of required equipment, supplies, or medicine (11.0%)

FOP	Public	Private for-profit
Availability and functioning of required equipment, supplies, or medicine (8.4%)	Availability and functioning of required equipment, supplies, or medicine (3.4%)	Specialized services or care availability (7.7%)

Note: Patients who could not provide a specific reason for choosing to seek care at the facility were excluded. The sample size is 491.

Patients were also asked about the areas of the facility that needed improvement (Table 76). The most common reasons for choosing a provider were the availability of specialized services or care and ensuring good infrastructure, amenities, and cleanliness. The proportion of patients reporting no areas for improvement was significantly higher in FOPs (59.6 percent) and private for-profit facilities (49.9 percent) than in public (32.3 percent) facilities.

TABLE 76. Proportion of patients identifying different aspects of the health facility as needing improvement, by facility type (%)

FOP	Public	Private for-profit
Provide specialized services or care availability (57.8%)	Provide specialized services or care availability (39.3%)	Provide specialized services or care availability (51.4%)
Ensure availability and functioning of required equipment, supplies, or medicine (16.5%)	Ensure good infrastructure, amenities, and/or cleanliness (including disability-friendly infrastructure, comfort of waiting area) (19.0%)	Ensure availability and functioning of required equipment, supplies, or medicine (9.7%)
Ensure good infrastructure, amenities, and/or cleanliness (including disability-friendly infrastructure, comfort of waiting area) (11.8%)	Ensure availability and functioning of required equipment, supplies, or medicine (16.4%)	Improve opening hours/hours of operation (8.6%)
Increase the duration of consultations with provider(s) (5.1%)	Improve opening hours/hours of operation (6.1%)	Increase the duration of consultation(s) with providers (7.3%)
Improve opening hours/hours of operation (2.5%)	Increase the duration of consultation(s) with providers (5.1%)	Improve clinical competence of providers (6.9%)

Note: The sample size is 1,022.

5.2. FINANCIAL PROTECTION

5.2.1. Opportunity costs

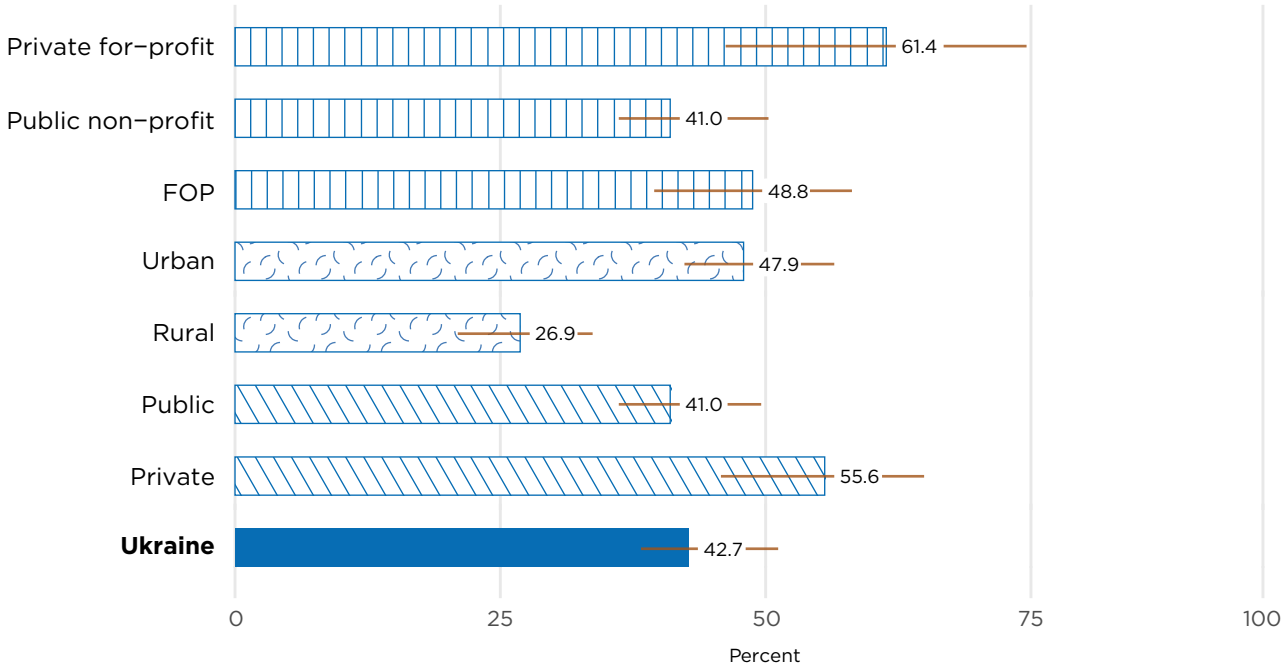
The last domain under person-centered outcomes is financial protection. The concept of financial protection in health is broadly understood as the relationship between costs incurred by people as they seek care relative to their total household income, or total household expenditures. This survey helps improve the understanding of financial protection in health by focusing on elements that have been traditionally less well understood, that is, not only the direct costs incurred, such as for travel, services, and medicine, but also the indirect costs, such as lost income in seeking care. This insight helps to shed light on how travel time and travel cost affect access to primary health care. Together, the following 2

sections describe costs incurred by patients throughout the entire care-seeking journey: starting from transport costs and ending with fees at the time of service (direct OOP expenditure). The median travel time is 15 minutes (IQR: 10–20). In addition to opportunity costs in the form of travel time, households are also at risk of incurring additional indirect costs in the form of lost income for seeking care. Overall, less than 1 percent of patients (CI: 0.4–1.4) reported that they lost income when seeking care. The median amount of income loss reported by this small subset of patients was 300 UAH (IQR: 200–400). [42]

5.2.2. OOP costs

Patients incur expenses for health care services, including travel, consultation, medication, laboratory tests, and care costs for children or elders (Figure 42). Slightly more than two in five patients incurred costs in seeking health care (42.7 percent; CI: 38.3–47.3). Patients in rural facilities (26.9 percent; CI: 21.0–33.7) were significantly less likely to report incurring care expenses than those in urban facilities (47.9 percent; CI: 42.3–53.5). Among patients in public facilities, rural ones (26.9 percent; CI: 21.0–33.8) were significantly less likely to report incurring costs than urban ones (46.5 percent; C5I: 40.2–52.9).

FIGURE 42. Patients incurring cost seeking health care, by facility type, ownership, and location (%)



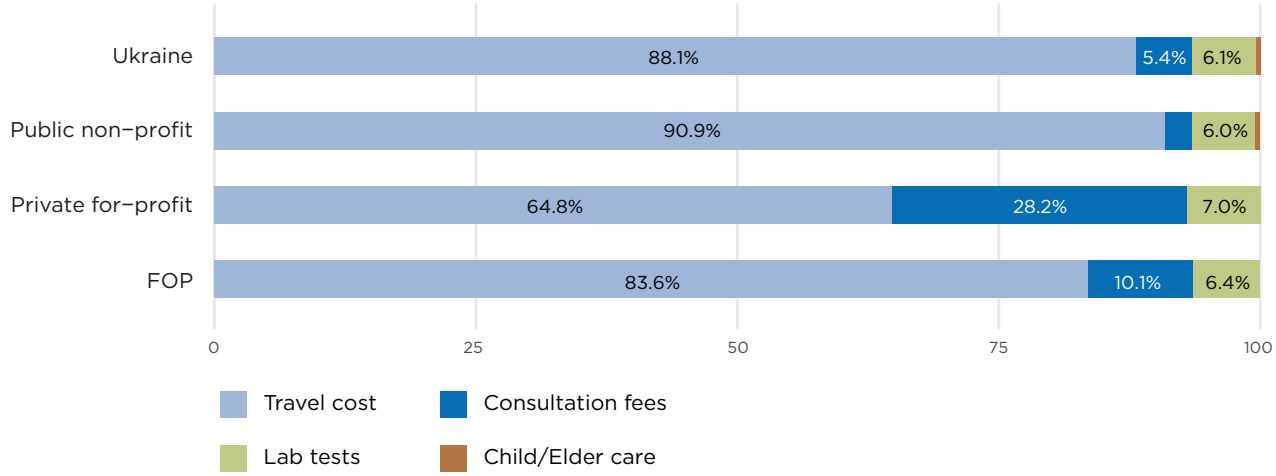
Note: The error bar represents a 95 percent confidence internal with α = 0.05. The sample size is 2,490.

Among the patients who reported incurring any cost in seeking care on the day of the survey, travel costs accounted for the largest proportion of OOP costs, averaging 88.1 percent of total OOP costs (Figure 43). Consultation fees only accounted for 5.4 percent of total OOP costs overall; this proportion was significantly higher in FOPs (10.1 percent; CI: 4.3–15.9) and private for-profit facilities (28.2 percent; CI: 15.7–40.7) than in public facilities (2.6 percent; CI: 0.9–4.3). More than two in five patients (43.1 percent; CI: 38.4–47.9) reported incurring transportation costs to reach the health facility. The median

[42]This represents $8 (IQR: $5–$11) converted at the exchange rate of 36.5686 UAH/US$ used in the RDNA3 report.

cost reported (not shown) by these patients to reach the health facility was 30 UAH (IQR: 15–52). Almost all (92.8 percent; CI: 86.3–99.2) patients who incurred any costs reported using household savings to pay for the expenses (not shown).

FIGURE 43. Distribution of costs incurred by patients across categories (%) (N = 326)



Notes: the sample size is 326. Categories without value labels individually represent less than five percent of the total cases.

Chapter 6. Conclusions

The SDI Health Survey in Ukraine is intended to provide policy-relevant evidence to enable governments, citizens, and other stakeholders to identify successes and bottlenecks in health service delivery, monitor progress over time, and make cross-country comparisons. Areas of focus are (1) the foundations for health service delivery, (2) the processes of care, and (3) person-centered outcomes. The results of the assessment should inform actions to improve population health outcomes. This section summarizes the key findings and then selects a few areas, based upon the strength of the evidence, for recommendations. In these areas and others, further analytical work is needed to deepen understanding and further strengthen the evidence base.

KEY STRENGTHS

Despite the immense demands placed on the Ukrainian PHC system due to the invasion, the system continues to function, with services provided to locals and IDPs and funds and supplies available. Approximately three-quarters of providers (76.4 percent) reported providing service to an IDP in the week preceding the survey; they estimated that one in twenty patients was an IDP in that period. Only one in nine facilities (11.1 percent) reported delays in anticipated supply deliveries since the invasion, and less than one in ten reported any payment delays from the central government (5.1 percent) or local government (2.8 percent). Humanitarian actors support facilities (71.7 percent reported support), albeit primarily public (81.0 percent) rather than private ones (27.3 percent).

Service delivery is dependent on the staff in the health facilities, where only one in nine (11.6 percent) is absent during an unannounced visit, and less than one percent (0.02 percent) is for an unauthorized reason. Although providers are generally experienced (doctors average 17 years and nurses 23 years) and qualified (46.2 percent of doctors have reached the highest grade, and only 30 percent are in the bottom two tiers), the NHSU e-Academy is an important source of training that may serve as the normative provider de facto in the absence of approved Ukrainian clinical guidelines. The median provider sees 12.9 patients per day (adjusted for absences) and spends nearly two-thirds of the time providing care (66.7 percent for doctors and 64.2 percent for nurses). Overall job satisfaction is excellent (99.1 percent favorable), and work pressures (87.0 percent overall, 82.2 percent for doctors and 95.0 percent for nurses) are reasonable. The commitment of providers is impressive given the dissatisfaction expressed with salary levels.

The system's resilience derives some strength from its preparedness for emergencies: seven in ten facilities (71.2 percent) have guidelines to respond to an emergency signal and nine in ten providers (91.7 percent) have received training to respond to an air raid alert. However, public facilities were significantly more prepared (92.9 percent) than private-for-profit (82.6 percent) and FOP (79.2 percent) facilities.

KEY WEAKNESSES

Although providers spend two-thirds of their time providing care, they also spend more than 20 percent on clinical administrative and e-MIS data entry tasks. This is more pronounced for nurses (26.0 percent cumulatively) than doctors (21.2 percent cumulatively), despite the requirement for only doctors to do the clinical administrative data entry.

Humanitarian support flows help the system's resilience, but only half (51.1 percent) of them are recorded in the government accounting system (MedData). Reporting is not significantly better in public than in private facilities, showing systemic weaknesses. This situation is worse than the broader LMIS situation, where only three in ten facilities (31.7 percent) do not have a system.

POTENTIAL FOR IMPROVEMENT

For seven in ten cases (71.5 percent) of common pathologies, proper primary diagnosis (82.5 percent) and treatment (71.8 percent) are given. However, not much more than one in two cases (52.3 percent) is given the correct complete diagnosis (66.3 percent and treatment (55.0 percent). For an upper middle-income country, with the NCD burden and the growing mental health burden, this finding represents an important challenge as Ukraine—an upper-middle-income country with an existing NCD burden and growing mental health burden—seeks to expand the use of primary health care. This is particularly relevant for moderate depression (41.1 percent proper primary diagnosis and care) and child pneumonia (60.8 percent proper primary diagnosis and care), which are likely to become increasingly prevalent or should be well-mastered. Clinical guidelines represent a possible source of support as six in seven providers (85.7 percent) use such references, whether national (50.8 percent), international (1.1 percent), or both (33.8 percent). However, doctors using guidelines statistically significantly outperformed their peers not using guidelines on both correct primary (74.5 percent and 47.3 percent, respectively) and complete treatment (58.0 percent and 27.2 percent, respectively).

The survey sampling explicitly excluded the most at-risk areas; however, burnout may remain a risk for health care providers and health facility staff. Six in 10 facilities (60.9 percent) reported offering services to support staff burnout; more than three-quarters of providers in facilities offering these services reported being aware of them (76.3 percent). Yet, little more than one in four (28.0 percent) availed themselves of such services.

THREATS: UNREADY FOR EMERGENCIES

Emergency preparedness, as measured in the survey, is a weak point. Approximately half of the facilities had assessed their structural vulnerability to natural disasters (54.7 percent) or conducted drills on safety procedures related to natural disasters (46.5 percent). The average facility also had approximately four of seven (55.3 percent) measured guidelines and protocols in place to mobilize resources and to communicate with others and less than half (44.6 percent) of the four measured invasion-related

guidelines and protocols. There is generally little variation across strata, although public facilities did better than private on natural disasters (61.8 percent and 48.8 percent, respectively) and emergency preparedness (57.7 percent and 43.9 percent, respectively).

Three in five (59.5 percent) facilities have completed the drills and assessments for natural disasters, five in nine (55.3 percent) have guidelines and protocols in place to mobilize resources and to communicate with others, and four in nine (44.6 percent) have the invasion-related guidelines and protocols in place. There is generally little variation across strata, although public facilities did better than private on natural disasters (61.8 percent and 48.8 percent, respectively) and emergency preparedness (57.7 percent and 43.9 percent, respectively).

The resilience of the health system also depends on the confidence of the patients who use it. Among those interviewed in the health facilities, two-thirds (67.7 percent) felt safe at their current facility, yet one in nine (11.8 percent) had delayed seeking care in the past year. This implies that there may be other potential patients who are not seeking care for reasons of perceived insecurity.

Although providers are committed to their jobs, the issue of pay is a sensitive one, due to fiscal constraints and to the difference in dissatisfaction levels among public and private providers. The available data, covering 2023, do not show significant differences in the evolution of facility staffing, but they do not rule out potential continued evolutions. There may be little scope for adjustment during the invasion, even though health care providers, whether doctors or nurses, may have alternatives in other countries.

SELECTED RECOMMENDATIONS

The Ministry of Health should return to a more prescriptive position on guidelines. A reform in 2017 allowed providers to use any guidelines rather than solely the Ukrainian ones. The SDI survey, through the vignettes, shows that clinical quality is not as strong and is statistically significantly weaker among providers who do not use guidelines. As noted in the 2024 health financing report (WHO 2024), there is the potential to link purchasing to the use of guidelines. Currently, the capitation-based system does not require information about the care provided, which could be part of the redeveloping of the e-Health database to include clinical decision support information over a period of two years. Necessary shorter-term actions could include a formal decision on the redevelopment of Ukrainian guidelines or which international guidelines to recommend or require. The NHSU e-Academy system, which has already provided de facto guidelines in certain areas, could serve as the platform for expanded content for providers. As in other countries, annual continuing education requirements could be linked to the e-Academy courses to allow for the development of content over time. This in-service training could be complemented by reforms to the medical education content and approaches in conjunction with the planned development of university hospitals.[43]

[43] The planned investment is described at this link https://www.dream.gov.ua/pip-pipeline/DREAM-UA-180824-F0AF1587.

Increased support for socially and physically vulnerable groups is important for better health outcomes. These groups include those requiring mental health support, those experiencing gender-based violence, those who are disabled, and those seeking sexual and reproductive health services.

- **Mental health:** Facilities reported offering approximately two-thirds (68.0 percent) of the 11 measured general mental health services. The Ministry of Health, which is developing a capable network for mental health inpatient care, should consider strengthening telemedicine capacity to complement outpatient and mobile care. Although 93 percent of providers feel capable of providing such care and 80 percent of patients are willing to use such modalities, coverage remains low for community-based mental health services (32.5 percent) and screening for common conditions such as anxiety (64.8 percent), depression (66.9 percent), and post-traumatic stress disorder (60.1 percent). Since the development of mental health support in facilities will not happen uniformly or immediately, the development of remote consultations could be piloted in facilities whose infrastructure is planned or under construction to start earlier and to go beyond a traditional outreach campaign.

- **Physical infirmity:** Due to both the invasion and the impact of NCDs, this should be better addressed for more inclusive access to health care. The focus on building back better and the EU accession is an opportunity to revise the ministry's requirements for buildings, beyond the Ukrainian norms, by requiring that all bathrooms in facilities receiving public funds are handicapped accessible and menstrual-hygiene friendly and that facilities develop a minimum package of accessibility features for disabled persons, including ramps, flooring, and signage. The first steps could be (1) to evaluate the situation across facilities receiving public funds, (2) to develop a policy outline, (3) to convene a stakeholder group with representatives of the owners and patients to review and confirm the policy, (4) to adopt the policy, and (5) to provide guidance and support in the implementation in all civil works in the health sector beyond simple window repairs/painting.

- **SRH services:** Although pregnancy care was added to the set of PMG packages as an outpatient service in 2021, PHC facilities, on average, could provide only 59.9 percent of 9 measured pregnancy services and 36.7 percent of 10 measured SRH services. Of note are weaknesses in screenings for cervical cancer, GBV, and maternal depression (refer to Annex Table 1 in Annex 3). The ongoing selective contracting of higher-volume hospitals for deliveries should be complemented by broad access to basic services to better screen for risks and to manage them earlier. Depending upon the education provided to nurses, this might be an area for task-shifting or for requirements to provide these services as part of the basic PHC package. The Ministry of Health may wish to review how it procures such services as part of the PHC package, because FOPs provide statistically significantly less SRH and pregnancy services than public or private-for-profit facilities, yet their share of total contracts rose from six to 34 percent between 2018 and 2024 (WHO 2024).

Given the importance of vaccines, the observed gaps call for further action. The third most-frequent reason for health facility visits is childhood immunization, yet the average facility has 63.5 percent of the required vaccines available. Even excluding BCG, which is often given in the maternity facilities, vaccine availability is insufficient. There are statistically significant differences; rural facilities have less vaccine availability than urban ones, FOPs have less than the other strata, and private for-profit have more than other categories when excluding the BCG vaccine. Vaccine procurement is centralized; the strategic purchasing of PHC services is a hybrid model with bonuses for public health elements such as vaccination, and it may need to be evaluated to find ways to incentivize higher vaccine availability and delivery. The presence of an LMIS is not statistically significantly correlated with higher vaccine availability, only with the systematic tracking of stock levels when controlling for location, facility type, and LMIS type (paper, electronic, and hybrid). Yet, the evidence is clear that vaccination is possible in Ukraine; the performance-based condition in the Health Enhancement and Life-Saving project (P180245) led to more than five million verified inoculations in two years. The Ministry of Health should review the vaccine logistics management chain, with a special focus on the LMIS presence, functionality, procedures, and use, and it should consider strengthening pharmaceutical and vaccine management at the facility level.

References

WHO (World. Health Organization). 2024. "Health Financing in Ukraine: Reform, Resilience and Recovery." WHO Regional Office for Europe, Copenhagen. License: CC BY-NC-SA 3.0 IGO.

Annexes

ANNEX 1. DESCRIPTION OF SDI SUBDOMAINS

1. FOUNDATIONS

Systems

Policies and protocols: The successful operation of a health care facility relies on adherence to operational and process guidelines, including safety and human resources protocols, and high-quality clinical care aligned with international and local clinical guidelines for patient examination/consultation, diagnosis, and treatment. While appropriate implementation of and adherence to guidelines can be difficult to measure, part of the health facility environment that enables adherence to guidelines includes the physical availability in the facility of such guidelines for reference by staff. Against this backdrop, the SDI health survey includes the physical verification of written guidelines on both operations/processes (such as IPC, waste management, emergency preparedness, and human resource guidelines) and clinical practice (such as family planning consultation protocols, and diagnosis and treatment of hypertension, and pneumonia), where possible.

Institutions tasked with accountability for quality: Ensuring accountability for quality requires not only routine data collection by facilities on indicators capturing high-quality clinical and interpersonal care, but also frequent review, analysis, and dissemination of this information. To promote transparency and quality improvement, information on performance should be shared not only with facility management and higher-level administrators, but also with facility staff and the population that the facility serves. The SDI health survey captures the frequency with which facility-level performance indicators are collected, reviewed, and shared, and it also provides information on whom the data are shared with. The survey also measures how and how often feedback is solicited from the population served by the facility. Finally, the survey captures the institutions and practices in place for external supervision (such as supportive supervision visits from central authorities) and the extent to which any supervisory activities adhere to the WHO definition of "supportive."

Management and supervision: It is not just the broader accountability architecture that influences the quality of primary care service delivery, but also the direct management and supervision of staff members. The management and supervision domain focuses on the procedures and practices within a health facility to review staff performance and provide feedback and support for improvement. These include measuring how frequently staff are provided with performance feedback and using certain indicators and protocols to measure performance and conduct staff evaluations.

Financing: The financing systems in health facilities have implications for facility level and provider level incentives, efficiency, and accountability. Information on financing at the facility level includes the sources and amount of revenue that facilities generate. Funds flowing into a facility may come from government

or other sources (including private or donor sources) and may be in the form of cash or in kind. The extent to which health care providers receive payment in the form of gifts (such as from patients) or other incentives for outcomes/performance may influence staff behavior and facility functioning.

Physical infrastructure: This component measures the availability and functioning of key physical infrastructure required for operation of the health facility, especially in cases of emergency. This includes the availability and functioning of infrastructure to facilitate utilization of services by individuals with disabilities (such as ramps, lifts, tactile flooring, toilets for clients with limited mobility, and assistive technologies for visually impaired clients); provisions for auditory and visual privacy for patients; improved, functioning, accessible, and private toilet facilities; handwashing facilities; uninterrupted electricity; ambient temperature management infrastructure (heaters and air conditioners/fans); refrigerators for vaccine storage; functioning fire safety infrastructure (alarm, extinguisher); and ICT (telephone, radio, computer, internet, etc.).

Care Organization

Service delivery organization: This domain captures the high-level organization of care—i.e., how primary care services are delivered in the country and how facilities are situated to serve their catchment populations. Specifically, this domain includes description of the types of facilities that deliver primary health care, their location (including their connectivity to the population through local public transportation and motorable roads), the size of the population they serve and how accessible they are to this population (i.e., the average time it takes for the catchment population to reach the facility), outreach practices, and facilities' opening hours/hours of operation.

Facility connective networks: In many cases, service delivery can be strengthened by connective networks between health facilities that allow seamless transfer of patients and information. Facility connective networks refer to systems that allow for inter-facility communication and enable health facilities to connect patients to other facilities or practitioners for further care. Facilities may be part of formal designated networks that share staff and infrastructure and/or are part of formal referral systems. Facilities may also be connected by systems for communicating with one another during emergencies or may have an ambulance or other form of transportation on site that facilitates the linkage of patients to other facilities. This domain captures the existence of these connective systems but does not cover the performance or effectiveness of these facility networks.

Service and case mix: This domain captures the number and types of primary health care services that are available at the facility, including availability of laboratory services. Services may be available (infrastructure, human resources, equipment, and supplies are present), but this does not necessarily mean that they are utilized by patients. This domain captures both availability and utilization, hence measuring allocative efficiency (whether facilities provide services and whether these services are utilized). This domain also includes measures of outpatient volume, stratified by case type (such as NCD visits and childhood immunization visits, among others). This domain captures which facilities are overburdened by which types of cases and therefore what additional resources or referral patterns are required.

Workforce

Availability: This domain captures the de facto and de jure human resources at the health facility. It includes counts of staff of different cadres, counts of providers of different types of care (e.g., outpatient care, inpatient care, antenatal care, and so on) where applicable, and the number of administrative/support staff. Particularly in large facilities, the number of health care providers on the staff roster may not truly reflect the number of health care providers present on a given day. This discrepancy may arise for many reasons—including shift systems, on-call protocols, arrangements where health care providers perform home visits or provide care at subsidiary facilities, and the presence of individuals in management roles who have medical training but serve as facility administrators or managers who are not patient-facing. The literature has also indicated that staff may be absent from health facilities for unauthorized reasons, which affects performance management and accountability. This domain measures these aspects.

Education and training: Beyond just the availability of staff, the distribution of educational attainment and training of health care providers has implications for quality of clinical and interpersonal care. This domain measures the preservice education level of providers at each facility, along with recent service-specific in-service training. Combined with information on the types and volume of cases, this domain measures whether certain training courses are being administered where needed.

Workload: A high workload impacts the ability of health care providers to provide high-quality care. Overworked and burnt-out health care providers are more likely to misdiagnose, provide incorrect treatment, not counsel patients, etc. It is therefore essential to better understand health care providers' workload. It is possible that health care providers are involved in administrative activities like filling out insurance paperwork, managing medical supplies, etc. This role becomes even more common in small health facilities that are run by just 1 or 2 staff members. Therefore, in measuring the workload among health care providers, both their clinical caseload and their non-clinical work are accounted for. This domain also provides an understanding of how the time of health care providers is distributed across various activities.

Satisfaction and retention: Individuals' job satisfaction is closely related to their work performance and their motivation to continue to learn and grow at their workplace. For health care providers, satisfaction affects the quality of care, their interaction with patients, absence, and willingness to continue to work, especially in high-stress environments. Thus, providers' job satisfaction affects patients' satisfaction and influences their decisions on accessing and continuing care. There is a need to improve job satisfaction among the health care workforce to build effective, efficient, and resilient health systems. This domain measures health care providers' satisfaction across various relevant domains, including pay/benefit package, workload, and promotion and transfer system.

Tools

Medical equipment and supplies: Availability of functioning medical equipment and supplies is required to provide high-quality health care. Health care providers might not be able to diagnose and treat patients or might do so incorrectly if the health facilities do not have the most essential medical items

like stethoscope, syringe, etc. When medical conditions like TB and other communicable diseases go undiagnosed/misdiagnosed, the effect on the individual and community can be catastrophic. In some cases of shortage/unavailability of essential medical supplies, providers try to optimize the current stock or reuse medical supplies that should be disposed of after single use (like syringes, gloves, etc.). This can lead to hospital-acquired infections. Patients also tend to (i) lose trust in health systems, (ii) seek care elsewhere, or (iii) not seek care at all when they are not able to receive care due to supply shortage. This component provides a comprehensive picture of whether health facilities are stocked with essential medical equipment and supplies by making direct observations and checking for functionality. A health facility is recorded as having a given medical supply/piece of equipment if the field team can physically verify even one such item.

Medicines: This domain provides information on the availability of unexpired essential medicines for primary health care. Unavailability of medicine can influence patient's behavior on care uptake and continuation. In remote areas where health facilities are the only source of affordable medicine, unavailability/shortage of medicine can keep patients from following up with the recommended treatment or can cause them to incur a high out of pocket expenditure, which can also impact patients' economic well-being. If patients start considering health facilities "unreliable," they may turn to traditional sources of care, which they deem to be more accessible and dependable. This component provides a comprehensive picture of whether health facilities have essential primary care medicines by making direct observations. This component also records whether the available medicines are expired to provide information not just on their availability but also on their usability. A health facility is recorded as having a said medicine if the field team can physically verify even one full prescription of that unexpired medicine.

Information systems: Use of information systems to record and manage relevant data is essential for health facilities to make data-driven decisions, whether for tracking patient history or managing supply of medical items. For example, health facilities that do not use a logistic management information system (LMIS) or any other logistics system to manage their medical supplies are more likely to face stock-outs as it becomes difficult to manage inventory. Further, such facility-level data when aggregated at macro level provide important insights about the health system in the country, such as the country's current disease burden. Having this information helps shed light on the state of the health system and ongoing challenges and helps in the design of targeted interventions to improve the quality of health care. This domain measures various kinds of information systems used in health facilities (e.g., data reporting systems), staff trained in using these information systems, and other systems in place to share information with other health facilities and/or authorities.

2. PROCESSES OF CARE

Competent Care Systems

Diagnosis, treatment, counseling: While inputs (like medical equipment, medicine, clinical guidelines, etc.) and basic infrastructure (like electricity and water supply, telephone, etc.) are essential to provide high-quality care, their availability does not guarantee the same. It is common for patients to receive subpar care (including misdiagnosis of medical conditions) or not receive any care even at well-equipped health facilities. This possibility has led to a gradual shift to incorporate other measures along with the availability of inputs to better understand the performance of health systems. This domain sheds light on the level of competent care provided for common medical conditions like diabetes, hypertension, and others. It also measures incompetent care like incorrect diagnosis, treatment delays, and overprescription of drugs, all of which can have harmful short-term and long-term effects. A two-pronged approach is used wherein not only providers' knowledgeis tested in diagnosing and treating specific medical conditions through clinical case simulations, but also the actual experience of patients in receiving care for these medical conditions. This allows the assessment of whether health care providers have appropriate medical knowledge for providing high-quality care and to capture any "know-do" gap (the gap between providers' knowledge and their actual practice) by comparing their performance on clinical case simulations to the actual experience of patients. Through both the clinical case simulations and the outpatient exit interview, other aspects of care quality are captured as well, like whether the health care provider counseled the patient about any lifestyle change, whether they explained the frequency and dosage of medicine, and others.

Referral, continuity, integration: This domain triangulates information from all three SDI questionnaires—facility, health care provider, and outpatient exit interview—to provide a comprehensive picture of the way referrals work within the health system, the likelihood of patients receiving care from the same health facility/provider, and the extent to which health facilities are connected to one another. For a better understanding of the referral system, the following are also reported on the number of referrals made from/to health facilities, common reasons for referrals, type of health facility from/to which referrals are made, and how patient information is transferred from/to health facilities. This information identifies gaps in the overall functioning of the referral system. For example, better guidelines and systems would need to be set up if health facilities lacked a well-defined structure to share patient information with the facility where the patient has been referred. By improving referral systems, this ensures that health facilities provide high-quality care according to their service mandate, and patients can navigate the health system with ease.

Patients' willingness to continue to receive care from the same health facility/provider is an important measure of health systems that provide high-quality care. Such continuity of care strengthens provider-patient relationships, creates expectations around care, and increases the likelihood that patients will follow through with the treatment process in a timely manner. When sharing medical history with different health facilities/providers is difficult, patients may experience delays in diagnosis and treatment.

Safety, prevention, detection: Along with providing timely diagnosis and treatment to patients, primary care systems also need to have mechanisms and guidelines in place for early detection of an outbreak, prevention of health care–associated infections, and response to emergencies. The COVID-19 pandemic showed the importance of resilient health systems that can aid in early detection and surveillance of an epidemic/pandemic and can respond to health emergencies along with providing routine health services. This domain provides an understanding of the IPC measures in health facilities (e.g., patient isolation room), guidelines on emergency response (e.g., guidelines to request emergency medical supplies), and preparedness against fire and natural disasters. For this domain, the following are also captured: in-service training (like training on antimicrobial resistance) and disaster assessments and drills that have been conducted in health facilities.

Positive User Experience

Respect and autonomy: Along with providing timely treatment, high-quality health systems must also treat patients with respect, account for their needs and preferences, and involve them in decisions regarding their health and treatment. Whether patients seeking care feel empowered and respected or belittled and disrespected influences their care-seeking behavior and trust in the overall health system. Even with all the required resources and systems in place, good health outcomes would be difficult to achieve if patients refrain from seeking care to avoid a negative and disrespectful experience.

This domain measures the extent to which patients are treated with respect at various stages of their consultation with the health care provider. Indicators of respectful care include whether providers greet and introduce themselves, how well providers explain things to patients, whether providers obtain their consent before a procedure, etc. This information from the patients' experience is also compared to the relevant sections from clinical case simulations (such as whether providers introduce themselves, whether they counsel the patient on medicine dosage/next steps, etc.) to highlight any gaps between providers' knowledge and their practice.

User focus: "User-centered" health care systems focus on patients' needs and preferences to ensure that they can receive high-quality care with ease. Such systems anticipate various bottlenecks that can arise right from the time that a patient decides to seek care, and they design measures to address those challenges. Measurement of user-focused care includes average wait time to see a health care provider, average travel time to the health facility, care provided in the patient's primary language, and others. Information from the 3 surveys is also triangulated to identify areas that may better cater to patients' needs, like facility-reported hours of operation and patient-reported satisfaction with facility's operating hours.

3. PERSON-CENTERED OUTCOMES

Confidence in System

Satisfaction and recommendation: Patient satisfaction is essential for high-quality primary health care systems, as it influences care-seeking behavior and hence health outcomes. Patients bypass health facilities when they are not satisfied with the care result that can unevenly distribute workload and patient volume across health facilities, thus disrupting the effectiveness of health systems. Patient dissatisfaction may worsen in close-knit communities, where word of mouth spreads perceptions easily, and people consider other people's experiences and recommendations when seeking care. There are several factors (such as average wait time, out of pocket expenditure, etc.) apart from access to health care and timely diagnosis and treatment that impact patient satisfaction. This domain reports on the level of patients' satisfaction with care and whether patients would recommend others to seek care from their provider. Attempts were also made to try to identify patients' reasons for seeking care from a particular health facility and the areas that should be improved at the health facility.

Care uptake and retention: This domain captures patients seeking care at more than one facility and their reasons for doing so. Additionally, patients' intention to return to the health facility for care are captured—for example, pregnant women willing to give birth in the same health facility where they received ANC services. In high-quality primary care systems, patients continue to seek care at one facility unless referred to another facility. This ensures that patients do not bypass specific health facilities and that they can also seek care from providers who are familiar with their medical history, needs, and preferences.

Financial Protection

Out of pocket costs: Patients may face barriers or trade-offs in seeking primary care, which can reduce care utilization and have long-term economic impact, resulting in poor health outcomes. For example, patients receiving primary care at a health facility may incur costs to reach the health facility itself (including transport) or for care of family members while they receive care (such as costs for childcare or elderly care). Once at the health facility, patients may pay out of pocket for consultation fees (or gifts to providers), medicine, supplies, etc. This domain captures out of pocket costs and the source of these funds, including whether patients needed to borrow money or take out a loan to afford the services received.

Opportunity costs: In addition to direct out of pocket costs, patients often incur opportunity costs to visit a health facility, such as lost income due to time taken off from work. These costs may be particularly burdensome for patients who work in informal labor markets and/or do not have paid medical leave. By quantifying these costs along with the out-of-pocket expenditure, the true financial burden of care seeking can more accurately be measured.

ANNEX 2. SAMPLING METHODOLOGY AND REPRESENTATIVENESS

FACILITY SELECTION

The oblasts of Mykolaiv, Kherson, Dnipropetrovsk, Zaporizhzhia, Donetsk, and Luhansk were excluded from the survey due to concerns regarding the safety of fieldwork at the time of the survey. Similarly, the autonomous republic of Crimea and the city of Sevastopol were excluded. The oblasts of Sumy and Kharkiv were partially included, specifically, certain localities close to the front lines as well as to the north near the Russian border were excluded based on similar safety concerns.

Aside from the full or partial exclusion mentioned above, no major geographic criteria were necessarily considered when selecting facilities to be part of the survey. The primary survey sub-strata of analytic interest included separation of interviewed facilities as well as their providers and patients into facility type (in the Ukraine SDI this included publics, private for-profits, and FOPs), location (rural and urban), and ownership (public and private). The "public" ownership sub-strata and the "public" sub-strata represent the same facilities. In some cases where significant urban and rural differences were observed, results for public facilities were further disaggregated into rural and urban sub-strata. This was done primarily because public facilities made up most of the facilities interviewed in rural areas (86.4% of rural facilities).

To be considered as part of the survey, facilities needed to be operational, insofar that they were actively providing PHC services to patients and were required to have at least one PHC physician and one registered patient, per legal mandates for PHC service provision and definitions of PHC practice. A sample frame was shared by the National Health Service of Ukraine, which included information on the location, ownership, and type of facilities across the country. Additional information included the number of registered patients and the number of active doctors in each facility. Individual health facilities were selected using probability proportional to the size of their registered population. To ensure that results could be reasonably presented by facility type, ownership, and location, the samples within each sub-strata were selected such that the relative margin of error would not exceed 10%, assuming a design effect of 1.5, maximum variance with prevalence of 0.5 and at a 95% confidence level (i.e. $\alpha = 0.05$). Furthermore, the target margins of error for survey-wide estimates were set to be at or lower than 6% for facilities. Provider and patient estimates were powered at 4% and 3%, respectively. Overall, the final sample in the survey met and even exceeded these criteria, however the number of interviews with private for-profit facilities was lower than anticipated. Despite this, the estimates margin of error for private for-profit facilities was 10.9%, which was slightly above the target margin of error, but, nonetheless, is still worth presenting in this report. In practice, the higher the margin of error for any sub-strata, the wider the confidence intervals around estimates for that sub-group will be, meaning that sometimes it may be more difficult to definitively detect differences between facility types.

HEALTH CARE PROVIDER SELECTION

Both physicians and nurses were interviewed as part of the Ukraine SDI survey. In general, up to a maximum of 3 PHC physicians were selected in each health facility. If there were 3 or fewer PHC physicians, all were selected for interview; if there were more than three PHC physicians, those selected for interviews were chosen at random. This process was incorporated directly into the computer-assisted personal interview (CAPI) program and was established for the field teams ahead of the survey interview date.

Information on the exact number of nurses was not available in each facility, thus the team leveraged pre-existing estimates of the number of nurses per doctor in facilities across the country (2.2 nurses per doctor). Based on this assumption, an approximate relative margin of error around estimates for nurses was 5% assuming that up to two nurses per facility were interviewed and the margin of error for physicians was similarly 5%. The relative margin of error for providers overall was approximately 4%.

CLINICAL VIGNETTE ASSIGNMENT

Each health care provider was assigned 2 out of the 5 clinical vignettes, except pediatricians who only received the child pneumonia vignette. Vignettes were randomly selected out of the ones that each provider was deemed eligible for based on the types of patients they typically treat. This was done to ensure that that the "average patient's experience" of receiving care was captured, reflecting care provision by providers who diagnose and treat the vignette conditions under normal circumstances (and according to their medical background and local guidelines).

PATIENT SELECTION

A primary objective of the SDI survey was to measure patients' experience of and satisfaction with care using a simple random sample of patients availing themselves of care at all eligible facilities. Due to the nature of the invasion in Ukraine, patients were approached and interviewed upon exit from the health facility. Typically, to avoid potential bias, patients are recruited upon entry at health facilities, however in Ukraine pre-testing and piloting the tools proved that in any cases of activated air alerts (e.g., "shelter-in-place") or in any other cases where patient interviews may be interrupted, patients could easily be lost to follow-up. Patient participation rates were generally high, with 87.5% of those selected agreeing to participate in the survey.

The survey implementation team used the protocol below, which was based on the size of the field team, and which started before the beginning of the workday. The steps are as follows:

- Anticipate the total number, N, of patients who will arrive to be seen by doctors at the facility during the workday. This was done by taking an arithmetic mean of the number of outpatient visits to the health facility on each of the 3 previously completed days prior to the survey (this information was collected in an advance copy of the facility questionnaire).

- Define the number of interviews that each interviewer can be expected to conduct in the workday. For instance, if the facility is open for health appointments for six hours and appointments take 30 minutes on average, then the number of expected outpatient interviews to be conducted by 1 Patient Interviewer = 12.

- Determine the total number of patient interviews (n) that the field team can conduct in the facility using the following formula: Number of expected outpatient interviews to be conducted by 1 Patient Interviewer × Number of Patient Interviewers.

- Compute the sampling step, s = N/n, rounding to an integer.

- Give each patient a serially numbered tag upon arrival and ask him/her to contact the patient handler after the consultation.

- Determine the serial number, f, of the first patient to be interviewed as a random integer between 1 and s. The patients to be interviewed will be those with serial numbers, f, f+s, f+2s, etc. This approach reduces potential issues around interviewer subjectivity when selecting the next outgoing patient (especially when multiple patients exit the facility simultaneously).

SURVEY WEIGHTS

Given the multi-respondent nature of the SDI survey, weights were developed at multiple levels, depending upon how certain units of observation were nested within existing entities.
For example, facilities were selected based upon probability proportional to their size (registered population); thus, the probability of selecting a facility (f_i) is as follows:

$$f = (n * m_i) / \sum_{i=1}^{N} m_i * (t/n)$$

where "n" = total number of selected facilities;
m_i = total registered population of the facility; and
t = total number of facilities successfully interviewed in the stratum

The probability of selecting a provider in each cadre (doctor or nurse) in a given facility (p_i) was determined as follows:

$$p = (s_i / n_i) * (t_i / s_i) * f_i$$

where,
n = total number of eligible providers in the cadre in facility i;
s = number of providers selected in the cadre in facility i; and

t = number of providers in the cadre successfully interviewed in facility i

The above provider weight is meant to adequately weight the selection of providers for the provider survey interview. However, part of the weight, t_i / s_i, overlaps with the potential absence of providers in the facility on the day of the interview. Thus, weighting for the provider absence indicator at the facility must exclude this term and be weighted as follows for the probability of a provider being selected (a_i):

$$a_i = s_i / n_i$$

where,

n = total number of eligible providers in the cadre in facility i; and

s = number of providers in the cadre selected in facility i

Selection of patients was analogous to the selection of providers, though rather than being based upon a preexisting roster, patient selection was based upon a sampling fraction developed using the expected patient volume in the facility. The survey weights for patients in a given facility (pt_i) is expressed using the following:

$$pt_i = (s_i / n_i) * (t_i / s_i) * f_i$$

where,

n = number of patients on the day of interview in facility i;

s = number of patients selected for interview in facility i; and

t = number of patients successfully interviewed in facility i

Survey weights were calculated as the inverse probability of selection, as follows:

Facility $1 / f_i$

Providers = $1 / p_i$

Patients = $1 / pt_i$

INTERPRETATION OF RESULTS

The Ukraine SDI is not nationally representative but is representative of health facilities in the oblasts and localities included in the survey. While the SDI is typically a nationally representative study, implementation in Ukraine for any data collection activity is complex and can pose significant risks to both interview staff and interviewees, thus careful consultation with the Ministry of Health of Ukraine was undertaken to determine which areas in Ukraine would be safe enough to conduct in-person interviews with facility staff and patients.

Results for providers are representative of providers in the included types of facilities, as well as those operating in urban and rural areas. Random selection of providers ensures that there was no bias in selection of providers within the facilities and for facilities with less than 3 doctors or fewer than 2 nurses, all providers of each cadre were included, thus being representative of all care providers within that facility. Survey weights also reflected the unique makeup of each individual facility and its staff.

With respect to interpretation of the results from patient interviews, the sampling strategy and enrollment method were designed to reduce bias as much as possible and generate a sample that was representative of primary health care seekers. Although response rates among patients were high, it is important to note that the results may not fully represent the experiences of those who refused to participate, and potential differences between participants and non-participants remain unknown. Furthermore, as this survey is facility-based, the interviewed patients are limited to those who had empirical access to the facility and actively sought primary health care. Consequently, the findings may not be entirely representative of the broader population, including individuals who do not utilize health facilities.

ANNEX 3. ADDITIONAL STATISTICS

ANNEX TABLE 1. Facilities able to provide measured services (%)

Service category	Service	Average	Rural	Urban	FOP	Public	Private for-profit	Private	Public
Sexual and reproductive health	Collection of material for Human Papillomavirus screening	9.7 (4.8–14.5)	8.5 (1.9–15.1)	11.1 (4.0–18.3)	7.8 (1.6–14.1)	8.6 (3.0–14.2)	26.4 (9.1–43.7)	14.9 (6.7–23.2)	8.6 (3.0–14.2)
Sexual and reproductive health	Collection of material for pap smear	14.3 (8.4–20.1)	14.4 (5.9–23.0)	14.0 (6.4–21.7)	7.4 (1.3–13.6)	14.0 (7.1–20.8)	28.9 (11.7–46.1)	15.6 (7.4–23.9)	14.0 (7.1–20.8)
Sexual and reproductive health	Counseling on family planning	67.5 (60.7–74.4)	77.9 (69.0–86.8)	54.7 (45.5–63.9)	47.1 (34.0–60.3)	70.0 (62.2–77.9)	68.9 (55.6–82.1)	55.5 (45.2–65.7)	70.0 (62.2–77.9)
Sexual and reproductive health	Counseling on intimate sanitation and hygiene	77.5 (71.8–83.1)	83.8 (76.3–91.3)	69.7 (61.7–77.6)	54.9 (41.7–68.2)	80.4 (74.0–86.7)	77.6 (65.9–89.4)	63.6 (54.0–73.2)	80.4 (74.0–86.7)
Sexual and reproductive health	Dispensing of emergency contraceptive pills	12.6 (7.0–18.2)	16.0 (7.2–24.7)	8.5 (1.8–15.2)	6.5 (1.8–11.2)	13.7 (7.0–20.5)	8.3 (1.0–15.5)	7.2 (3.2–11.2)	13.7 (7.0–20.5)
Sexual and reproductive health	Gender-based violence screening and counseling	52.5 (43.9–61.2)	53.9 (40.0–67.8)	50.9 (41.7–60.0)	24.9 (15.5–34.4)	55.0 (44.6–65.4)	65.7 (51.6–79.8)	40.5 (31.0–50.0)	55.0 (44.6–65.4)
Sexual and reproductive health	Insertion of intrauterine contraceptive device (IUD)	7.7 (3.6–11.8)	8.6 (1.9–15.3)	6.5 (2.5–10.5)	4.3 (0.3–8.3)	7.3 (2.6–12.0)	17.7 (0.5–34.9)	9.4 (2.0–16.9)	7.3 (2.6–12.0)
Sexual and reproductive health	Patient referral for cervical cancer diagnosis	73.4 (67.1–79.6)	82.4 (74.6–90.2)	62.2 (53.4–71.1)	48.0 (34.6–61.3)	76.3 (69.3–83.4)	77.3 (65.4–89.1)	59.2 (49.2–69.1)	76.3 (69.3–83.4)
Sexual and reproductive health	Prescription of oral contraceptive pills (OCPs)	23.8 (16.8–30.7)	25.8 (15.2–36.5)	21.2 (12.7–29.8)	17.2 (8.8–25.5)	24.1 (15.9–32.4)	29.9 (17.0–42.8)	22.0 (14.9–29.2)	24.1 (15.9–32.4)
Sexual and reproductive health	Screening for cervical cancer	28.0 (20.8–35.2)	31.1 (19.8–42.4)	24.1 (15.8–32.5)	16.1 (4.1–28.1)	28.8 (20.3–37.3)	36.7 (19.4–54.1)	24.0 (13.8–34.2)	28.8 (20.3–37.3)
Monitoring of uncomplicated pregnancy	Family planning counseling to HIV-positive pregnant women	41.1 (33.0–49.1)	42.6 (29.9–55.3)	39.2 (30.3–48.2)	25.7 (15.9–35.5)	42.6 (33.0–52.2)	46.9 (30.4–63.3)	33.8 (24.4–43.2)	42.6 (33.0–52.2)
Monitoring of uncomplicated pregnancy	Infant and young child counseling for prevention of mother-to-child transmission (PMTCT)	79.9 (74.6–85.3)	86.6 (79.8–93.4)	71.7 (64.0–79.4)	49.0 (35.7–62.4)	83.6 (77.8–89.5)	83.3 (71.7–94.8)	62.1 (52.1–72.2)	83.6 (77.8–89.5)
Monitoring of uncomplicated pregnancy	Nutritional counseling to HIV-positive pregnant women and their infants for PMTCT	47.8 (39.4–56.2)	47.3 (34.1–60.6)	48.4 (39.2–57.6)	30.6 (19.3–42.0)	49.5 (39.4–59.5)	54.6 (38.8–70.5)	39.8 (29.9–49.7)	49.5 (39.4–59.5)

Service category	Service	Average	Rural	Urban	FOP	Public	Private for-profit	Private	Public
Monitoring of uncomplicated pregnancy	Prescription of folic acid	60.9 (51.9–69.9)	64.0 (49.2–78.8)	57.0 (47.6–66.4)	56.7 (43.3–70.0)	60.7 (50.0–71.4)	69.9 (56.0–83.8)	61.7 (51.8–71.7)	60.7 (50.0–71.4)
Monitoring of uncomplicated pregnancy	Referral of pregnant woman to obstetrician-gynecologist (OB-GYN) for specialized care	82.0 (76.8–87.2)	88.2 (82.0–94.5)	74.3 (66.4–82.2)	59.1 (45.6–72.5)	85.0 (79.2–90.7)	81.9 (70.0–93.8)	67.8 (58.0–77.6)	85.0 (79.2–90.7)
Monitoring of uncomplicated pregnancy	Screening for post-natal maternal depression	49.1 (40.6–57.6)	54.9 (40.9–68.8)	42.0 (33.2–50.7)	34.6 (21.9–47.2)	49.9 (39.9–60.0)	62.2 (47.1–77.3)	45.1 (35.0–55.2)	49.9 (39.9–60.0)
Monitoring of uncomplicated pregnancy	Screening for pre-natal maternal depression	43.2 (35.1–51.3)	49.0 (35.6–62.4)	36.1 (27.7–44.4)	25.9 (13.8–38.0)	43.9 (34.2–53.5)	62.9 (47.8–78.0)	40.1 (30.1–50.0)	43.9 (34.2–53.5)
Monitoring of uncomplicated pregnancy	Surveillance of pregnant women	59.8 (52.1–67.5)	72.8 (62.5–83.1)	43.6 (34.6–52.7)	39.5 (27.2–51.8)	62.1 (53.2–71.0)	63.1 (48.0–78.2)	48.6 (38.4–58.7)	62.1 (53.2–71.0)
Monitoring of uncomplicated pregnancy	Treatment of anemia	75.6 (66.2–85.0)	75.4 (59.6–91.1)	75.9 (68.1–83.7)	72.5 (60.3–84.7)	75.7 (64.5–86.9)	79.2 (66.6–91.8)	75.1 (66.1–84.1)	75.7 (64.5–86.9)
Pediatric services	Lactation management	90.5 (87.0–94.1)	97.5 (94.5–100.0)	82.0 (75.4–88.6)	64.8 (50.9–78.8)	93.4 (89.9–97.0)	96.1 (91.5–100.0)	76.8 (67.1–86.4)	93.4 (89.9–97.0)
Pediatric services	Neonatal care and management of newborn	79.3 (69.9–88.8)	80.5 (64.2–96.8)	77.9 (70.8–84.9)	62.4 (48.7–76.1)	80.6 (69.3–92.0)	90.3 (83.1–97.6)	73.1 (63.5–82.7)	80.6 (69.3–92.0)
Pediatric services	Newborn examination	90.0 (86.4–93.7)	97.1 (93.7–100.0)	81.2 (74.6–87.9)	68.1 (54.4–81.8)	92.4 (88.6–96.2)	95.7 (91.6–99.8)	78.7 (69.4–88.0)	92.4 (88.6–96.2)
Pediatric services	Newborn, infant and child growth monitoring	92.6 (89.5–95.8)	98.5 (96.2–100.0)	85.4 (79.2–91.6)	72.5 (58.9–86.2)	94.8 (91.6–98.0)	97.8 (95.2–100.0)	82.2 (73.1–91.3)	94.8 (91.6–98.0)
Pediatric services	Nutritional counseling for children	93.0 (89.9–96.1)	98.3 (95.8–100.0)	86.6 (80.6–92.6)	71.4 (57.5–85.2)	95.4 (92.4–98.5)	98.1 (95.6–100.0)	81.6 (72.3–90.9)	95.4 (92.4–98.5)
Pediatric services	Physical activity counseling for children	92.9 (89.7–96.0)	97.8 (95.2–100.0)	86.8 (80.8–92.7)	72.2 (58.3–86.1)	95.2 (92.0–98.3)	97.8 (95.2–100.0)	82.0 (72.7–91.3)	95.2 (92.0–98.3)
Pediatric services	Pneumonia treatment	85.3 (75.7–95.0)	86.4 (69.6–100.0)	84.0 (77.3–90.8)	73.4 (59.6–87.2)	85.9 (74.3–97.5)	98.1 (95.6–100.0)	82.8 (73.6–92.0)	85.9 (74.3–97.5)
Pediatric services	Treatment for acute diarrheal diseases	86.7 (81.8–91.7)	89.9 (82.9–96.8)	82.9 (76.2–89.6)	70.5 (56.4–84.7)	88.0 (82.4–93.5)	97.5 (94.9–100.0)	80.9 (71.3–90.4)	88.0 (82.4–93.5)
Pediatric services	Treatment for acute viral respiratory infections	93.2 (90.0–96.3)	98.1 (95.5–100.0)	87.0 (81.0–93.1)	76.3 (62.6–90.0)	94.9 (91.7–98.1)	98.1 (95.6–100.0)	84.6 (75.6–93.7)	94.9 (91.7–98.1)

Service category	Service	Average	Rural	Urban	FOP	Public	Private for-profit	Private	Public
Vaccination	Age-based vaccination for adults according to the preventative vaccination schedule	92.7 (89.4–96.1)	99.9 (99.9–100.0)	83.8 (76.6–90.9)	77.0 (64.5–89.6)	94.6 (91.1–98.2)	93.8 (87.7–99.8)	83.4 (75.0–91.8)	94.6 (91.1–98.2)
Vaccination	Age-based vaccination for children according to the preventative vaccination schedule	94.0 (91.2–96.9)	98.9 (96.8–100.0)	88.0 (82.4–93.6)	81.8 (71.1–92.5)	95.4 (92.3–98.4)	97.2 (94.2–100.0)	87.7 (80.8–94.6)	95.4 (92.3–98.4)
Vaccination	COVID-19 vaccination	85.4 (80.9–89.9)	91.5 (86.1–96.9)	77.9 (71.0–84.8)	49.0 (35.6–62.4)	90.7 (86.0–95.5)	77.2 (64.9–89.6)	59.8 (49.9–69.7)	90.7 (86.0–95.5)
Vaccination	Emergency immunization (except for rabies)	80.5 (75.0–86.1)	84.3 (76.2–92.3)	75.9 (68.7–83.1)	64.7 (51.9–77.4)	82.5 (76.2–88.9)	81.1 (71.3–90.8)	70.9 (62.0–79.9)	82.5 (76.2–88.9)
Vaccination	Health-based vaccination according to the preventative vaccination schedule	96.0 (93.3–98.8)	99.4 (98.3–100.0)	91.9 (86.1–97.6)	90.2 (80.6–99.9)	96.8 (93.8–99.8)	95.5 (90.9–100.0)	92.2 (86.0–98.5)	96.8 (93.8–99.8)
Vaccination	Vaccination counseling for adults	93.2 (89.9–96.5)	99.5 (98.6–100.0)	85.4 (78.5–92.3)	77.0 (64.1–89.8)	95.2 (91.8–98.7)	93.7 (87.7–99.7)	83.4 (74.7–92.0)	95.2 (91.8–98.7)
Vaccination	Vaccination counseling for children	95.2 (92.6–97.7)	100.0 (99.9–100.0)	89.2 (83.7–94.7)	78.1 (64.4–91.8)	97.1 (94.9–99.4)	98.1 (95.6–100.0)	85.7 (76.7–94.8)	97.1 (94.9–99.4)
Vaccination	Vaccination for epidemic indications according to the preventative vaccination schedule (e.g., measles, polio, additional/specific off-schedule vaccinations designated by Ministry of Health based on disease prevalence)	94.9 (92.3–97.4)	97.1 (94.4–99.8)	92.1 (87.6–96.7)	87.6 (77.8–97.4)	96.1 (93.4–98.9)	90.6 (83.2–97.9)	88.7 (82.0–95.5)	96.1 (93.4–98.9)
Noncommunicable diseases	Diagnosis of chronic respiratory diseases (e.g., COPD and asthma)	96.2 (93.7–98.6)	96.1 (92.6–99.6)	96.2 (93.0–99.5)	96.3 (91.7–100.0)	96.0 (93.1–98.8)	98.0 (95.3–100.0)	96.9 (93.9–100.0)	96.0 (93.1–98.8)
Noncommunicable diseases	Diagnosis of Diabetes Mellitus	93.2 (90.0–96.3)	92.1 (87.1–97.0)	94.5 (90.8–98.1)	91.2 (84.2–98.3)	93.1 (89.5–96.8)	96.4 (91.8–100.0)	93.2 (88.5–97.9)	93.1 (89.5–96.8)
Noncommunicable diseases	Diagnosis of hypertension	91.7 (87.8–95.6)	94.4 (90.0–98.9)	88.3 (81.8–94.9)	86.7 (76.4–97.0)	92.2 (87.7–96.6)	93.9 (88.0–99.9)	89.5 (82.6–96.4)	92.2 (87.7–96.6)
Noncommunicable diseases	Patient referral for diagnosis of breast cancer	92.7 (89.4–96.0)	99.5 (98.6–100.0)	84.3 (77.4–91.2)	80.9 (69.6–92.2)	94.3 (90.7–97.9)	91.1 (83.7–98.6)	84.8 (77.1–92.5)	94.3 (90.7–97.9)
Noncommunicable diseases	Patient referral for diagnosis of colorectal cancer	88.2 (83.7–92.7)	92.0 (86.3–97.7)	83.6 (76.7–90.4)	77.8 (66.2–89.4)	89.5 (84.4–94.6)	89.0 (81.0–97.0)	82.1 (74.1–90.0)	89.5 (84.4–94.6)
Noncommunicable diseases	Patient referral for diagnosis of lung cancer	92.7 (89.5–95.9)	99.1 (98.0–100.0)	84.8 (78.1–91.6)	78.3 (66.7–89.8)	94.7 (91.2–98.2)	91.3 (84.1–98.6)	83.3 (75.5–91.1)	94.7 (91.2–98.2)

Service category	Service	Average	Rural	Urban	FOP	Public	Private for-profit	Private	Public
Noncommunicable diseases	Patient referral for diagnosis of prostate cancer	88.7 (84.3–93.1)	94.0 (89.4–98.6)	82.2 (74.7–89.7)	79.5 (68.1–90.8)	89.8 (84.8–94.8)	89.8 (82.1–97.6)	83.4 (75.7–91.2)	89.8 (84.8–94.8)
Noncommunicable diseases	Risk assessment of cancers	91.4 (88.0–94.9)	94.2 (90.1–98.4)	87.9 (82.4–93.5)	74.6 (61.6–87.6)	93.5 (89.9–97.1)	92.8 (86.2–99.3)	81.5 (72.8–90.3)	93.5 (89.9–97.1)
Noncommunicable diseases	Risk assessment of cardiovascular diseases (e.g., heart attack and stroke) by SCORE	90.0 (85.8–94.2)	93.9 (89.1–98.7)	85.3 (78.3–92.2)	77.7 (65.6–89.9)	91.2 (86.5–96.0)	94.6 (88.8–100.0)	84.2 (76.1–92.3)	91.2 (86.5–96.0)
Noncommunicable diseases	Risk assessment of cardiovascular diseases by physical measurements (e.g., BMI and waist circumference)	93.0 (89.4–96.6)	97.9 (94.7–100.0)	86.9 (80.1–93.6)	86.5 (76.8–96.3)	93.5 (89.4–97.6)	96.7 (92.6–100.0)	90.4 (84.1–96.7)	93.5 (89.4–97.6)
Noncommunicable diseases	Risk assessment of chronic respiratory diseases	95.9 (93.5–98.4)	99.4 (98.5–100.0)	91.6 (86.3–97.0)	91.8 (83.7–100.0)	96.3 (93.5–99.1)	98.4 (96.1–100.0)	94.4 (89.2–99.5)	96.3 (93.5–99.1)
Noncommunicable diseases	Risk assessment of Diabetes Mellitus	97.3 (95.2–99.4)	98.9 (96.8–100.0)	95.3 (91.4–99.1)	97.1 (92.9–100.0)	97.2 (94.7–99.7)	98.5 (96.1–100.0)	97.6 (94.9–100.0)	97.2 (94.7–99.7)
Noncommunicable diseases	Screening for colorectal cancer	67.9 (58.5–77.2)	67.0 (51.9–82.1)	68.9 (59.9–78.0)	67.7 (55.1–80.3)	67.0 (55.9–78.0)	79.3 (67.7–90.9)	72.1 (63.1–81.2)	67.0 (55.9–78.0)
Noncommunicable diseases	Screening for prostate cancer, prostate serum antigen	62.6 (53.3–71.8)	57.0 (42.7–71.3)	69.4 (60.4–78.5)	71.0 (58.7–83.2)	59.9 (49.1–70.7)	82.4 (72.6–92.2)	75.3 (66.7–83.9)	59.9 (49.1–70.7)
Noncommunicable diseases	Screening for risk factors of breast cancer	80.9 (75.5–86.3)	85.2 (78.2–92.1)	75.6 (67.7–83.5)	75.4 (63.4–87.4)	81.0 (74.7–87.2)	88.8 (81.0–96.6)	80.5 (72.3–88.7)	81.0 (74.7–87.2)
Noncommunicable diseases	Screening for risk factors of lung cancer	78.6 (72.8–84.4)	80.8 (72.6–89.0)	75.9 (68.2–83.7)	73.3 (61.3–85.3)	78.6 (71.9–85.4)	86.8 (78.3–95.3)	78.5 (70.2–86.7)	78.6 (71.9–85.4)
Noncommunicable diseases	Treatment of cardiovascular diseases (e.g., heart attack and stroke)	76.4 (66.8–86.0)	73.9 (58.0–89.8)	79.6 (72.2–87.0)	70.4 (57.8–83.1)	76.0 (64.6–87.4)	91.4 (84.3–98.5)	78.5 (69.9–87.0)	76.0 (64.6–87.4)
Noncommunicable diseases	Treatment of chronic respiratory diseases (e.g., COPD and asthma)	88.8 (79.1–98.6)	84.5 (67.8–100.0)	94.2 (90.2–98.2)	88.6 (78.5–98.7)	88.3 (76.6–99.9)	96.4 (92.6–100.0)	91.6 (85.0–98.1)	88.3 (76.6–99.9)
Noncommunicable diseases	Treatment of Diabetes Mellitus	80.7 (70.9–90.4)	78.7 (62.7–94.8)	83.1 (74.6–91.5)	81.6 (70.9–92.2)	79.5 (67.9–91.1)	94.2 (88.0–100.0)	86.4 (79.3–93.5)	79.5 (67.9–91.1)
Noncommunicable diseases	Treatment of hypertension	87.3 (77.5–97.1)	86.7 (69.9–100.0)	88.0 (81.6–94.5)	82.4 (71.3–93.6)	87.3 (75.6–99.0)	95.1 (89.4–100.0)	87.3 (79.9–94.7)	87.3 (75.6–99.0)
General Mental health services	Community mental health services	32.5 (25.1–39.9)	35.8 (24.2–47.4)	28.4 (19.3–37.5)	21.6 (11.8–31.4)	33.4 (24.6–42.1)	39.3 (22.2–56.3)	28.3 (18.9–37.8)	33.4 (24.6–42.1)

Service category	Service	Average	Rural	Urban	FOP	Public	Private for-profit	Private	Public
General Mental health services	First psychological aid	90.5 (86.7–94.3)	95.2 (91.2–99.2)	84.7 (78.2–91.3)	75.9 (64.6–87.2)	92.4 (88.2–96.7)	90.2 (81.8–98.7)	81.4 (73.6–89.1)	92.4 (88.2–96.7)
General Mental health services	Referral to narcologist for patients with relevant non-alcohol substance abuse disorder	83.1 (78.3–88.0)	89.7 (84.1–95.4)	75.0 (67.5–82.6)	61.9 (48.9–74.9)	85.9 (80.6–91.3)	82.7 (72.3–93.1)	69.9 (60.7–79.1)	85.9 (80.6–91.3)
General Mental health services	Referral to psychologist/psychiatrist for patients with mental and behavioral disorders, including alcohol or substance abuse disorder	90.4 (86.8–93.9)	93.0 (88.5–97.4)	87.2 (81.7–92.7)	77.5 (66.1–88.9)	92.5 (88.7–96.3)	84.6 (73.1–96.0)	80.2 (71.9–88.5)	92.5 (88.7–96.3)
General Mental health services	Screening for alcohol abuse disorder	57.0 (49.0–65.1)	62.0 (50.2–73.8)	50.9 (41.6–60.2)	48.6 (35.2–62.1)	56.9 (47.4–66.4)	72.2 (59.4–85.1)	57.7 (47.8–67.5)	56.9 (47.4–66.4)
General Mental health services	Screening for anxiety	64.8 (55.5–74.1)	65.7 (50.7–80.8)	63.6 (54.0–73.1)	68.0 (56.0–80.0)	63.7 (52.7–74.6)	73.3 (60.6–86.1)	70.1 (61.1–79.0)	63.7 (52.7–74.6)
General Mental health services	Screening for depression	66.9 (57.6–76.2)	68.1 (53.0–83.2)	65.4 (55.8–74.9)	67.0 (54.7–79.3)	66.6 (55.5–77.6)	70.8 (56.9–84.7)	68.5 (59.2–77.7)	66.6 (55.5–77.6)
General Mental health services	Screening for eating disorders	62.2 (53.1–71.3)	62.7 (47.9–77.5)	61.5 (52.4–70.6)	61.9 (49.5–74.3)	61.5 (50.8–72.3)	70.7 (56.9–84.5)	65.3 (56.0–74.6)	61.5 (50.8–72.3)
General Mental health services	Screening for non-alcohol substance use disorder	51.9 (43.5–60.4)	54.8 (41.9–67.7)	48.4 (39.1–57.6)	45.5 (32.1–59.0)	51.8 (41.8–61.7)	64.3 (49.8–78.9)	52.7 (42.6–62.9)	51.8 (41.8–61.7)
General Mental health services	Screening for PTSD	60.1 (51.1–69.1)	57.0 (42.8–71.2)	64.0 (55.0–72.9)	53.1 (39.8–66.3)	60.5 (49.8–71.2)	66.2 (51.9–80.6)	58.1 (48.2–68.0)	60.5 (49.8–71.2)
General Mental health services	Supportive counseling for mental health	88.2 (83.8–92.6)	89.7 (82.9–96.4)	86.4 (81.5–91.4)	67.5 (55.1–79.9)	91.2 (86.4–96.1)	83.6 (72.1–95.0)	73.7 (64.7–82.6)	91.2 (86.4–96.1)
Supplementary mental health services	Application of behavioral interventions for mental health conditions	32.5 (25.2–39.8)	34.3 (22.7–45.8)	30.3 (22.2–38.4)	34.5 (20.7–48.3)	31.4 (23.0–39.8)	42.9 (26.1–59.8)	37.7 (27.0–48.4)	31.4 (23.0–39.8)
Supplementary mental health services	Application of psychosocial interventions for mental health conditions	39.1 (31.3–46.9)	41.2 (28.7–53.7)	36.6 (28.1–45.1)	37.9 (24.1–51.6)	38.2 (29.2–47.3)	52.3 (36.3–68.3)	43.4 (32.8–53.9)	38.2 (29.2–47.3)
Supplementary mental health services	Assessment of social status and problems related to patient's mental health condition, including determination of their needs for socialization and/or social rehabilitation	55.5 (46.7–64.4)	54.4 (40.4–68.4)	56.9 (47.6–66.2)	59.7 (47.3–72.2)	53.3 (43.0–63.7)	76.3 (63.9–88.8)	66.1 (57.1–75.1)	53.3 (43.0–63.7)
Supplementary mental health services	Clinical assessment for anxiety	63.6 (54.3–72.9)	60.2 (45.6–74.8)	67.8 (58.5–77.2)	65.0 (52.7–77.3)	62.7 (51.8–73.7)	72.3 (59.0–85.5)	67.8 (58.6–76.9)	62.7 (51.8–73.7)

Service category	Service	Average	Rural	Urban	FOP	Public	Private for-profit	Private	Public
Supplementary mental health services	Clinical assessment for depression	62.0 (52.8–71.2)	58.7 (44.3–73.2)	66.1 (56.6–75.6)	61.9 (49.2–74.7)	61.0 (50.1–71.8)	75.5 (62.7–88.3)	67.1 (57.8–76.5)	61.0 (50.1–71.8)
Supplementary mental health services	Clinical assessment for eating disorders	58.4 (49.4–67.4)	53.5 (39.6–67.4)	64.5 (55.5–73.6)	58.1 (45.2–71.1)	57.4 (46.8–68.0)	71.6 (58.2–85.0)	63.3 (53.7–72.8)	57.4 (46.8–68.0)
Supplementary mental health services	Clinical assessment for PTSD	57.7 (48.8–66.6)	52.5 (38.8–66.3)	64.1 (54.7–73.4)	55.8 (42.9–68.8)	57.0 (46.5–67.6)	69.3 (55.7–83.0)	61.0 (51.4–70.6)	57.0 (46.5–67.6)
Supplementary mental health services	Education for legal representatives and/or caregivers on patient's mental health condition and environmental factors related to their condition	61.8 (52.8–70.7)	59.8 (45.3–74.3)	64.2 (56.0–72.4)	40.3 (26.8–53.8)	64.1 (53.3–74.9)	67.2 (53.3–81.1)	50.6 (40.5–60.7)	64.1 (53.3–74.9)
Supplementary mental health services	Monitoring of patient mental health treatment adherence, including involvement of community-based social or mental health services	46.5 (38.2–54.9)	48.1 (34.8–61.4)	44.6 (35.5–53.8)	35.0 (21.6–48.4)	47.6 (37.7–57.5)	51.4 (35.3–67.5)	41.3 (30.8–51.7)	47.6 (37.7–57.5)
Supplementary mental health services	Prescription of antidepressants	48.2 (39.7–56.6)	47.7 (34.5–60.9)	48.7 (39.5–58.0)	50.0 (36.6–63.4)	47.3 (37.4–57.2)	56.0 (40.1–71.9)	52.3 (42.0–62.5)	47.3 (37.4–57.2)
Supplementary mental health services	Prescription of antiepileptics	33.6 (26.0–41.2)	36.7 (24.6–48.8)	29.8 (21.3–38.4)	27.9 (16.5–39.3)	33.8 (24.8–42.8)	40.9 (24.0–57.8)	32.9 (23.0–42.7)	33.8 (24.8–42.8)
Supplementary mental health services	Prescription of other pharmacological interventions, not including antidepressants or antiepileptics	60.1 (51.1–69.1)	58.9 (44.6–73.3)	61.5 (52.3–70.8)	57.1 (44.0–70.1)	59.6 (49.0–70.3)	70.6 (57.2–84.0)	62.2 (52.6–71.9)	59.6 (49.0–70.3)
Supplementary mental health services	Psychological support and education for patients to manage and understand their mental health condition	65.3 (56.1–74.5)	63.5 (48.6–78.3)	67.6 (59.1–76.1)	50.4 (37.0–63.7)	66.7 (55.6–77.7)	72.5 (58.7–86.3)	58.8 (49.1–68.6)	66.7 (55.6–77.7)
Supplementary mental health services	Psychological support for legal representatives and/or caregivers for family members, including teaching them self-help techniques	71.9 (62.7–81.2)	67.3 (52.0–82.6)	77.6 (71.5–83.8)	52.1 (38.8–65.4)	74.3 (63.0–85.5)	74.4 (61.8–87.1)	60.6 (51.0–70.3)	74.3 (63.0–85.5)
Supplementary mental health services	Referral of patients to advanced care specialists in the absence of improvement after administration of counseling and treatment at PHC level	83.9 (74.3–93.4)	81.0 (64.8–97.3)	87.3 (82.2–92.4)	78.8 (68.9–88.8)	84.8 (73.3–96.3)	80.5 (68.9–92.1)	79.5 (71.9–87.1)	84.8 (73.3–96.3)
Supplementary mental health services	Referrals for laboratory and instrumental studies (except those included in the specifications of the Primary Health Care package) for differential diagnosis and exclusion of physical health-related psychiatric and neurologic issues.	65.4 (56.1–74.6)	63.3 (48.4–78.3)	67.9 (59.3–76.4)	62.6 (50.4–74.9)	64.4 (53.4–75.3)	82.1 (71.5–92.7)	70.1 (61.5–78.7)	64.4 (53.4–75.3)

Service category	Service	Average	Rural	Urban	FOP	Public	Private for-profit	Private	Public
Disability services	Disability assessment using WHO Disability Assessment Schedule (DAS)	50.4 (41.9–59.0)	44.2 (31.3–57.1)	58.2 (49.3–67.0)	47.3 (33.9–60.8)	49.0 (39.0–59.0)	73.8 (61.0–86.5)	57.4 (47.6–67.3)	49.0 (39.0–59.0)
Disability services	Needs assessment for rehabilitative medicine or equipment	63.6 (54.4–72.7)	55.9 (41.7–70.0)	73.0 (64.9–81.1)	70.3 (58.3–82.4)	61.8 (51.1–72.6)	74.1 (61.1–87.1)	71.8 (62.8–80.7)	61.8 (51.1–72.6)
Adult and child palliative care	Counseling or training to caregivers of adult or child palliative care patients	77.2 (71.5–83.0)	76.2 (66.9–85.5)	78.5 (72.4–84.6)	52.8 (39.3–66.3)	81.2 (74.8–87.6)	67.3 (53.4–81.1)	58.3 (48.1–68.5)	81.2 (74.8–87.6)
Adult and child palliative care	Monitoring of adult or child palliative care patient disease progress	77.1 (71.1–83.1)	79.1 (70.6–87.6)	74.7 (66.7–82.6)	53.9 (40.4–67.4)	80.7 (74.0–87.4)	69.2 (55.7–82.8)	59.8 (49.7–69.9)	80.7 (74.0–87.4)
Adult and child palliative care	Monitoring of adult or child palliative care patient pain severity	76.4 (70.4–82.5)	78.1 (69.5–86.8)	74.3 (66.2–82.4)	59.3 (46.2–72.4)	79.2 (72.3–86.1)	68.9 (55.2–82.5)	63.0 (53.2–72.7)	79.2 (72.3–86.1)
Adult and child palliative care	Monitoring of adult or child palliative care patient pain treatment	72.8 (66.2–79.4)	74.2 (64.7–83.7)	71.1 (62.4–79.8)	55.8 (42.6–69.1)	75.4 (67.9–83.0)	67.4 (53.6–81.2)	60.3 (50.4–70.1)	75.4 (67.9–83.0)
Adult and child palliative care	Prescription for treatment of concomitant symptoms in adult or child palliative care patients	74.0 (64.7–83.2)	69.4 (54.1–84.7)	79.6 (73.4–85.9)	59.6 (45.9–73.2)	76.1 (65.0–87.3)	70.4 (57.6–83.1)	63.7 (53.7–73.7)	76.1 (65.0–87.3)
Adult and child palliative care	Prescription for treatment of pain in adult or child palliative care patients, including potent opioids and other drugs defined by the National List of Essential Medicines	72.7 (63.4–82.0)	66.8 (51.6–82.0)	79.9 (73.9–86.0)	61.5 (48.5–74.4)	74.2 (63.0–85.4)	71.8 (59.2–84.3)	65.4 (55.9–74.9)	74.2 (63.0–85.4)
Adult and child palliative care	Referral of adult or child palliative care patients to other institutions for additional medical, psychological, social, or other services	83.6 (78.8–88.4)	83.8 (76.5–91.2)	83.3 (77.7–89.0)	73.6 (62.8–84.3)	85.6 (80.2–91.1)	74.5 (62.4–86.6)	73.9 (65.8–82.0)	85.6 (80.2–91.1)
Infectious disease services	Contact tracing for patients with suspected or diagnosed TB infection	83.9 (78.7–89.0)	86.0 (79.1–92.8)	81.3 (73.9–88.7)	62.5 (49.4–75.6)	87.1 (81.4–92.9)	77.7 (66.3–89.2)	68.3 (58.9–77.7)	87.1 (81.4–92.9)
Infectious disease services	HIV post exposure prophylaxis	24.6 (18.1–31.0)	23.1 (13.2–33.0)	26.3 (18.7–34.0)	23.5 (12.5–34.5)	23.9 (16.4–31.5)	34.0 (17.1–50.9)	27.5 (17.9–37.1)	23.9 (16.4–31.5)
Infectious disease services	Prescription of anti-retroviral therapy (ART) for HIV positive patients	7.2 (3.7–10.6)	6.5 (1.6–11.4)	8.0 (3.4–12.5)	5.7 (1.1–10.2)	6.4 (2.6–10.2)	18.9 (1.7–36.2)	10.7 (3.1–18.4)	6.4 (2.6–10.2)
Infectious disease services	Prescription of pre-exposure prophylaxis (PrEP) for at-risk patients not currently diagnosed with HIV/AIDS	13.1 (8.7–17.5)	11.3 (4.9–17.7)	15.3 (9.5–21.1)	14.3 (4.4–24.1)	11.3 (6.4–16.2)	34.0 (16.9–51.1)	21.8 (12.5–31.1)	11.3 (6.4–16.2)
Infectious disease services	Referral to physiologist or TB focal person for TB diagnosis	96.3 (94.0–98.5)	96.9 (93.9–100.0)	95.4 (92.0–98.8)	94.4 (89.2–99.7)	96.8 (94.2–99.4)	92.4 (86.2–98.7)	93.7 (89.7–97.7)	96.8 (94.2–99.4)

Service category	Service	Average	Rural	Urban	FOP	Public	Private for-profit	Private	Public
Infectious disease services	Referral to physiologist or TB focal person for TB treatment	86.5 (76.7–96.2)	82.5 (65.9–99.0)	91.4 (86.2–96.6)	88.2 (80.9–95.6)	85.9 (74.3–97.6)	90.3 (82.9–97.7)	89.0 (83.7–94.4)	85.9 (74.3–97.6)
Infectious disease services	Screening for hepatitis	78.3 (68.5–88.0)	73.3 (57.5–89.1)	84.4 (77.0–91.8)	75.7 (64.2–87.1)	78.2 (66.6–89.9)	82.9 (73.1–92.8)	78.4 (70.3–86.5)	78.2 (66.6–89.9)
Infectious disease services	Screening for HIV	76.9 (67.2–86.6)	70.5 (54.9–86.1)	84.8 (77.6–92.1)	71.5 (59.2–83.7)	77.0 (65.4–88.5)	85.2 (75.9–94.5)	76.7 (68.2–85.3)	77.0 (65.4–88.5)
Infectious disease services	Screening for Sexually transmitted infections (e.g., syphilis, gonorrhea)	40.8 (33.0–48.7)	34.0 (22.4–45.6)	49.2 (40.0–58.4)	52.0 (38.7–65.4)	37.4 (28.4–46.3)	66.0 (52.0–80.0)	57.4 (47.4–67.3)	37.4 (28.4–46.3)
Supplementary TB services	Administration of anti-TB drugs under direct supervision	14.3 (9.2–19.5)	12.5 (4.9–20.0)	16.7 (10.1–23.2)	7.1 (1.4–12.8)	14.5 (8.6–20.5)	23.7 (5.6–41.8)	13.4 (5.1–21.8)	14.5 (8.6–20.5)
Supplementary TB services	Collection and transportation of TB patient's biomaterial for bacteriological tests.	45.8 (37.5–54.1)	48.3 (34.9–61.6)	42.8 (33.9–51.7)	14.7 (7.1–22.3)	50.8 (40.7–61.0)	33.3 (16.0–50.7)	21.8 (13.0–30.6)	50.8 (40.7–61.0)
Supplementary TB services	Counseling and education with TB patients focused on sanitation and hygiene to prevent transmission to other persons	79.9 (74.8–85.1)	83.1 (75.7–90.6)	76.0 (69.6–82.4)	58.4 (45.6–71.2)	83.6 (77.9–89.2)	69.3 (56.1–82.4)	62.6 (53.1–72.0)	83.6 (77.9–89.2)
Supplementary TB services	Evaluation and monitoring of adverse symptoms related to TB treatment	62.1 (54.5–69.8)	64.8 (53.5–76.2)	58.8 (49.7–67.9)	52.8 (39.6–66.0)	64.5 (55.7–73.4)	47.3 (30.8–63.8)	50.7 (40.4–61.0)	64.5 (55.7–73.4)
Supplementary TB services	Evaluation of hearing, visual acuity, and polyneuropathy symptoms following treatment monitoring for TB patients	53.7 (45.0–62.4)	51.6 (37.9–65.3)	56.3 (47.1–65.5)	50.8 (37.5–64.1)	55.1 (44.7–65.5)	40.9 (24.0–57.8)	47.0 (36.5–57.5)	55.1 (44.7–65.5)
Supplementary TB services	Monitoring of patient TB treatment adherence	54.0 (45.3–62.8)	57.1 (42.9–71.2)	50.3 (41.1–59.6)	32.8 (20.7–44.8)	57.0 (46.4–67.5)	51.8 (35.8–67.9)	40.1 (29.9–50.2)	57.0 (46.4–67.5)
Supplementary TB services	Monitoring of the health status of a patient diagnosed with TB	75.4 (69.3–81.5)	79.9 (71.7–88.1)	69.9 (61.6–78.1)	51.2 (37.9–64.6)	79.0 (72.1–85.9)	68.9 (55.5–82.3)	58.0 (48.2–67.8)	79.0 (72.1–85.9)
Supplementary TB services	Monitoring of the use of anti-TB drugs prescribed by a TB doctor	58.6 (49.8–67.5)	59.3 (44.9–73.6)	57.9 (49.0–66.8)	41.0 (27.8–54.3)	61.5 (50.8–72.1)	51.8 (35.8–67.8)	45.1 (34.7–55.5)	61.5 (50.8–72.1)
Health Promotion and Education	Counseling on the harmful effects of alcohol use	95.8 (93.5–98.1)	97.8 (95.2–100.0)	93.3 (89.5–97.1)	82.5 (71.6–93.3)	97.4 (95.2–99.7)	97.2 (94.1–100.0)	88.1 (81.1–95.1)	97.4 (95.2–99.7)
Health Promotion and Education	Counseling on the harmful effects of non-alcohol substance use (e.g., cocaine, heroin, and others)	93.4 (90.4–96.4)	94.8 (90.5–99.1)	91.7 (87.5–95.8)	77.6 (65.7–89.5)	95.4 (92.3–98.6)	93.2 (86.2–100.0)	83.6 (75.6–91.6)	95.4 (92.3–98.6)

Service category	Service	Average	Rural	Urban	FOP	Public	Private for-profit	Private	Public
Health Promotion and Education	Counseling on the harmful effects of tobacco use, including e-cigarettes, vapes, and hookah	96.6 (94.6–98.7)	97.8 (95.2–100.0)	95.2 (92.1–98.4)	88.1 (79.6–96.5)	97.7 (95.6–99.9)	97.2 (94.1–100.0)	91.5 (86.1–97.0)	97.7 (95.6–99.9)
Health Promotion and Education	Nutrition counseling for adults	89.7 (85.1–94.2)	97.2 (93.9–100.0)	80.3 (71.7–89.0)	76.0 (63.8–88.1)	91.2 (85.9–96.4)	92.6 (86.2–98.9)	82.3 (74.2–90.5)	91.2 (85.9–96.4)
Health Promotion and Education	Physical activity counseling for adults	90.8 (87.0–94.6)	96.9 (93.7–100.0)	83.2 (76.2–90.3)	74.0 (61.6–86.4)	92.7 (88.6–96.9)	93.4 (87.2–99.5)	81.4 (73.1–89.7)	92.7 (88.6–96.9)
Health Promotion and Education	Safe sex counseling	87.6 (83.4–91.8)	91.9 (86.5–97.4)	82.3 (76.1–88.6)	72.1 (59.8–84.3)	89.2 (84.5–94.0)	92.4 (86.1–98.7)	79.8 (71.7–88.0)	89.2 (84.5–94.0)
Administration of instrumental diagnostic tests	Administration of electrocardiography	95.7 (93.0–98.3)	96.7 (93.2–100.0)	94.4 (90.4–98.5)	93.5 (87.4–99.7)	95.7 (92.6–98.9)	98.1 (95.6–100.0)	95.3 (91.4–99.2)	95.7 (92.6–98.9)
Administration of instrumental diagnostic tests	Administration of ophthalmoscopy	50.6 (42.0–59.2)	47.9 (34.6–61.2)	53.9 (44.6–63.2)	47.0 (33.9–60.1)	50.4 (40.3–60.5)	59.0 (44.0–73.9)	51.5 (41.2–61.9)	50.4 (40.3–60.5)
Administration of instrumental diagnostic tests	Administration of otoscopy	83.8 (78.8–88.8)	80.1 (71.9–88.3)	88.3 (83.0–93.7)	79.0 (67.0–91.0)	83.8 (78.0–89.6)	91.7 (85.6–97.8)	83.8 (75.8–91.8)	83.8 (78.0–89.6)
Administration of instrumental diagnostic tests	Administration of Peak flow meter test	66.5 (59.0–74.0)	62.8 (50.7–74.8)	71.0 (62.7–79.3)	67.1 (53.1–81.0)	66.0 (57.1–74.8)	71.7 (58.6–84.8)	68.8 (58.8–78.9)	66.0 (57.1–74.8)
Administration of instrumental diagnostic tests	Administration of spirometry test	39.8 (31.9–47.7)	39.5 (27.3–51.7)	40.1 (31.1–49.2)	29.8 (17.3–42.3)	39.5 (30.2–48.7)	59.9 (44.7–75.1)	41.3 (31.2–51.4)	39.5 (30.2–48.7)
Administration of instrumental diagnostic tests	Administration of visual acuity test	87.7 (82.9–92.4)	87.4 (81.3–93.5)	87.9 (80.4–95.4)	85.8 (74.0–97.5)	87.6 (82.1–93.1)	91.2 (84.0–98.4)	87.8 (80.0–95.7)	87.6 (82.1–93.1)
Emergency medical care	Cardiopulmonary resuscitation (CPR)	84.6 (79.6–89.7)	84.3 (76.5–92.1)	85.0 (79.3–90.8)	81.2 (72.4–90.1)	86.0 (80.2–91.8)	73.6 (60.2–86.9)	78.3 (70.8–85.8)	86.0 (80.2–91.8)
Emergency medical care	Emergency medical care for sudden onset seizure, including administration of parenteral anticonvulsants	80.8 (75.6–86.0)	87.0 (80.6–93.4)	73.1 (65.2–81.0)	68.3 (54.7–81.9)	82.7 (76.8–88.5)	77.2 (65.2–89.2)	71.7 (62.0–81.5)	82.7 (76.8–88.5)
Treatment for poisonings	Treatment for chemical-based poisoning	50.9 (42.3–59.5)	52.7 (38.9–66.5)	48.7 (39.4–58.1)	39.2 (26.7–51.7)	52.3 (42.1–62.5)	52.6 (36.6–68.6)	44.3 (34.1–54.5)	52.3 (42.1–62.5)

Service category	Service	Average	Rural	Urban	FOP	Public	Private for-profit	Private	Public
Treatment for poisonings	Treatment for food-based poisoning	77.4 (67.8–86.9)	77.2 (60.9–93.4)	77.6 (70.4–84.8)	61.7 (47.7–75.6)	78.8 (67.3–90.2)	85.4 (75.2–95.5)	70.7 (60.6–80.8)	78.8 (67.3–90.2)
Treatment for poisonings	Treatment for medication-based poisoning	56.0 (47.3–64.8)	56.2 (42.0–70.4)	55.9 (46.9–64.9)	41.0 (28.3–53.7)	57.7 (47.2–68.2)	60.1 (45.2–75.1)	48.3 (38.1–58.5)	57.7 (47.2–68.2)
Administrative services	Issuance of medical death certificates	76.2 (66.7–85.6)	73.3 (57.8–88.9)	79.7 (71.9–87.5)	64.3 (51.5–77.1)	76.9 (65.6–88.3)	85.6 (75.6–95.7)	72.5 (63.5–81.5)	76.9 (65.6–88.3)
Administrative services	Issuance of medical reports for temporary disability	92.3 (82.5–100.0)	88.6 (71.6–100.0)	96.8 (94.0–99.5)	94.2 (88.6–99.8)	91.5 (79.8–100.0)	98.0 (95.3–100.0)	95.7 (92.0–99.3)	91.5 (79.8–100.0)
Administrative services	Issuance of referrals for medical and social examination commission	81.0 (71.3–90.7)	77.8 (61.7–93.9)	84.9 (77.7–92.1)	80.7 (70.7–90.7)	79.8 (68.3–91.4)	95.5 (91.7–99.3)	86.3 (79.9–92.8)	79.8 (68.3–91.4)

Note: the sample size is 378.

ANNEX TABLE 2. Availability of functioning equipment (%)

Equipment type	Average	Rural	Urban	FOP	Public	Private for-profit	Private	Public
Essential equipment and supplies								
Adult weighing scale	98.5 (96.5–100.0)	98.4 (95.3–100.0)	98.5 (96.2–100.0)	98.3 (94.9–100.0)	98.4 (96.0–100.0)	100.0 (100.0–100.0)	98.9 (96.9–100.0)	98.4 (96.0–100.0)
Blood pressure monitor	86.2 (81.6–90.8)	88.3 (81.6–95.1)	83.6 (77.8–89.4)	79.9 (70.7–89.1)	87.4 (82.1–92.7)	81.0 (70.1–91.8)	80.3 (73.3–87.4)	87.4 (82.1–92.7)
Cabinet for storing medicines and medical products	99.9 (99.7–100.0)	100.0 (100.0–100.0)	99.7 (99.3–100.0)	99.1 (97.3–100.0)	100.0 (100.0–100.0)	99.5 (98.7–100.0)	99.2 (98.1–100.0)	100.0 (100.0–100.0)
Chairs and (or) armchairs for waiting rooms	99.0 (97.8–100.0)	100.0 (100.0–100.0)	97.8 (95.1–100.0)	99.6 (98.7–100.0)	98.9 (97.4–100.0)	99.6 (98.9–100.0)	99.6 (99.0–100.0)	98.9 (97.4–100.0)
Changing table (for the waiting room)	84.1 (78.5–89.8)	87.7 (80.0–95.3)	79.7 (71.7–87.8)	75.6 (63.6–87.5)	84.4 (77.8–91.0)	94.3 (89.2–99.4)	82.7 (74.8–90.6)	84.4 (77.8–91.0)
Child weighing scale	96.3 (94.3–98.4)	100.0 (100.0–100.0)	91.8 (87.3–96.4)	83.0 (72.3–93.8)	97.9 (96.0–99.9)	98.1 (95.6–100.0)	88.8 (81.9–95.7)	97.9 (96.0–99.9)
Cooler bag with a set of cold batteries	97.8 (95.5–100.0)	99.4 (98.4–100.0)	95.7 (90.9–100.0)	98.0 (94.2–100.0)	97.7 (95.0–100.0)	98.1 (95.6–100.0)	98.1 (95.5–100.0)	97.7 (95.0–100.0)
Couch	87.5 (82.3–92.7)	88.1 (81.0–95.2)	86.8 (79.3–94.3)	88.8 (77.4–100.0)	86.7 (80.6–92.8)	95.7 (90.3–100.0)	91.5 (84.0–99.0)	86.7 (80.6–92.8)
Doctor/nurse bag	95.9 (92.5–99.2)	97.4 (94.0–100.0)	94.0 (87.9–100.0)	95.3 (90.1–100.0)	95.8 (91.8–99.7)	98.1 (95.6–100.0)	96.4 (93.0–99.7)	95.8 (91.8–99.7)
Electrocardiograph	99.7 (99.1–100.0)	100.0 (99.9–100.0)	99.3 (97.9–100.0)	99.9 (99.7–100.0)	99.6 (98.9–100.0)	100.0 (100.0–100.0)	99.9 (99.8–100.0)	99.6 (98.9–100.0)
Eye protection/ goggles	96.7 (93.8–99.5)	97.4 (94.0–100.0)	95.7 (91.0–100.0)	98.3 (96.2–100.0)	96.4 (92.9–99.8)	98.0 (94.7–100.0)	98.1 (96.4–99.9)	96.4 (92.9–99.8)
Face shield	98.1 (96.5–99.7)	97.9 (95.3–100.0)	98.4 (96.7–100.0)	100.0 (100.0–100.0)	97.8 (95.8–99.7)	99.3 (98.0–100.0)	99.7 (99.2–100.0)	97.8 (95.8–99.7)
Gynecological chair	65.3 (58.5–72.1)	83.7 (76.5–90.9)	42.5 (33.4–51.6)	23.4 (12.6–34.2)	70.8 (63.3–78.4)	63.1 (48.4–77.8)	38.6 (28.9–48.3)	70.8 (63.3–78.4)

Equipment type	Average	Rural	Urban	FOP	Public	Private for-profit	Private	Public
Height meter	99.8 (99.5–100.0)	100.0 (100.0–100.0)	99.5 (98.9–100.0)	100.0 (100.0–100.0)	100.0 (100.0–100.0)	96.9 (92.4–100.0)	98.8 (97.1–100.0)	100.0 (100.0–100.0)
Ink cartridge for printer	97.9 (95.8–100.0)	96.9 (93.2–100.0)	99.1 (97.9–100.0)	97.2 (93.0–100.0)	97.9 (95.5–100.0)	98.2 (94.6–100.0)	97.6 (94.7–100.0)	97.9 (95.5–100.0)
Measuring tape	99.9 (99.7–100.0)	100.0 (100.0–100.0)	99.7 (99.4–100.0)	100.0 (100.0–100.0)	100.0 (100.0–100.0)	98.1 (95.6–100.0)	99.3 (98.3–100.0)	100.0 (100.0–100.0)
Medical flashlight	97.4 (95.2–99.6)	96.2 (92.3–100.0)	99.0 (97.6–100.0)	100.0 (100.0–100.0)	96.9 (94.2–99.6)	100.0 (100.0–100.0)	100.0 (100.0–100.0)	96.9 (94.2–99.6)
Neurological reflex hammer	96.3 (94.1–98.5)	97.0 (94.0–100.0)	95.4 (92.4–98.5)	92.0 (85.5–98.5)	96.7 (94.2–99.2)	98.5 (96.1–100.0)	94.5 (90.3–98.6)	96.7 (94.2–99.2)
Ophthalmoscope	85.6 (80.3–90.9)	82.2 (73.6–90.9)	89.8 (84.3–95.3)	88.4 (81.3–95.5)	84.9 (78.5–91.2)	90.5 (82.8–98.3)	89.2 (83.9–94.5)	84.9 (78.5–91.2)
Paper for printer (A4)	98.2 (95.9–100.0)	96.9 (92.6–100.0)	99.9 (99.8–100.0)	100.0 (100.0–100.0)	97.9 (95.0–100.0)	99.6 (98.9–100.0)	99.9 (99.6–100.0)	97.9 (95.0–100.0)
Picfluometer	82.9 (77.0–88.8)	81.8 (72.6–91.1)	84.3 (77.7–90.9)	87.3 (75.0–99.6)	82.3 (75.4–89.2)	83.8 (73.5–94.2)	86.0 (77.5–94.5)	82.3 (75.4–89.2)
Portable pulse oximeter	99.7 (99.1–100.0)	100.0 (100.0–100.0)	99.3 (97.9–100.0)	100.0 (100.0–100.0)	99.6 (98.9–100.0)	100.0 (100.0–100.0)	100.0 (100.0–100.0)	99.6 (98.9–100.0)
Respirator	90.4 (86.3–94.6)	92.4 (86.9–98.0)	87.9 (81.7–94.2)	90.3 (82.8–97.8)	90.3 (85.3–95.2)	92.9 (85.8–100.0)	91.3 (85.9–96.7)	90.3 (85.3–95.2)
Respirator mask (N95 or similar grade)	92.7 (88.9–96.4)	93.7 (88.8–98.5)	91.5 (85.8–97.2)	93.9 (89.1–98.7)	92.1 (87.6–96.6)	98.3 (95.9–100.0)	95.6 (92.5–98.6)	92.1 (87.6–96.6)
Small, medium and large cuffs for blood pressure monitor	99.7 (99.3–100.0)	99.5 (98.6–100.0)	100.0 (100.0–100.0)	100.0 (100.0–100.0)	99.7 (99.1–100.0)	100.0 (100.0–100.0)	100.0 (100.0–100.0)	99.7 (99.1–100.0)
Stethoscope	99.4 (98.4–100.0)	100.0 (100.0–100.0)	98.7 (96.5–100.0)	100.0 (100.0–100.0)	99.4 (98.2–100.0)	98.5 (96.2–100.0)	99.4 (98.6–100.0)	99.4 (98.2–100.0)
Thermometer (digital or infrared)	99.9 (99.8–100.0)	100.0 (100.0–100.0)	99.8 (99.6–100.0)	99.6 (98.7–100.0)	100.0 (100.0–100.0)	99.6 (98.9–100.0)	99.6 (99.0–100.0)	100.0 (100.0–100.0)
Additional equipment and supplies								

Equipment type	Average	Rural	Urban	FOP	Public	Private for-profit	Private	Public
12-channel electrocardiograph with a digital interface	61.0 (51.8–70.1)	59.1 (44.5–73.7)	63.3 (54.1–72.4)	74.6 (63.4–85.8)	58.0 (47.3–68.6)	76.6 (64.2–89.1)	75.4 (67.0–83.8)	58.0 (47.3–68.6)
Bag for manual lung ventilation (type Ambu)	90.8 (86.1–95.6)	91.5 (84.8–98.2)	90.0 (83.3–96.8)	92.7 (85.1–100.0)	90.1 (84.4–95.8)	97.2 (94.2–100.0)	94.4 (89.5–99.3)	90.1 (84.4–95.8)
Biochemical analyzer	25.3 (18.8–31.9)	20.5 (11.9–29.0)	31.4 (22.0–40.7)	9.3 (3.4–15.1)	27.0 (19.1–34.9)	30.4 (16.2–44.5)	17.3 (10.7–24.0)	27.0 (19.1–34.9)
Changing table	92.9 (89.7–96.1)	97.7 (94.9–100.0)	87.0 (81.0–93.0)	75.8 (62.1–89.6)	94.7 (91.5–97.9)	97.4 (94.6–100.0)	84.1 (74.9–93.2)	94.7 (91.5–97.9)
Colposcope	23.0 (16.5–29.6)	20.7 (11.6–29.7)	26.0 (17.0–34.9)	20.4 (9.5–31.3)	20.9 (13.3–28.4)	54.4 (38.7–70.2)	33.4 (23.6–43.2)	20.9 (13.3–28.4)
Dermatoscope	47.2 (38.6–55.9)	53.2 (40.1–66.4)	39.8 (30.8–48.8)	41.4 (27.9–54.9)	47.0 (36.7–57.2)	59.8 (44.8–74.9)	48.4 (38.1–58.8)	47.0 (36.7–57.2)
Digital spirometer	30.9 (23.9–37.9)	25.9 (16.1–35.8)	37.0 (28.1–45.9)	38.1 (24.5–51.6)	29.4 (21.3–37.4)	38.0 (23.1–53.0)	38.1 (27.9–48.2)	29.4 (21.3–37.4)
General review digital camera (autofocus, digital zoom, polarizing filter, auto white balance)	23.7 (17.4–30.0)	21.2 (12.3–30.0)	26.9 (18.2–35.5)	25.2 (13.2–37.1)	23.1 (15.7–30.5)	28.4 (15.4–41.5)	26.4 (17.6–35.3)	23.1 (15.7–30.5)
Hematological analyzer	41.3 (33.5–49.1)	34.8 (23.7–45.9)	49.3 (40.3–58.4)	16.1 (7.5–24.7)	44.0 (34.6–53.4)	48.5 (32.3–64.7)	28.5 (20.1–36.9)	44.0 (34.6–53.4)
Interactive digital stethoscope	26.5 (19.8–33.1)	28.8 (18.6–39.1)	23.5 (15.4–31.7)	16.7 (8.9–24.4)	28.0 (20.1–36.0)	22.5 (11.1–33.9)	18.9 (12.4–25.4)	28.0 (20.1–36.0)
Medical stretchers	77.3 (71.8–82.9)	89.1 (82.5–95.7)	62.8 (54.4–71.3)	36.6 (23.1–50.1)	83.6 (77.5–89.8)	64.6 (50.3–78.9)	47.3 (37.1–57.5)	83.6 (77.5–89.8)
Microscope	47.9 (39.3–56.5)	55.1 (42.2–68.1)	38.9 (29.6–48.3)	14.5 (6.2–22.7)	52.3 (42.4–62.2)	46.7 (30.5–62.8)	26.8 (18.5–35.1)	52.3 (42.4–62.2)
Nasopharyngoscope	55.0 (46.8–63.1)	59.5 (47.2–71.8)	49.3 (40.0–58.6)	47.8 (34.5–61.0)	54.9 (45.2–64.5)	67.6 (54.1–81.1)	55.3 (45.2–65.5)	54.9 (45.2–64.5)
Nebulizer	83.4 (77.7–89.0)	84.6 (76.2–93.0)	81.9 (74.9–88.9)	75.1 (64.9–85.2)	84.6 (78.0–91.2)	81.2 (70.0–92.5)	77.4 (69.8–85.0)	84.6 (78.0–91.2)

Equipment type	Average	Rural	Urban	FOP	Public	Private for-profit	Private	Public
Otoscope	91.1 (87.2–95.0)	91.6 (86.3–96.9)	90.5 (84.8–96.2)	94.9 (89.5–100.0)	90.6 (86.0–95.2)	91.4 (84.1–98.7)	93.5 (89.2–97.8)	90.6 (86.0–95.2)
Oxygen concentrator	80.4 (74.6–86.3)	86.1 (77.7–94.4)	73.5 (65.9–81.2)	48.2 (34.8–61.5)	85.4 (78.7–92.0)	70.9 (57.0–84.8)	56.9 (46.8–66.9)	85.4 (78.7–92.0)
Portable shadowless illuminator	40.2 (32.4–48.0)	35.2 (23.8–46.7)	46.4 (37.1–55.6)	32.6 (21.0–44.2)	39.5 (30.3–48.7)	61.5 (46.6–76.5)	43.7 (33.7–53.6)	39.5 (30.3–48.7)
Sinus scope	26.4 (19.8–33.0)	25.3 (15.7–34.9)	27.7 (19.2–36.2)	26.2 (14.7–37.7)	24.4 (16.8–32.0)	51.3 (35.2–67.4)	35.8 (25.9–45.8)	24.4 (16.8–32.0)
Table for tools, mobile	89.7 (85.6–93.8)	94.6 (90.6–98.6)	83.7 (76.4–91.1)	88.1 (81.0–95.2)	89.8 (84.9–94.6)	91.6 (84.7–98.5)	89.5 (84.3–94.6)	89.8 (84.9–94.6)
Vital signs monitor with a digital interface (blood pressure, thermometry, pulse oximetry)	35.6 (28.0–43.3)	34.2 (22.9–45.5)	37.4 (27.8–47.0)	30.4 (17.8–42.9)	35.9 (26.9–45.0)	40.3 (23.5–57.0)	34.2 (24.0–44.3)	35.9 (26.9–45.0)
Wheelchair	66.7 (59.1–74.2)	66.7 (55.1–78.2)	66.6 (57.8–75.5)	48.6 (35.2–62.1)	68.4 (59.6–77.2)	74.4 (61.2–87.6)	58.5 (48.7–68.3)	68.4 (59.6–77.2)
Disposable consumables and instruments								
Anatomical tweezers	83.5 (78.5–88.6)	93.0 (87.9–98.1)	71.9 (63.4–80.3)	75.3 (64.6–85.9)	85.0 (79.2–90.8)	79.1 (67.8–90.5)	76.7 (68.9–84.6)	85.0 (79.2–90.8)
Atraumatic needles with suture thread	55.0 (46.9–63.1)	66.4 (55.3–77.5)	41.0 (31.9–50.0)	36.8 (24.5–49.0)	57.8 (48.4–67.1)	50.0 (33.8–66.3)	41.8 (31.8–51.9)	57.8 (48.4–67.1)
Catheters	86.0 (80.8–91.1)	89.9 (82.9–97.0)	81.1 (73.8–88.4)	83.6 (74.1–93.1)	85.7 (79.6–91.8)	93.2 (87.6–98.8)	87.3 (81.0–93.6)	85.7 (79.6–91.8)
Curved surgical clamp (kortsang)	52.2 (43.6–60.7)	59.9 (45.4–74.3)	42.7 (33.4–52.0)	29.9 (18.6–41.2)	54.8 (44.4–65.1)	55.6 (39.9–71.3)	39.7 (29.8–49.6)	54.8 (44.4–65.1)
Curved surgical scissors	55.3 (46.7–63.9)	66.6 (51.6–81.6)	41.3 (32.3–50.4)	36.3 (24.1–48.4)	57.6 (47.2–68.0)	57.3 (41.8–72.9)	44.3 (34.2–54.4)	57.6 (47.2–68.0)
Disposable scalpels or blades for disposable scalpel with appropriate pen	61.9 (52.8–70.9)	69.3 (53.9–84.7)	52.6 (43.3–61.9)	49.9 (36.5–63.3)	63.2 (52.4–74.0)	63.9 (48.8–79.1)	55.3 (45.0–65.5)	63.2 (52.4–74.0)
Disposable sheets for the couch	87.2 (81.9–92.4)	87.6 (80.1–95.1)	86.6 (79.4–93.9)	98.0 (95.8–100.0)	85.4 (79.0–91.7)	91.7 (82.8–100.0)	95.6 (91.9–99.3)	85.4 (79.0–91.7)

Equipment type	Average	Rural	Urban	FOP	Public	Private for-profit	Private	Public
Double-sided button probe	33.1 (25.7–40.6)	35.1 (23.6–46.7)	30.7 (21.9–39.5)	23.6 (12.9–34.3)	33.5 (24.8–42.3)	43.5 (26.7–60.4)	31.2 (21.5–41.0)	33.5 (24.8–42.3)
Dry wipes	97.9 (95.8–100.0)	97.8 (94.5–100.0)	98.0 (95.9–100.0)	99.4 (98.4–100.0)	97.7 (95.2–100.0)	97.7 (95.0–100.0)	98.8 (97.5–100.0)	97.7 (95.2–100.0)
Examination gloves	98.9 (96.9–100.0)	100.0 (100.0–100.0)	97.6 (93.1–100.0)	100.0 (100.0–100.0)	98.7 (96.3–100.0)	99.6 (98.9–100.0)	99.9 (99.6–100.0)	98.7 (96.3–100.0)
Hemostatic clamp	77.7 (72.0–83.4)	88.8 (82.6–94.9)	64.1 (55.1–73.0)	59.1 (46.1–72.2)	80.4 (73.9–86.9)	73.7 (60.5–86.9)	64.7 (55.1–74.3)	80.4 (73.9–86.9)
Infusion system	90.2 (86.1–94.3)	92.5 (86.9–98.0)	87.4 (81.5–93.3)	87.2 (78.4–96.0)	90.3 (85.6–95.1)	93.4 (86.9–99.9)	89.6 (83.6–95.6)	90.3 (85.6–95.1)
Medical spatula (disposable)	99.3 (98.4–100.0)	99.6 (98.9–100.0)	98.9 (97.0–100.0)	99.4 (98.3–100.0)	99.3 (98.2–100.0)	99.6 (98.9–100.0)	99.5 (98.7–100.0)	99.3 (98.2–100.0)
Needle holder	61.7 (54.2–69.2)	74.5 (64.9–84.0)	46.0 (36.7–55.2)	43.8 (30.9–56.7)	64.6 (56.0–73.2)	54.3 (38.3–70.2)	47.8 (37.6–58.1)	64.6 (56.0–73.2)
Paper towels	98.7 (96.9–100.0)	97.8 (94.5–100.0)	99.8 (99.6–100.0)	100.0 (100.0–100.0)	98.5 (96.3–100.0)	98.8 (97.0–100.0)	99.5 (98.8–100.0)	98.5 (96.3–100.0)
Sterile dressing material	91.5 (87.4–95.6)	94.9 (90.3–99.6)	87.2 (80.3–94.2)	92.2 (86.6–97.9)	91.2 (86.3–96.1)	93.6 (87.9–99.3)	92.7 (88.6–96.9)	91.2 (86.3–96.1)
Straight surgical scissors	71.4 (64.9–77.9)	85.0 (77.8–92.1)	54.6 (45.2–63.9)	51.6 (38.2–65.0)	74.4 (67.0–81.8)	65.4 (51.0–79.8)	56.9 (46.8–67.0)	74.4 (67.0–81.8)
Surgical tweezers	75.1 (69.1–81.1)	89.3 (83.2–95.3)	57.5 (48.2–66.8)	57.6 (44.6–70.5)	78.5 (71.7–85.3)	60.3 (45.0–75.6)	58.6 (48.7–68.5)	78.5 (71.7–85.3)
Syringes 10 ml	98.4 (97.0–99.7)	100.0 (100.0–100.0)	96.3 (93.3–99.3)	94.6 (89.5–99.7)	99.0 (97.5–100.0)	96.7 (92.2–100.0)	95.4 (91.8–99.0)	99.0 (97.5–100.0)
Syringes 2 ml	99.9 (99.8–100.0)	100.0 (100.0–100.0)	99.8 (99.5–100.0)	100.0 (100.0–100.0)	100.0 (100.0–100.0)	98.8 (96.9–100.0)	99.5 (98.8–100.0)	100.0 (100.0–100.0)
Syringes 5 ml	98.7 (97.2–100.0)	98.8 (96.4–100.0)	98.6 (96.9–100.0)	99.4 (98.3–100.0)	98.8 (97.0–100.0)	96.7 (92.2–100.0)	98.4 (96.5–100.0)	98.8 (97.0–100.0)
Vacuum tubes	43.8 (35.5–52.0)	45.6 (32.6–58.6)	41.5 (32.2–50.7)	34.4 (22.4–46.5)	43.3 (33.6–53.0)	64.4 (49.9–78.9)	45.9 (35.8–55.9)	43.3 (33.6–53.0)
Wet wipes	93.3 (89.9–96.7)	93.8 (88.6–98.9)	92.8 (88.5–97.1)	97.9 (95.3–100.0)	92.8 (88.7–96.9)	92.5 (86.6–98.4)	95.8 (93.1–98.6)	92.8 (88.7–96.9)

Equipment type	Average	Rural	Urban	FOP	Public	Private for-profit	Private	Public
Sterilization equipment								
Electric autoclave (pressure & wet heat)	15.4 (9.8–21.0)	20.9 (12.0–29.9)	8.6 (1.8–15.4)	7.2 (2.6–11.8)	17.0 (10.3–23.8)	8.4 (1.5–15.4)	7.7 (3.8–11.5)	17.0 (10.3–23.8)
Electric boiler or steamer (no pressure)	63.7 (56.5–70.9)	77.9 (68.6–87.2)	46.1 (36.7–55.5)	41.2 (27.7–54.7)	68.4 (60.3–76.5)	40.7 (25.6–55.7)	41.0 (30.9–51.1)	68.4 (60.3–76.5)
Electric dry heat sterilizer	30.2 (20.6–39.8)	42.4 (27.9–56.8)	15.3 (7.5–23.0)	13.0 (5.5–20.5)	33.7 (22.5–44.9)	14.8 (5.5–24.0)	13.7 (7.8–19.5)	33.7 (22.5–44.9)
Nonelectric autoclave	12.8 (7.6–17.9)	13.4 (6.2–20.6)	12.0 (4.7–19.3)	14.1 (2.6–25.6)	12.7 (6.7–18.6)	11.7 (3.6–19.9)	13.2 (5.4–21.0)	12.7 (6.7–18.6)
Nonelectric pot with cover for boiling/ steam	32.9 (25.5–40.3)	35.4 (24.0–46.9)	29.8 (20.6–38.9)	16.0 (8.4–23.6)	34.4 (25.6–43.3)	41.3 (24.4–58.2)	25.7 (16.8–34.5)	34.4 (25.6–43.3)

Note: the sample size is 378.

ANNEX TABLE 3. Availability of medications, by medication (%)

Medicine category	Average	Rural	Urban	FOP	Public	Private for-profit	Private	Public
Medicines								
Acetylsalicylic acid 500 mg	93.6 (90.4–96.8)	98.0 (95.4–100.0)	88.2 (82.1–94.4)	87.6 (79.1–96.2)	94.4 (90.8–98.0)	93.0 (86.5–99.6)	89.7 (83.8–95.6)	94.4 (90.8–98.0)
Amiodarone 5%-3 ml	62.3 (53.1–71.5)	57.6 (43.2–71.9)	68.1 (59.2–77.0)	67.3 (53.6–81.1)	60.1 (49.4–70.9)	81.4 (70.9–92.0)	72.7 (63.0–82.5)	60.1 (49.4–70.9)
Atropine sulfate 0.1%-1 ml	91.0 (87.5–94.6)	93.7 (89.0–98.3)	87.8 (82.4–93.1)	87.5 (80.1–94.9)	91.5 (87.4–95.6)	90.9 (81.9–100.0)	88.8 (83.1–94.5)	91.5 (87.4–95.6)
Captopril 25 mg	93.3 (89.6–96.9)	96.3 (92.0–100.0)	89.5 (83.4–95.6)	89.4 (81.1–97.7)	93.2 (89.0–97.5)	99.6 (98.9–100.0)	93.3 (88.1–98.5)	93.2 (89.0–97.5)
Chlorhexidine bi-gluconate 0.05%-100 ml	88.1 (83.1–93.1)	88.6 (81.1–96.1)	87.5 (81.1–93.9)	93.3 (88.1–98.5)	87.1 (81.0–93.1)	92.5 (85.3–99.8)	93.0 (88.7–97.3)	87.1 (81.0–93.1)
Dexamethasone 0.4%m- 1ml	98.5 (97.0–100.0)	99.0 (97.0–100.0)	97.9 (95.7–100.0)	98.5 (96.3–100.0)	98.4 (96.6–100.0)	99.6 (98.9–100.0)	98.9 (97.6–100.0)	98.4 (96.6–100.0)
Drotaverine 2%-2 ml	97.7 (96.1–99.4)	98.6 (96.4–100.0)	96.7 (94.2–99.2)	96.6 (92.8–100.0)	98.1 (96.3–100.0)	94.5 (88.8–100.0)	95.8 (92.6–99.0)	98.1 (96.3–100.0)
Epinephrine 0.18%-1 ml	76.0 (69.7–82.3)	74.2 (64.2–84.2)	78.2 (71.2–85.2)	84.8 (75.6–94.0)	75.7 (68.3–83.1)	65.3 (47.9–82.7)	77.4 (68.1–86.6)	75.7 (68.3–83.1)
Furosemide 1%-2 ml	96.0 (93.4–98.6)	100.0 (100.0–100.0)	91.0 (85.3–96.8)	94.9 (89.7–100.0)	96.2 (93.1–99.2)	95.3 (89.5–100.0)	95.1 (91.1–99.0)	96.2 (93.1–99.2)
Glucose 40%-20 ml	94.5 (91.4–97.6)	97.4 (94.3–100.0)	91.0 (85.3–96.6)	94.0 (88.5–99.4)	94.8 (91.2–98.5)	91.5 (82.6–100.0)	93.0 (88.2–97.8)	94.8 (91.2–98.5)
Glucose 5%-200 ml	92.1 (88.3–95.8)	95.7 (91.5–99.9)	87.6 (81.2–94.0)	88.2 (80.6–95.7)	92.6 (88.2–96.9)	92.3 (83.9–100.0)	89.7 (84.1–95.4)	92.6 (88.2–96.9)
Heparin 5000 IU/5 ml	64.6 (55.5–73.7)	67.5 (52.3–82.6)	61.1 (52.1–70.1)	66.9 (54.6–79.1)	63.8 (53.1–74.6)	70.8 (57.3–84.3)	68.4 (59.2–77.5)	63.8 (53.1–74.6)
Lidocaine 2%-2 ml	88.1 (83.8–92.4)	91.0 (85.6–96.4)	84.5 (77.8–91.2)	85.7 (77.7–93.8)	87.7 (82.6–92.8)	96.6 (92.2–100.0)	89.9 (84.7–95.1)	87.7 (82.6–92.8)
Metoclopramide 0.5%-2 ml	95.9 (93.5–98.3)	99.4 (98.4–100.0)	91.5 (86.5–96.5)	93.5 (88.3–98.7)	96.2 (93.4–98.9)	96.0 (91.3–100.0)	94.5 (90.8–98.1)	96.2 (93.4–98.9)
Nitroglycerin 0.5 mg	94.2 (90.9–97.6)	97.6 (94.2–100.0)	90.0 (84.0–96.0)	91.1 (83.3–98.9)	94.5 (90.6–98.4)	95.6 (90.3–100.0)	92.8 (87.6–98.1)	94.5 (90.6–98.4)

Medicine category	Average	Rural	Urban	FOP	Public	Private for-profit	Private	Public
Paracetamol tablets 500 mg	98.2 (96.6–99.7)	100.0 (100.0–100.0)	95.9 (92.5–99.4)	96.5 (92.5–100.0)	98.3 (96.5–100.0)	98.9 (97.5–100.0)	97.4 (94.9–99.9)	98.3 (96.5–100.0)
Propranolol (anaprilin) 40mg	75.2 (68.8–81.7)	76.9 (67.6–86.1)	73.3 (64.6–81.9)	69.1 (56.5–81.7)	75.0 (67.3–82.6)	88.5 (80.0–96.9)	76.5 (67.9–85.2)	75.0 (67.3–82.6)
Salbutamol 100 mcg/dose, 200 doses pressurized inhalation	90.5 (85.9–95.1)	92.5 (85.8–99.3)	88.1 (82.1–94.0)	89.7 (82.7–96.7)	90.6 (85.2–96.0)	91.1 (83.7–98.5)	90.2 (85.1–95.4)	90.6 (85.2–96.0)
Sodium chloride 0.9%-200 ml	96.1 (93.2–98.9)	98.8 (96.4–100.0)	92.7 (87.2–98.2)	93.8 (87.0–100.0)	96.4 (93.1–99.6)	95.8 (90.5–100.0)	94.6 (89.9–99.3)	96.4 (93.1–99.6)
Vaccines								
Anti-COVID-19 vaccine	47.3 (38.7–56.0)	49.8 (36.3–63.4)	44.3 (35.2–53.4)	16.9 (9.3–24.5)	52.3 (42.3–62.2)	35.0 (17.8–52.1)	23.8 (15.1–32.5)	52.3 (42.3–62.2)
BCG vaccine	28.6 (22.5–34.7)	18.3 (10.9–25.7)	41.3 (32.5–50.1)	25.8 (16.0–35.6)	29.6 (22.3–36.9)	20.5 (8.3–32.8)	23.8 (16.2–31.4)	29.6 (22.3–36.9)
Diphtheria and tetanus (DT) vaccine	87.3 (82.9–91.7)	87.3 (80.6–94.0)	87.4 (82.0–92.7)	78.0 (66.0–90.0)	88.2 (83.2–93.2)	91.3 (85.2–97.4)	83.1 (75.1–91.1)	88.2 (83.2–93.2)
Diphtheria pertussis tetanus (DPT) vaccine	85.7 (80.2–91.2)	84.5 (75.4–93.5)	87.3 (82.0–92.6)	73.3 (61.0–85.6)	86.9 (80.5–93.3)	90.9 (81.2–100.0)	80.0 (71.4–88.6)	86.9 (80.5–93.3)
Hepatitis B vaccine	82.0 (75.7–88.2)	79.2 (69.0–89.4)	85.4 (79.2–91.7)	75.6 (63.8–87.5)	82.0 (74.6–89.4)	91.6 (85.2–98.0)	81.8 (73.8–89.7)	82.0 (74.6–89.4)
Influenza vaccine	19.8 (14.0–25.5)	15.8 (8.1–23.5)	24.6 (16.6–32.7)	24.5 (14.7–34.3)	17.1 (10.6–23.6)	45.5 (28.9–62.2)	32.5 (23.1–42.0)	17.1 (10.6–23.6)
Measles, mumps, and rubella (MMR) vaccine	82.4 (76.4–88.4)	82.2 (72.8–91.5)	82.8 (76.0–89.6)	71.3 (59.0–83.7)	83.2 (76.2–90.2)	90.4 (80.6–100.0)	78.6 (70.0–87.2)	83.2 (76.2–90.2)
Multicomponent: BOOSTRIKS POLIO (IPV), HEXAXIM, INFANRIX PENTA, INFANRIX IPV, INFANRIX HEXA, PENTAXIM, PentaHib, TETRAXIM	43.4 (35.4–51.4)	36.1 (24.7–47.4)	52.5 (43.2–61.7)	47.6 (34.3–60.8)	41.3 (32.0–50.6)	63.5 (48.7–78.3)	53.7 (43.4–64.0)	41.3 (32.0–50.6)
Poliomyelitis vaccine, inactivated injection	84.9 (79.4–90.4)	86.0 (77.4–94.6)	83.6 (77.6–89.7)	72.4 (60.3–84.6)	86.2 (79.9–92.6)	88.9 (81.3–96.5)	78.7 (70.4–87.0)	86.2 (79.9–92.6)
Poliomyelitis vaccine, live attenuated (OPV) oral solution	73.4 (66.7–80.1)	73.9 (63.4–84.3)	72.8 (65.2–80.3)	55.6 (41.9–69.2)	75.4 (67.6–83.1)	77.1 (64.7–89.6)	63.8 (53.7–74.0)	75.4 (67.6–83.1)

Note: the sample size is 378.

ANNEX TABLE 4. Facilities with at least one provider who received training in specific services in the last 2 years (%) (N = 378)

Service category	Service	Average	Rural	Urban	FOP	Public	Private for-profit	Private	Public
Sexual and reproductive health	Collection of material for Human Papillomavirus screening	6.8 (2.5–11.1)	5.2 (0.0–10.6)	8.8 (2.1–15.5)	7.1 (1.1–13.2)	6.4 (1.3–11.4)	11.8 (4.2–19.4)	8.9 (4.2–13.6)	6.4 (1.3–11.4)
Sexual and reproductive health	Collection of material for pap smear	9.4 (4.6–14.3)	8.5 (2.0–15.0)	10.6 (3.3–17.8)	4.9 (0.0–10.4)	9.7 (3.9–15.5)	13.7 (5.4–22.1)	8.3 (3.7–12.9)	9.7 (3.9–15.5)
Sexual and reproductive health	Counseling on family planning	41.8 (33.6–50.0)	44.8 (31.8–57.8)	38.0 (28.6–47.5)	28.2 (16.9–39.5)	43.7 (34.0–53.5)	39.1 (23.8–54.4)	32.4 (23.3–41.5)	43.7 (34.0–53.5)
Sexual and reproductive health	Counseling on intimate sanitation and hygiene	41.3 (33.1–49.4)	42.3 (29.6–54.9)	40.0 (30.5–49.5)	27.5 (16.2–38.7)	43.1 (33.4–52.8)	40.7 (25.4–56.1)	32.6 (23.5–41.6)	43.1 (33.4–52.8)
Sexual and reproductive health	Dispensing of emergency contraceptive pills	7.9 (3.5–12.2)	10.8 (3.2–18.4)	4.3 (1.7–6.9)	5.5 (1.1–9.9)	8.2 (3.0–13.4)	7.9 (0.7–15.1)	6.4 (2.6–10.3)	8.2 (3.0–13.4)
Sexual and reproductive health	Gender-based violence screening and counseling	36.9 (29.2–44.5)	37.6 (25.6–49.6)	35.9 (27.2–44.7)	16.6 (8.8–24.4)	39.1 (29.8–48.3)	41.7 (26.1–57.3)	26.2 (18.3–34.1)	39.1 (29.8–48.3)
Sexual and reproductive health	Insertion of intrauterine contraceptive device (IUD)	5.0 (1.5–8.4)	5.9 (0.0–11.8)	3.8 (1.3–6.3)	2.7 (0.0–5.8)	5.1 (0.9–9.2)	6.9 (1.4–12.5)	4.3 (1.5–7.2)	5.1 (0.9–9.2)
Sexual and reproductive health	Patient referral for cervical cancer diagnosis	39.7 (31.7–47.7)	41.7 (29.1–54.2)	37.4 (28.0–46.7)	20.0 (11.0–28.9)	42.2 (32.6–51.8)	40.6 (25.3–56.0)	27.9 (19.7–36.0)	42.2 (32.6–51.8)
Sexual and reproductive health	Prescription of oral contraceptive pills (OCPs)	17.3 (11.4–23.3)	21.0 (11.4–30.5)	12.8 (6.3–19.3)	10.4 (3.7–17.1)	17.8 (10.8–24.9)	21.8 (10.9–32.8)	14.8 (8.9–20.6)	17.8 (10.8–24.9)
Sexual and reproductive health	Screening for cervical cancer	16.2 (10.3–22.0)	16.2 (7.4–25.0)	16.2 (8.9–23.5)	7.5 (1.4–13.5)	17.0 (10.0–24.0)	20.3 (8.5–32.0)	12.4 (6.5–18.2)	17.0 (10.0–24.0)
Monitoring of uncomplicated pregnancy	Family planning counseling to HIV-positive pregnant women	24.0 (17.3–30.7)	25.5 (15.1–35.8)	22.2 (14.2–30.2)	13.6 (6.6–20.6)	25.9 (17.9–33.9)	17.1 (7.6–26.6)	14.9 (9.3–20.6)	25.9 (17.9–33.9)
Monitoring of uncomplicated pregnancy	Infant and young child counseling for prevention of mother-to-child transmission (PMTCT)	49.5 (41.0–58.0)	51.4 (37.7–65.1)	47.1 (37.8–56.4)	30.3 (18.7–41.9)	52.3 (42.0–62.5)	45.8 (30.0–61.6)	36.2 (26.9–45.5)	52.3 (42.0–62.5)
Monitoring of uncomplicated pregnancy	Nutritional counseling to HIV-positive pregnant women and their infants for PMTCT	27.4 (20.4–34.5)	29.2 (18.2–40.1)	25.3 (17.0–33.5)	14.5 (7.4–21.6)	29.3 (20.9–37.7)	24.8 (12.7–36.8)	18.4 (12.0–24.8)	29.3 (20.9–37.7)
Monitoring of uncomplicated pregnancy	Prescription of folic acid	30.7 (23.4–38.0)	33.5 (21.8–45.1)	27.2 (19.2–35.3)	29.1 (16.3–41.9)	30.5 (21.9–39.1)	35.7 (21.2–50.2)	31.6 (22.1–41.2)	30.5 (21.9–39.1)

Service category	Service	Average	Rural	Urban	FOP	Public	Private for-profit	Private	Public
Monitoring of uncomplicated pregnancy	Referral of pregnant woman to obstetrician-gynecologist (OB-GYN) for specialized care	41.5 (33.5–49.6)	47.3 (34.1–60.5)	34.4 (25.7–43.0)	28.9 (16.4–41.5)	43.4 (33.8–53.1)	37.7 (22.8–52.6)	32.3 (22.8–41.8)	43.4 (33.8–53.1)
Monitoring of uncomplicated pregnancy	Screening for postnatal maternal depression	32.6 (25.3–40.0)	34.4 (22.6–46.2)	30.5 (22.6–38.3)	21.9 (10.0–33.9)	33.8 (25.0–42.6)	35.3 (21.1–49.4)	27.0 (18.1–36.0)	33.8 (25.0–42.6)
Monitoring of uncomplicated pregnancy	Screening for prenatal maternal depression	27.1 (20.3–34.0)	30.8 (19.4–42.1)	22.7 (16.0–29.4)	18.3 (6.6–30.0)	27.7 (19.5–35.8)	34.6 (20.7–48.5)	24.5 (15.9–33.2)	27.7 (19.5–35.8)
Monitoring of uncomplicated pregnancy	Surveillance of pregnant women	30.9 (23.9–38.0)	36.7 (24.8–48.6)	23.8 (17.0–30.7)	19.6 (11.0–28.3)	31.1 (22.7–39.4)	47.2 (30.7–63.6)	30.2 (21.0–39.3)	31.1 (22.7–39.4)
Monitoring of uncomplicated pregnancy	Treatment of anemia	44.3 (36.1–52.6)	43.2 (30.4–56.0)	45.7 (36.4–55.0)	46.1 (32.8–59.5)	44.0 (34.2–53.7)	45.7 (29.9–61.4)	45.9 (35.7–56.2)	44.0 (34.2–53.7)
Pediatric services	Lactation management	60.8 (51.8–69.9)	60.9 (46.2–75.5)	60.8 (51.9–69.7)	52.7 (39.2–66.2)	61.6 (50.9–72.3)	64.4 (47.4–81.5)	57.2 (46.6–67.7)	61.6 (50.9–72.3)
Pediatric services	Neonatal care and management of newborn	53.9 (45.2–62.6)	51.9 (38.2–65.6)	56.4 (47.1–65.7)	44.5 (31.6–57.5)	54.6 (44.2–65.0)	60.1 (43.2–76.9)	50.5 (40.2–60.8)	54.6 (44.2–65.0)
Pediatric services	Newborn examination	64.3 (55.2–73.4)	63.1 (48.2–78.0)	65.8 (57.5–74.0)	49.2 (35.8–62.5)	66.3 (55.4–77.3)	62.7 (45.8–79.6)	54.3 (43.8–64.8)	66.3 (55.4–77.3)
Pediatric services	Newborn, infant and child growth monitoring	61.5 (52.4–70.6)	62.5 (47.7–77.2)	60.3 (51.2–69.5)	43.6 (30.8–56.3)	63.1 (52.2–73.9)	70.9 (53.8–88.0)	54.0 (43.6–64.4)	63.1 (52.2–73.9)
Pediatric services	Nutritional counseling for children	65.6 (56.5–74.8)	64.3 (49.3–79.3)	67.3 (59.0–75.6)	53.9 (40.4–67.5)	66.5 (55.6–77.4)	73.3 (56.1–90.5)	61.3 (50.7–71.9)	66.5 (55.6–77.4)
Pediatric services	Physical activity counseling for children	60.2 (51.2–69.2)	60.9 (46.3–75.6)	59.3 (50.4–68.3)	45.0 (32.1–57.9)	61.6 (50.9–72.3)	67.4 (50.5–84.4)	53.6 (43.2–64.0)	61.6 (50.9–72.3)
Pediatric services	Pneumonia treatment	63.5 (54.3–72.8)	64.6 (49.6–79.6)	62.2 (52.9–71.5)	56.6 (42.9–70.3)	63.9 (52.9–74.8)	70.1 (53.1–87.2)	61.8 (51.1–72.5)	63.9 (52.9–74.8)
Pediatric services	Treatment for Acute diarrheal diseases	55.9 (47.0–64.7)	53.1 (39.2–66.9)	59.4 (50.4–68.4)	47.5 (34.3–60.6)	55.9 (45.4–66.3)	69.8 (52.7–86.9)	56.0 (45.4–66.5)	55.9 (45.4–66.3)
Pediatric services	Treatment for Acute viral respiratory infections	64.2 (55.0–73.4)	63.8 (48.9–78.8)	64.7 (55.6–73.7)	54.5 (40.9–68.2)	64.7 (53.7–75.7)	73.6 (56.6–90.6)	61.8 (51.1–72.5)	64.7 (53.7–75.7)
Vaccination	Age-based vaccination for adults according to the preventative vaccination schedule	75.4 (65.9–84.8)	78.1 (62.0–94.3)	72.0 (63.8–80.2)	65.9 (52.7–79.2)	77.0 (65.7–88.3)	70.6 (53.3–87.9)	67.7 (57.2–78.2)	77.0 (65.7–88.3)

Service category	Service	Average	Rural	Urban	FOP	Public	Private for-profit	Private	Public
Vaccination	Age-based vaccination for children according to the preventative vaccination schedule	77.3 (67.7–86.9)	76.6 (60.3–92.9)	78.1 (71.1–85.1)	66.6 (53.6–79.6)	78.8 (67.3–90.4)	75.1 (57.7–92.5)	69.9 (59.5–80.2)	78.8 (67.3–90.4)
Vaccination	COVID-19 vaccination	69.8 (60.6–79.0)	69.8 (54.5–85.1)	69.8 (62.0–77.6)	44.6 (31.2–57.9)	74.0 (62.8–85.1)	58.3 (41.4–75.1)	49.8 (39.5–60.1)	74.0 (62.8–85.1)
Vaccination	Emergency immunization (except for rabies)	58.6 (49.6–67.5)	57.4 (43.1–71.7)	60.0 (51.1–68.9)	50.8 (37.4–64.2)	59.4 (48.8–70.0)	60.9 (44.2–77.6)	54.7 (44.3–65.1)	59.4 (48.8–70.0)
Vaccination	Health-based vaccination according to the preventative vaccination schedule	79.7 (70.1–89.3)	79.4 (63.1–95.7)	80.0 (72.7–87.3)	78.6 (67.1–90.1)	80.4 (68.9–91.8)	72.5 (55.2–89.7)	76.3 (66.5–86.1)	80.4 (68.9–91.8)
Vaccination	Vaccination counseling for adults	70.4 (61.1–79.7)	74.4 (58.6–90.2)	65.4 (56.5–74.3)	60.6 (47.1–74.0)	72.2 (61.0–83.3)	63.7 (46.7–80.8)	61.8 (51.3–72.3)	72.2 (61.0–83.3)
Vaccination	Vaccination counseling for children	72.0 (62.7–81.4)	74.3 (58.5–90.1)	69.2 (60.9–77.6)	58.5 (44.4–72.6)	74.3 (63.1–85.5)	64.9 (47.8–81.9)	60.9 (50.0–71.8)	74.3 (63.1–85.5)
Vaccination	Vaccination for epidemic indications according to the preventative vaccination schedule (e.g., measles, polio, additional/ specific off-schedule vaccinations designated by Ministry of Health based on disease prevalence)	77.2 (67.7–86.7)	76.4 (60.4–92.4)	78.2 (70.9–85.6)	76.1 (64.5–87.7)	78.2 (66.9–89.6)	66.3 (49.1–83.4)	72.4 (62.5–82.2)	78.2 (66.9–89.6)
Noncommunicable diseases	Diagnosis of chronic respiratory diseases (e.g., COPD and asthma)	68.7 (59.4–78.0)	64.3 (49.3–79.4)	74.1 (66.4–81.8)	75.7 (65.5–86.0)	67.5 (56.5–78.5)	72.7 (55.4–89.9)	74.6 (65.3–83.8)	67.5 (56.5–78.5)
Noncommunicable diseases	Diagnosis of Diabetes Mellitus	67.5 (58.3–76.7)	62.8 (48.0–77.7)	73.2 (65.6–80.9)	62.0 (48.6–75.5)	68.1 (57.1–79.1)	69.1 (52.0–86.3)	64.8 (54.2–75.3)	68.1 (57.1–79.1)
Noncommunicable diseases	Diagnosis of hypertension	65.9 (56.7–75.2)	65.1 (50.0–80.3)	66.9 (58.2–75.6)	61.4 (47.9–74.8)	66.2 (55.2–77.2)	69.5 (52.3–86.7)	64.5 (53.9–75.0)	66.2 (55.2–77.2)
Noncommunicable diseases	Patient referral for diagnosis of breast cancer	59.4 (50.4–68.4)	60.9 (46.2–75.6)	57.6 (48.5–66.6)	51.0 (37.6–64.4)	60.7 (49.9–71.4)	57.2 (40.5–73.9)	53.4 (43.0–63.8)	60.7 (49.9–71.4)
Noncommunicable diseases	Patient referral for diagnosis of colorectal cancer	55.5 (46.7–64.3)	54.6 (40.5–68.6)	56.7 (47.6–65.7)	45.2 (31.9–58.5)	56.8 (46.3–67.2)	56.4 (39.9–73.0)	49.5 (39.2–59.8)	56.8 (46.3–67.2)

Service category	Service	Average	Rural	Urban	FOP	Public	Private for-profit	Private	Public
Noncommunicable diseases	Patient referral for diagnosis of lung cancer	58.4 (49.5–67.4)	60.6 (46.0–75.2)	55.8 (46.7–64.9)	48.5 (35.2–61.9)	59.9 (49.3–70.6)	56.0 (39.4–72.6)	51.4 (41.0–61.7)	59.9 (49.3–70.6)
Noncommunicable diseases	Patient referral for diagnosis of prostate cancer	55.0 (46.2–63.8)	57.5 (43.2–71.8)	51.9 (42.6–61.1)	46.1 (32.7–59.4)	56.0 (45.6–66.5)	56.0 (39.4–72.5)	49.9 (39.5–60.2)	56.0 (45.6–66.5)
Noncommunicable diseases	Risk assessment of Cancers	61.9 (52.8–71.0)	60.3 (45.7–75.0)	63.8 (55.3–72.4)	52.7 (39.3–66.1)	63.1 (52.3–73.9)	62.0 (44.9–79.0)	56.2 (45.8–66.7)	63.1 (52.3–73.9)
Noncommunicable diseases	Risk assessment of cardiovascular diseases (e.g., heart attack and stroke) by SCORE	69.2 (59.9–78.5)	68.6 (53.2–83.9)	69.9 (61.5–78.4)	68.4 (55.8–81.0)	69.5 (58.4–80.5)	66.6 (49.5–83.7)	67.7 (57.5–77.9)	69.5 (58.4–80.5)
Noncommunicable diseases	Risk assessment of cardiovascular diseases by physical measurements (e.g., BMI and waist circumference)	69.2 (59.9–78.5)	70.4 (54.9–86.0)	67.7 (59.0–76.4)	71.0 (59.0–83.0)	68.8 (57.8–79.9)	71.5 (54.3–88.8)	71.2 (61.3–81.1)	68.8 (57.8–79.9)
Noncommunicable diseases	Risk assessment of chronic respiratory diseases	65.0 (55.8–74.2)	60.9 (46.2–75.6)	70.1 (61.9–78.3)	62.1 (48.6–75.6)	64.7 (53.8–75.6)	73.7 (56.4–91.0)	66.5 (56.0–77.1)	64.7 (53.8–75.6)
Noncommunicable diseases	Risk assessment of Diabetes Mellitus	71.7 (62.3–81.1)	67.7 (52.3–83.2)	76.6 (69.4–83.8)	70.4 (58.2–82.6)	71.6 (60.4–82.8)	74.8 (57.4–92.2)	72.1 (62.1–82.1)	71.6 (60.4–82.8)
Noncommunicable diseases	Screening for colorectal cancer	46.3 (37.9–54.6)	44.5 (31.6–57.4)	48.5 (39.2–57.8)	46.4 (32.9–59.9)	46.0 (36.1–55.8)	49.8 (33.6–66.0)	47.7 (37.4–58.0)	46.0 (36.1–55.8)
Noncommunicable diseases	Screening for prostate cancer, prostate serum antigen	43.0 (34.9–51.0)	40.1 (27.9–52.3)	46.4 (37.2–55.7)	42.8 (29.6–56.0)	42.5 (33.0–52.0)	49.0 (32.8–65.2)	45.1 (34.9–55.4)	42.5 (33.0–52.0)
Noncommunicable diseases	Screening for risk factors of breast cancer	54.9 (46.1–63.7)	53.3 (39.5–67.2)	56.9 (47.7–66.0)	57.3 (44.3–70.4)	53.9 (43.5–64.2)	64.3 (47.4–81.2)	60.0 (49.8–70.2)	53.9 (43.5–64.2)
Noncommunicable diseases	Screening for risk factors of lung cancer	55.1 (46.9–63.3)	56.7 (44.0–69.3)	53.1 (43.9–62.4)	50.6 (37.2–64.0)	55.7 (46.1–65.3)	54.5 (38.0–71.0)	52.1 (41.7–62.5)	55.7 (46.1–65.3)
Noncommunicable diseases	Treatment of cardiovascular diseases (e.g., heart attack and stroke)	59.2 (50.2–68.2)	56.9 (42.6–71.2)	62.0 (53.1–70.8)	53.3 (39.9–66.8)	59.4 (48.7–70.1)	66.1 (48.9–83.3)	58.2 (47.7–68.7)	59.4 (48.7–70.1)
Noncommunicable diseases	Treatment of chronic respiratory diseases (e.g., COPD and asthma)	67.8 (58.5–77.1)	63.4 (48.4–78.3)	73.2 (65.4–80.9)	73.1 (61.0–85.2)	66.9 (56.0–77.9)	69.5 (52.4–86.5)	71.7 (61.7–81.7)	66.9 (56.0–77.9)
Noncommunicable diseases	Treatment of Diabetes Mellitus	62.6 (53.4–71.8)	61.8 (47.1–76.5)	63.6 (54.2–72.9)	59.5 (46.0–72.9)	62.5 (51.6–73.3)	69.0 (51.7–86.2)	63.1 (52.6–73.6)	62.5 (51.6–73.3)

Service category	Service	Average	Rural	Urban	FOP	Public	Private for-profit	Private	Public
Noncommunicable diseases	Treatment of hypertension	66.7 (57.4–76.1)	63.7 (48.8–78.7)	70.4 (61.8–79.0)	65.9 (53.2–78.6)	66.0 (55.0–77.0)	77.6 (60.3–95.0)	70.4 (60.3–80.5)	66.0 (55.0–77.0)
General Mental health services	Community mental health services	24.4 (18.0–30.8)	30.3 (19.6–41.0)	17.1 (10.4–23.7)	14.5 (6.1–23.0)	25.7 (18.1–33.4)	23.2 (10.6–35.8)	17.8 (10.7–25.0)	25.7 (18.1–33.4)
General Mental health services	First psychological aid	76.5 (70.2–82.8)	83.6 (76.0–91.1)	67.7 (58.5–77.0)	58.1 (44.9–71.3)	79.3 (72.1–86.4)	71.1 (53.8–88.4)	63.0 (52.7–73.4)	79.3 (72.1–86.4)
General Mental health services	Referral to narcologist for patients with relevant non-alcohol substance abuse disorder	56.2 (48.1–64.3)	63.9 (52.4–75.4)	46.7 (37.5–55.9)	31.8 (20.7–42.9)	59.4 (50.1–68.7)	55.2 (38.7–71.7)	40.7 (31.2–50.2)	59.4 (50.1–68.7)
General Mental health services	Referral to psychologist/psychiatrist for patients with mental and behavioral disorders, including alcohol or substance abuse disorder	66.2 (58.8–73.6)	69.7 (59.0–80.4)	61.9 (52.8–71.0)	44.7 (31.8–57.6)	69.7 (61.3–78.1)	56.7 (39.9–73.5)	49.3 (39.0–59.6)	69.7 (61.3–78.1)
General Mental health services	Screening for alcohol abuse disorder	42.2 (33.3–51.1)	46.2 (32.3–60.2)	37.3 (28.6–45.9)	37.1 (23.4–50.7)	42.4 (31.9–53.0)	47.6 (31.5–63.6)	41.1 (30.8–51.3)	42.4 (31.9–53.0)
General Mental health services	Screening for anxiety	54.6 (45.8–63.4)	54.6 (40.6–68.5)	54.7 (45.2–64.1)	56.2 (43.3–69.1)	54.4 (44.0–64.8)	55.2 (38.5–71.8)	55.8 (45.6–66.0)	54.4 (44.0–64.8)
General Mental health services	Screening for depression	57.5 (48.6–66.4)	58.5 (44.2–72.8)	56.2 (46.7–65.7)	55.6 (42.4–68.8)	58.2 (47.6–68.8)	51.4 (35.0–67.8)	54.0 (43.6–64.3)	58.2 (47.6–68.8)
General Mental health services	Screening for eating disorders	46.3 (38.0–54.7)	48.9 (35.5–62.3)	43.2 (34.1–52.2)	40.9 (27.4–54.5)	47.2 (37.3–57.1)	44.2 (28.5–59.8)	42.2 (31.9–52.4)	47.2 (37.3–57.1)
General Mental health services	Screening for non-alcohol substance use disorder	40.0 (31.1–49.0)	42.5 (28.2–56.8)	37.0 (28.3–45.7)	29.7 (17.6–41.7)	41.3 (30.7–51.9)	40.8 (25.5–56.2)	33.9 (24.5–43.3)	41.3 (30.7–51.9)
General Mental health services	Screening for PTSD	49.7 (41.2–58.2)	50.0 (36.5–63.5)	49.4 (40.1–58.6)	40.6 (27.3–54.0)	50.9 (40.7–61.1)	49.2 (33.0–65.4)	43.9 (33.7–54.1)	50.9 (40.7–61.1)
General Mental health services	Supportive counseling for mental health	74.5 (67.9–81.0)	76.8 (67.3–86.2)	71.6 (63.0–80.2)	58.4 (45.4–71.3)	77.5 (70.0–85.1)	61.6 (44.5–78.8)	59.6 (49.4–69.9)	77.5 (70.0–85.1)
Supplementary mental health services	Application of behavioral interventions for mental health conditions	26.6 (19.9–33.4)	27.8 (17.1–38.4)	25.2 (17.6–32.9)	26.1 (12.6–39.6)	25.8 (18.0–33.6)	37.7 (20.5–54.9)	30.5 (19.8–41.2)	25.8 (18.0–33.6)
Supplementary mental health services	Application of psychosocial interventions for mental health conditions	33.5 (26.2–40.9)	36.0 (24.2–47.8)	30.5 (22.4–38.6)	30.1 (16.4–43.7)	33.0 (24.4–41.5)	46.5 (29.9–63.1)	36.3 (25.7–47.0)	33.0 (24.4–41.5)

Service category	Service	Average	Rural	Urban	FOP	Public	Private for-profit	Private	Public
Supplementary mental health services	Assessment of social status and problems related to patient's mental health condition, including determination of their needs for socialization and/or social rehabilitation	43.2 (35.1–51.4)	43.2 (30.5–56.0)	43.2 (34.0–52.4)	32.8 (19.9–45.8)	43.4 (33.7–53.0)	58.2 (42.9–73.6)	42.5 (32.3–52.8)	43.4 (33.7–53.0)
Supplementary mental health services	Clinical assessment for anxiety	54.7 (45.9–63.5)	51.4 (37.7–65.0)	58.9 (49.5–68.3)	51.6 (38.2–65.0)	54.2 (43.8–64.6)	66.3 (52.1–80.5)	57.2 (47.2–67.3)	54.2 (43.8–64.6)
Supplementary mental health services	Clinical assessment for depression	54.1 (45.3–62.8)	50.9 (37.3–64.6)	57.9 (48.5–67.3)	46.9 (33.6–60.2)	54.0 (43.6–64.4)	66.6 (52.4–80.9)	54.4 (44.3–64.6)	54.0 (43.6–64.4)
Supplementary mental health services	Clinical assessment for eating disorders	47.2 (38.9–55.6)	43.2 (30.4–55.9)	52.3 (43.0–61.6)	42.7 (29.6–55.8)	47.0 (37.2–56.9)	57.3 (41.8–72.7)	48.3 (38.0–58.6)	47.0 (37.2–56.9)
Supplementary mental health services	Clinical assessment for PTSD	48.9 (40.5–57.4)	44.8 (31.9–57.8)	54.0 (44.6–63.3)	39.8 (27.0–52.6)	49.3 (39.3–59.3)	59.5 (44.4–74.6)	47.3 (37.1–57.6)	49.3 (39.3–59.3)
Supplementary mental health services	Education for legal representatives and/ or caregivers on patient's mental health condition and environmental factors related to their condition	47.5 (39.1–55.9)	48.5 (35.2–61.9)	46.1 (36.9–55.4)	30.2 (17.6–42.8)	49.4 (39.3–59.5)	51.3 (35.1–67.4)	38.2 (28.0–48.5)	49.4 (39.3–59.5)
Supplementary mental health services	Monitoring of patient mental health treatment adherence, including involvement of community-based social or mental health services	40.6 (32.7–48.6)	43.0 (30.3–55.7)	37.7 (28.8–46.6)	21.6 (9.6–33.6)	43.0 (33.4–52.5)	41.7 (24.8–58.5)	29.3 (19.2–39.4)	43.0 (33.4–52.5)
Supplementary mental health services	Prescription of antidepressants	40.6 (32.7–48.5)	40.8 (28.4–53.2)	40.3 (31.4–49.1)	38.5 (24.9–52.0)	40.5 (31.2–49.7)	45.1 (28.5–61.6)	41.0 (30.5–51.5)	40.5 (31.2–49.7)
Supplementary mental health services	Prescription of antiepileptics	28.8 (21.5–36.1)	33.4 (21.6–45.1)	23.1 (15.0–31.3)	20.9 (11.4–30.4)	29.6 (21.0–38.3)	30.7 (13.2–48.2)	24.6 (15.4–33.8)	29.6 (21.0–38.3)
Supplementary mental health services	Prescription of other pharmacological interventions, not including antidepressants or antiepileptics	47.2 (38.8–55.6)	49.6 (36.2–63.1)	44.3 (35.1–53.5)	39.0 (25.8–52.2)	47.6 (37.6–57.5)	56.2 (40.6–71.7)	45.6 (35.2–55.9)	47.6 (37.6–57.5)
Supplementary mental health services	Psychological support and education for patients to manage and understand their mental health condition	56.3 (47.5–65.1)	55.3 (41.2–69.3)	57.6 (48.6–66.5)	40.6 (26.9–54.3)	58.4 (47.9–69.0)	54.9 (39.1–70.7)	46.1 (35.6–56.5)	58.4 (47.9–69.0)
Supplementary mental health services	Psychological support for legal representatives and/or caregivers for family members, including teaching them self-help techniques	56.0 (47.2–64.8)	53.7 (39.8–67.6)	58.8 (49.8–67.8)	36.0 (22.5–49.5)	58.1 (47.5–68.7)	61.9 (47.1–76.7)	45.9 (35.6–56.2)	58.1 (47.5–68.7)

Service category	Service	Average	Rural	Urban	FOP	Public	Private for-profit	Private	Public
Supplementary mental health services	Referral of patients to advanced care specialists in the absence of improvement after administration of counseling and treatment at PHC level	68.0 (58.8–77.2)	70.3 (55.0–85.6)	65.1 (56.3–73.9)	51.1 (37.7–64.5)	70.9 (59.7–82.0)	59.0 (43.8–74.3)	54.1 (43.9–64.3)	70.9 (59.7–82.0)
Supplementary mental health services	Referrals for laboratory and instrumental studies (except those included in the specifications of the Primary Health Care package) for differential diagnosis and exclusion of physical health-related psychiatric and neurologic issues.	48.0 (39.6–56.4)	48.6 (35.2–61.9)	47.3 (38.0–56.6)	42.4 (28.7–56.1)	47.3 (37.4–57.2)	65.9 (52.0–79.9)	51.4 (41.3–61.5)	47.3 (37.4–57.2)
Disability services	Disability assessment using WHO Disability Assessment Schedule (DAS)	35.4 (27.7–43.1)	33.9 (22.1–45.6)	37.3 (28.4–46.3)	36.0 (22.5–49.5)	34.5 (25.5–43.5)	45.6 (29.7–61.5)	39.7 (29.5–49.8)	34.5 (25.5–43.5)
Disability services	Needs assessment for rehabilitative medicine or equipment	40.1 (32.2–47.9)	37.0 (25.0–49.0)	43.8 (34.7–52.9)	42.6 (29.1–56.0)	39.0 (29.8–48.2)	49.0 (32.8–65.1)	45.0 (34.8–55.3)	39.0 (29.8–48.2)
Adult and child palliative care	Counseling or training to caregivers of adult or child palliative care patients	57.0 (48.9–65.0)	56.2 (43.5–68.8)	58.0 (48.9–67.1)	36.3 (24.2–48.4)	59.5 (50.2–68.8)	59.2 (44.2–74.2)	45.1 (34.9–55.2)	59.5 (50.2–68.8)
Adult and child palliative care	Monitoring of adult or child palliative care patient disease progress	55.1 (46.8–63.3)	60.3 (48.2–72.3)	48.6 (39.4–57.8)	34.4 (22.9–45.8)	57.4 (47.9–67.0)	58.8 (43.6–73.9)	43.7 (33.7–53.7)	57.4 (47.9–67.0)
Adult and child palliative care	Monitoring of adult or child palliative care patient pain severity	56.0 (47.9–64.2)	60.7 (48.8–72.6)	50.3 (41.0–59.6)	38.9 (26.7–51.0)	58.2 (48.7–67.7)	56.7 (41.3–72.1)	45.7 (35.5–55.8)	58.2 (48.7–67.7)
Adult and child palliative care	Monitoring of adult or child palliative care patient pain treatment	54.5 (46.3–62.8)	59.3 (47.2–71.4)	48.6 (39.4–57.8)	33.5 (22.2–44.8)	56.9 (47.3–66.5)	58.2 (43.1–73.4)	43.0 (33.0–52.9)	56.9 (47.3–66.5)
Adult and child palliative care	Prescription for treatment of concomitant symptoms in adult or child palliative care patients	52.0 (43.4–60.6)	47.4 (34.2–60.6)	57.7 (48.6–66.9)	38.5 (26.1–51.0)	52.8 (42.6–63.0)	64.1 (50.2–78.1)	48.3 (38.1–58.5)	52.8 (42.6–63.0)
Adult and child palliative care	Prescription for treatment of pain in adult or child palliative care patients, including potent opioids and other drugs defined by the National List of Essential Medicines	54.0 (45.3–62.7)	48.6 (35.3–62.0)	60.7 (51.8–69.6)	44.2 (30.9–57.4)	54.6 (44.3–64.9)	63.0 (48.8–77.1)	51.4 (41.1–61.6)	54.6 (44.3–64.9)

Service category	Service	Average	Rural	Urban	FOP	Public	Private for-profit	Private	Public
Adult and child palliative care	Referral of adult or child palliative care patients to other institutions for additional medical, psychological, social, or other services	55.7 (47.6–63.9)	58.7 (46.4–71.0)	52.1 (42.8–61.4)	38.4 (26.0–50.8)	57.4 (47.9–66.9)	63.0 (48.7–77.3)	47.8 (37.7–58.0)	57.4 (47.9–66.9)
Infectious disease services	Contact tracing for patients with suspected or diagnosed TB infection	61.8 (54.2–69.5)	64.0 (52.5–75.6)	59.1 (50.1–68.0)	40.2 (27.1–53.3)	64.8 (56.0–73.6)	59.5 (44.6–74.4)	47.6 (37.3–57.8)	64.8 (56.0–73.6)
Infectious disease services	HIV post exposure prophylaxis	18.0 (12.2–23.9)	16.1 (7.3–24.9)	20.4 (13.3–27.5)	13.8 (3.9–23.6)	17.9 (11.1–24.7)	27.0 (9.8–44.1)	18.8 (9.6–28.0)	17.9 (11.1–24.7)
Infectious disease services	Prescription of anti-retroviral therapy (ART) for HIV positive patients	4.8 (1.9–7.6)	4.1 (0.0–8.1)	5.7 (1.8–9.6)	3.3 (0.0–6.7)	3.9 (0.8–6.9)	18.5 (1.2–35.8)	9.1 (1.6–16.6)	3.9 (0.8–6.9)
Infectious disease services	Prescription of pre-exposure prophylaxis (PrEP) for at-risk patients not currently diagnosed with HIV/AIDS	9.4 (5.7–13.2)	7.9 (2.4–13.4)	11.4 (6.4–16.3)	8.3 (2.7–13.9)	8.1 (3.9–12.2)	28.3 (10.8–45.8)	16.0 (7.7–24.2)	8.1 (3.9–12.2)
Infectious disease services	Referral to physiologist or TB focal person for TB diagnosis	69.0 (61.9–76.1)	72.8 (62.5–83.0)	64.4 (55.4–73.3)	54.1 (40.7–67.5)	70.7 (62.4–78.9)	72.2 (59.8–84.6)	61.0 (51.1–70.9)	70.7 (62.4–78.9)
Infectious disease services	Referral to physiologist or TB focal person for TB treatment	61.4 (52.3–70.5)	60.4 (45.8–75.0)	62.8 (53.6–71.9)	56.6 (43.3–69.8)	61.7 (50.9–72.6)	65.9 (52.0–79.7)	60.1 (50.2–70.0)	61.7 (50.9–72.6)
Infectious disease services	Screening for hepatitis	55.3 (46.5–64.0)	50.5 (36.9–64.0)	61.2 (52.2–70.1)	38.7 (25.7–51.6)	56.5 (46.0–66.9)	67.0 (53.6–80.5)	49.5 (39.4–59.7)	56.5 (46.0–66.9)
Infectious disease services	Screening for HIV	55.2 (46.5–64.0)	46.7 (33.6–59.8)	65.8 (57.1–74.4)	44.7 (31.5–57.9)	55.5 (45.1–65.8)	69.1 (56.0–82.3)	54.0 (43.9–64.1)	55.5 (45.1–65.8)
Infectious disease services	Screening for Sexually transmitted infections (e.g., syphilis, gonorrhea)	25.0 (18.7–31.2)	17.9 (9.2–26.6)	33.6 (25.3–42.0)	30.5 (17.0–44.0)	22.2 (15.2–29.3)	50.2 (34.0–66.4)	38.0 (27.4–48.6)	22.2 (15.2–29.3)
Supplementary TB services	Administration of anti-TB drugs under direct supervision	9.7 (5.8–13.7)	7.3 (2.2–12.4)	12.8 (6.9–18.7)	6.8 (1.1–12.5)	9.5 (5.0–13.9)	18.1 (0.5–35.8)	11.1 (3.1–19.1)	9.5 (5.0–13.9)
Supplementary TB services	Collection and transportation of TB patient's biomaterial for bacteriological tests.	31.2 (24.1–38.3)	30.9 (20.0–41.8)	31.5 (23.2–39.9)	10.2 (3.7–16.7)	34.1 (25.5–42.7)	28.4 (10.7–46.0)	17.2 (8.7–25.7)	34.1 (25.5–42.7)
Supplementary TB services	Counseling and education with TB patients focused on sanitation and hygiene to prevent transmission to other persons	52.6 (43.9–61.2)	48.7 (35.3–62.0)	57.3 (48.5–66.2)	40.3 (26.9–53.8)	53.8 (43.5–64.1)	56.7 (41.5–71.9)	46.6 (36.2–57.0)	53.8 (43.5–64.1)

Service category	Service	Average	Rural	Urban	FOP	Public	Private for-profit	Private	Public
Supplementary TB services	Evaluation and monitoring of adverse symptoms related to TB treatment	37.4 (29.8–45.1)	34.1 (22.8–45.5)	41.5 (32.3–50.7)	29.4 (16.6–42.1)	38.8 (29.7–47.9)	33.3 (15.5–51.0)	30.9 (20.4–41.3)	38.8 (29.7–47.9)
Supplementary TB services	Evaluation of hearing, visual acuity, and polyneuropathy symptoms following treatment monitoring for TB patients	37.9 (30.1–45.7)	36.6 (24.7–48.5)	39.5 (30.4–48.6)	33.7 (20.2–47.2)	39.1 (29.9–48.4)	29.4 (11.6–47.1)	32.0 (21.3–42.8)	39.1 (29.9–48.4)
Supplementary TB services	Monitoring of patient TB treatment adherence	34.9 (27.5–42.3)	35.9 (24.2–47.6)	33.6 (25.3–41.9)	16.7 (8.7–24.8)	36.8 (27.9–45.7)	39.8 (22.5–57.1)	25.5 (16.4–34.7)	36.8 (27.9–45.7)
Supplementary TB services	Monitoring of the health status of a patient diagnosed with TB	53.4 (44.7–62.1)	55.3 (41.3–69.4)	51.1 (41.9–60.4)	36.7 (23.4–50.1)	56.0 (45.5–66.5)	48.2 (31.7–64.6)	41.1 (30.6–51.6)	56.0 (45.5–66.5)
Supplementary TB services	Monitoring of the use of anti-TB drugs prescribed by a TB doctor	39.8 (31.9–47.7)	38.5 (26.4–50.7)	41.4 (32.1–50.6)	23.6 (12.8–34.4)	41.6 (32.1–51.0)	43.8 (26.8–60.8)	31.3 (21.4–41.3)	41.6 (32.1–51.0)
Health Promotion and Education	Counseling on harmful effects of alcohol use	58.9 (50.0–67.8)	55.9 (41.7–70.1)	62.6 (54.0–71.2)	49.5 (36.1–62.9)	60.0 (49.4–70.6)	60.2 (43.5–76.8)	53.6 (43.3–63.9)	60.0 (49.4–70.6)
Health Promotion and Education	Counseling on harmful effects of non-alcohol substance use (e.g., cocaine, heroin, and others)	58.2 (49.4–67.1)	56.1 (41.9–70.2)	60.9 (52.3–69.5)	46.0 (32.5–59.5)	59.9 (49.3–70.5)	56.7 (40.2–73.3)	50.1 (39.8–60.4)	59.9 (49.3–70.5)
Health Promotion and Education	Counseling on harmful effects of tobacco use, including e-cigarettes, vapes, and hookah	64.5 (57.1–71.9)	65.8 (54.4–77.2)	62.9 (54.3–71.5)	49.9 (36.5–63.3)	66.7 (58.2–75.3)	60.1 (43.4–76.9)	53.8 (43.5–64.1)	66.7 (58.2–75.3)
Health Promotion and Education	Nutrition counseling for adults	55.7 (47.5–63.9)	61.2 (49.2–73.2)	48.9 (39.6–58.2)	47.8 (34.4–61.2)	56.9 (47.4–66.5)	53.0 (36.6–69.5)	49.8 (39.5–60.1)	56.9 (47.4–66.5)
Health Promotion and Education	Physical activity counseling for adults	51.9 (43.3–60.6)	53.1 (39.3–67.0)	50.5 (41.2–59.8)	43.6 (30.4–56.8)	52.9 (42.7–63.2)	52.7 (36.4–69.1)	47.1 (36.9–57.3)	52.9 (42.7–63.2)
Health Promotion and Education	Safe sex counseling	50.7 (42.1–59.3)	48.7 (35.3–62.1)	53.2 (44.0–62.4)	45.9 (32.6–59.2)	51.1 (40.9–61.2)	54.3 (37.9–70.8)	49.1 (38.8–59.4)	51.1 (40.9–61.2)
Administration of instrumental diagnostic tests	Administration of electrocardiography	61.4 (52.4–70.5)	59.6 (45.0–74.1)	63.7 (55.0–72.4)	53.4 (40.1–66.8)	62.1 (51.3–72.8)	66.4 (49.5–83.2)	58.4 (48.1–68.7)	62.1 (51.3–72.8)
Administration of instrumental diagnostic tests	Administration of ophthalmoscopy	36.1 (28.4–43.9)	34.5 (22.7–46.2)	38.2 (29.0–47.3)	29.5 (18.7–40.2)	37.2 (28.0–46.4)	33.7 (18.7–48.7)	31.1 (22.3–39.9)	37.2 (28.0–46.4)

Service category	Service	Average	Rural	Urban	FOP	Public	Private for-profit	Private	Public
Administration of instrumental diagnostic tests	Administration of otoscopy	54.1 (45.3–62.8)	48.9 (35.5–62.3)	60.4 (51.2–69.6)	52.8 (39.4–66.1)	53.4 (43.1–63.7)	64.0 (47.2–80.9)	57.1 (46.7–67.4)	53.4 (43.1–63.7)
Administration of instrumental diagnostic tests	Administration of Peak flow meter test	40.0 (32.1–47.8)	36.2 (24.6–47.8)	44.6 (35.3–54.0)	36.0 (23.9–48.2)	40.1 (30.8–49.4)	44.2 (28.4–60.1)	39.2 (29.5–48.9)	40.1 (30.8–49.4)
Administration of instrumental diagnostic tests	Administration of spirometry test	27.8 (21.0–34.7)	28.4 (17.9–38.8)	27.2 (18.8–35.5)	21.3 (9.1–33.4)	28.4 (20.3–36.4)	31.6 (17.6–45.5)	25.2 (16.1–34.3)	28.4 (20.3–36.4)
Administration of instrumental diagnostic tests	Administration of visual acuity test	48.1 (39.7–56.5)	43.5 (30.7–56.3)	53.9 (44.6–63.1)	38.8 (26.6–51.1)	49.1 (39.1–59.1)	50.7 (34.4–67.0)	43.4 (33.5–53.3)	49.1 (39.1–59.1)
Emergency medical care	Cardiopulmonary resuscitation (CPR)	60.0 (50.9–69.1)	56.8 (42.5–71.1)	64.0 (55.0–73.0)	57.3 (44.1–70.4)	60.7 (49.9–71.5)	55.6 (38.9–72.3)	56.6 (46.3–67.0)	60.7 (49.9–71.5)
Emergency medical care	Emergency medical care for sudden onset seizure, including administration of parenteral anticonvulsants	54.1 (45.3–62.8)	56.2 (42.0–70.4)	51.4 (42.2–60.7)	48.2 (34.9–61.4)	55.0 (44.6–65.4)	52.0 (35.6–68.4)	49.6 (39.3–60.0)	55.0 (44.6–65.4)
Treatment for poisonings	Treatment for chemical-based poisoning	33.9 (26.4–41.4)	37.0 (25.1–48.8)	30.1 (21.4–38.9)	19.7 (10.6–28.8)	35.9 (26.9–44.8)	32.3 (18.1–46.5)	24.5 (16.7–32.4)	35.9 (26.9–44.8)
Treatment for poisonings	Treatment for food-based poisoning	46.5 (38.1–54.8)	50.2 (36.7–63.8)	41.8 (32.8–50.9)	34.0 (22.4–45.5)	47.4 (37.5–57.2)	55.3 (38.8–71.9)	42.1 (32.5–51.8)	47.4 (37.5–57.2)
Treatment for poisonings	Treatment for medication-based poisoning	37.0 (29.2–44.7)	36.0 (24.3–47.7)	38.1 (28.6–47.6)	24.8 (13.9–35.7)	38.6 (29.3–47.9)	36.5 (21.4–51.7)	29.3 (20.4–38.2)	38.6 (29.3–47.9)
Administrative services	Issuance of medical death certificates	41.1 (33.0–49.1)	38.7 (26.4–51.0)	44.0 (34.8–53.2)	33.5 (20.7–46.4)	41.5 (32.0–51.0)	47.9 (31.8–64.0)	39.0 (29.1–49.0)	41.5 (32.0–51.0)
Administrative services	Issuance of medical reports for temporary disability	58.5 (49.5–67.5)	59.0 (44.6–73.5)	57.9 (48.6–67.3)	56.0 (42.7–69.3)	58.7 (48.1–69.4)	60.1 (43.4–76.9)	57.6 (47.2–68.0)	58.7 (48.1–69.4)
Administrative services	Issuance of referrals for medical and social examination commission	50.2 (41.6–58.7)	50.9 (37.3–64.5)	49.3 (40.0–58.5)	50.0 (36.6–63.4)	49.2 (39.1–59.2)	62.9 (46.1–79.8)	55.0 (44.7–65.3)	49.2 (39.1–59.2)

Note: the sample size is 378.

ANNEX TABLE 5. Reasons that patients visited the health facility the day of the survey (multiple select; %)

Reason	Average	FOP	Public	Private for-profit	Public	Private	Urban	Rural
Cough/sore throat	28.2 (24.6–31.9)	31.4 (26.6–36.3)	28.4 (24.3–32.4)	23.9 (14.5–33.3)	28.4 (24.3–32.4)	27.4 (21.3–33.4)	28.9 (24.2–33.5)	26.3 (23.6–29.0)
Routine health checkup	15.0 (11.0–18.9)	20.7 (14.9–26.5)	13.7 (9.6–17.9)	27.2 (11.5–42.8)	13.7 (9.6–17.9)	24.2 (14.9–33.5)	16.3 (11.0–21.6)	10.8 (7.8–13.9)
Runny nose/nose congestion	21.9 (17.4–26.4)	25.0 (20.2–29.9)	21.9 (16.8–27.0)	18.8 (11.1–26.5)	21.9 (16.8–27.0)	21.6 (16.5–26.8)	23.2 (17.5–28.9)	17.7 (14.9–20.6)
Headache/migraine	14.2 (10.1–18.3)	11.4 (7.5–15.3)	14.7 (10.0–19.3)	10.5 (5.1–16.0)	14.7 (10.0–19.3)	10.9 (7.5–14.4)	11.6 (6.9–16.3)	22.2 (16.8–27.6)
Hypertension/high blood pressure	13.4 (11.1–15.6)	11.2 (8.3–14.1)	13.7 (11.2–16.2)	10.7 (6.0–15.4)	13.7 (11.2–16.2)	10.9 (8.0–13.8)	11.3 (8.8–13.7)	19.8 (15.0–24.6)
Fever	13.6 (10.1–17.1)	14.5 (9.5–19.4)	13.5 (9.6–17.5)	14.0 (7.7–20.2)	13.5 (9.6–17.5)	14.2 (10.1–18.3)	13.9 (9.4–18.4)	12.7 (9.5–15.9)
Back pain	8.9 (7.1–10.7)	6.0 (3.2–8.8)	9.3 (7.3–11.3)	5.6 (2.9–8.3)	9.3 (7.3–11.3)	5.8 (3.8–7.8)	8.4 (6.1–10.8)	10.2 (8.2–12.3)
Arthritis/joint pain	8.1 (4.3–11.9)	7.1 (4.6–9.6)	8.4 (4.1–12.6)	5.3 (2.7–8.0)	8.4 (4.1–12.6)	6.1 (4.2–8.0)	7.7 (2.6–12.8)	9.3 (6.9–11.8)
Fatigue	6.9 (4.4–9.4)	6.0 (2.7–9.4)	7.1 (4.3–9.9)	4.9 (2.2–7.7)	7.1 (4.3–9.9)	5.5 (3.2–7.7)	6.4 (3.3–9.4)	8.6 (5.2–11.9)
Chest pain	6.2 (4.4–8.1)	5.2 (2.6–7.8)	6.3 (4.2–8.4)	5.5 (2.6–8.4)	6.3 (4.2–8.4)	5.4 (3.4–7.3)	5.5 (3.4–7.7)	8.3 (5.3–11.3)
Stomach/abdominal pain	5.4 (3.8–7.1)	7.2 (3.5–10.9)	5.5 (3.6–7.3)	3.2 (1.3–5.1)	5.5 (3.6–7.3)	5.0 (2.9–7.1)	5.7 (3.5–7.8)	4.6 (3.0–6.3)
Dizziness/vertigo	5.2 (3.5–7.0)	4.8 (2.6–7.1)	5.3 (3.4–7.3)	4.3 (1.9–6.7)	5.3 (3.4–7.3)	4.6 (2.9–6.2)	4.9 (2.8–7.0)	6.3 (3.4–9.2)
Diabetes	4.6 (2.6–6.6)	3.1 (1.6–4.6)	4.9 (2.7–7.1)	1.9 (0.5–3.3)	4.9 (2.7–7.1)	2.5 (1.4–3.5)	4.5 (1.9–7.1)	4.9 (3.3–6.5)
Asthma/shortness of breath	3.6 (2.2–5.0)	2.4 (1.0–3.8)	3.7 (2.1–5.3)	4.0 (1.6–6.4)	3.7 (2.1–5.3)	3.3 (1.9–4.7)	3.2 (1.7–4.8)	4.8 (1.9–7.6)
Ear infection/pain/hearing difficulties	1.9 (0.9–2.9)	1.7 (0.6–2.8)	1.7 (0.7–2.8)	4.2 (0.5–7.9)	1.7 (0.7–2.8)	3.1 (0.8–5.3)	1.9 (0.6–3.2)	1.8 (0.8–2.7)

Reason	Average	FOP	Public	Private for-profit	Public	Private	Urban	Rural
Anxiety/depression/mental health	1.5 (0.7–2.2)	1.3 (0.2–2.4)	1.4 (0.6–2.1)	3.4 (0.0–7.3)	1.4 (0.6–2.1)	2.4 (0.1–4.7)	1.1 (0.3–1.9)	2.6 (1.1–4.2)
Diarrhea	2.8 (1.7–3.9)	3.2 (1.5–4.8)	2.9 (1.7–4.2)	1.2 (0.3–2.2)	2.9 (1.7–4.2)	2.1 (1.2–3.1)	3.0 (1.6–4.4)	2.3 (1.1–3.5)
Skin infection/condition	2.1 (1.0–3.2)	2.1 (0.4–3.7)	2.1 (0.9–3.4)	1.4 (0.4–2.5)	2.1 (0.9–3.4)	1.7 (0.8–2.7)	2.3 (0.8–3.7)	1.6 (0.5–2.6)
Vomiting	1.2 (0.6–1.8)	2.2 (0.6–3.9)	1.1 (0.5–1.8)	0.7 (0.0–1.4)	1.1 (0.5–1.8)	1.4 (0.5–2.3)	1.1 (0.4–1.9)	1.3 (0.6–2.1)
Transport accidents/injuries	1.0 (0.4–1.6)	0.0 (0.0–0.1)	1.1 (0.4–1.7)	0.9 (0.0–1.8)	1.1 (0.4–1.7)	0.5 (0.0–1.0)	0.7 (0.1–1.2)	1.9 (0.5–3.4)
Cancer	1.6 (0.7–2.5)	0.6 (0.0–1.3)	1.7 (0.7–2.8)	0.6 (0.0–1.3)	1.7 (0.7–2.8)	0.6 (0.1–1.1)	1.7 (0.5–2.8)	1.5 (0.4–2.6)
Family planning/reproductive health	0.8 (0.3–1.3)	1.0 (0.1–1.9)	0.7 (0.2–1.3)	1.6 (0.0–3.3)	0.7 (0.2–1.3)	1.3 (0.4–2.3)	0.8 (0.2–1.5)	0.6 (0.1–1.2)
Other non-listed reason	1.2 (0.4–2.0)	1.6 (0.4–2.8)	1.2 (0.4–2.1)	0.7 (0.1–1.3)	1.2 (0.4–2.1)	1.1 (0.4–1.8)	1.2 (0.2–2.2)	1.4 (0.5–2.2)
Eye infection/pain/vision difficulties	1.3 (0.4–2.2)	0.4 (0.0–1.1)	1.5 (0.4–2.5)	0.5 (0.0–1.0)	1.5 (0.4–2.5)	0.5 (0.0–0.9)	1.5 (0.3–2.7)	0.8 (0.1–1.5)
Burn/cut/fall	0.9 (0.3–1.6)	0.3 (0.0–0.8)	1.0 (0.3–1.7)	0.4 (0.0–1.0)	1.0 (0.3–1.7)	0.4 (0.0–0.8)	0.8 (0.0–1.6)	1.3 (0.5–2.0)
Self-harm	0.6 (0.1–1.1)	0.4 (0.0–0.8)	0.6 (0.0–1.2)	0.4 (0.0–1.1)	0.6 (0.0–1.2)	0.4 (0.0–0.8)	0.6 (0.0–1.3)	0.6 (0.0–1.2)
Animal contact/ingestion of harmful substance/ poisoning	0.4 (0.0–0.9)	0.0 (0.0–0.1)	0.5 (0.0–1.1)	0.0 (0.0–0.0)	0.5 (0.0–1.1)	0.0 (0.0–0.0)	0.5 (0.0–1.2)	0.2 (0.0–0.5)
Epilepsy/seizures/convulsions	0.3 (0.0–0.7)	0.1 (0.0–0.4)	0.3 (0.0–0.8)	0.0 (0.0–0.0)	0.3 (0.0–0.8)	0.1 (0.0–0.2)	0.4 (0.0–0.9)	0.0 (0.0–0.0)

Note: the sample size is 2,490.

ANNEX TABLE 6. Treatment selected by providers, by vignette (%)

Diagnosis	Providers (%)	Primary Treatment	Specific Treatment
Diabetes Type 2 Vignette			
Metformin	93.2	+	
Metformin:500 mg	87.1	+	+
Metformin: twice a day	85.5	+	+
Atorvastatin	56.6		+
Acetylsalicylic acid (any amount or frequency)	23.1		
Any other statin (any amount or frequency)	18.1		+
Sulfonylurea (Gliclazide)	16.0		
Insulin (any amount or frequency)	1.0		
Tuberculosis Vignette			
Refer to a TB specialist for follow-up	97.1	+	✓
Anti TB drugs (any)	64.5		x
Anti TB: Combination therapy	49.9		x
Register patient in District TB Register	45.6		
Anti TB:4 tablets daily of HRZE (fixed dose combination-4FDC) for first 2 months	31.4		x
Vitamin B6 (pyridoxine) (any amount or frequency)	26.5		
Macrolide (e.g., erythromycin, roxithromycin, azithromycin)	19.2		
Admission of patient for at least 1 week until first negative culture conversion	18.6		
Amoxicillin (any amount or frequency)	16.3		
Paracetamol (any amount or frequency)	16.1		
Anti TB:2 tablets daily of HR (2FDC) for the next 4 months	13.2		x
Refer to another health facility (not specifically a TB clinic)	9.3		
Oxygen	9.3		
Clavulanic acid (any amount or frequency)	7.6		
Refer to another health care provider within this health facility (not specifically a TB specialist)	3.0		
Depression Vignette			
Advice on engaging in daily physical activities	89.5	+	✓
Advice on structuring the day	87.3	+	✓
Advise patient to contact provider if condition worsens	85.1		
Follow-up care: health care provider asks patient "Do you have any questions?"	84.8		
Advice to reduce stress and strengthen social relationships	84.6	+	✓

Diagnosis	Providers (%)	Primary Treatment	Specific Treatment
Follow-up care: offer the patient an option to schedule a follow-up visit	83.7	+	✓
Explanation of the disease	78.5	+	✓
Advice on active involvement in community life	77.7	+	✓
Discuss and decide with patient if antidepressants are appropriate	67.1	+	✓
Advice on scheduling follow-up session	64.5	+	✓
Advice on stigma and misconceptions	63.3	+	✓
Advice on self-help	57.6		
Provide written/information materials corresponding to the age	45.6		
Prescribe Fluoxetine	26.6		
Prescribe Amitriptyline	20.2		
Hypertension Vignette			
Advise patient to eat a low-salt diet	93.4		+
Advise patient to increase physical activity	92.5		+
Advise patient to avoid alcohol	91.9		+
Advise patient to avoid all tobacco use/secondhand tobacco smoke	89.8		+
Advise patient to lose weight	85.6		+
Advise patient to eat 5+ servings of vegetables/fruits	82.7		+
Advise patient to eat food rich in omega 3 fatty acids	82.6		+
Advise patient to use health oils	76.2		+
Advise patient to avoid sweets/added sugar	72.7		+
Hydrochlorothiazide/thiazide-like diuretic (any amount or frequency)	68.8	+	+
Atorvastatin	69.0		+
Advise patient to eat nuts, legumes, whole grains, and foods rich in potassium	66.8		+
Advise patient to limit red meat consumption	64.4		+
Advise patient to limit rice and potato consumption	64.4		+
Atorvastatin:10 mg	64.4		+
Oral ACE inhibitors (e.g., captopril, enalapril, lisinopril) (any amount or frequency)	58.4	+	+
Atorvastatin: Before sleep	57.9		+
Atorvastatin: once a day	57.9		+
Aspirin (any amount or frequency)	50.9		
Any ARB preparation (Losartan)	39.5	+	+
Oral β-blockers (e.g., bisoprolol, carvedilol, metoprolol) (any amount or frequency)	30.3		
Oral calcium channel blockers (e.g., amlodipine, nifedipine, verapamil) (any amount or frequency)	30.0	+	+

Diagnosis	Providers (%)	Primary Treatment	Specific Treatment
No treatment or referral is needed	29.4		
Refer to another health care professional staff within this facility	19.5		
Metformin (any amount or frequency)	19.5		
Refer to another facility	15.3		
Oral vasodilators (e.g., nitroglycerine, glyceryl trinitrate) (any amount or frequency)	4.1		
Pneumonia Vignette			
Paracetamol (any amount or frequency)	70.4	+	
Amoxicillin (any amount or frequency)	67.6	+	
Amoxicillin:15 mL of oral amoxicillin syrup (125 mg/5 mL)	50.2	+	+
Amoxicillin:3 times per day for 5 days (syrup)	44.3	+	+
Paracetamol: every 6-8 hours until fever is gone	42.1	+	+
Paracetamol:10 mL of paracetamol syrup (125 mg/5 mL)	41.8	+	+
Other antipyretics (not paracetamol) (any amount or frequency)	38.6	+	
Oxygen	26.2		
Paracetamol:15 mg/kg paracetamol	23.6	+	+
Amoxicillin:2 times per day for 5 days (tablets)	12.1	+	+
Paracetamol:250 mg paracetamol (1/2 tablet)	11.1	+	+
Ciprofloxacin (any amount or frequency)	6.8		
Any other antibiotics (any amount or frequency)	5.0	+	
Amoxicillin: 375g of amoxicillin tablets (15 tablets)	4.6	+	+
Erythromycin (any amount or frequency)	2.8	+	
Doxycycline (any amount or frequency)	2.0		
Cotrimoxazole (any amount or frequency)	1.8	+	
Tuberculosis/TB treatment (any amount or frequency)	1.5		

Notes:
1. At least one of the options marked (+) must have been selected by the provider to count for the primary treatment. For vignettes with (+) symbols marked in black and orange, one option from each color set must have been chosen.
2. All checked (✓) options and at least one of the options marked (+) must have been selected by the provider to count for complete treatment
3. Diagnoses marked with an "x" denote penalizations for TB treatments that are clinically incorrect. Primary care physicians in Ukraine are supposed to refer patients for further care with a TB specialist and not directly prescribe anti-TB medication.
4. The sample size is 873.

ANNEX TABLE 7. Diagnoses selected by providers, by vignette (%)

Diagnosis	Providers (%)	Diagnosis	
		Primary	Specific
Diabetes Type 2 vignette			
Diabetes Mellitus Type II	89.0	+	+
Obesity	64.7		✓
Diabetes (non-specific)	50.6		
Diabetes Type I/Diabetes Mellitus Type I	4.2		
Hyperthyroidism	2.0		
Patient does not have any disease/patient is healthy	2.0		
Stroke	1.4		
Don't know	1.1		
Tuberculosis vignette			
Tuberculosis/TB	78.3	+	+
Pulmonary tuberculosis/PTB smear positive	54.6	+	+
Drug-susceptible tuberculosis/TB (DS-TB)	46.6	+	+
Multidrug-resistant tuberculosis/TB (MDR-TB)	11.5		x
Drug-resistant tuberculosis/TB (DR-TB)	9.8		x
Extra-pulmonary tuberculosis/TB (EPTB)	6.9		x
Latent tuberculosis/TB infection (LTBI)	6.5		x
Chronic obstructive pulmonary disease (COPD)	5.4		
Bronchitis	4.8		
Pneumonia	2.7		
Asthma	2.1		
Don't know	1.6		
Patient does not have any disease/patient is healthy	1.5		
Depression vignette			
Depression	61.3	+	
Moderate depression	56.0	+	✓
Mild depression	23.8		x
Anxiety	19.9		
Stress (acute, chronic, or adjustment stress disorders)	13.4		
Somatoform vegetative dysfunction	7.0		
Neurasthenia	5.5		
Depressive episode in bipolar disorder	4.3		
Severe depression	4.1		x
Anemia	1.9		

Diagnosis	Providers (%)	Diagnosis	
		Primary	Specific
Diabetes	1.0		
Hypertension	0.7		
Don't know	0.7		
Hypertension vignette			
Hypertension	83.3	+	+
Obesity	63.6		✓
Hyperlipidemia/Dyslipidemia/Hypercholesterolemia	61.7		✓
Metabolic syndrome	37.3		
Patient does not have any disease/patient is healthy	9.9		
Diabetes	6.6		
Pre-hypertension	3.7		
Renal artery stenosis	0.2		
Aortic coarctation	0.2		
Don't know	0.0		
Pneumonia vignette			
Pneumonia	82.5	+	+
Upper respiratory tract infection	17.5		
Bronchitis	9.0		
Asthma	1.2		
Tuberculosis/TB	1.1		
Patient does not have any disease/patient is healthy	1.0		
Dehydration	0.3		
Don't know	0.3		

Notes:
1. At least one of the options marked (+) must have been selected by the provider to count for the primary diagnosis.
2. All checked (✓) options and at least one of the options marked (+) must have been selected by the provider to count for complete diagnosis.
3. Diagnoses marked with an "x" denote penalizations for TB diagnoses that are clinically incorrect. None of the information in the vignettes suggested drug-resistance, latent infection, or extra-pulmonary TB.
4. The sample size is 873.

ANNEX TABLE 8. NCD care at current or previous visits, by facility type, ownership, location, and patient sex (%)

Service	Ukraine	Rural	Urban	FOP	Public	Private for-profit	Private	Public	Male	Female
Risk factor assessment										
Asked about alcohol use	78.6 (69.1–85.8)	70.0 (51.8–83.5)	83.6 (73.6–90.3)	82.5 (70.1–90.4)	78.1 (67.5–85.9)	84.4 (72.6–91.7)	83.4 (75.5–89.2)	78.1 (67.5–85.9)	89.6 (81.4–94.5)	73.7 (60.9–83.4)
Asked about current medication	99.2 (97.2–99.8)	99.5 (96.3–99.9)	99.0 (95.6–99.8)	97.3 (87.2–99.5)	99.3 (96.7–99.8)	99.2 (94.4–99.9)	98.3 (93.7–99.5)	99.3 (96.7–99.8)	98.4 (90.4–99.7)	99.6 (98.2–99.9)
Asked about diet	94.3 (89.6–97.0)	95.9 (88.5–98.6)	93.4 (86.3–97.0)	99.1 (96.0–99.8)	94.2 (88.8–97.0)	92.6 (83.7–96.8)	95.8 (91.4–98.0)	94.2 (88.8–97.0)	91.9 (82.4–96.5)	95.4 (89.6–98.0)
Asked about occupation	68.1 (54.5–79.1)	74.8 (61.7–84.6)	64.1 (45.0–79.6)	84.8 (74.4–91.5)	66.5 (51.9–78.5)	82.8 (68.0–91.6)	83.8 (75.4–89.7)	66.5 (51.9–78.5)	74.8 (61.7–84.5)	65.1 (47.5–79.3)
Asked about physical activity	91.1 (83.9–95.3)	93.1 (85.2–96.9)	89.9 (78.3–95.6)	93.7 (85.3–97.4)	90.9 (82.7–95.4)	93.2 (85.0–97.1)	93.5 (88.3–96.4)	90.9 (82.7–95.4)	87.5 (74.8–94.3)	92.7 (82.9–97.1)
Asked about tobacco use	77.8 (67.7–85.5)	68.0 (50.4–81.7)	83.6 (71.7–91.1)	89.6 (79.8–95.0)	77.2 (66.0–85.5)	79.3 (63.8–89.3)	84.4 (75.8–90.4)	77.2 (66.0–85.5)	92.2 (85.2–96.0)	71.5 (57.9–82.0)
Asked family history	93.8 (89.6–96.3)	88.6 (79.9–93.9)	96.8 (92.5–98.7)	91.0 (80.5–96.2)	93.8 (89.1–96.6)	95.8 (88.5–98.5)	93.4 (87.7–96.6)	93.8 (89.1–96.6)	96.0 (91.3–98.3)	92.8 (87.2–96.0)
Asked medical history	95.9 (92.6–97.8)	96.9 (92.3–98.8)	95.3 (90.2–97.8)	94.2 (85.8–97.7)	95.9 (92.2–97.9)	98.5 (93.8–99.6)	96.3 (92.1–98.3)	95.9 (92.2–97.9)	95.6 (88.3–98.4)	96.1 (91.8–98.2)
Physical and biomarker examinations										
Examined eyes	69.4 (55.2–80.7)	75.9 (63.6–85.0)	65.6 (45.1–81.6)	81.9 (68.9–90.3)	68.5 (53.0–80.8)	75.0 (58.4–86.5)	78.4 (68.5–85.9)	68.5 (53.0–80.8)	82.9 (69.6–91.1)	63.4 (46.5–77.6)
Examined feet*	53.9 (42.0–65.3)	57.5 (40.5–72.9)	51.7 (36.2–66.9)	76.3 (63.3–85.7)	52.0 (39.2–64.5)	68.3 (52.1–81.0)	72.3 (62.4–80.4)	52.0 (39.2–64.5)	64.7 (50.7–76.6)	49.0 (35.2–63.0)
Examined blood pressure	98.3 (95.0–99.4)	98.6 (93.9–99.7)	98.2 (92.3–99.6)	96.5 (87.8–99.1)	98.5 (94.4–99.6)	96.6 (88.7–99.0)	96.6 (91.8–98.6)	98.5 (94.4–99.6)	99.3 (96.5–99.8)	97.9 (93.2–99.4)
Checked blood cholesterol profile	81.6 (74.2–87.3)	75.4 (62.7–84.8)	85.3 (75.8–91.4)	85.1 (73.7–92.1)	81.2 (72.9–87.4)	86.8 (75.4–93.4)	86.0 (78.5–91.1)	81.2 (72.9–87.4)	81.6 (68.0–90.3)	81.6 (72.0–88.4)
Received blood cholesterol profile results	84.1 (77.5–89.0)	73.1 (62.5–81.5)	90.6 (83.2–95.0)	88.1 (78.1–93.9)	83.6 (76.3–89.0)	90.1 (78.1–95.9)	89.1 (82.1–93.6)	83.6 (76.3–89.0)	83.0 (73.1–89.7)	84.6 (75.5–90.8)

Service	Ukraine	Rural	Urban	FOP	Public	Private for-profit	Private	Public	Male	Female
Blood cholesterol level: high-low-normal	85.3 (78.0–90.6)	76.9 (64.3–86.1)	90.3 (80.9–95.3)	87.4 (75.5–93.9)	84.9 (76.6–90.5)	93.0 (81.6–97.5)	90.2 (82.9–94.6)	84.9 (76.6–90.5)	86.9 (78.1–92.6)	84.6 (74.8–91.1)
Checked blood glucose- level	83.5 (75.8–89.1)	79.7 (66.2–88.8)	85.7 (75.9–92.0)	84.5 (73.6–91.5)	83.4 (74.8–89.4)	85.2 (71.4–92.9)	84.9 (76.8–90.5)	83.4 (74.8–89.4)	81.2 (67.3–90.1)	84.5 (74.8–90.9)
Received blood glucose results	88.3 (81.5–92.8)	81.7 (69.1–89.9)	92.2 (84.7–96.2)	88.5 (78.6–94.2)	88.0 (80.4–92.9)	94.0 (83.6–98.0)	91.3 (84.9–95.1)	88.0 (80.4–92.9)	86.2 (74.1–93.2)	89.2 (79.6–94.6)
Informed blood glucose- level: high-low-normal	91.1 (85.8–94.5)	87.1 (79.0–92.4)	93.4 (85.3–97.2)	86.7 (75.9–93.1)	91.2 (85.3–94.9)	92.0 (77.5–97.5)	89.4 (81.6–94.1)	91.2 (85.3–94.9)	87.6 (72.6–94.9)	92.6 (87.2–95.8)
Counseling services										
Advised on alcohol use	68.9 (55.1–80.0)	72.1 (57.9–82.9)	67.0 (46.9–82.4)	86.2 (74.4–93.1)	67.3 (52.3–79.4)	84.7 (73.3–91.8)	85.5 (77.9–90.7)	67.3 (52.3–79.4)	85.3 (74.6–91.9)	61.6 (45.0–75.9)
Advised on diet	94.7 (88.4–97.7)	94.1 (86.2–97.6)	95.1 (84.0–98.6)	98.6 (95.2–99.6)	94.4 (87.3–97.6)	96.7 (89.2–99.1)	97.7 (94.2–99.1)	94.4 (87.3–97.6)	93.1 (83.4–97.3)	95.4 (86.1–98.6)
Advised on physical activity	91.9 (86.5–95.3)	92.3 (84.0–96.4)	91.7 (83.5–96.0)	94.9 (85.1–98.4)	91.7 (85.6–95.4)	93.2 (85.0–97.1)	94.1 (88.7–97.0)	91.7 (85.6–95.4)	84.9 (72.4–92.3)	95.0 (89.7–97.7)
Advised on tobacco use	69.1 (55.3–80.2)	71.7 (58.2–82.1)	67.6 (47.2–83.0)	82.6 (69.8–90.7)	67.8 (52.9–79.9)	81.7 (68.2–90.3)	82.1 (73.4–88.4)	67.8 (52.9–79.9)	86.6 (77.3–92.4)	61.4 (44.8–75.7)
Done all the above	27.8 (20.4–36.8)	35.2 (22.4–50.6)	23.4 (15.5–33.8)	51.1 (37.2–64.9)	25.8 (17.9–35.7)	45.6 (32.7–59.1)	48.3 (38.9–58.0)	25.8 (17.9–35.7)	36.4 (22.2–53.4)	24.0 (16.2–34.1)
Median number of services conducted (22)	20.0 [17.0–22.0]	20.0 [16.0–22.0]	20.0 [17.0–21.0]	22.0 [19.0–22.0]	20.0 [17.0–22.0]	21.0 [17.0–22.0]	21.0 [18.0–22.0]	20.0 [17.0–22.0]	21.0 [18.0–22.0]	19.0 [17.0–21.0]

*Notes: *Feet examination is conducted only for patients seeking diabetes care. Values in parentheses are 95 percent confidence interval values; those in brackets represent the 25th and 75th percentile values. The sample size is 434.*

ANNEX TABLE 9. Emergency preparedness, by facility type, ownership, and location (%)

Type	FOP	Public	Private for-profit	Private	Public	Rural	Urban	Ukraine
Assessments and drills								
Conducted assessment of structural vulnerability to natural disasters and weather events (past 2 years)	34.8 (23.5–48.0)	58.7 (49.0–67.7)	37.7 (24.4–53.3)	35.9 (27.0–45.8)	58.7 (49.0–67.7)	57.2 (44.3–69.1)	51.8 (42.6–60.8)	54.7 (46.5–62.8)
Conducted safety procedure drills to prepare for natural disasters and weather events (past 2 years)	39.9 (27.2–54.1)	48.4 (38.6–58.3)	32.8 (20.5–48.0)	37.2 (27.7–47.7)	48.4 (38.6–58.3)	41.3 (29.4–54.2)	52.9 (43.8–61.8)	46.5 (38.3–54.8)
Conducted assessment of vulnerability to fire risks (past 2 years)	67.7 (54.3–78.8)	77.3 (69.1–83.9)	78.1 (64.8–87.3)	71.7 (62.0–79.7)	77.3 (69.1–83.9)	70.3 (58.4–80.0)	83.8 (77.4–88.6)	76.3 (69.5–82.1)
Conducted drills on fire safety and prevention (past 2 years)	56.6 (43.3–69.1)	70.5 (58.3–80.3)	67.4 (48.6–81.8)	60.8 (50.2–70.3)	70.5 (58.3–80.3)	64.1 (48.1–77.5)	74.6 (67.0–81.0)	68.8 (58.9–77.2)
Conducted drills on managing surge capacity (past 2 years)	38.1 (25.2–52.8)	53.5 (43.6–63.1)	39.8 (25.8–55.8)	38.7 (29.0–49.5)	53.5 (43.6–63.1)	53.5 (40.3–66.2)	47.8 (38.6–57.2)	50.9 (42.5–59.3)
Proportion of all assessments and drills (5)	**47.4 (37.4–57.7)**	**61.7 (56.3–66.8)**	**51.2 (41.2–61.0)**	**48.8 (41.6–56.1)**	**61.7 (56.3–66.8)**	**57.3 (50.3–63.9)**	**62.2 (56.4–67.6)**	**59.5 (54.0–63.9)**
Guidelines and protocols								
Guidelines/protocols to access backup human resources	76.1 (65.0–84.4)	66.5 (54.7–76.6)	61.1 (43.1–76.4)	70.3 (60.2–78.8)	66.5 (54.7–76.6)	61.8 (46.3–75.2)	73.9 (64.8–81.3)	67.2 (57.3–75.7)
Guidelines/protocols to access essential medicines, consumables, and equipment from medical buffer stores during emergencies	16.2 (9.4–26.5)	40.3 (30.2–51.4)	19.3 (9.9–34.2)	17.4 (11.5–25.4)	40.3 (30.2–51.4)	40.8 (27.2–55.9)	30.9 (23.2–39.8)	36.4 (27.7–46.0)
Guidelines/protocols to access financing during emergencies	19.7 (11.4–32.0)	58.0 (48.4–67.0)	32.6 (18.1–51.3)	24.6 (16.5–35.1)	58.0 (48.4–67.0)	62.9 (50.7–73.7)	39.0 (30.3–48.5)	52.2 (43.9–60.4)
Protocols for communication between this health facility and higher-level authorities	43.3 (30.9–56.5)	66.0 (56.5–74.3)	53.6 (37.7–68.7)	47.2 (37.1–57.5)	66.0 (56.5–74.3)	64.2 (51.6–75.1)	61.0 (51.7–69.5)	62.7 (54.7–70.1)
Protocols for communication between this health facility and its registered population	42.9 (30.1–56.6)	42.7 (32.6–53.4)	44.0 (28.9–60.3)	43.3 (33.4–53.8)	42.7 (32.6–53.4)	48.4 (35.0–62.0)	35.9 (27.8–44.8)	42.8 (34.2–51.8)

Type	FOP	Public	Private for-profit	Private	Public	Rural	Urban	Ukraine
Protocols for communication between this health facility and other health facilities	48.8 (35.6–62.1)	57.6 (47.9–66.7)	43.1 (28.3–59.1)	46.6 (36.5–57.0)	57.6 (47.9–66.7)	59.7 (47.0–71.2)	50.8 (41.6–60.0)	55.7 (47.5–63.7)
Protocols for communication with staff within this health facility	50.8 (37.5–63.9)	72.8 (63.9–80.1)	68.9 (53.9–80.8)	57.7 (47.3–67.5)	72.8 (63.9–80.1)	74.2 (62.9–83.0)	65.2 (55.8–73.7)	70.2 (62.7–76.7)
Proportion of all guidelines and protocols (7)	**42.5 (36.1–49.2)**	**57.7 (51.6–63.5)**	**46.1 (39.2–53.1)**	**43.9 (39.1–48.8)**	**57.7 (51.6–63.5)**	**58.8 (50.5–66.7)**	**51.0 (46.3–55.6)**	**55.3 (50.1–60.4)**
Guidelines and protocols (invasion-related)								
Protocols outlining actions for staff and patients to take in the event of an activated alert signal (e.g., "Attention all," "Air Alert," or "Shelter in place")	76.2 (65.0–84.6)	70.1 (57.8–80.1)	77.0 (62.5–87.1)	76.5 (68.0–83.3)	70.1 (57.8–80.1)	66.7 (50.2–79.9)	76.9 (67.3–84.3)	71.2 (60.9–79.7)
Protocols outlining actions for staff and patients to take in the event of real or perceived threats of violence or harm by armed groups (e.g., militia, or military groups)	20.3 (12.0–32.1)	31.9 (23.9–41.2)	39.7 (24.1–57.8)	27.7 (19.1–38.3)	31.9 (23.9–41.2)	29.4 (19.6–41.5)	33.5 (25.2–42.9)	31.2 (24.4–39.0)
Protocols outlining actions for staff to take in the event of real or perceived threat of harm by patients	29.8 (19.8–42.1)	45.2 (35.0–55.8)	41.6 (25.8–59.3)	34.3 (25.1–44.8)	45.2 (35.0–55.8)	45.9 (32.5–60.0)	40.1 (31.2–49.7)	43.3 (34.7–52.4)
Protocols for communication with security authorities, such as the oblast military facility	20.1 (12.1–31.5)	34.2 (24.1–45.9)	36.3 (22.5–52.7)	26.3 (18.7–35.6)	34.2 (24.1–45.9)	41.2 (27.7–56.3)	22.4 (16.0–30.5)	32.8 (24.2–42.7)
Proportion of all invasion-related guidelines and protocols (4)	**36.6 (29.8–43.9)**	**45.4 (40.0–50.8)**	**48.7 (38.2–59.3)**	**41.2 (35.1–47.6)**	**45.4 (40.0–50.8)**	**45.8 (38.8–53.0)**	**43.2 (38.1–48.5)**	**44.6 (40.1–49.3)**

Notes: values in paratheses represent the 95 percent confidence intervals. The sample size is 378.

ANNEX 4. DESCRIPTION OF INDICATORS

Domain level 1	Domain level 2	Domain level 3	Indicator name	Definition	Numerator	Denominator
Foundations	Care organization	Facility connective networks	Emergency transport capacity	% of facilities with at least 1 vehicle present and functional at the time of the survey (vehicle, functional, fuel, driver)	Number of facilities that own a four-wheeled motor vehicle or vehicle operational from facility that has fuel and authorized staff to drive at time of visit.	All facilities
Foundations	Care organization	Service and case mix	Outpatient volume	Outpatient visits per day over a 3-month period	Number of outpatient visits per day over a 3-month period.	Number of days health facility was open between October - December, 2023.
Foundations	Care organization	Service and case mix	Outpatient volume per provider	Outpatient visits per provider per day over a 3-month period	Number of outpatient visits per day over a 3-month period.	Product of number of days health facility was open between October - December 2023 and number of providers on staff roster at facility.
Foundations	Care organization	Service and case mix	Absence-adjusted outpatient volume per provider	Absence-adjusted outpatient visits per provider per day over a 3-month period	Number of outpatient visits per day over a 3-month period.	Product of number of days health facility was open between October - December, 2023, number of providers on staff roster at facility, and inverse of provider absence rate at facility.
Foundations	Care organization	Service and case mix	Outpatient volume by service	Visits by service type (noncommunicable diseases [NCDs], growth monitoring, etc.)	Number of outpatient visits over a 3-month period by service type (child immunization, child growth monitoring, adult tuberculosis [TB], adult diabetes, hypertension, cancer screenings).	All facilities
Foundations	Care organization	Service and case mix	Proportion of measured services offered, by category	Percent of measured services facilities can provide measured at Primary Health Center (PHC), by service category.	Number of services that facilities were able to provide between over a three-month period, by service category	Number of measured services, by service category

Domain level 1	Domain level 2	Domain level 3	Indicator name	Definition	Numerator	Denominator
Foundations	Care organization	Service and case mix	Proportion of measured laboratory services, by category	Percent of measured laboratory services facilities can provide measured at Primary Health Center (PHC), by service category	Number of laboratory services that facilities were able to provide over a three-month period, by service category	Number of measured laboratory services, by service category
Foundations	Care organization	Service delivery organization	Facility registered population	Average facility registered population size	Total registered population	All facilities
Foundations	Care organization	Service delivery organization	Facility operating days	Proportion of facilities operating on each day of the week.	Number of facilities open each day of the week	All facilities
Foundations	Care organization	Service delivery organization	Facility opening hours	Average duration of operation per day	Average hours open per day (by day of the week)	All facilities
Foundations	Care organization	Service delivery organization	Connectivity to motorable road	Proportion of facilities connected to a motorable road	Number of facilities connected to motorable road (verified)	All facilities
Foundations	Care organization	Service delivery organization	Connectivity (public transport)	Proportion of facilities with public transport station/stop within a 10-minute walk	Number of facilities with a public transportation station/stop within a 10-minute walk	All facilities
Foundations	Systems	Financing	Non-government Revenue	Proportion of facilities that received revenue from sources other than the Government	Number of facilities that received revenue from sources other than the Government	All facilities
Foundations	Systems	Financing	Revenue Amount	Average revenue received from sources other than the Government	Amount of revenue received from sources other than the government in calendar 2023.	Number of facilities that received any revenue from non-government sources in the past 12 months (January – December 2023)
Foundations	Systems	Institutions for accountability for quality	Community advisory board	Proportion of facilities with community advisory boards	Number of facilities with community advisory boards	All facilities

Domain level 1	Domain level 2	Domain level 3	Indicator name	Definition	Numerator	Denominator
Foundations	Systems	Institutions for accountability for quality	Community advisory board meeting frequency	Frequency of community board meetings	Number of facilities where the administrative board met weekly, monthly, every 3 months, every 6 months, annually and never in 2023.	Number of facilities with a community advisory board
Foundations	Systems	Institutions for accountability for quality	Facility quality improvement targets	Proportion of health facilities with quality improvement targets	Number of health facilities with quality improvement targets in 2023.	All facilities
Foundations	Systems	Institutions for accountability for quality	Facility quality improvement activities	Proportion of facilities that conducted quality improvement activities	Number of facilities that conducted quality improvement activities in calendar 2023.	All facilities
Foundations	Systems	Institutions for accountability for quality	Facility quality improvement data sharing: external leaders	Proportion of health facilities with quality improvement data shared with external leadership at least every 6 months	Number of facilities that shared quality improvement results with external leadership (Ministry of Health/NHSU)	Number of facilities that conducted quality improvement activities
Foundations	Systems	Institutions for accountability for quality	Facility supervision visits	Proportion of health facilities with at least one supervisory visit in past 12 months (January – December 2023)	Number of health facilities with at least one supervisory visit in 2023.	All facilities
Foundations	Systems	Institutions for accountability for quality	Facility supportive supervision components	Proportion of facilities reporting supportive supervision visits that included sharing challenges, issues identified, collective problem solving, written feedback, and all together.	Number of facilities whose supportive supervision visit included sharing challenges, issues identified, collective problem solving, written feedback, and all together.	Facilities that had supervision visits in the past 12 months (January – December 2023)
Foundations	Systems	Institutions for accountability for quality	Feedback collection from community	Proportion of health facilities that sought feedback from their catchment community	Number of health facilities that sought feedback from their catchment community in 2023.	All facilities

Domain level 1	Domain level 2	Domain level 3	Indicator name	Definition	Numerator	Denominator
Foundations	Systems	Institutions for accountability for quality	Community feedback data use	Proportion of health facilities utilizing community feedback data including review at least every 6 months, sharing with external leadership, sharing with facility management/ staff, sharing with patients.	Number of health facilities that utilized community feedback data through review at least every 6 months, sharing with external leadership, sharing with facility management/staff, and sharing with patients.	Facilities that collected feedback from catchment population in the past 12 months (January – December 2023)
Foundations	Systems	Institutions for accountability for quality	Improvement community feedback types	Most common community feedback about area(s) of improvement for the health facility (frequency of different feedback)	Five most common areas for facility improvement according to community feedback	Facilities that collected feedback
Foundations	Systems	Institutions for accountability for quality	Positive community feedback types	Most common community positive feedback about the health facility (frequency of different feedback)	Five most common favorable aspects of facilities according to community feedback	Facilities that collected feedback
Foundations	Systems	Management and supervision	Components of facility management capacity	Proportion of facilities with each component: manager with degree in management, manager has attended management training, facility conducts provider performance reviews, facility conducts support staff performance reviews, facility uses assessment tools	Number of facilities that have each attribute: (i) Manager with degree in management (ii) Manager has attended management training (iii) Facility conducts provider performance reviews (iv) Facility manager received performance review in 2023 (v) Facility conducts support staff performance reviews (vi) Manager has either management degree or training	(i-iv, vi) All facilities (v) Facilities with support staff

Domain level 1	Domain level 2	Domain level 3	Indicator name	Definition	Numerator	Denominator
Foundations	Systems	Management and supervision	Tools to support staff performance	Distribution of different types of tool(s) and criteria used to assess staff performance	Number of facilities that used each of the tools to assess staff performance	All facilities
Foundations	Systems	Management and supervision	In-service training selection	Distribution of selection criteria for selecting staff for training	Number of facilities that used each of the different processes to determine which health care provider(s) receive in-service training	All facilities
Foundations	Systems	Management and supervision	Provider's satisfaction with support from supervisors	Proportion of providers who report being satisfied with direct supervisor support	Number of providers that report agreeing or strongly agreeing to being satisfied with the amount of support and guidance received from their supervisor	All providers
Foundations	Systems	Physical infrastructure	Accessibility of facility for people with disabilities	Proportion of attributes in place for patients with disabilities (ramp, lift, tactile flooring, assistive technologies for visually impaired, toilet accessible for people with limited mobility)	Number of attributes each facility has for patients with disabilities (verified), ramp (for facilities with incline or step at entrance), lift (for facilities with more than one floor), tactile flooring, assistive technologies for visually impaired, toilet accessible for people with limited mobility.	All facilities
Foundations	Systems	Physical infrastructure	Consultation room with visual and auditory privacy	Proportion of facilities with at least one consultation room with auditory and visual privacy	Number of facilities that have at least one consultation room with auditory and visual privacy (verified)	All facilities
Foundations	Systems	Physical infrastructure	Functioning, uninterrupted electricity	Proportion of facilities with functioning, uninterrupted electricity (from any source) – meaning functioning today, no interruptions in the past 3 months (October – December 2023)	Number of facilities with (verified) functional main source of electricity, no interruptions in a three-month period.	All facilities

Domain level 1	Domain level 2	Domain level 3	Indicator name	Definition	Numerator	Denominator
Foundations	Systems	Physical infrastructure	Electricity interruption frequency	Frequency of electricity interruptions	Number of interruptions to electricity facilities had in a three-month period.	Facilities that experienced any electricity interruption
Foundations	Systems	Physical infrastructure	Electricity interruption duration	Average longest duration (hours) of electricity interruption over a 3-month period	Longest electricity interruption (hours) in a three-month period.	Number of facilities experiencing at least one interruption in electricity between March–May 2022
Foundations	Systems	Physical infrastructure	Refrigerator (vaccine storage)	% of facilities with least one functional refrigerator used for storing vaccines (with temperature within appropriate range as measured during survey)	Number of facilities with at least one refrigerator available and functioning for the storage of vaccines with recorded temperatures of 2–8°C (verified)	All facilities
Foundations	Systems	Physical infrastructure	Water quality and availability	% of facilities with improved, functioning, uninterrupted, on-premises water source (functioning today, no interruptions in in a three-month period.	Number of facilities with available water source located on premises that have not experienced interruptions during in a three-month period.	All facilities
Foundations	Systems	Physical infrastructure	Water interruption frequency	% of facilities by frequency of interruptions in a three-month period.	Number of water interruptions experienced by facilities	All facilities that report an interruption duration
Foundations	Systems	Physical infrastructure	Water interruption duration	Median longest duration of water interruption between n a three-month period.	Duration of longest interruption experienced in a three-month period. (hours)	Facilities that experienced water interruption in a three-month period.
Foundations	Systems	Physical infrastructure	Toilets	% of facilities with improved, functioning, accessible toilets	Number of facilities with at least one improved, functional, and accessible toilet within the premises in functioning condition for use by staff and patients (verified)	All facilities

Domain level 1	Domain level 2	Domain level 3	Indicator name	Definition	Numerator	Denominator
Foundations	Systems	Physical infrastructure	Toilets for staff	% of facilities with improved, functional, accessible toilet designated for staff only	Number of facilities with at least one improved, functional, accessible toilet designated for health facility staff only (verified)	All facilities
Foundations	Systems	Physical infrastructure	Female toilets	% of facilities with improved, functional, accessible toilet designated for females only	Number of facilities with (verified) at least one improved, functional, accessible, and private toilet designated for females only	All facilities
Foundations	Systems	Physical infrastructure	Female toilets with menstrual hygiene	% of facilities with improved, functional, accessible toilet designated for females only that has menstrual hygiene facilities	Number of facilities with verified improved, functional, accessible toilet designated for females only that has menstrual hygiene facilities	All facilities
Foundations	Systems	Physical infrastructure	WaSH infrastructure	Proportion of facilities with available WaSH infrastructure including: Improved, functioning, uninterrupted, on-premises water source. Improved, functioning, accessible toilet. Functioning handwashing facility with soap within 5-meters from toilet. Point of care with hand hygiene facility All combined.	Number of facilities that have each attribute verified: - At least one improved, functioning, uninterrupted, on-premises water source - At least one improved, functioning, accessible toilet. - At least one functioning handwashing facility with soap within 5 meters from toilet. - At least one point of care with hand hygiene facility. - All combined.	All facilities

Domain level 1	Domain level 2	Domain level 3	Indicator name	Definition	Numerator	Denominator
Foundations	Systems	Physical infrastructure	Service readiness: infection prevention	% of facilities with infection prevention and control (IPC) infrastructure (physical barriers where patients present, separate waiting area for contagious patients, designated site for patient isolation, functional handwashing facility, adequate infectious waste disposal system, all measures)	Number of facilities with all IPC infrastructure verified: - Physical barriers at one or more points of initial patient contact. At least one separate waiting area for patients with contagious disease and designated site for patient isolation. - Appropriate waste disposal (infectious medical waste other than sharps is not visible, or waste is disposed in a protected area). - All measures are present.	All facilities
Foundations	Systems	Physical infrastructure	Ventilation infrastructure	% of facilities with at least one consultation room with ventilation and has had at least one ventilation performance assessment done in the past 2 years.	Number of facilities with at least one consultation room with ventilation and has had at least one ventilation performance assessment done in the past 2 years (January 2022 - December 2023)	All facilities
Foundations	Systems	Physical infrastructure	Fire safety infrastructure	% of facilities with fire safety (functioning alarm, functioning extinguisher, conducted fire assessment in the past 2 years, conducted at least 1 fire drill in the past 2 years.	Number of facilities with each component of fire safety (functioning alarm, functioning extinguisher, conducted fire assessment in the past 2 years, conducted at least 1 fire drill in the past 2 years, has fire evacuation sign visible to staff and patients	All facilities
Foundations	Systems	Physical infrastructure	Functioning telephone	% of facilities with at least one functioning telephone (can be landline, mobile, or smartphone) on day of the survey	Number of facilities with at least one functional landline telephone, mobile phone, or smartphone	All facilities

Domain level 1	Domain level 2	Domain level 3	Indicator name	Definition	Numerator	Denominator
Foundations	Systems	Physical infrastructure	Functioning computer	% of facilities with functioning computer on day of the survey	Number of facilities with at least one computer functional	All facilities
Foundations	Systems	Physical infrastructure	Functioning printer	% of facilities with functioning printer on day of the survey	Number of facilities with at least one printer functional	All facilities
Foundations	Systems	Physical infrastructure	Functioning internet	% of facilities with functioning internet on day of the survey	Number of facilities with functioning internet	All facilities
Foundations	Systems	Physical infrastructure	Functioning, uninterrupted internet	% of facilities with uninterrupted functioning uninterrupted in a three-month period internet	Number of facilities with functioning internet that did not experience any interruptions of internet access in a three-month period	All facilities
Foundations	Systems	Policies and protocols	IPC guidelines	% of facilities with physically present up-to-date IPC guidelines	Number of facilities with physically present up-to-date IPC guidelines	All facilities
Foundations	Tools	Information systems	Electronic medical information system (e-MIS)	% of facilities with functioning electronic medical information system the day of the survey	Number of facilities with a functioning electronic medical information system on the day of the survey	All facilities
Foundations	Tools	Information systems	Staff using e-MIS	Proportion of facilities with at least one staff member trained on electronic medical information system data entry	Number of facilities with at least one e-MIS trained staff member	All facilities
Foundations	Tools	Medical equipment and supplies	Equipment availability	% of equipment available + functioning (wherever required) in each equipment category defined (MCH and reproductive health, laboratory, IPC, acute care)	Number of equipment items in category that are available and functional at time of visit	All facilities

Domain level 1	Domain level 2	Domain level 3	Indicator name	Definition	Numerator	Denominator
Foundations	Tools	Medical equipment and supplies	Test availability	% of patients prescribed laboratory test(s) who report receipt of all tests	Number of patients that received prescribed laboratory test(s)	Number of patients prescribed a laboratory test
Foundations	Tools	Medicines	Medicine availability	Proportion of measured medicines available (meaning that the facility has at least one observed, unexpired medicine)	Number of medicines in category that are unexpired at time of visit	Total number of medicines measured
Foundations	Tools	Medicines	Medicine availability	% of facilities with at least one available and unexpired dose of each measured medicine	Number of facilities with all medicines in category that are available and unexpired at time of visit	All facilities
Foundations	Workforce	Availability	Health care providers	Median number of health care providers	Number of active health care providers at the health facility	All facilities
Foundations	Workforce	Availability	Clinical support staff	Median number of clinical support staff (pharmacists and technicians)	Number of clinical support staff working at the facility	All facilities
Foundations	Workforce	Availability	Administrative support staff	Median number of administrative support staff (administrative and clerical staff)	Number of administrative support staff working at the facility	All facilities
Foundations	Workforce	Availability	Total staff	Median number of total staff	Number of providers and other staff working at the facility	All facilities
Foundations	Workforce	Availability	Provider cadre	Median number of doctors, HA, nurses	Number of doctors and nurses	All facilities
Foundations	Workforce	Availability	PHC providers NOT present at health facility (overall % absence)	% of sampled (from roster) PHC providers NOT at the facility providing care on the day of the unannounced visit ("absence" metric)	Number of doctors and nurses **not** present at the facility at the time of the unannounced visit	Number of sampled doctors and nurses

Domain level 1	Domain level 2	Domain level 3	Indicator name	Definition	Numerator	Denominator
Foundations	Workforce	Availability	Provider absence reasons	Distribution of reasons for absence of PHC providers on the day of the unannounced visit (including both authorized reasons and unauthorized reasons)	Number of doctors, HAs and nurses absent per reason on the day of the unannounced visit	Number of providers absent at time of unannounced visit
Foundations	Workforce	Education and training	Provider retention (proxy)	Median years in the current position and in clinical service	Number of years in the current position and in clinical service	All providers
Foundations	Workforce	Education and training	Service-specific training	Proportion of health facilities with at least one provider that received in-service training in the last 2 years in each service category	Number of facilities with at least one provider having been trained in each service category in the past 2 years	Facilities able to provide the service
Foundations	Workforce	Education and training	Service-specific training: specialized services and topics (facility)	Proportion of health facilities with at least one provider trained in specialized services and topics in the last 2 years in each category	Number of facilities with at least one provider having been trained in each service category in the past two years	All facilities
Foundations	Workforce	Education and training	Service-specific training: specialized services and topics (provider)	Distribution of receipt and modality of specialized training received by providers	Number of providers mentioning receipt and modality of training in specialized services	All providers
Foundations	Workforce	Education and training	Professional training	Distribution, by cadre, of professional degrees	Number of doctors and nurses who attained each of the relevant professional degrees	Total number of doctors or nurses interviewed
Foundations	Workforce	Satisfaction and retention	Job satisfaction	Proportion of providers reporting being satisfied across different aspects of work	Number of providers reporting being satisfied (who agree or strongly agree with statements presented) across different aspects of work	All providers

Domain level 1	Domain level 2	Domain level 3	Indicator name	Definition	Numerator	Denominator
Foundations	Workforce	Workload	Time distribution across different activities	Proportion of time spent by provider on different activities in most recent typical work week: providing care to patients, administrative clinical tasks, education activities, community outreach, management activities, other activities	Time in hours spent by provider in different activities (providing care to patients, administrative clinical tasks, education activities, facility administration, and other activities)	Total hours worked in the most recent typical work week
Foundations	Workforce	Workload	Weekly hours worked	Median number of hours worked in the most recent typical work week	Number of hours worked in the most recent typical work week	All providers
Foundations	Workforce	Workload	Provider outpatient contacts (per day)	Median outpatient contacts per day in the most recent typical work week	Number of outpatient contacts per day in the most recent typical work week	All providers
Foundations	Workforce	Workload	Satisfaction with clinical vs. nonclinical work	% of providers who are dissatisfied with the balance between clinical and administrative work	Number of providers who disagreed or strongly disagreed with the following statement, “In my current role at this facility, I am satisfied with the balance I have between clinical and administrative work"	All providers
Foundations	Tools	Information systems	% of facilities with LMIS system	% of facilities with LMIS	Number of facilities with LMIS	All facilities
Foundations	Tools	Information systems	LMIS format	Distribution of formats (fully electronic, fully paper-based, and hybrid) of facility LMIS	Number of facilities with electronic, paper, or a combination of electronic and paper-based LMIS	Number of facilities with LMIS

Domain level 1	Domain level 2	Domain level 3	Indicator name	Definition	Numerator	Denominator
Foundations	Systems	Policies and Protocols	Quality assurance of inventory	% of facilities with quality inspection protocol, "first-expired, first-out" protocol, and which physically separate and dispose damaged/expired inventory	Number of facilities which: 1. have quality inspection protocol 2. have "first-expired, first-out" protocol 3. physically separate and dispose of damaged/expired inventory	All facilities
Foundations	Systems	Policies and Protocols	Indentation for inventory management	% of facilities which indent medicine and medical supply inventory, have protocols for emergency indenting in case of a stock-out or near stock-out	Number of facilities which: 1. indent medicine and medical supply inventory 2. have protocols for emergency indenting in case of a stock-out or near stock-out	All facilities
Foundations	Systems	Policies and Protocols	Inventory receipt duration	Average duration (weeks) between when facility indented medicine or medical supply inventory and when it received it	Frequency of: 1. Average duration (weeks) between indenting and when the facility received the supplies 2. Average duration (weeks) between emergency indenting and when the facility received the supplies	1. Facilities that indent medicine and medical supply inventory 2. Facilities that placed emergency indents over the past 12 months
Foundations	Tools	Medicines	Patient-reported medicine prescription form	% of patients who received a paper or electronic prescription form	Number of patients that received paper or electronic prescription form	Number of patients prescribed medicine
Foundations	Tools	Medicines	Patient-reported medicine prescription format	Distribution of formats on which patients received their prescription form	Number of patients reporting that the prescription forms they received were all paper, all electronic, or a mix of paper and electronic formats	Number of patients who state that they received a paper or electronic prescription form

Domain level 1	Domain level 2	Domain level 3	Indicator name	Definition	Numerator	Denominator
Foundations	Workforce	Education and training	PHC Provider professional grade	Distribution of responses from PHC physicians regarding their current professional grade	Number of PHC physicians reporting their current professional grade (apprentice, second, first, highest, refuse to answer, don't know)	All PHC physicians
Foundations	Workforce	Workload	PHC provider employment schedules	Distribution of PHC providers who state that they work a full or part-time schedule at the target facility where they were interviewed the day of the survey	Number of PHC providers who report their schedule (full-time, part-time, don't know, other) at the target facility where they were interviewed the day of the survey	All PHC providers
Foundations	Workforce	Workload	PHC provider employment location	% of PHC providers who report that they only work at the target facility where they were interviewed the day of the survey	Number of PHC providers who report that they only work at the target facility where they were interviewed the day of the survey	All PHC providers
Foundations	Workforce	Workload	PHC providers who report having on-call duty	% of PHC providers who report that they have had on-call duties at least once over a 3-month period	Number of PHC providers who report that they have had on-call duties at least once over a 3-month period	All PHC providers
Foundations	Workforce	Satisfaction and retention	Provider confidence in facility capacity to respond to invasion-related emergencies	Proportion of providers who report feeling confident in the ability of the health facility which they were interviewed in to respond as needed to an emergency related to invasion	Number of providers who report feeling confident in the ability of the health facility which they were interviewed in to respond as needed to an emergency related to invasion	All Providers
Foundations	Workforce	Satisfaction and retention	Provider satisfaction with training focused on responding to invasion-related emergencies	Proportion of providers who report feeling satisfied with the amount of training they have received focused on responding to emergencies related to invasion	Number of providers who report feeling satisfied with the amount of training they have received focused on responding to emergencies related to invasion	All Providers

Domain level 1	Domain level 2	Domain level 3	Indicator name	Definition	Numerator	Denominator
Foundations	Workforce	Satisfaction and retention	Providers reporting delays in salary disbursement over a 12-month period	Proportion of providers who report that they have had a delay in receiving their expected salary at any time over a 12-month period	Number of providers who report that they have had a delay in receiving their expected salary at any time over a 12-month period	All Providers
Foundations	Workforce	Satisfaction and retention	Providers reporting delays in salary disbursement due to the invasion over a 12-month period	Proportion of providers who report that their salary delay over a 12-month period was due to reasons related to invasion	Number of providers who report that their salary delay over a 12-month period was due to reasons related to invasion	Providers who report having a salary delay over a 12-month period
Foundations	Workforce	Satisfaction and retention	Proportion of providers aware of burnout support services available to them	Proportion of providers who report that they are aware of any services provided by the facility that could be accessed to prevent burnout and support them if they are affected	Number of providers who report that they are aware of any services provided by the facility that could be accessed to prevent burnout and support them if they are affected	All providers
Foundations	Workforce	Satisfaction and retention	Proportion of providers aware of burnout services available to them who report using them at least once over a 12-month period	Number of providers who report using services to support provider burnout at least once during a 12-month period	Number of providers who report using services to support provider burnout at least once during a 12-month period	Providers who report being aware of burnout support services
Foundations	Workforce	Satisfaction and retention	Number of times providers used burnout services over a 12-month period	Number of times providers state that they used any services available to them at the health facility to prevent or address burnout	Number of times providers mention using burnout services	Providers who report being aware of burnout support services and report a specific frequency of service utilization

Domain level 1	Domain level 2	Domain level 3	Indicator name	Definition	Numerator	Denominator
Foundations	Systems	Policies and protocols	Proportion of providers using international or national clinical guidelines	Number of providers who mention that they use at least one international, at least one national, or at least one of both national and international clinical guideline documents to guide decisions regarding patient care	Number of providers mentioning that they use international, national, or both national and international clinical guidelines to guide decisions regarding patient care	All providers
Foundations	Systems	Policies and protocols	Distribution of international guidelines used by provider	Distribution of most used international guideline used by providers	Number of providers mentioning which international guideline they most often consult to guide decisions regarding patient care	Providers who used at least one international guideline
Foundations	Care organization	Service delivery organization	Change in facility registered population since onset of invasion	Distribution of responses (Increase, decrease, no change, don't know) from facilities regarding whether the size of their registered population has changed since the onset of the invasion (Feb. 24, 2022)	Number of facilities mentioning each response (Increase, decrease, no change, don't know) when asked whether the size of the facility's registered population has changed since February 24, 2022	All facilities
Foundations	Care organization	Service delivery organization	Median increase in facility registered population since onset of the invasion	Median number of patients who signed new declarations with a health care provider at the facility since February 24, 2022	Number of patients who signed new declarations with a health care provider at the facility since February 24, 2022	Facilities that experienced an increase in their registered population
Foundations	Care organization	Service delivery organization	Median decrease in facility registered population since onset of the invasion	Median number of patients who dropped their declaration with a health care provider at the facility since February 24, 2022	Number of patients who dropped declarations with a health care provider at the facility since February 24, 2022	Facilities that experienced a decrease in their registered population

Domain level 1	Domain level 2	Domain level 3	Indicator name	Definition	Numerator	Denominator
Foundations	Care organization	Service delivery organization	Change in registered population	Median number of additional patient registrations health facilities since February 24, 2022	Number of additional patient registrations health facilities since February 24, 2022	Facilities that experienced a change in their registered population
Foundations	Care organization	Service delivery organization	Facilities experiencing closures related to the invasion (3 months)	Proportion of facilities that report they had to close for at least one full day any time between October - December 2023 due to interruptions caused by the invasion	Number of facilities that report they had to close for at least one full day any time between October - December 2023 due to interruptions caused by the invasion	All facilities
Foundations	Systems	Management and supervision	Duration of facility manager's longest management training program	Duration (less than 1-week, less than 1-month, less than 3 months, less than 6 months, 6 months or longer) of facility manager's longest management training program attended	Distribution of responses when asking about the duration of the longest management training program attended by the facility manager	Facilities with a manager that has ever attended a management training program
Foundations	Workforce	Satisfaction and retention	Change in number of healthcare providers at facilities from January - December 2023	Proportion of facilities whose number of healthcare providers increased, decreased, or remained the same in the past 12 months	Number of facilities that had an increase (more staff joined than left), decrease (more staff left than joined), or no change (same number of staff who joined and left) to the number of healthcare providers working in the health facility in the past 12 months.	All facilities

Domain level 1	Domain level 2	Domain level 3	Indicator name	Definition	Numerator	Denominator
Foundations	Systems	Financing	Delayed fund distribution from government and non-government sources from January - December 2023	Proportion of facilities who report disbursement of funds from central government (NHSU), local government, national or local non-government, and international assistance (incl. humanitarian relief) organizations being delayed in the past 12 months	Number of facilities who report receiving revenue from central government (NHSU), local government, national or local non-government, and international assistance (incl. humanitarian relief) organizations being delayed in the past 12 months.	Facilities who reported receiving revenue from each source
Foundations	Systems	Financing	Delayed distribution of staff salaries by facilities	Proportion of facilities that have delayed disbursement of staff salaries at any time in 2023	Number of facilities that have delayed disbursement of staff salaries at any time in 2023	All facilities
Foundations	Workforce	Satisfaction and retention	Availability of services or resources at facilities to support healthcare provider burnout	Proportion of facilities that offered services or resources (such as counseling, skills training, or flexible leave arrangements, among others) to address healthcare provider burnout in 2023	Number of facilities that offered services or resources (such as counseling, skills training, or flexible leave arrangements, among others) to address healthcare provider burnout in 2023	All facilities
Foundations	Systems	Physical infrastructure	Internet interruptions caused by invasion	Proportion of internet interruptions that facilities state were caused by reasons related to the invasion in the last three months	Number of internet interruptions that facilities state was caused by reasons related to invasion in the last three months	Total number of internet interruptions
Foundations	Systems	Physical infrastructure	Electricity interruptions caused by invasion	Proportion of electricity interruptions that facilities state were caused by reasons related to the invasion in the last three months	Number of electricity interruptions that facilities state were caused by reasons related to the invasion in the last three months	Total number of electricity interruptions

Domain level 1	Domain level 2	Domain level 3	Indicator name	Definition	Numerator	Denominator
Foundations	Systems	Physical infrastructure	Water interruptions caused by the invasion	Proportion of water interruptions that facilities state were caused by reasons related to invasion in the last three months	Number of water interruptions that facilities state were caused by reasons related to the invasion in the last three months	Total number of water interruptions
Foundations	Systems	Physical infrastructure	Facility structural or equipment damage caused by the invasion	Proportion of facilities that report the facility's infrastructure or equipment has been destroyed or damaged since February 24, 2022, due to causes related to invasion	Number of facilities that report the facility's infrastructure or equipment has been destroyed or damaged since February 24, 2022, due to causes related to invasion	All facilities
Foundations	Systems	Policies and Protocols	Supply receipt delay since February 24, 2022, related to the invasion	Proportion of facilities that report experiencing a delay in receiving medicines or medical supply inventory since February 24, 2022, due to reasons related to invasion	Number of facilities that report experiencing a delay in receiving medicines or medical supply inventory since February 24, 2022, due to reasons related to the invasion	All facilities
Foundations	Tools	Information systems	Medicine or medical supply donations received from humanitarian organizations since February 24, 2022	Proportion of facilities that report receiving medicines or medical supply donations from humanitarian organizations since February 24, 2022	Number of facilities that report receiving medicines or medical supply donations from humanitarian organizations since February 24, 2022	All facilities
Foundations	Tools	Information systems	System used to report humanitarian organization supply donations	Distribution of systems used by facility to track supply donations from humanitarian organizations received since February 24, 2022	Distribution of systems used by facility to track supply donations from humanitarian organizations received since February 24, 2022	Facilities that received supplies from humanitarian organizations since February 24, 2022

Domain level 1	Domain level 2	Domain level 3	Indicator name	Definition	Numerator	Denominator
Foundations	Competent care systems	Safety, prevention, detection	Facilities with protocols focused on addressing risks of harm to patients or staff related to invasion	Proportion of facilities with various protocols focused on addressing risks of harm to patients or staff related to the invasion	Number of facilities reporting protocols focused on addressing risks of harm to patients or staff related to the invasion. Specific protocols cover: (i) Actions for staff and patients to take in the case of an activated alert signal, (ii) Actions for staff and patients to take in the case of real or perceived threats of violence/harm by armed groups, (iii) Actions for staff in the case of real or perceived threat by patients, and (iv) protocols for communication with security authorities such as the oblast military facility	All facilities
Foundations	Systems	Policies and Protocols	Facilities with specified location for staff and patients to shelter in place	Proportion of facilities with a specified location where staff and patients can shelter in place	Number of facilities with a specified location where staff and patients can shelter in place	All facilities
Foundations	Systems	Policies and Protocols	Facilities with instructions visible to both staff and patients providing information about what to do in case there is a need to seek shelter	Proportion of facilities with instructions visible to both staff and patients (verified) providing information about what to do in case there is a need to seek shelter	Number of facilities with instructions visible to both staff and patients (verified) providing information about what to do in case there is a need to seek shelter	All facilities

Domain level 1	Domain level 2	Domain level 3	Indicator name	Definition	Numerator	Denominator
Foundations	Systems	Policies and Protocols	Facilities with an emergency public announcement system	Proportion of facilities that have a public announcement system that can be used to communicate verbal information or instruction to patients and staff in cases of a natural disaster, public health emergency, or emergency related to the invasion	Number of facilities that have a public announcement system that can be used to communicate verbal information or instruction to patients and staff in cases of a natural disaster, public health emergency, or emergency related to invasion	All facilities
Foundations	Workforce	Education and training	Proportion of providers taking various in-service training courses through the NHSU academy e-platform	Proportion of facilities with at least one provider who received specialized service-specific training through the NHSU e-platform, by course	Number of facilities with at least one provider who received specialized service-specific training through the NHSU e-platform, by course	All facilities

Domain level 1	Domain level 2	Domain level 3	Indicator name	Definition	Numerator	Denominator
Foundations	Systems	Policies and Protocols	Standard operating procedure availability	Proportion of facilities with verified standard operating procedure documents available on the day of the survey	Number of facilities who have a verified standard operating procedure document for the following procedures available the day of the survey: (1) Collection of specimens/ samples (2) Storage of specimens/ samples (3) Transportation of specimens/ samples (4) Test analysis/interpretation guidelines (e.g., glucose, cholesterol, troponin, hepatitis, HIV) (5) Internal quality control for specimen collection (6) External quality assessment of laboratory tests (7) Venous blood sampling (8) Capillary blood sampling (9) Operation and maintenance of refrigerator/freezer for vaccines (10) Techniques for non-intravenous administration (e.g., intramuscular, subcutaneous, intradermal) (11) Techniques for intravenous (IV) medicine administration (12) Operation of respiratory medical devices (e.g., nebulizer, oxygen concentrator)	All facilities

Domain level 1	Domain level 2	Domain level 3	Indicator name	Definition	Numerator	Denominator
Foundations	Systems	Policies and Protocols	Standard operating procedure availability (care provision guidance)	Proportion of facilities that have a verified standard operating procedure document that covers the use of international or national resources to guide the provision of primary care diagnostic or therapeutic services, examinations, or consultants with patients	Number of facilities that have a verified standard operating procedure document that covers the use of international or national resources to guide the provision of primary care diagnostic or therapeutic services, examinations, or consultants with patients	All facilities
Foundations	Systems	Policies and Protocols	Clinical pathway document availability	Median number of clinical pathway documents which outline how and when patients should be moved through the structural unit of a health facility (or different health facilities) involved in providing their care available at health facilities	Number of clinical pathway documents which outline how and when patients should be moved through the structural unit of a health facility (or different health facilities) involved in providing their care available at health facilities	All facilities
Processes of care	Competent care systems	Diagnosis, treatment, counseling	Clinical knowledge: primary diagnosis	Vignette-average performance in indicating primary diagnosis correctly	Number of providers who selected the correct primary diagnosis by case: Hypertension Diabetes Depression Child Pneumonia Adult TB Overall	Total number of providers who completed the vignette by case

Domain level 1	Domain level 2	Domain level 3	Indicator name	Definition	Numerator	Denominator
Processes of care	Competent care systems	Diagnosis, treatment, counseling	Clinical knowledge: complete specific diagnosis	Vignette-average performance in indicating complete specific diagnosis correctly	Number of providers who selected the correct complete specific diagnosis by case: Hypertension Diabetes Depression Child Pneumonia Adult TB Overall	Total number of providers who completed the vignette by case
Processes of care	Competent care systems	Diagnosis, treatment, counseling	Clinical knowledge: diagnosis	Vignette-specific distribution of diagnosis (correct + incorrect)	Number of providers who selected each type of potential diagnosis by cases	Total number of providers who completed the vignette by case
Processes of care	Competent care systems	Diagnosis, treatment, counseling	Clinical knowledge: primary treatment	Vignette-average performance in indicating primary treatment correctly	Number of providers who selected the correct primary treatment by case: hypertension, diabetes, depression, child pneumonia, and adult TB,	Total number of providers who completed the vignette by case
Processes of care	Competent care systems	Diagnosis, treatment, counseling	Clinical knowledge: complete specific treatment	Vignette-average performance in indicating complete specific treatment correctly	Number of providers who selected the correct complete specific treatment by case: hypertension, diabetes, depression, child pneumonia, and adult TB,	Total number of providers who completed the vignette by case
Processes of care	Competent care systems	Diagnosis, treatment, counseling	Clinical knowledge: treatment	Vignette-specific distribution of treatment (correct + incorrect)	Number of providers who selected each type of potential treatment by cases	Total number of providers who completed the vignette by case
Processes of care	Competent care systems	Diagnosis, treatment, counseling	Clinical knowledge	Vignette-specific and average performance in correct primary diagnosis + primary treatment together	Number of providers who selected the correct primary diagnosis and treatment by case: Hypertension, Diabetes, Depression, Child Pneumonia, Adult TB,	Number of providers who completed the vignette by case

Domain level 1	Domain level 2	Domain level 3	Indicator name	Definition	Numerator	Denominator
Processes of care	Competent care systems	Diagnosis, treatment, counseling	Competent NCD care: this or previous visit	At this or previous visit for diabetes or hypertension, % of patients who report: Asked about alcohol; Asked about diet; Asked about family history; Asked about medicine history; Asked about physical activity; Asked about tobacco use; Cholesterol tested; Examined eyes; Examined feet*; Examined stomach; Glucose tested by blood sample; Measured Blood Pressure; Received results of cholesterol test; Received results of glucose test; Told blood cholesterol/ lipid profile was normal/ higher/lower than expected; Told blood sugar was normal/higher/lower than expected; Counseled on diet; Counseled on harmful use of alcohol; Counseled on harms of betel; Counseled on harms of tobacco use; Counseled on physical activity.	Number of diabetes or hypertension patients who received each (and all together) of the specified services across all visits	Number of patients who visited the facility for diabetes and/or hypertension treatment/ management

Domain level 1	Domain level 2	Domain level 3	Indicator name	Definition	Numerator	Denominator
Processes of care	Competent care systems	Diagnosis, treatment, counseling	Competent sick child care	Fraction of interviewed patients visiting facility for sick child care receiving each (and all together) of the following for this visit by child age group: asked to see MCH handbook; asked age of child; asked about child's symptoms; asked if first or follow-up visit; asked about immunization history; Asked about mother's health ; Advise on giving child complementary foods; Asked about feeding; asked about growth; informed on diagnosis; counseled on feeding; Counseled on exclusive breastfeeding; Plotted growth; received nutritional supplement.	Number of patients who visited a facility for sick child care received each (and all together) of the specified services this visit	Number of patients who visited the facility for sick child care
Processes of care	Competent care systems	Referral, continuity, integration	Frequency of visiting health facility	Distribution of frequency (always, often, sometimes, rarely, never) with which patients visit the health facility at which they were interviewed when they seek care	Frequency (always, often, sometimes, rarely, never) with which patients visit the health facility	All patients
Processes of care	Competent care systems	Referral, continuity, integration	Frequency of seeing the same provider	Distribution of frequency (always, often, sometimes, rarely, never) with which patients see the same provider when they seek care at this health facility	Frequency (always, often, sometimes, rarely, never) with which patients see the same provider when they seek care	All patients

Domain level 1	Domain level 2	Domain level 3	Indicator name	Definition	Numerator	Denominator
Processes of care	Competent care systems	Referral, continuity, integration	Provider referral frequency	Median provider-reported referral counts during in the past three months	Number of referrals providers report making in the past three months	All providers
Processes of care	Competent care systems	Referral, continuity, integration	Referral within facility: patient reported	Percent of patients referred for care within the same health facility on the day of the survey	Number of patients referred for care within the same health facility on the day of the survey	All patients
Processes of care	Competent care systems	Referral, continuity, integration	Referral outside facility: patient reported	Percent of patients referred for care to another facility on the day of the survey	Number of patients referred for care to another facility on the day of the survey	Patients that received services on the day of the survey
Processes of care	Competent care systems	Referral, continuity, integration	Reason for referral outside facility: patient reported	Percent of patients referred because 'services/specialized care not available from current health facility'	Number of patients referred for care to another facility because "services/specialized care not available from current health facility"	Patients referred to another facility on day of the survey
Processes of care	Competent care systems	Referral, continuity, integration	Reason for referral outside facility: facility manager reported	Distribution of most common reason for referral outside facility as reported by the facility manager	Number of facility managers per reason	Facilities that made patient referrals over a 3-month period
Processes of care	Competent care systems	Referral, continuity, integration	Provider-reported frequency of referral completion	Frequency of patient referral completion as reported by provider	Distribution of frequency at which provider estimates referrals have been completed over a 3-month period	Providers who made referrals in the 3 months between March-May 2022
Processes of care	Competent care systems	Referral, continuity, integration	Provider-reported informed referral modality	Distribution of ways that patient information was sent: "What was the most common way that patient information (such as patient history and the reason for referral) was sent to the health facility or health care provider to which you referred the patient?"	Frequency of ways that patient record and the referral ticket were sent to the facility or health care provider to which patient was referred	Providers who made referrals in the 3 months between March-May 2022

Domain level 1	Domain level 2	Domain level 3	Indicator name	Definition	Numerator	Denominator
Processes of care	Competent care systems	Referral, continuity, integration	Facility-reported informed referral modality	Facility reported information transfer mode for referrals from external facility	Frequency of ways that patient records and referral information were sent to the facility or health care provider to which patient was referred	Facilities that had any patients referred from another health facility between March-May 2022
Processes of care	Competent care systems	Referral, continuity, integration	Patient-reported informed referral modality	Among patients having referral in past 3 months % reporting (for last referral) how they think their patient information was shared with health facility to which they were referred (including if the information was not shared at all).	Frequency of ways that patient record and the referral ticket were sent to the facility or health care provider to which patient was referred	Patients who received a referral in the 3 months between October - December 2023
Processes of care	Competent care systems	Referral, continuity, integration	Health document availability	Percent of patients with any type of health document; frequency of each type of document	Number of patients with any and each type of health document: a) Results of preliminary examinations b) Extracts/epicrisis c) Outpatient medical card d) Referral e) Prescription f) No documentation	All patients
Processes of care	Competent care systems	Safety, prevention, detection	IPC Surveillance: reporting	Percent of facilities with protocols to test and report to higher level authorities of any national notifiable diseases	Number of facilities with protocols to test and report to higher level authorities of any national notifiable diseases	All facilities
Processes of care	Competent care systems	Safety, prevention, detection	IPC point of care cleaning	Percent of facilities where point of care are cleaned regularly	Number of facilities where points of care are cleaned regularly	All facilities

Domain level 1	Domain level 2	Domain level 3	Indicator name	Definition	Numerator	Denominator
Processes of care	Competent care systems	Safety, prevention, detection	IPC: antibiotic tracking	Percent of facilities that maintain record to track the antibiotics prescribed/ dispensed	Number of facilities that maintain record to track the antibiotics prescribed/dispensed	All facilities
Processes of care	Competent care systems	Safety, prevention, detection	IPC: AMR training	Percent of facilities where at least one staff received training on antimicrobial resistance (AMR) or antibiotic stewardship in last 2 years	Number of facilities where at least one staff received training on antimicrobial resistance (AMR) or antibiotic stewardship in the last 2 years	All facilities
Processes of care	Competent care systems	Safety, prevention, detection	IPC training	Percent of facilities where at least one provider received in-service training on IPC in the last 2 years	Number of facilities where at least one provider received in-service training on IPC in the last 2 years	All facilities
Processes of care	Competent care systems	Safety, prevention, detection	Emergency preparedness: Human resources guidelines	Percent of facilities with guidelines/protocols to access backup human resources during emergencies	Number of facilities with guidelines/protocols to access backup human resources	All facilities
Processes of care	Competent care systems	Safety, prevention, detection	Emergency preparedness: Medical supply guidelines	% of facilities with protocols to access essential medicines, consumables, and equipment from medical buffer stores during emergencies	Number of facilities with protocols to access essential medicines, consumables, and equipment from medical buffer stores during emergencies	All facilities
Processes of care	Competent care systems	Safety, prevention, detection	Emergency preparedness: Financing guidelines	Percent of facilities with guidelines/protocols to access financing during emergencies	Number of facilities with guidelines/protocols to access financing during emergencies	All facilities
Processes of care	Competent care systems	Safety, prevention, detection	Emergency preparedness: Risk communication guidelines	Percent of facilities with protocols to communicate with other health facilities, communities, and public during emergencies	Number of facilities with protocols to communicate with other health facilities, communities, and public during emergencies	All facilities

Domain level 1	Domain level 2	Domain level 3	Indicator name	Definition	Numerator	Denominator
Processes of care	Competent care systems	Safety, prevention, detection	Emergency Preparedness: natural disasters and weather events drill/ simulation	Percent of facilities that conducted drill on safety procedures in the event of a natural disaster and/or weather event in the past 2 years	Number of facilities that conducted drill on safety procedures in the event of a natural disaster and/or weather event in the past 2 years	All facilities
Processes of care	Competent care systems	Safety, prevention, detection	Emergency Preparedness: Natural disasters and weather event vulnerability assessment	Percent of facilities that assessed vulnerability in event of natural disaster and/ or weather event in the past 2 years	Number of facilities that assessed vulnerability in event of natural disaster and/or weather event in the past 2 years	All facilities
Processes of care	Competent care systems	Safety, prevention, detection	Emergency Preparedness: Surge capacity management drills	Percent of facilities that conducted drills on managing surge capacity in the past 2 years	Number of facilities that conducted drills on managing the surge capacity in the past 2 years	All facilities
Processes of care	Competent care systems	Safety, prevention, detection	Emergency Preparedness: Fire safety drill/ simulation	Percent of facilities where a drill/simulation on fire safety and prevention have been conducted in the past 2 years	Number of facilities that have conducted a fire drill in the past two years	All facilities
Processes of care	Competent care systems	Safety, prevention, detection	Emergency Preparedness: Fire safety assessment	Percent of facilities which assessed vulnerability to fire in the past 2 years	Number of facilities which assessed vulnerability to fire in the past 2 years	All facilities
Processes of care	Positive user experience	Respect and autonomy	Patient rating of their experience	Percent of patients satisfied with different aspects of their experience (auditory privacy, visual privacy, communication, greetings and introduction, patient involvement in care)	Number of patients rating different aspects of their experience (auditory privacy, visual privacy, communication, greetings and introduction, patient involvement in care) as "good" or "very good"	Patients who received care

Domain level 1	Domain level 2	Domain level 3	Indicator name	Definition	Numerator	Denominator
Processes of care	Positive user experience	Respect and autonomy	Patient-reported questions answered	Percent of patients reporting all questions were answered during consultation	Number of patients that reported all their questions were answered during their consultation	Patients who received care
Processes of care	Positive user experience	Respect and autonomy	Greetings and introduction: provider	Percent of providers who greeted the patient and introduced themselves in ANY of the clinical vignettes that were administered	Number of providers who greeted the patient and introduced themselves in at least one of the vignettes	Providers that completed at least one vignette
Processes of care	Positive user experience	User focus	Visits based on appointments	Percent of visits based on appointments (with specific day/time given, or were asked to visit the health facility after a certain time interval without mentioning a specific date/time) and without an appointment	Number of visits based on appointments (with specific day/ time given, or were asked to visit the health facility after a certain time interval without mention of a specific date/time) and without an appointment	All patients
Processes of care	Positive user experience	User focus	Patient-reported wait and consultation time	Median time waited and consultation time	Time spent waiting at the health facility after arrival and before being seen by one of the health care providers, and consultation time	All patients
Processes of care	Positive user experience	User focus	Patient rating of aspects of facility	Percent of patients satisfied with different aspects of their experience (wait time, travel time, physical condition of rooms, duration of consultation, convenience of hours of operation, cleanliness of rooms, availability, and functioning of equipment/ supplies/ medicines)	Number of patients rating different aspects of their experience (wait time, travel time, physical condition of rooms, duration of consultation, convenience of hours of operation, cleanliness of rooms, availability + functioning of equipment/ supplies/ medicines) as "good" or "very good"	All patients

Domain level 1	Domain level 2	Domain level 3	Indicator name	Definition	Numerator	Denominator
Processes of care	Competent care systems	Diagnosis, treatment, counseling	Proportion of outpatient visits in the last 3 months for which cancer screenings were provided for patients eligible for prostate, breast, and other cancer screenings.	Percent of outpatients eligible for prostate, breast, or other cancer screening that the PHC provider reports providing screening to over the last 3 months	Number of eligible outpatients that the PHC provider reports providing cancer screening for over a 3-month period.	Total number of outpatients who were eligible for cancer screenings over a 3-month period
Processes of care	Competent care systems	Referral, continuity, integration	PHC providers seeing internally displaced patients the week preceding the survey	Number of internally displaced patients the provider reports having consulted on an outpatient basis the week preceding the survey	Number of internally displaced patients the provider reports having consulted on an outpatient the week preceding the survey	All PHC providers
Processes of care	Competent care systems	Referral, continuity, integration	PHC providers providing care to internally displaced patients without signed declarations the week preceding the survey	Number of internally displaced patients who do not hold an active registration with the PHC provider whom the provider reports having an outpatient visit with the week preceding the survey	Number of internally displaced patients who do not hold an active registration with the PHC provider whom the provider reports having an outpatient visit with the week preceding the survey	PHC providers who had at least one outpatient visit with an internally displaced patient the week preceding the survey
Processes of care	Competent care systems	Referral, continuity, integration	Proportion of internally displaced patients without signed declarations provided care the week preceding the survey	% of internally displaced patients who do not hold an active registration with the PHC provider whom the provider reports having an outpatient visit with the week preceding the survey	Number of internally displaced patients who do not hold an active registration with the PHC provider whom the provider reports having an outpatient visit with the week preceding the survey	Number of internally displaced patients the provider reports having an outpatient visit the week preceding the survey

Domain level 1	Domain level 2	Domain level 3	Indicator name	Definition	Numerator	Denominator
Processes of care	Competent care systems	Referral, continuity, integration	Proportion of outpatient visits made by internally displaced patients the week preceding the survey	% of outpatient visits the week preceding the survey that the provider had with internally displaced patients	Number of outpatient visits conducted by the PHC provider with internally displaced persons the week preceding the survey	Total number of outpatient visits conducted by the PHC provider the week preceding the survey.
Processes of care	Competent care systems	Referral, continuity, integration	Proportion of facilities that record visits conducted with patients who do not have a signed declaration	Proportion of facilities that record visits conducted with patients who do not have a signed declaration	Number of facilities (division and/or legal entity) that record visits conducted with patients who do not have a signed declaration	All facilities
Processes of care	Competent care systems	Safety, prevention, detection	Emergency preparedness: Staff training	Distribution of training topic and frequency received by providers related to invasion since February 24, 2022	Number of providers mentioning receipt of training in topics related to invasion of since February 24, 2022	All providers
Processes of care	Competent care systems	Safety, prevention, detection	IPC: action after exposure	Distribution of actions providers would take in the case of accidental puncture by a potentially infectious sharp object	Number of providers mentioning each action they would take in the event of accidental puncture by a sharp, potentially infectious object	All providers
Processes of care	Competent care systems	Safety, prevention, detection	Emergency preparedness: invasion-related emergency guidelines	% of facilities with guidelines/protocols to govern service provision and staff/patient safety during a invasion-related emergency	# of facilities with guidelines/ protocols to govern service provision and staff/patient safety during a invasion-related emergency	All facilities

Domain level 1	Domain level 2	Domain level 3	Indicator name	Definition	Numerator	Denominator
Processes of care	Positive user experience	User focus	Number of outpatient visits conducted using telemedicine the week preceding the survey	Number of outpatient visits the week preceding the survey that the provider conducted through telemedicine	Number of outpatient visits the week preceding the survey that the provider conducted through telemedicine	Total number of outpatient visits conducted by the PHC provider the week preceding the survey.
Processes of care	Positive user experience	User focus	Telehealth service provision resources	Proportion of providers who agree (strongly agree or agree) when asked whether they feel they have the appropriate resources to conduct patient visits using remote means of communication without interruption	Number of providers mentioning level of agreement (strongly agree or agree) when asked whether they feel they have the appropriate resources to conduct patient visits using remote means of communication without interruption	All providers
Processes of care	Positive user experience	User focus	Confidence to provide telehealth services	Proportion of providers who agree (strongly agree or agree) when asked whether they feel confident they can provide the same quality of care as in-person consultation to patients using remote means of communication	Number of providers mentioning level of agreement (strongly agree or agree) when asked whether they feel confident they can provide the same quality of care as in-person consultation to patients using remote means of communication	All providers
Processes of care	Positive user experience	User focus	Confidence to provide emergency psychological services resulting from invasion	Proportion of providers who agree (strongly agree or agree) when asked whether they feel confident in their ability to provide services for patients experiencing trauma, anxiety, or other mental health conditions related to invasion	Number of providers mentioning level of agreement (strongly agree or agree) when asked whether they feel confident in their ability to provide services for patients experiencing trauma, anxiety, or other mental health conditions related to invasion	All providers

Domain level 1	Domain level 2	Domain level 3	Indicator name	Definition	Numerator	Denominator
Processes of care	Positive user experience	User focus	Confidence to provide services for patients experiencing sexual or domestic violence	Proportion of providers who agree (strongly agree or agree) when asked whether they feel confident in their ability to provide services for patients who have experienced sexual or domestic violence	Number of providers mentioning level of agreement (strongly agree or agree) when asked whether they feel confident in their ability to provide services for patients who have experienced sexual or domestic violence	All providers
Person-centered outcomes	Confidence in system	Care uptake and retention	Patients who received intended care	% of patients reporting receipt of intended care	Number of patients that received the intended services during their visit	All patients
Person-centered outcomes	Confidence in system	Care uptake and retention	Patients intending to get second opinion	Patients intending to seek care at another facility for the same concern out of those not referred elsewhere ("plan to attend another health care provider or department/unit within this health facility or another health facility for further care for the same reason you visited the health facility today")	Number of patients who plan to visit another health care provider within the same or another health facility for further care for the same reason they visited the facility that day	Patient not referred elsewhere
Person-centered outcomes	Confidence in system	Care uptake and retention	Intention to return	% of patients who would return to this facility for similar health concern	Number of patients who would come back to the same facility if they needed care for a similar health concern	All patients
Person-centered outcomes	Confidence in system	Care uptake and retention	Choice of NCD facilities	% of patients who have visited other health facilities for NCD care	Number of patients who have visited any other health facility/ facilities for diabetes and/or hypertension care	Patients seeking NCD care (diabetes treatment/ management and/or hypertension treatment/management) at facility

Domain level 1	Domain level 2	Domain level 3	Indicator name	Definition	Numerator	Denominator
Person-centered outcomes	Confidence in system	Care uptake and retention	Reasons for choice of NCD facility	Distribution of reasons for visiting more than one facility for NCD care	Number of patients who selected each reason for visiting more than one facility for diabetes and/or hypertension care.	Number of patients who visited another facility seeking diabetes and/or hypertension care
Person-centered outcomes	Confidence in system	Satisfaction and recommendation	Recommend facility	% of patients who would recommend facility	Number of patients who would recommend facility to a friend or family member who needed the same service they received that day	Patients who received care
Person-centered outcomes	Confidence in system	Satisfaction and recommendation	Patient's overall quality rating of facility	% of patients satisfied with different aspects (overall quality of care, health care provider skills, choice of health care provider) of the quality of care received	Number of patients rating different aspects (overall quality of care, health care provider skills, choice of health care provider) of the quality of care as “good” or “very good”	Patients who received care
Person-centered outcomes	Confidence in system	Satisfaction and recommend-dation	Reasons for choosing this facility	Distribution of reasons for choosing the facility for healthcare	Frequency of response to why the patient chose this PHC facility if not registered with a provider	Patients without a registration with a provider or who mention that they registered because of facility characteristics
Person-centered outcomes	Confidence in system	Satisfaction and recommend-dation	Reasons for choosing this provider	Distribution of reasons for choosing the provider for healthcare	Frequency of response to why the patient chose this PHC provider	Patients who have an active registration with a provider at the health facility
Person-centered outcomes	Confidence in system	Satisfaction and recommendation	Top thing to be improved	Distribution of responses to "What is the top thing that could be improved in this health facility?"	Frequency of selection of each response to what could be improved in the health facility	All patients
Person-centered outcomes	Financial protection	Opportunity costs	Time to reach facility	Median time to reach facility	Time it took patient to reach facility from home (minutes)	All patients

Domain level 1	Domain level 2	Domain level 3	Indicator name	Definition	Numerator	Denominator
Person-centered outcomes	Financial protection	Opportunity costs	Lost income to health care	% of patients with lost income due to seeking care	Number of patients with lost income due to the time it took to visit the health facility	All patients
Person-centered outcomes	Financial protection	Out-of-pocket costs	Cost of seeking healthcare	% of patients incurring cost in seeking health care	Number of patients who incurred expenses on travel, consultation, laboratory tests, or child/elder care costs	All patients
Person-centered outcomes	Financial protection	Out-of-pocket costs	Cost distribution	Distribution of costs incurred by patients across categories (travel, consultation, medication, laboratory tests, or child/elder care)	Cost incurred by patients on each category: travel, consultation, laboratory tests, or child/elder care	Patients incurring expenses in seeking healthcare
Person-centered outcomes	Financial protection	Out-of-pocket costs	Travel cost	Median expense incurred on transportation to reach the facility	Expense incurred on transportation to reach the facility	Patients who incurred travel cost
Person-centered outcomes	Financial protection	Out-of-pocket costs	Source of money	Distribution of sources of money to pay for current health care visit	Number of patients who selected each source of money used to pay for health care-related expenses on the day of the visit	Patients incurring expenses in seeking healthcare
Person-centered outcomes	Confidence in system	Care uptake and retention	Care seeking bypass	Percent of patients who bypassed care	Number of patients who state there is a health facility closer to them where they could receive the same services sought for the visit the day of the survey	All patients

Domain level 1	Domain level 2	Domain level 3	Indicator name	Definition	Numerator	Denominator
Person-centered outcomes	Confidence in system	satisfaction and retention	Patient-reported delay in care seeking	Percent of patients who report that they have delayed, canceled, or avoided seeking care at any time over a 12-month period due to safety concerns related to invasion	Number of patients reporting that they have delayed, canceled, or avoided seeking care at any time over a 12-month period due to safety concerns related to invasion	All patients
Person-centered outcomes	Confidence in system	Care uptake and retention	Patient-reported frequency of care seeking delays	Distribution of frequency which patients report delaying, canceling, or avoiding healthcare over a 12-month period due to safety concerns related to invasion	Number of patients reporting the frequency (always, often, sometimes, rarely, never, prefer not to answer, don't know) at which they delayed, canceled, or avoided seeking care over a 12-month period due to safety concerns related toinvasion	Patients who reported that they delayed, cancelled, or avoided seeking care
Person-centered outcomes	Confidence in system	Care uptake and retention	Patient-reported registration with PHC provider	% of patients who state that they have an active registration with a provider at the facility the day of the survey	Number of patients who state that they have an active registration with a provider at the facility they visited the day of the survey	All patients
Person-centered outcomes	Confidence in system	Care uptake and retention	Patient-reported care seeking safety at target facility	Distribution of frequency which patients report regarding perceived safety of seeking care at the specific facility that they visited the day of the survey since the onset of invasion in February, 2022.	Number of patients reporting that they have felt "somewhat safe" or "very safe" seeking care at the facility they were interviewed on the day of the survey.	All patients

Domain level 1	Domain level 2	Domain level 3	Indicator name	Definition	Numerator	Denominator
Person-centered outcomes	Confidence in system	Care uptake and retention	Patient-reported general care seeking safety	Distribution of frequency which patients report regarding perceived safety of seeking care at any health facility since the onset of invasion in February, 2022.	Number of patients reporting that they have felt "somewhat safe" or "very safe" seeking care at any health facility.	All patients
Person-centered outcomes	Confidence in system	Care uptake and retention	Patient-reported comfort seeking care for anxiety, depression, trauma, or other mental health concerns at target facility	Percent of patients reporting that they would feel comfortable discussing symptoms of anxiety, depression, trauma, or other mental health concerns with a provider at the health facility they visited the day of the survey	Number of patients stating "yes" when asked if they would feel comfortable discussing symptoms of anxiety, depression, trauma, or other mental health concerns with a provider at the health facility they visited the day of the survey.	All patients
Person-centered outcomes	Confidence in system	Care uptake and retention	Patient-reported willingness to receive telehealth services for the same reason they visited the facility the day of the survey	Distribution of responses (Yes, No, Don't know) from patients regarding their willingness to receive telehealth services for the same reason they came to the health facility the day of the survey.	Number of patients who state "yes" when asked if they would be willing to receive similar care as that which they sought at the health facility using telehealth services.	All patients
Person-centered outcomes	Confidence in system	Care uptake and retention	Patient-reported confidence in the comparable quality of telehealth services for the same reason they visited the facility the day of the survey	Distribution of responses (Yes, No, Don't know) from patients regarding their belief that they could receive services of similar quality through telehealth services for the same reason they visited the health facility the day of the survey	Number of patients who state "yes" when asked if they are confident that they could receive a similar quality of care as that which they sought at the health facility using telehealth services.	All patients

Note: the following reference periods are used in the table above: "3-month period" is October-December 2023; "past 12 months" is calendar year 2023, "past two years" is January 2021-December 2023.