

## Executive Summary

In 2015, the Ministry of Health of Ukraine, with support of the WHO Country Office, initiated a project aimed to reduce the NCD burden and improve the coverage of appropriate services for people with NCDs at primary health care (PHC) level in Ukraine by implementing the WHO Package of Essential Noncommunicable Disease Interventions (WHO PEN). In terms of the project, WHO PEN for PHC was implemented in seven pilot regions of Ukraine. The effectiveness of the project was first evaluated in 2018-2019 in the mixed-method study organized by WHO to assess changes in clinical practices in PHC. Qualitative analyses highlighted the improved knowledge and skills as well as revealed the need in a sustainable health system change to secure the new clinical practices (Laatikainen et al., 2021). In addition, the evaluation acknowledged that a longer follow-up may help to analyze sustainability of the achieved changes in PHC clinical practice and its effectiveness.

The current, 2<sup>nd</sup> wave of the qualitative research organized by the WHO Country Office aimed to assess the sustainability of clinical practice changes documented in the 1<sup>st</sup> wave of the WHO study and to identify potential enablers and barriers for improvement of integrated care for hypertension and diabetes and for NCD risk factors prevention interventions at PHC level. With this aim, fifty-six in-depth interviews (IDI) were conducted with 19 Managers of PHC clinics, 18 Family doctors, and 19 Nurses in the same seven pilot regions of Ukraine in the period between February 06 and March 15, 2022. The respondents were PHC providers from both urban and rural facilities who received the NCD training; as for Managers, two thirds had completed training themselves, and other represented PHC clinics with the trained personnel.

Thematic analysis was performed to delineate key concepts from the collected data to build hypotheses on how WHO PEN contributed to the change in clinical practices. Prospective qualitative longitudinal research (QLR) methodology was used to analyze the data in two ways: 1) as a cross-sectional data at the current time point/wave, and 2) as longitudinal data, to compare results of the two waves of the study. Based on the study results, the following conclusions were made.

## Conclusions

Five years post-training on integrated NCD management, IDI participants appreciated the training and training materials they received. They emphasized that *after training, prevention work has significantly improved*, together with improved detection of diabetes and hypertension at earlier stages, decrease in the number of cases and complications of cardiovascular diseases, and patients' "stories of success". As three years ago, there was a demand for booster trainings, supervision and mentorship to ensure the proper intervention implementation.

After training, *providers were motivated and enthusiastic to implement novel approaches*, including more attention to prevention and to integrated management of patients with NCD or with high risk of disease. Many said they reassessed their role as health care professionals. Among *typical changes in clinical practice*, participants named, enhanced knowledge and clinical management on assessing risk factors for diabetes and hypertension, successful integration of health counseling into routine practices, and improved equipment in the PHC offices. While at the 1st wave in some regions providers reported not having started implementing the intervention, IDI participants reported the project implementation in all pilot regions of Ukraine.

*Changes in the division of responsibilities between a doctor and a nurse* were reported: most often, a nurse would take measurements, and a doctor would do a lifestyle modification counseling. Nurses admitted they

became more focused on prevention work due to new knowledge and skills; many reported doing preventive counseling as well.

While at the 1<sup>st</sup> wave of the study respondents emphasized it was too early to assess the impact of the WHO PEN on the prevention and detection of the cardiovascular diseases, after 5-year post-training period, IDI participants *reported positive results of the intervention implementation*. They were confident that these results would be more impressive if not COVID-19 pandemic negative impact.

Compared with the previous wave, in the current study, respondents provided many stories of success of patients who were cooperative and followed recommendations. However, despite some evident success and similarly to the 1<sup>st</sup> wave data, *prevention work was hampered by* a lack of motivation for lifestyle change and overall lack of health culture in patients.

As in the 1<sup>st</sup> wave, providers described support they received from clinic management as new equipment purchase and cascade trainings at the workplace. The majority associated the reported *improved equipping of the family doctors' offices* with the health care reform that started in Ukraine simultaneously with WHO PEN. As previously, some participants recommended to establish office for pre-physician examination (“долікарняний кабінет”) to ensure patient basic examinations. Compared with the 1<sup>st</sup> wave when reported site equipment considerably varied across regions and facilities, by 2022, access to equipment became more unified across the regions. However, some providers in rural areas complained about a lack of equipment or expendables in the offices.

*Access to laboratory testing* has not changed much since the 1<sup>st</sup> wave of the study. The main progress was associated with the availability of glucometers and cholesterolometers onsite. In different facilities, the lab testing accessibility varied; rural patients often were referred to another facility (sometimes quite remote) to do the needed tests for free.

Providers admitted that due to the “Affordable medicines” programme, *access to the medicines substantially improved*, especially for patients with limited income. However, compared with overall satisfaction with the “Affordable medicines” programme expressed by the 1<sup>st</sup> wave participants, after 5-year period, providers were more skeptical towards the programme. They repeatedly talked about limited choice and low quality of the medicines affordable in terms of this programme as well as about limited access of rural residents to the programme medicines. Respondents recommended to ensure availability of more convenient and effective polycomponent drugs.

In general, *residents of rural areas have lower access to services*, including laboratory examinations or use of the “Affordable medicines” programme. The equipment of rural ambulatories was often worse than that in the cities. The overall situation has not changed in the past three years.

IDI participants reported no specific changes in the NCD monitoring and patient following-up since the 1<sup>st</sup> wave of the study. As three years ago, there was a demand for the *standard monitoring system* both for patients with cardiovascular disease and those with elevated risk for NCDs, as well as for monitoring the overall prevention work.

*COVID-19 pandemic became a barrier to changes and their sustainability*. With the start of the pandemic, all prevention work slowed down or faded away, as provider contacts with patients were minimized, and the COVID-related workload on medical staff significantly increased. Providers complained they were overloaded with multiple responsibilities during COVID-19 pandemic, which negatively impacted their performance.

However, many providers acknowledged that training helped them to manage patients with NCD during COVID-19 pandemic.

In the pre-COVID period, the theme “lack of time” emerged at every focus group discussion. The participants complained about limited time for seeing one patient, which was a barrier for the intervention implementation. In the current study, most respondents talked about elevated workload during pandemic, emphasizing that with COVID-19, no time was left for NCD prevention.

Besides COVID-19, respondents listed *other barriers*, often related to the health care reform. Among them were the following: little time for seeing a patient; too many patients assigned to one family doctor; documenting patient’s information in both electronic and paper records; and insufficient computer literacy of medical staff of the older age, especially in rural facilities. In general, negative comments related to the health reform prevailed over positive opinions. Respondents associated negative impact of the health reform with medical staff reduction and increased workload on the providers, while computerization only doubled their workload. Among *positive sides of the health reform* providers mentioned improved funding and better equipping of PHC facilities, as well as positive effect of the “Affordable Medicines” programme.

Talking about needed support, participants proposed to increase time for one patient’s appointment and to decrease workload for PHC providers by reducing required number of patients per one family doctor; to establish office for pre-physician examinations for performing necessary tests and measurements; and to ensure providers’ access to NCD management and booster trainings and mentorship. The most common recommendations on improving implementation of the integrated management of hypertension and diabetes at the PHC level were following: to support NCD prevention actions at the government level; to standardize protocols for monitoring patients with hypertension and diabetes and those with elevated risk of NCDs; and to expand the list of drugs in the “Affordable medicines” programme.

In general, the 2<sup>nd</sup> wave of the QLR have shown that, in addition to the problems caused by COVID-19 pandemic, a number of systemic problems have remained unresolved over the three years since the 1st wave of the study. While some improvements of the implementation of the WHO PEN were evident, other aspects of the hypertension and diabetes management did not undergo significant changes or even showed negative tendencies.