World Health Organization

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COUNTRY VIGNETTE

UKRAINE

UKRAINE'S JOURNEY TO DATA-DRIVEN PRIMARY HEALTH CARE

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MOTIVATION

Ukraine's health reform, launched in 2018, positioned primary health care (PHC) at the core of a people-centred, accessible and integrated health system (*1*). A key innovation has been the development of digital technologies to enhance PHC delivery and performance. Ukraine introduced a range of new tools, including an electronic registration system for the public to enrol with a PHC doctor (e-declaration), electronic prescription of medicines under the Affordable Medicines Program (AMP) at PHC level (e-prescription), the e-referral system and automated data reporting through the national electronic health system (eHealth). The National Health Service of Ukraine (NHSU) publishes on its website open data and live dashboards on health-care providers' capacities, enrolled populations, prescribed medicines, and contracting and financing, ensuring broad public access to information (*2*).

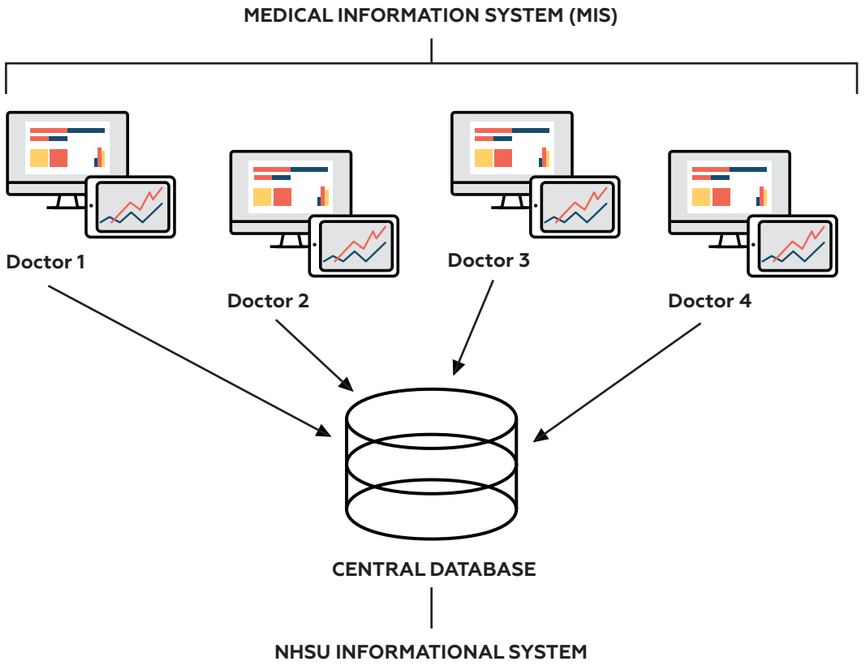
These achievements represent an important step towards not only strengthening routine data management but also establishing the foundations for performance monitoring, accountability and greater system transparency. Building on this progress, Ukraine has developed and piloted a PHC performance indicator framework, which has since been scaled nationally through automated eHealth reporting, providing a powerful tool for providers, facility owners and policy-makers.

ROLE OF DIGITAL TRANSFORMATION IN ADVANCING PERFORMANCE MONITORING

eHealth as a critical precondition for performance monitoring

eHealth development became a critical precondition for performance monitoring, as it allowed each individual to be linked with a specific PHC provider and physician and all patient records to be stored in one centralized system. eHealth has been developed as a two-component system in which users interact with the central database (CDB) through medical information systems (MIS) (Fig. 1). Currently, more than 35 MIS developed by leading Ukrainian information technology companies have been connected to eHealth (3).

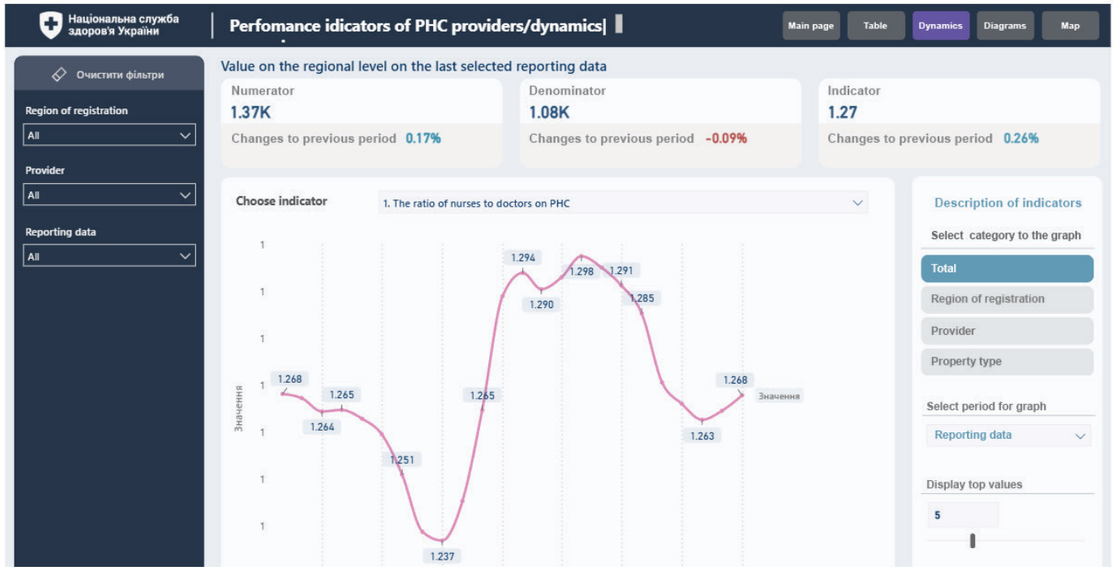
Fig. 1. PHC data flow



This patient–provider linkage enables the system to automatically calculate key PHC indicators based on routine data entered by PHC physicians, eliminating the need for additional data entry.

As of 2025 eHealth includes data on more than 35 million Ukrainians and contains more than 4.4 billion medical records, including e-prescriptions, diagnostics, referrals and treatment plans (*4*). NHSU has developed interactive public dashboards to ensure easy access to this information (Fig. 2). The availability of the data and their wide accessibility to policy-makers, heads of medical facilities and providers have been an important precondition for further development of PHC performance monitoring.

Fig. 2. Example of an NHSU analytical dashboard, showing PHC providers' performance indicators. Indicator measuring nurse-to-doctor ratio in PHC



[1] The CDB is an information and telecommunication system that contains legally mandated registries, software modules, and the NHSU information system to the extent necessary for implementing state financial guarantees and other functions. It also enables the creation, viewing and exchange of information and documents between registries, state electronic information resources and medical information systems.

[2] An MIS is an information and telecommunication system that allows health-care entities to automate their work, as well as to create, view and exchange information in electronic form, including with the CDB (if connected).

IMPLEMENTATION JOURNEY

Further steps towards implementing monitoring of healthcare performance

Various steps towards implementing monitoring of health-care performance, and in particular PHC, have been observed in Ukraine since 2011 (Table 1).

In 2011 the Ministry of Health developed a list of quality indicators, which were piloted in several regions of Ukraine. The relevant order introduced various PHC indicators, including ones related to newly established disability, infant mortality, detection of visual forms of cancer, coverage of preventive vaccinations and dispensary supervision (*5*). Reporting forms were used to collect information on these indicators, but the data collection process itself was neither systematically organized nor standardized. It therefore required significant manual effort from providers, causing physicians to double their workload by recording information in patients' paper documentation and then in separate paper reports. Furthermore, the process lacked mechanisms for consistent monitoring and analysis at the national level; the monitoring procedures and institutional responsibilities were not clearly defined, and there was insufficient methodological understanding regarding the calculation and interpretation of indicators. Consequently, the regulation remained largely a statement of intent and was not effectively implemented in practice.

Table 1. The eHealth journey to PHC performance monitoring, 2011–2025

START	TOOLS (SERVICES)
2011	Ministry of Health order defining quality indicators for primary, secondary, tertiary and emergence medical care
2017	Start of health financing reform
2018–2019	PHC providers contracting with the NHSU (e-contracting)
	Population registration to selected PHC provider (e-declaration)
	Electronic prescriptions under AMP (e-prescription)[3]
April 2020	Electronic health records
	Electronic referral system (e-referral)
2021	WHO training programme on PHC performance monitoring
2023	Ministry of Health order outlining an extended list of quality indicators
2024	Initiation of the processes of extending the list of quality indicators and of revising PHC monitoring (draft decree)
	Launch of e-Health reports on PHC performance monitoring
2024–2025	Piloting the list of indicators in Lviv and Chernivtsi cities
2025	All declarations in eHealth were subject to verification through integration with other government databases[4]
March 2025	Declarations that have not passed verification become inactive
2025	An online course on PHC monitoring published on NHSU Academy
Implementation planned for 2025–2026	Patients' Portal (online platform where patients can access their health information, test results, prescriptions, manage personal data and electronically reregister with a new PHC provider)
	There are plans to add a module for registering medical checkups to eHealth.

With the establishment of the NHSU in 2018, data on health-care provision began to accumulate in eHealth, which allowed the NHSU to process, analyse and use data for decision-making, as well as to publish impersonal datasets on the unified state open-data web portal. Importantly, this marked a shift from statistical reporting forms to using data generated directly by health-care providers.

[3] The Affordable Medicines Program (AMP), introduced as part of Ukraine's health-care reform, is a unique national initiative designed to improve access to essential medicines for patients with chronic conditions (cardiovascular diseases, type 2 diabetes, bronchial asthma, etc.). Medicines are provided free of charge or with only a small copayment.

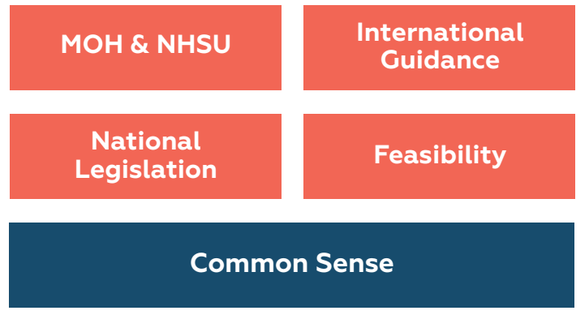
[4] Verification is the process of confirming the accuracy and validity of a patient's information in eHealth. The verification procedure is carried out through data exchange between eHealth, the State Register of Individuals — Taxpayers, and the State Register of Civil Status Acts.

Since 2021 efforts have been made to introduce targeted performance-related payment at PHC level (*6*). Childhood vaccination was the first pay-for-performance indicator tracked by the NHSU, with others added later. The clear linkage between each patient and their physician was an important precondition, as it allowed performance tracking at physician level and thereby created clear accountability with service providers. The results were derived entirely from existing eHealth data, with no additional reporting requirements imposed on providers. Linking payments to eHealth-reported data also aimed to strengthen accuracy and quality of reporting. The NHSU used the digitized eHealth database to evaluate provider performance and apply financial incentives to promote improvement.

In 2023, in line with the requirements of the World Bank HEAL (Health Enhancement and Lifesaving) project (*7*), the Ministry of Health formed a model list of PHC quality indicators. More detailed than the list approved by the 2011 order, it was designed to use eHealth data for assessing the indicators and thereby to avoid imposing reporting burdens on PHC physicians. However, because of implementation challenges and unclear distribution of responsibilities, the Ministry of Health and NHSU requested technical support from WHO Country Office experts to elaborate the framework.

In response, in 2024, the list of indicators was revised and expanded by the WHO Country Office experts, drawing on lessons from regional implementation and international recommendations (WHO/UNICEF PHC measurement framework (*8,9*) (Fig. 3). The Draft Order on PHC monitoring was developed with the aim of introducing a mechanism to carry out monitoring and reporting procedure, determining the roles of the Ministry of Health, NHSU, local health authorities and PHC providers, and providing a list of indicators' passports.[5]

Fig. 3. Developing a monitoring and evaluation (M&E) logical framework



The updated draft decree includes:

- monitoring order — a generic part that defines the framework and terms, and outlines objectives and principles;
- procedure for monitoring of PHC indicators — defines the mechanism and the roles of institutions;
- suggested list of indicators; and
- passports for PHC indicators.

[5] An indicator passport is a standardized document that defines the purpose, methodology and data sources for a specific indicator used in M&E. It describes how the indicator is calculated, interpreted and reported, ensuring consistency, transparency and comparability of data across different levels and reporting periods.

Pilot projects in Lviv and Chernivtsi

To test its real-world applicability, WHO supported the city health departments of two city — Lviv (population 1 million) and Chernivtsi (population 260 000) (*10*) — in piloting the monitoring framework, to assess its relevance for PHC facilities, municipal health departments and MIS functionality. These pilots provided critical insights to support the ongoing scale-up and refinement of Ukraine's data-driven approach to PHC performance. The indicators were published on city dashboards, with a dedicated section for PHC metrics accessible to both providers and patients, thereby promoting transparency, accountability and informed decision-making at all levels (Figs 4 and 5).

Fig. 4. Lviv city dashboard

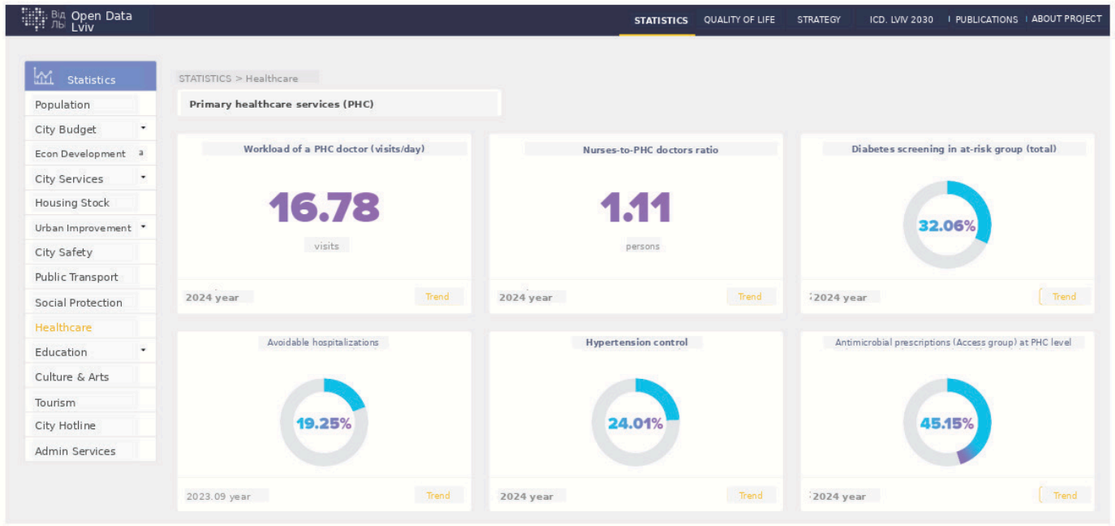
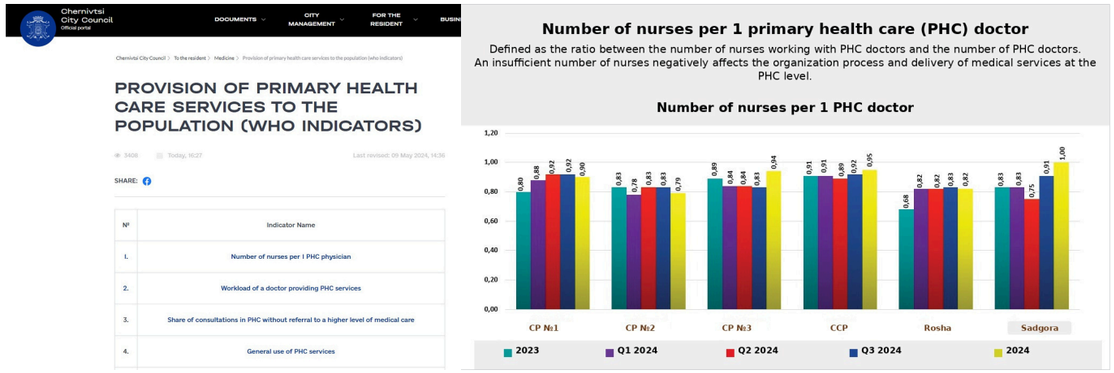


Fig. 5. Visualization of indicators on the Chernivtsi City Council website



Automated eHealth analytical report on performance of PHC provider

FROM DATA TO INSIGHTS: MOVING FROM CONCEPT TO PRACTICAL APPLICATION

A significant milestone was achieved in August 2024, when the NHSU analytical department, with technical support from the WHO Country Office in Ukraine, launched the first version of the automated eHealth analytical report. The report enables PHC providers to track the results of the work using data already entered into the MIS (Box 1). Automatically generated with results of defined indicators outlined in the draft order, the report is produced in Microsoft Excel format and distributed monthly to each PHC provider. Since the source of information for the report is data entered by the provider into the MIS, the report does not impose any additional burden on PHC staff, and the form of the report allows local managers to analyse the state of PHC provision in facilities, compare facilities with each other, and disseminate best practices in PHC to improve public health indicators. The information contained in the report allows providers' performance to be assessed by indicators, both at the level of the entire facility and at the level of individual doctors.

Each report provides a comprehensive overview, including results on defined indicators (Fig. 6):

- medical facility profile (number of registered care points, doctors and declarations);
- patient demographics (sex and age distribution);
- electronic medical record activity (appointments, telemedicine use, home visits and interactions under the Program of Medical Guarantees[6]); and
- referral data (imaging, consultations, hospital admissions, procedures).

Box 1. Key features of Ukraine's eHealth analytical report

- FACILITY PROFILE
- PATIENT DEMOGRAPHICS
- VISIT AND CONSULTATION TYPES
- E-REFERRALS
- RESULTS OF PHC INDICATORS
- RESULTS OF PAY-FOR-PERFORMANCE (P4P) INDICATORS
- INDICATOR PASSPORTS
- STATUS OF PATIENT VERIFICATION
- COMPARISON OF PHC DOCTORS
- COMPARISON OF FACILITIES

[6] The Program of Medical Guarantees is a health benefits package established by Ukraine under its health financing reform (Law on Financial Guarantees for Health Care Services, 2017), administered by the NHSU as the strategic purchaser. It guarantees that essential health services included in its benefits package are covered for all citizens and permanent residents without direct payment at point of service.

Fig. 6. An example of an analytical report

Національна служба здоров'я України

Analytical report on PHC provider performance, 01/11/2025

World Health Organization

PHC facility

Report level: Надавач <-- Select report details

Facility profile

	8/1/2025	9/1/2025	10/1/2025	11/1/2025	Change, per month
Number of registered healthcare facilities:	6	6	6	6	0
Number of registered family doctors:	5	5	5	5	0
therapists:	2	2	2	2	0
pediatricians:	2	2	2	2	0
Number of declarations:	10,417	10,433	10,419	10,412	-7

Structure of declarations:

	8/1/2025	9/1/2025	10/1/2025	11/1/2025	Change, per month
Number of women declared by age group:					
0-5 years	165	167	165	162	-3
6-17 years	686	687	682	679	-3
18-39 years	982	989	988	984	-4
40-64 years	2,146	2,142	2,146	2,146	0
65+ years	1,821	1,823	1,824	1,822	-2
Number of declarations:	5,599	5,608	5,605	5,593	-12

	8/1/2025	9/1/2025	10/1/2025	11/1/2025	Change, per month
Number of declared men by age group:					
0-5 years	163	167	164	159	-5
6-17 years	672	668	663	668	5
18-39 years	3,161	3,171	3,175	3,170	-5
40-64 years	1,933	1,930	1,919	1,924	5
65+ years	889	889	893	898	5
Number of declarations:	4,818	4,825	4,814	4,819	5

Structure of declarations

The ratio of nurses to doctors in PHC

Reflects the average number of registered nurses per doctor working in the facility.

	8/1/2025	9/1/2025	10/1/2025	11/1/2025	Change per month
Number of nurses working in PHC:	23	23	23	24	1
Number of active primary healthcare doctors:	9	9	9	9	0
Indicator value:	2.6	2.6	2.6	2.7	0.1

Percentage of declared patients compared to the recommended number

Comparison of the number of declarations recommended by the Ministry of Health with the actual number of declarations per doctor.

	8/1/2025	9/1/2025	10/1/2025	11/1/2025	Change per month
Number of declarations:	10,417	10,433	10,419	10,412	-7
Recommended number of declarations:	14,800	14,800	14,800	14,800	0
Indicator value:	70.4%	70.5%	70.4%	70.4%	0.0%

Overall utilization of PHC services

Reflects the proportion of patients who had at least one visit to a doctor during the year.

	8/1/2025	9/1/2025	10/1/2025	11/1/2025	Change per month
Number of patients who had a visit to a doctor in the last year:	8,379	8,338	8,447	8,597	150
Number of declared patients per doctor on the reporting date:	10,417	10,433	10,419	10,412	-7
Indicator value:	80.4%	79.9%	81.1%	82.6%	1.5%

Proportion of consultations with PHC physicians without referrals

Proportion of visits that ended without a referral for consultation at a specialized level of medical care.

	8/1/2025	9/1/2025	10/1/2025	11/1/2025	Change per month
Number of visits without a referral for consultation:	1,320	1,429	1,591	1,594	3
Number of visits to a doctor:	1,496	1,638	1,779	1,793	14
Indicator value:	88.2%	87.2%	89.4%	88.9%	-0.5%

Complete cardiovascular risk assessment.

The proportion of patients in the target group and patients in the risk group who underwent the necessary measurements.

	8/1/2025	9/1/2025	10/1/2025	11/1/2025	Change per month
The number of persons in the denominator whose data include information on the assessment of the risk of developing cardiovascular disease during one of the visits:	823	862	925	988	63
Number of persons (declared) who have reached the age of 40 (men) and 50 (women) and whose electronic medical records were entered during a visit within the last 2 years if there are no risk factors and within the last year if there are risk factors:	2,937	2,881	2,906	2,957	51
Indicator value:	28.0%	29.9%	31.8%	33.4%	1.6%

Assessment of hypertension compensation.

The proportion of the declared population diagnosed with hypertension who had their blood pressure measured during their last visit to a PHC physician and whose blood pressure was less than 140/90 mm Hg.

	8/1/2025	9/1/2025	10/1/2025	11/1/2025	Change per month
Number of patients (declared) with hypertension, aged 18 years and older, who have controlled blood pressure (SBP <140 and DBP <90) during the patient's last visit in the reporting quarter:	133	122	130	156	26
Total number of persons (declared) aged 18 and older with a primary diagnosis of K86, K87, excluding patients with a first-time diagnosis who had electronic medical records during the visit:	1,443	1,426	1,448	1,530	82
Indicator value:	9.2%	8.6%	9.0%	10.2%	1.2%

An online course "Using monitoring and evaluation for strengthening PHC service delivery system"

As a follow-up step, an online course "Using monitoring and evaluation for strengthening PHC service delivery system" was developed with the support of the WHO Country Office in Ukraine (Fig. 7) (11). The course characterizes M&E as a practical tool for gathering data and ongoing situational assessment with the aim of improving quality of PHC. It is tailored for a wide audience of PHC professionals, including family doctors, paediatricians, nurses, facility owners, municipal and regional health authorities, and policy-makers from the Ministry of Health and NHSU. The course aims to strengthen stakeholders' capacity to use data to assess and improve facility operations, planning and health policy implementation at both local and regional levels.

Fig. 7. Online course "Using monitoring and evaluation for strengthening PHC service delivery system"

"This course has helped me better understand the difference between monitoring and evaluation. After completing it, I have learned how to use data effectively to make informed, data-driven decisions that will help to improve the quality of care in my facility."

EARLY ACHIEVEMENTS AND SUSTAINABILITY

- Broad adoption of eHealth tools among PHC providers
- Open-access dashboards with visualized indicators for increased transparency
- Institutionalization of performance monitoring practices through the NHSU
- Nationwide rollout of autogenerated regular eHealth reports on PHC provider performance
- Launch of an online M&E course to train stakeholders on using eHealth performance reports

LESSONS LEARNED

1. Align monitoring with PHC policy priorities and invest in digital infrastructure. The PHC performance monitoring system should be built around the country's PHC policy goals and context. Before implementing performance monitoring, countries should invest in digital infrastructure, which will allow routine data collection to be conducted automatically without creating an additional burden for PHC providers.
2. Promote transparency through open data. Public access to health data builds trust and accountability and allows evidence-informed decision-making.
3. Ensure methodological clarity. A monitoring framework should include transparent calculation methods, standardized indicator definitions and agreed measurement approaches in order to safeguard data reliability, ensure relevance to PHC performance, avoid manipulation and misinterpretation, and reinforce trust in performance information.
4. Define roles and responsibilities. Clear assignment of stakeholders' roles and responsibilities is needed to ensure that results are properly analysed, interpreted and communicated, while also specifying who is responsible to action on the findings. Defined responsibilities help to translate monitoring findings into concrete management and policy decisions.
5. Pilot and codevelop with local actors. Testing in selected regions ensures that tools are practical, relevant and responsive to real-world contextual needs.
6. Use electronic data for strategic planning, contracting and financing. A well-designed performance-based payments system, supported by reliable eHealth data and performance indicators, should inform service planning, contracting, financing and accountability mechanisms. Linking financing and contracts with verified data incentivizes providers to improve data quality and perform better, while also enabling purchasers and policy-makers to make transparent, evidence-based decisions.
7. Build capacity alongside technology. Continuous capacity-building activities help health professionals and managers to view monitoring as a tool for improvement rather than control, fostering a culture of peer-to-peer learning, innovation and data-driven decision.
8. Leverage international expertise and partnerships. Collaborate with global partners to gain technical guidance and knowledge of best practices and benchmark progress against international standards. Collaboration with WHO and development partners is helpful in adapting recognized performance monitoring frameworks to national and local contexts and ensures that there is alignment with the broader goals of health system reform.

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REFERENCES

1. Primary health care in Ukraine: progress review and way forward: assessment and data collection 2020–2021: health policy paper series. Copenhagen: WHO Regional Office for Europe; 2023. Available at: https://www.who.int/europe/publications/i/item/WHO-EURO-2023-7087-46853-68305 , accessed: 19 January 2026).
2. National Health Service of Ukraine (202) Аналітичні панелі (дашборди) [Analytical panels (dashboards)]. Kyiv: NHSU. Available at: https://nszu.gov.ua/nszu-cifrova/onlain-servisi-dasbordi (in Ukrainian, accessed: 19 January 2026).
3. eHealth (2026) Що таке медичні інформаційні системи та які послуги вони надають) [What are medical information systems and what services do they provide?]. Kyiv: eHealth. Available at: https://ehealth.gov.ua/2024/05/07/shho-take-medychni-informatsijni-systemy-ta-yaki-poslugy-vony-nadayut/ (in Ukrainian, accessed: 19 January 2026).
4. Ministry of Health. (2025, September 9). [Facebook post]. Kyiv: MoH. Available at: https://www.facebook.com/share/p/1BWydNoBT4/ (in Ukrainian, accessed 19 January 2026).
5. Ministry of Health (2011) Міністерство охорони здоров'я України наказ 02.11.2011 № 743 "Про затвердження Індикаторів якості медичної допомоги" [Order of the Ministry of Health of Ukraine dated 02 November 2011 No. 743 "On the approval of the indicators of the quality of medical care"]. Kyiv: Ministry of Health of Ukraine. Available at: https://zakon.rada.gov.ua/laws/show/z1328-11#Text (in Ukrainian, accessed: 19 January 2026).
6. Primary health care financing in Ukraine: a situation analysis and policy considerations. Copenhagen: WHO Regional Office for Europe; 2023. Available at: https://iris.who.int/handle/10665/373329, accessed: 19 January 2026.
7. World Bank Ukraine - Health Enhancement and Lifesaving (HEAL) Ukraine Project (English). Washington, D.C. : World Bank Group. Available at: http://documents.worldbank.org/curated/en/099155012092231772, accessed: 19 January 2026.
8. World Health Organization & United Nations Children's Fund. (2022). Primary health care measurement framework and indicators: Monitoring health systems through a primary health care lens (Technical series on primary health care). World Health Organization. Available at: https://www.who.int/publications/i/item/9789240044210, accessed: 19 January 2026.
9. World Health Organization & United Nations Children's Fund. (2022). Web annex: Technical specifications — Primary health care measurement framework and indicators: Monitoring health systems through a primary health care lens (Technical series on primary health care). World Health Organization. Available at : https://www.who.int/publications/i/item/9789240044234, accessed 19 January 2026.
10. Enhancing primary health care in Ukraine: WHO pilots a hypertension project in Chernivtsi [news release]. World Health Organization; 12 August 2024. Available at : https://www.who.int/europe/news/item/12-08-2024-enhancing-primary-health-care-in-ukraine-who-pilots-a-hypertension-project-in-chernivtsi, accessed 19 January 2026.
11. NHSU Academy (2025). "Використання моніторингу та оцінки для розвитку системи надання первинної медичної допомоги") [Using monitoring and evaluation for strengthening PHC service delivery system]. Kyiv: NHSU Academy. Available at : https://academy.nszu.gov.ua/course/view.php?id=267, (in Ukrainian, accessed 19 January 2026).