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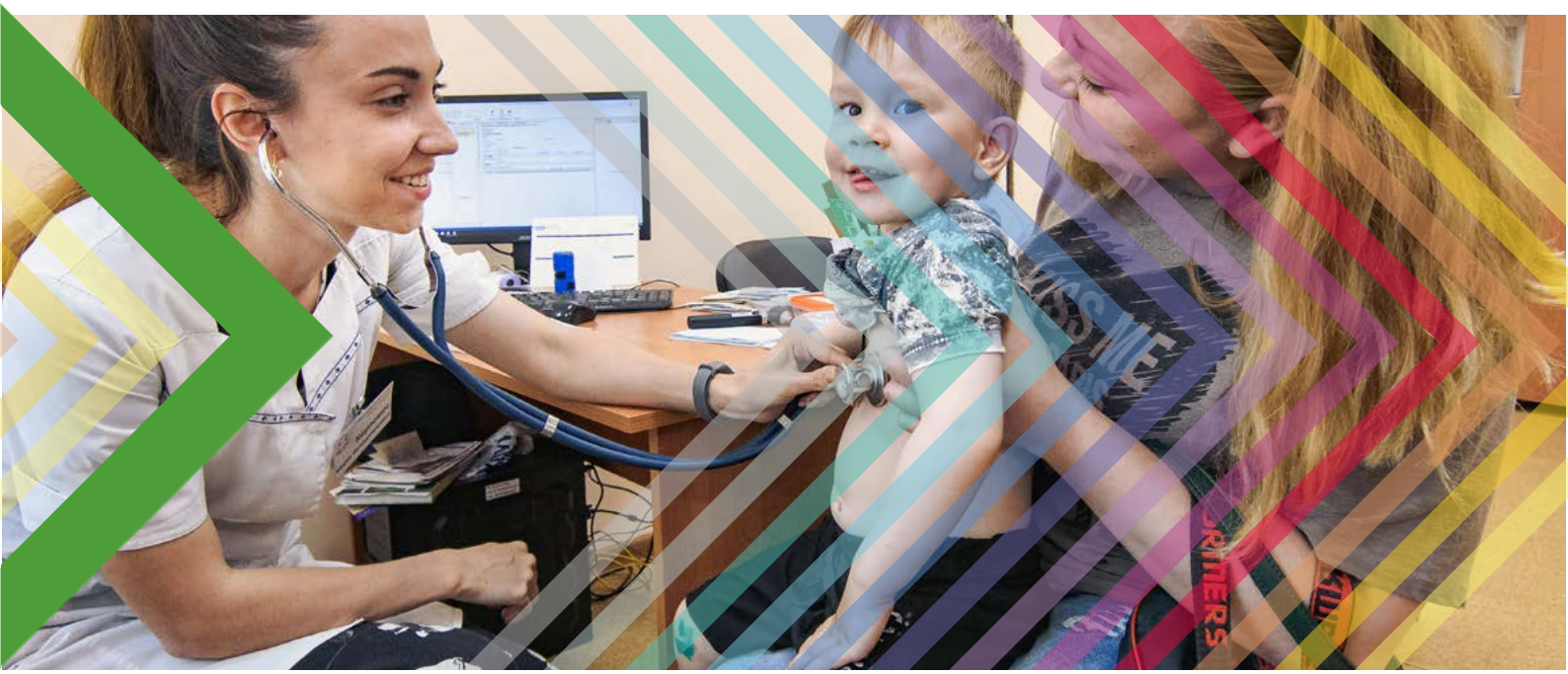

TOWARDS A HEALTHIER UKRAINE

Progress on the health-related Sustainable Development Goals 2020

World Health Organization
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ABSTRACT

This report summarizes information collected to date on the efforts undertaken by the Government of Ukraine to advance the health-related Sustainable Development Goals (SDGs), specifically SDG 3 (ensure healthy lives and promote well-being for all at all ages) as well as health-related targets in other SDGs. The report outlines the methodology of data collection and analysis and sets the scene regarding Ukraine's sociopolitical context, its health system and its status regarding achievement of the SDGs. Each target and indicator within SDG 3 is analysed to identify trends in progress towards achievement. The analysis extends to the health-related targets in other SDGs and reviews relevant indicators included in the Global Action Plan for Health and Well-being. A set of nine recommendations based on the analysis are grouped into three categories: engaging in focused alignment of all sector stakeholders with priority actions; cultivating an enabling environment for SDG attainment; and prioritizing foundational health system improvements.

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FOREWORD

Many more people today are living healthier lives than in the past decade. Nevertheless, people are still suffering needlessly from preventable diseases and too many are dying prematurely. Overcoming disease and ill health will require concerted and sustained efforts, focusing on population groups and regions that have been neglected. The United Nations 2030 Agenda for Sustainable Development is a plan of action for people, planet, peace, partnership and prosperity, and the right to health is fundamental to many of the targets within its and the Sustainable Development Goals (SDGs). The achievement of SDG 3, which seeks to ensure healthy lives and promote well-being for all at all ages, and the health-related targets in other SDGs is essential to providing an enabling environment for human capital development.

In the WHO European Region, ministers for health have committed themselves at the highest levels to achieve the SDGs by endorsing the Roadmap to Implement the 2030 Agenda for Sustainable Development in 2017. In line with this commitment, WHO is actively supporting our Member States. In Ukraine, WHO has been fortunate to work closely with other United Nations agencies as One-UN to accelerate the implementation of SDG-supportive policies and plans in the spirit of the Global Action Plan for Health and Well-being signed by United Nations partner agencies in 2019 at the United Nations General Assembly.

This report takes stock of Ukraine's exemplary efforts to transform its health system in the interests of improving the health of all Ukrainians, and to explore recommendations to achieve health for all in Ukraine. With the support of the Ministry of Health and other ministries, as well as United Nations and partner agencies, we have no doubt that Ukraine is well positioned to meet and exceed its targets for the health and health-related SDGs in the years to come, although the COVID-19 crisis and its direct and indirect impact on the health of populations and on health systems and available resources may, of course, be slowing this positive trend down. Being able to look back now on the strong joint commitment as One-UN within Ukraine confirms that this is one way to mitigate the negative effects of the pandemic and to ensure a faster resolution of the challenges encountered. We would like to take this opportunity to thank all partners for their commitment and important contributions to date and hope that this report will contribute to inform our future work.

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This report was written by Dr Ali Okhowat and Ms Kateryna Denysova under the leadership of Dr Jarno Habicht, Dr Bettina Menne, and Ms Anastasiya Brylova, WHO Regional Office for Europe. Special thanks for their technical guidance and support in review to Dr Assia Brandrup-Lukanow, Dr Christoph Wippel, to Ms Stefania Davia, Dr Angela Ciobanu, to Dr Georgiy Dymov, Mr Oleksandr Martynenko, Dr Liudmila Slobodianyk and Dr Arkadii Vodianyk, WHO Regional Office for Europe. Special thanks also to Dr Jane Ward for her technical contributions during the editing process.

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ABBREVIATIONS

2030 Agenda	United Nations 2030 Agenda for Sustainable Development
GAP	Global Action Plan for Healthy Lives and Well-being for All
GDP	gross domestic product
Global Fund	Global Fund to Fight AIDS, Tuberculosis and Malaria
IDP	internally displaced person
IHR	International Health Regulations
IHME	Institute for Health Metrics and Evaluation
NCD	noncommunicable disease
NHSU	National Health Service of Ukraine
ODA	official development assistance
OOP	out-of-pocket (expenditure)
SDG	Sustainable Development Goal
SDG 3+	SDG 3 and the health-related targets in other SDGs
TB	tuberculosis
UHC	universal health coverage
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
UN INFO	planning, monitoring and reporting system to assess United Nations country-level support for delivery on the SDGs
Unitaid	international organization investing in innovation and drugs for communicable diseases
UNPF	United Nations Partnership Framework
WaSH	water, sanitation and hygiene

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EXECUTIVE SUMMARY

This report assesses progress on the health-related Sustainable Development Goals (SDGs) to support the country process of new multiagency activities in Ukraine around the United Nations 2030 Agenda for Sustainable Development (2030 Agenda) and the Global Action Plan for Health and Well-being (GAP). It provides a point of reference for policy dialogues and health system planning between the Ministry of Health, development partners and stakeholders as they continue in partnerships to achieve SDG 3 (health and well-being for all at all ages) and the health-related targets within the other SDGs (referred to collectively in this document as SDG 3+ targets). The report provides an outline of the current health status in Ukraine, highlights trends and projections, analyses problem areas and implementation barriers, and provides recommendations for future priorities.

The assessment used both quantitative and qualitative methodology: analysing national data against international comparators where available for quantitative data; and supporting this analysis qualitatively using interviews with national health experts to identify areas of progress and perceived gaps and bottlenecks in addressing SDG 3+ targets. A literature review and desk analysis of national strategic policy and programme documents related to health and well-being were undertaken to assess their alignment with the health priorities that were identified and to evaluate the extent to which SDG 3+ targets were integrated into and addressed by national policies. In addition, country actions by United Nations agencies and other development agencies were mapped using literature reviews, interviews and reviews of standard datasets (e.g. UN INFO, a planning, monitoring and reporting system to track how the United Nations system supports governments at the country level to deliver on the SDG and the 2030 Agenda) to assess the actions undertaken to support SDG 3+ targets and identify both gaps and overlaps with health system priorities, and opportunities for alignment.

Notable achievements highlighted in this review include declining rates of neonatal and maternal mortality, improvements in health-care access and expansion of immunization programmes. Ukraine is currently undertaking one of the most ambitious health system transformations in the world; rates of extreme poverty, severe malnutrition and greenhouse gas emissions have markedly declined, and gender equality, health service coverage and International Health Regulations (IHR) capacities have all risen. However, significant challenges remain as evidenced by the deleterious effects of conflict on health outcomes and marked increases in internally displaced people, persistently high out-of-pocket (OOP) and catastrophic health expenditures, persistently high rates of noncommunicable diseases (NCDs) and high mortality rates among young men.

Despite these challenges, the country's strong political will to demonstrate marked improvements in the SDGs will see Ukraine move swiftly to enact policies and implement roadmaps to accelerate the attainment of SDG 3+ targets in the years approaching 2030. This report concludes with recommendations that seek to strengthen policy dialogues among key actors engaged in advancing a coordinated effort to improve health and well-being in Ukraine and accelerate the achievement of Ukraine's SDG 3+ agenda.

The recommendations derived from the analysis in this report are grouped into three action categories.

Engage and align

Engagement focuses on aligning all sector stakeholders with priority actions to support a healthy population and ensure that the health-enabling SDGs and their targets are reached.

- **Align national and global SDG targets and indicators:** key to enabling the attainment of the SDGs is the need to establish a common understanding around the targets and indicators that need to be reached; this will allow for the generation of comparable datasets. Common understanding and collective action will enable chosen targets and indicators to be reached, which will ultimately contribute to better health outcomes and health protection of the population.
- **Align the national development strategy and health system transformation agenda with the SDGs**: strategies and a transformation agenda need to be systematically aligned with actions to achieve Ukraine's SDG targets. This will allow for synergies in policy and action and thus accelerate impact.
- **Align the United Nations system and activities of international partners with priorities of the Prime Minister and Government for the SDGs:** integrating the SDGs into national policies and work plans should be a central focus of partners working with the Government in Ukraine. Once synergy is achieved, collective action between all health stakeholders will drive sustained progress towards health goals.

Cultivate an enabling environment for SDG attainment

- **Broaden the fiscal space for sustainable health financing:** fiscal policy needs to move beyond commitments and towards implementation. Front-loading investments in the health sector could have cascading effects on other sectors and facilitate sustainable financing through domestic public resource mobilization.
- **Expand disaggregated health data systems:** Ukraine's digital transformation of Government services should prioritize the health sector and boost e-health initiatives. The focus on relevant, timely and accurate data should drive considerations for the expansion of data sources and, ultimately, enhance health equity.
- **Develop international partnerships and celebrate initiatives:** Ukraine should strengthen its links with, and contributions to, SDG 3+ institutions and initiatives, such as the GAP and the International Health Partnership for UHC 2030. Doing so, with the inclusion of annual or more frequent landmark days (such as a day celebrating UHC or SDGs) will help to continually reorient people and policies around the importance of achieving the SDGs by 2030.

Prioritize foundation health system improvements

- **Engender a whole-of-government and participatory approach to UHC:** collaboration with other ministries and agencies outside of the traditional health sector will be important as many SDG-accelerating interventions necessitate multisectoral cooperation and policies that address the social

determinants of health. It is paramount to endorse a formal road map that includes all Ministries working together to achieve SDG 3+ with the support of the United Nations development system and health partners in Ukraine.

- **Improve access to quality health services:** one of the most important "best-buys" for health in Ukraine is to provide improved access to preventive and curative health services. Improvements in health system performance can drive commensurate advancements in health status. These also need to be reinforced with overarching action on determinants of health and social protection measures.
- **Support the development of a resilient health workforce:** efforts must be intensified to recruit and retain knowledgeable health workers and to provide them with access to opportunities to enhance the competencies needed for their positions. Only through a sustainable health workforce strategy can the attainment of the SDGs truly remain sustainable.

1 Introduction

This report assesses progress to date on the SDG 3+ targets in Ukraine and seeks to provide a point of reference for policy and planning dialogues between the Ministry of Health, health development partners and other stakeholders in Ukraine on the path towards attainment of the 2030 Agenda.

The report is in six sections. This Introduction reviews the genesis of the SDGs and the GAP before outlining the methodology used for the assessment.

Section 2 analyses the Ukrainian sociopolitical context and health system organization before moving to analyse Ukraine's SDGs and progress to date.

Section 3 reviews progress to date on specific targets within SDG 3.

Section 4 explores the health-related targets in other SDGs at the goal level and assesses progress towards their attainment and the contribution of GAP partners to the process.

Section 5 discusses recommendations based on the findings that could improve the incorporation of SDG 3+ targets into Government policies, as well as proposals for United Nations bodies and other health sector partners in Ukraine to support the implementation of health reform in Ukraine.

Section 6 concludes with a review of the major progress to date, gaps that remain and health system priorities for SDG 3+ attainment in the short to medium term.

NB. Work on this report was initiated and finalized before the COVID-19 pandemic, and the implications of COVID-19 are, therefore, not reflected in the report.

1.1 The SDGs

In 2015, the United Nations General Assembly endorsed the 2030 Agenda *(1)*. This takes the holistic development paradigm of "people, planet, partnership, peace and prosperity" as a basis for articulating goals and monitoring activities summarized in the 17 SDGs, their 169 targets and more than 230 indicators. Five core principles underpinned the development of the Agenda:

- interconnectedness and indivisibility: the 17 SDGs are interconnected and indivisible meaning that countries should focus on attaining all of them to truly achieve any one of them;
- inclusiveness: a whole-of-government and whole-of-society approach is needed to achieve the goals;
- leaving no one behind: all people, particularly those who are most vulnerable, should benefit from the attainment of the SDGs, hence the need for local, disaggregated data;
- multistakeholder partnerships: partnerships should be established to share resources and collaborate on implementation; and
- universality: the 2030 Agenda applies to all countries and contexts at all times.

The interrelated nature of the SDGs was reiterated at the highest political levels in the September 2019 Political Declaration of the High-level Meeting on Universal Health Coverage: Universal Health Coverage – Moving Together to Build a Healthier World *(2)*. The Declaration noted that the SDGs can only be achieved through a "holistic approach, with a view to leaving no one behind (and) reaching the furthest behind first". Consequently, while SDG 3 seeks to ensure healthy lives and promote well-being for all at all ages, health-related targets can be found in all of the SDGs and progress on one SDG affects and is affected by progress on other SDGs (Fig. 1) *(3)*.

Fig. 1. SDG 3 interrelates with all the other SDGs

1.2 The GAP

The GAP was established as a commitment by global health and development agencies to advance collective action and accelerate progress towards the health and health-related targets of the SDGs *(4)*. The GAP was officially launched on 24 September 2019 during the 74th session of the United Nations General Assembly. It is hosted by WHO and composed of 12 of the leading global health and development organizations: Gavi, the Global Financing Facility, the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund), the Joint United Nations Programme on HIV/AIDS (UNAIDS), Unitaid (an international organization investing in innovation and drugs for communicable diseases), the United Nations Children's Fund (UNICEF), the United Nations Development Programme (UNDP), the United Nations Population Fund (UNFPA), UN Women, World Bank Group, World Food Programme and WHO. The GAP outlines a shared vision and renews its member organizations' pledge to enhance collective action and accelerate impact. The GAP is organized under a framework of four strategic approaches (Fig. 2):

- engage underscores the importance of working together with countries to identify priorities and collaborating on the planning and implementation of interventions;
- accelerate refers to use of innovative and synergistic efforts to markedly fast-track progress within countries under specific accelerator themes and on gender equality and the dissemination of global public goods;
- align empowers health stakeholders to harmonize operational and financial resources to be most efficiency for interventions in support of countries; and
- account refers to the development of a joint framework for assessing results and coordinating investments through an informed evidence base.

Fig. 2. The GAP at a glance

Source: WHO, 2019 *(4)*.

The seven accelerator themes are:

- accelerator 1: primary health care and health systems strengthening for universal health coverage (UHC);
- accelerator 2: sustainable financing and investment for health and well-being;
- accelerator 3: community engagement in establishing healthy places, settings and resilient communities;
- accelerator 4: addressing health determinants and promoting multi- and intersectoral policies;
- accelerator 5: emergency preparedness and response;
- accelerator 6: research and development, innovation and access, including health literacy; and
- accelerator 7: strengthening national health information systems and digital health.

Considerations of which accelerator themes to prioritize require high-level commitments and a whole-of-government approach to ensure that efforts are geared towards improvements in health outcomes. Other stakeholders, such as United Nations bodies, have an important role to play in supporting a government's efforts with respect to implementation of accelerators.

In the WHO European Region, another strategic approach has been added to the four GAP approaches: assess, which refers to continuous assessment of the current situation and trends, policies and resources. In some countries, this assessment stage contributes to a common country assessment *(5)*.

The GAP framework represents a new commitment to advance collective action and accelerate progress towards the SDG 3+ targets. While focusing on health and well-being, the approach cuts across sectors and commits agencies to develop new ways of working together to maximize resources and measure progress in a more transparent way.

The first step of country support under the GAP is assessing country needs through engagement and dialogue. This report seeks to do so by providing a point of reference for policy dialogues and planning between the Ministry of Health, health development partners and other stakeholders in their pursuit to achieve the SDG 3+ targets in Ukraine.

1.3 Methodology

Overall, this report provides an outline of the current health status of Ukraine, highlights trends and projections, analyses implementation barriers and opportunity gaps, and provides recommendations for health priorities moving forward.

In compiling information, a thorough review was undertaken of relevant data and consultations were held with in-country and international health sector stakeholders. Specifically, the assessment included:

- desk review of relevant publications and reports;
- evaluation of national policies and status of their implementation;
- consultations with Government ministries, United Nations agencies and other international organizations; and
- interviews with key informants and subject matter experts.

Health systems data were analysed using a mixed-methods approach. This included quantitative examination of national data versus international comparators where available, plus interviews with national health experts to identify areas of progress, gaps and bottlenecks in addressing the SDG 3+ targets. Limitations to the analyses included the lack of available up-to-date data and standardization of sampling frames. Significant data gaps occurred from 2014 and still persist in relation to people living in areas not controlled by the Government in eastern Ukraine.

A literature review and desk analysis of national strategic policy and programme documents related to health and well-being were also undertaken to assess

alignment with identified health priorities and to evaluate the extent to which SDG 3+ targets were integrated into and addressed by national policies.

It is important to note that the process of adapting the SDG targets and indicators to the Ukrainian context resulted in the modification of many national targets and indicators, which do not always map directly onto their global SDG counterparts. Therefore, while the global and national goals are the same, differences among targets and indicators, including those for SDG 3 and health-related areas of the other SDGs, challenge a direct comparison of national with international data. For the purposes of this analysis, we have endeavoured to highlight information gaps and opportunities to improve monitoring where relevant.

Progress on specific targets was assessed by considering indicators from various data sources to triangulate trends. Data collection frequency, disaggregation and other reporting characteristics may prevent ready comparisons and so need to be kept in mind when evaluating the trends identified in this report.

The data used for this report were taken from the most recently available published statistics in November 2019 from global, regional and national monitoring mechanisms. Sources include publications and databases of WHO and other United Nations agencies and groups, other international organizations, national ministries and scientific publications.

As with the World Health Statistics Report 2019 *(6)*, two types of statistics were collected to assess progress on each SDG target:

- primary data, which include data reported regularly by countries through monitoring agreements with international organizations or through public sources such as the national census data or demographic and health surveys; and
- comparable estimates, where country data have been adjusted to allow for comparison with regional averages.

Where possible, primary data have been prioritized.

Mapping of country actions by the United Nations and other development agencies was undertaken through literature reviews, interviews and reviews of standard datasets (e.g. UN INFO) to assess actions undertaken to support SDG 3+ targets and opportunities for alignment. Actions were also assessed in light of the seven accelerators outlined in the GAP *(4)* to determine possible areas where stronger and more effective collaboration between stakeholders and development partners can be achieved.

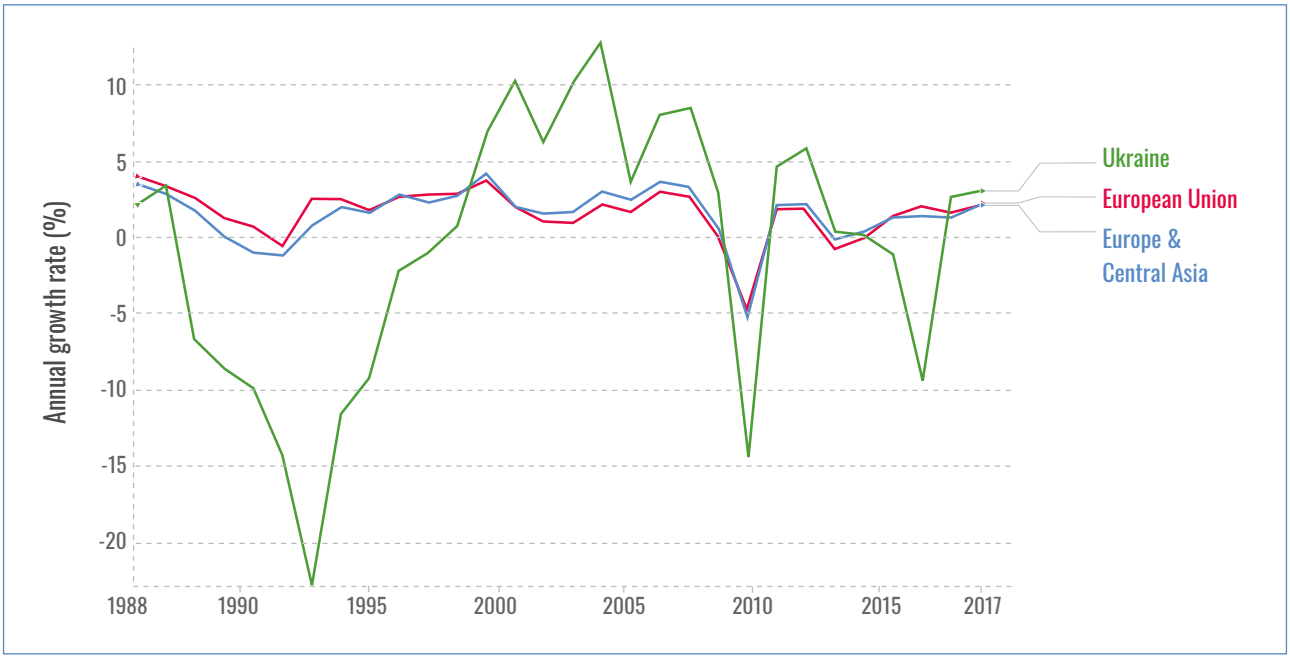
2 Overview: Ukrainian health system and SDG localization

2.1 Political and sociodemographic context

In August 1991, Ukraine declared independence following the dissolution of the Soviet Union, and the Ukrainian constitution was adopted in 1996. These events restructured Ukraine's political system to a multiparty and dual-executive system (whereby the Prime Minister and Cabinet of Ministers operate alongside the President). Contested elections and political reforms since independence have coincided with significant civil unrest, most notably during the 2004 Orange Revolution, the Euromaidan protests of 2014 and ongoing armed conflict in the east of Ukraine.

The Human Development Index for Ukraine was 0.750 in 2018, ranking it at 88th out of 189 countries and territories *(7)*, and with a gross domestic product (GDP) per capita of US$ 907 (2011 purchasing power parity) in 2018, it was one of the two countries with the lowest income in the WHO European Region, alongside the Republic of Moldova *(8)*. Nevertheless, economic, health, social protection, environmental and other indicators of societal and individual well-being have primarily been trending towards improved outcomes over the past five years (Fig. 3) *(8,9)*.

Fig. 3. Annual growth rate for GDP per capita, Ukraine and regional figures, 1988–2017



Source: Global Change Data Lab, 2019 *(9)*.

Since independence, Ukraine's total population has decreased by 7.4 million from a relative high of 52 million in 1991 to 44.6 million in 2018, with approximately 70% living in urban settings *(10)*.[1] Kyiv is Ukraine's largest city, with a population of 2.9 million, with four other cities having populations over 1 million: Dnipro, Donetsk, Kharkiv and Odessa *(12)*. This falling population number is primarily a result of high net migration and relatively high death rates compared with birth rates (Table 1) *(10,11)*. Migration to surrounding countries is a significant factor that has accompanied theeconomic and political unrest. Urbanization and the availability of family planning have led to a

[1] *The State Statistics Service of Ukraine estimated the population at 1 October 2019 as 42 million based on official birth and death registries (where available), although this excluded the temporarily occupied territories of the Autonomous Republic of Crimea and the city of Sevastopol* (11).

decline in the fertility rate from 1.8 to 1.4 births per woman between 1991 and 2017, which can account for some of the decline in population growth.

Table 1. Sociodemographic indicators in Ukraine, 1980–2017 (selected years)

	1980	1990	2000	2005	2010	2015	2017
Total population (mid-year, millions)	49.97	51.89	49.18	47.11	45.87	45.15	44.83
Population, female (% total population)	54.07	53.49	53.45	53.62	53.84	53.74	53.70
Population growth (average annual %)	0.44	0.23	−1.01	−0.73	−0.40	−0.26	−0.39
Birth rate (crude, per 1000 people)	15.15	12.60	7.80	9.00	10.80	10.70	9.40
Fertility rate (total, births per woman)	1.95	1.84	1.11	1.21	1.44	1.51	1.37
Death rate (crude, per 1000 people)	11.43	12.10	15.40	16.60	15.20	14.90	14.50

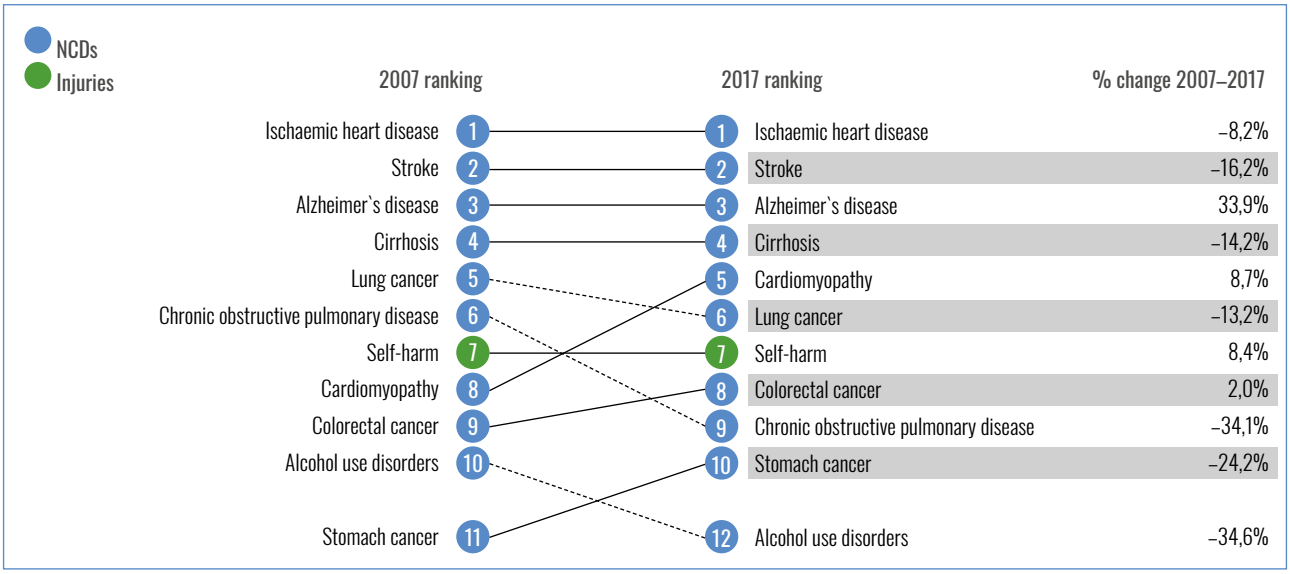
Source: World Bank, 2019 *(10)*.

2.2 Health status

From 1991 to 2017, life expectancy at birth increased from 69.3 to 71.8 years *(10)*. Disaggregation of all-cause mortality revealed a preponderance of men dying early, resulting in a more than 10-year difference in life expectancy at birth and a significantly higher mortality rate in men than women, starting in the third decade of life.

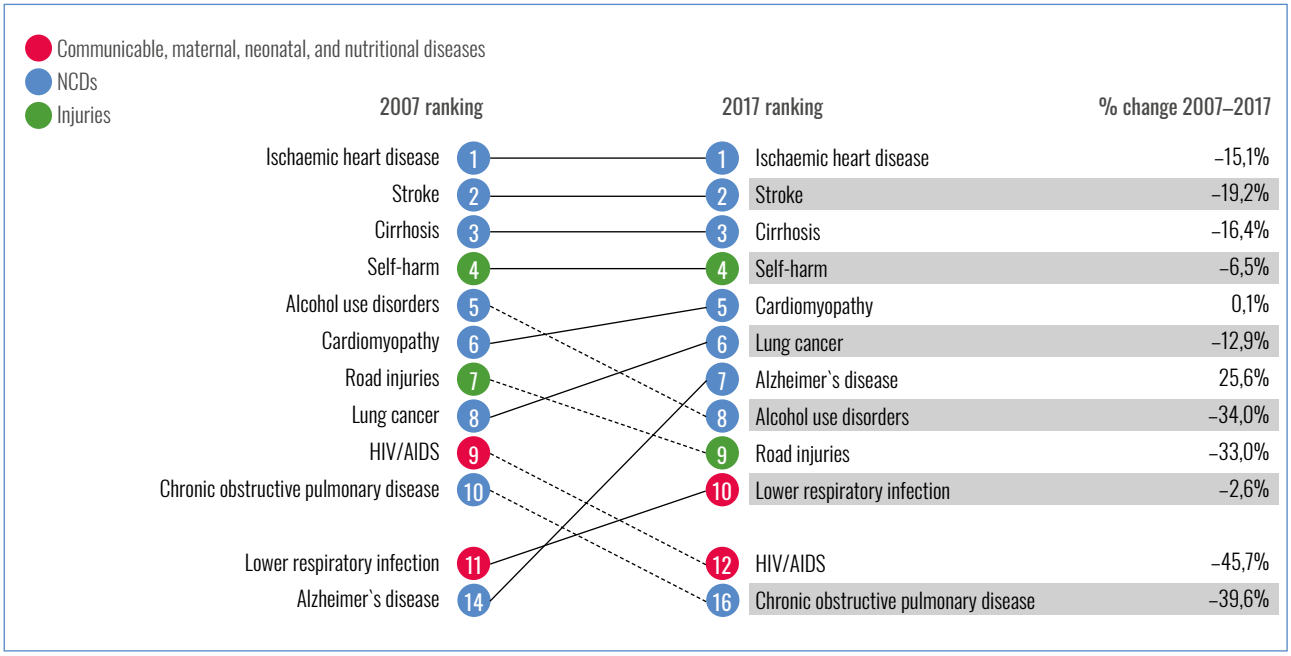
Ukrainians continue to be afflicted by preventable diseases and premature death. NCDs, such as cardiovascular diseases, cancer, chronic respiratory disease and type 2 diabetes, accounted for six of the top 10 causes of death from 2007 to 2017 according to data from the Institute for Health Metrics and Evaluation (IHME) (Fig. 4) *(13)*. During the same period, NCDs and injuries accounted for nine of the top 10 causes of premature death (Fig. 5), and NCDs accounted for 84% of all deaths in 2019 *(14)*. These health challenges are linked to many antecedent risks, including the incidence of communicable diseases, the lack of primary and secondary prevention of NCDs and their risk factors, and high rates of mental health illnesses and injuries. The prevalence of mental disorders in Ukraine has

Fig. 4. Top 10 causes of death in Ukraine from NCDs and injuries, 2007 and 2017



Source: IHME, 2019 *(13)*.

Fig. 5. Top 10 causes of premature death in Ukraine, 2007 and 2017



Source: IHME, 2019 *(13).*

consistently been above the WHO European Region average, being around 4% between 1990 and 2015 *(15)*. Reducing NCDs is considered one of the main public health challenges in Ukraine *(16)*.

Communicable diseases, including HIV and vaccine-preventable illnesses, continue to strain the health system. HIV transmission and multidrug-resistant tuberculosis (TB) rates in Ukraine are among the highest in the WHO European Region with the rate of new HIV diagnoses reaching 37.7 per 100 000 people in 2018 *(17,18)*.

Coverage for immunizations has also fallen (Table 2). By January 2019 Ukraine had the lowest vaccine coverage rates for all vaccinations among WHO European Region Member States *(13,15)*. Additionally, from 1990 to 2008 the measles vaccination rate remained around 99%; however, precipitous drops occurred in 2010 (56%) and as recently as 2016 (42%), with approximately 14% of children in Ukraine remaining unvaccinated against measles in 2017 *(15)*.

Table 2. National immunization rates for vaccine-preventable diseases, Ukraine

Vaccines	2019	2018	2017	2016	2015	2010	2005	2000
BCG	84	90	84	75	39	92	96	98
DTP1	92	87	65	42	59	52	99	99
DTP3	80	69	50	19	23	52	96	99
HepB3	76	67	52	26	22	48	97	4
HepB_BD	60	60	49	37	57	64	96	_
Hib3	80	58	39	47	38	51	_	_
IPV1	83	92	43	75	59	_	_	_
MCV1	93	91	86	42	56	56	96	99
MCV2	92	90	84	31	57	41	96	99

Table 2 (contd)

Vaccines	2019	2018	2017	2016	2015	2010	2005	2000
PCV3	_	_	_	_	_	_	_	_
Pol3	78	71	48	56	51	57	95	99
RCV1	93	91	86	42	56	56	96	_
RotaC	_	_	_	_	_	_	_	_

Notes: BCG, for TB; DTP1: diphtheria, tetanus toxoids, pertussis, first dose; DTP3: diphtheria, tetanus toxoids, pertussis, third dose; HepB3: hepatitis B, third dose; HepB_BD: hepatitis B, birth dose; Hib3: Haemophilus influenzae type b; IPV1: inactivated polio vaccine, first dose; MCV1: meningococcal vaccine, first dose; MCV2: meningococcal vaccine, second dose; PCV3: pneumococcal conjugate, third dose; Pol3: polio, third dose; RCV1: rubella, first dose; RotaC: rotavirus.

Source: WHO, 2020 *(19)*.

The incidence of injuries from violence has also increased since 2014, with the onset of conflict in eastern Ukraine significantly affecting Ukrainians' health status. Following the Russian Federation's declaration of control over the Crimean Autonomous Republic and the outbreak of armed conflict in the Donbas region of eastern Ukraine in 2014, population displacement and a breakdown of critical health and social services occurred. Between 2014 and September 2019, at least 3339 conflict-related civilian deaths were reported. People continue to live in conflict-affected areas with limited access to essential services such as immunizations. By November 2019, more than 1.4 million people had registered as being internally displaced, ranking Ukraine ninth in the world in its population of internally displaced people (IDPs) *(20)*.

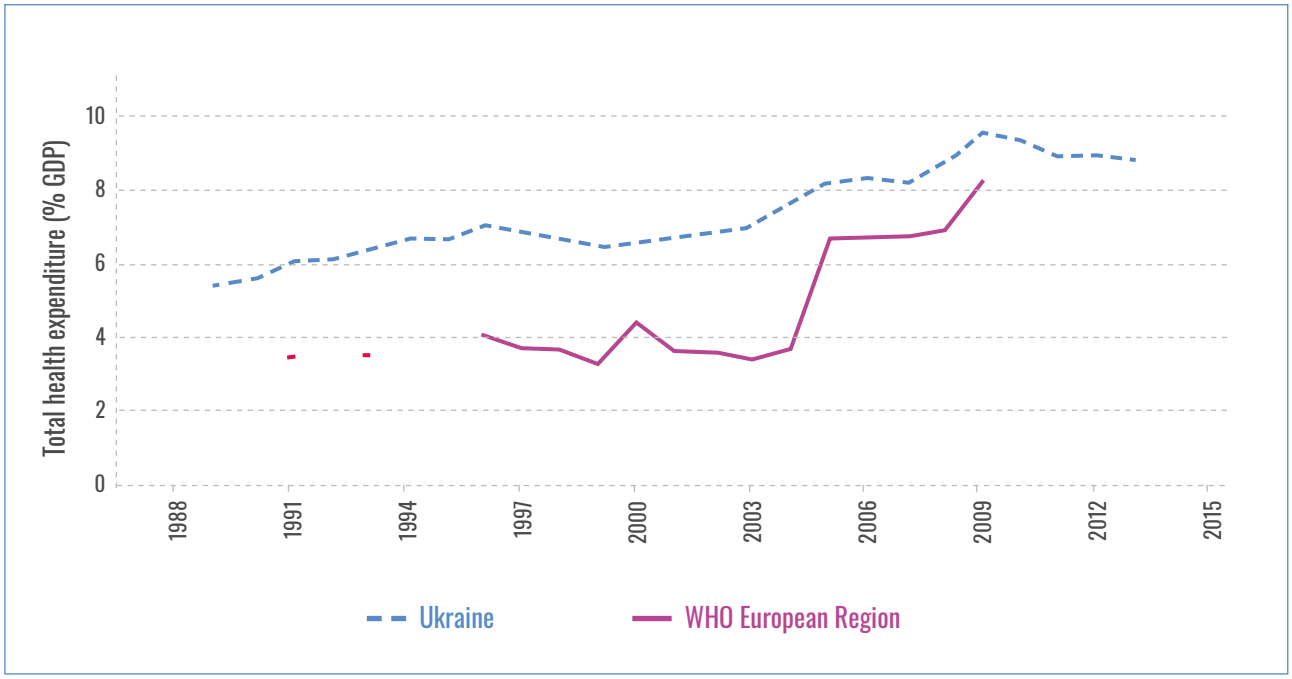
2.3 Assessment of the health system

Ukraine's current health expenditure as a percentage of GDP lags behind that of its regional European counterparts (Fig. 6). Although it has increased markedly since the late 1990s, the share of expenditure funded from domestic public sources for health has decreased in step with increased private, external and OOP expenditures. Until 2020 funding transfers to health facilities were determined according to current capacity and staffing levels instead of performance or quality measures, a persistent legacy of the Semashko system.

The Ukrainian health system is financed from general taxes; corporate income tax, value-added tax, excise tax and customs duty. However, OOP expenditure remains a significant source of health expenditure (48% of total spending on health in 2015). Medicines and inpatient care are the largest drivers of OOP spending. Although the Constitution has outlined free access to a package of health-care services, scarce resource allocations and inefficient use of public funds have led to the use of informal payments. Previous health financing arrangements had been based on passive historical line item budgeting, which focused on inputs (building, staffing) and led to considerable inefficiencies.

To reduce health inequalities and provide for UHC, Ukraine's health system transformation began in earnest in 2014 with the passage of the National Strategy on Health Reform. Ukraine's Cabinet of Ministries approved the Concept of Reforming of Health Care Financing in 2016 and Parliament approved supporting legislation for sustainable health financing for institutions and practitioners, including the national

Fig. 6. Total health expenditure as a percentage of GDP, 1988 to latest available year



Source: WHO Regional Office for Europe, 2019 *(15).*

rollout of a reform of primary health care by 2020. In addition, the approved decrees enabled expansion of financial oversight responsibilities for health facilities and hospital districts and managerial reforms. This led to the establishment of the National Health Service of Ukraine (NHSU) with the intention of facilitating contracting and payment mechanisms with health-care providers. The health-care reforms sought to set a new focus on people's needs and services, implement new pooling and purchasing policies, introduce new payment mechanisms for health-care providers and define a guaranteed package of health-care services.

In line with this, a guaranteed benefits package was introduced to cover primary care, secondary care (inpatient and outpatient), childbirth care, rehabilitation, palliative care, emergency medical care and pharmaceutical treatment for the most prevalent NCDs, including cardiovascular diseases, asthma, type 2 diabetes and cancer.

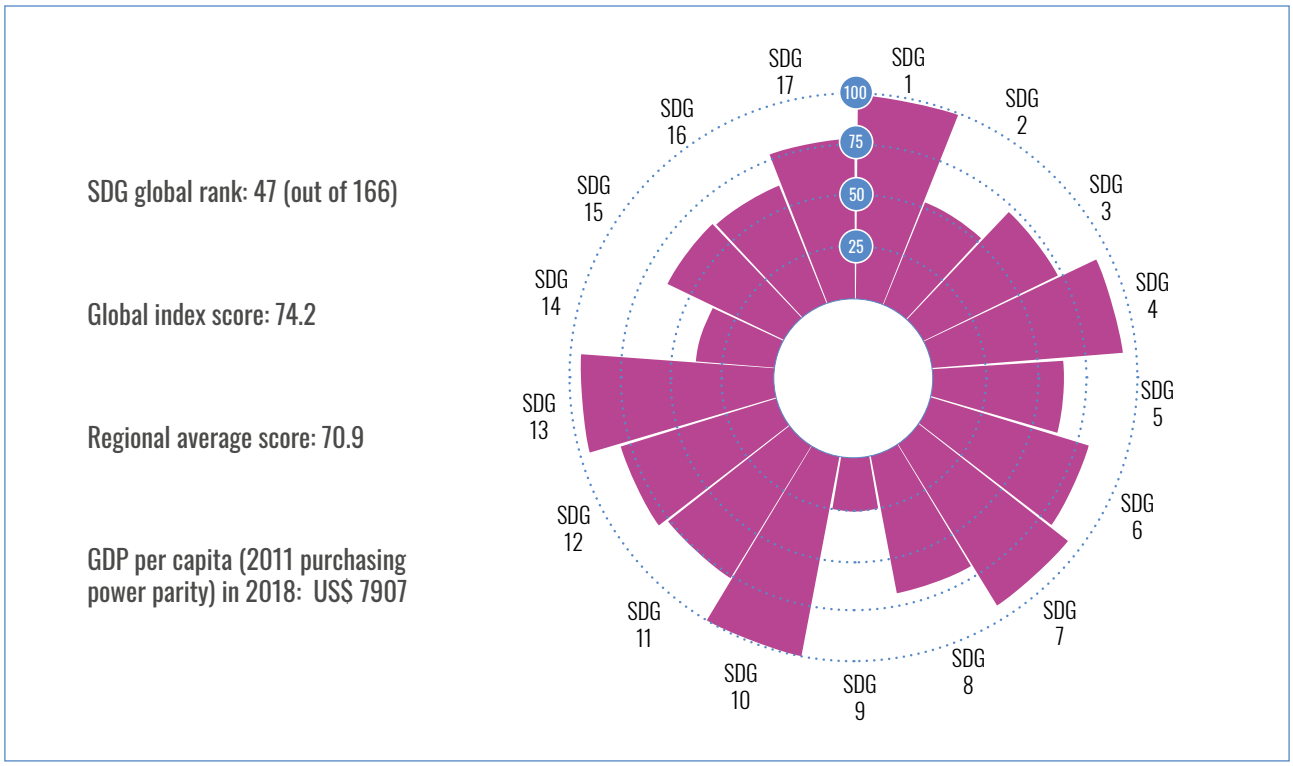
Nevertheless, the newly adopted health-care reform created additional challenges for the eastern part of Ukraine. Large inflows of IDPs stretch already scarce resources, and the forced relocation of hospitals left medical equipment and facilities inaccessible within the occupied territories. Most remaining facilities also reported a reduction in the number of staff; medical facilities are also severely underfunded and the available resources are used inefficiently.

Consequently, even financially secure patients often have to seek health care outside their region. Local authorities and hospital administration in the Donbass region have insufficient knowledge of management in health-care systems *(21)*. This continues to slow Government-initiated health-care reforms and efforts of the national and international stakeholders.

2.4 SDG opportunities and challenges

According to the Sustainable Development Report 2019, Ukraine has made concrete progress on the SDGs *(22)*. In 2019, Ukraine had a global index score of 72.8, which is 3.4% higher than the Region average and ranked it as 41st out of 162 countries within the SDG global ranking (Fig. 7). The evaluation in this report indicated that, although improvements are being made for SDG 3 and some other areas, progress is insufficient to reach its goals by 2030.

Fig. 7. SDG progress in Ukraine: global index scores and achievements for SDGs, 2019



Source: Sustainable Development Solutions Network, 2019 *(23)*.

Overall, Ukraine's health system continues to face five main challenges, which have plagued it since independence. Although improvements have been made, particularly since 2015, these challenges will need to be addressed if Ukraine is to move forward in meeting its 2030 Agenda goals.

- **High OOP health expenditure.** Persistently high OOP spending and the lack of safeguards against catastrophic health expenditures impact most severely on those with acute or major health needs.
- **Misaligned health policy, resource allocation and management.** Resource-based budgeting and allocation and decentralized health management administration have resulted in persistence of structures and personnel that may be misaligned with the health needs of the local population and cause fragmented health policy implementation.
- **Conflict-related decline in health outcomes.** Civil unrest and conflict-related shocks to the health system and economy have prevented health outcomes from improving as much as in Ukraine's regional counterparts. Improving access to health services within and across frontlines for Ukrainians living in conflict-affected areas is of paramount importance.

- **Net outward migration of health workers.** Movement of health workers from Ukraine mainly to surrounding countries has left major gaps in the health workforce. This has been exacerbated by the onset of conflict and has significantly hindered the ability of the Government to meet legislated norms for service personnel in certain catchment areas.
- **Poorly coordinated intersectoral and interministerial action on health.** Whole-of-government and whole-of-society efforts are needed to address the root causes of the high burden of diseases, both communicable and NCDs, as well as injury-related morbidity and mortality. The primary prevention of avoidable morbidity and mortality for the most prevalent causes requires a deep understanding of how the social determinants of health lead to the adoption of behavioural risk factors, such as poor diet, poor lifestyle and substance abuse, which then lead on to pathophysiological manifestations. Population-wide programmes need to be developed and undertaken across sectors and ministries to truly address root causes. The adoption of the National Action Plan for Non-communicable Disease Prevention, Control and Health Promotion 2018 *(24)* was a step in the right direction but these strategies for improved health need to be expanded at the national level.

3 Progress on SDG 3 health targets in Ukraine

The Government of Ukraine recognizes importance of health and well-being for all through implementation of SDGs (particularly SDG 3). The national reform agenda provides the framework for mainstreaming health into national development, humanitarian and recovery processes, and confirms a responsibility to address health-related SDGs through operational activities at the country level. With its strong focus on the people of Ukraine, the Government of Ukraine together with WHO consolidates the efforts of Government representatives, United Nations agencies, other development partners and civil society to tackle structural issues of poverty, inequality and vulnerability in the country. The aim is to build a stronger more-resilient health-care system, combat communicable diseases and NCDs and ensure UHC for all. To achieve these objectives, it will be important to develop coherency between humanitarian, recovery and development programmes to produce maximum impact in the areas of strategic priorities that correspond with the indicators in SDG 3 and in the health-related targets of other SDGs.

3.1 Data and monitoring of SDG 3 targets

Implementation of SDG 3 will be facilitated by implementation of several other SDGs, including SDG 1 (overcoming poverty), SDG 5 (gender equality), SDG 8 (comprehensive, sustainable economic growth), SDG 10 (reducing inequality), SDG 16 (inclusive societies for sustainable development) and SDG 17 (strengthening global partnerships).

Table 3 shows the Ukrainian targets against the corresponding global SDGs targets, plus current status for the global targets based on data analysis of globally available data. There are number of targets that share similar definition and numbering both globally and on country level (e.g. SDGs 3.1, 3.2, 3.3 and 3.6); some differ partially (e.g. SDGs 3.4 and 3.7) and some are significantly different or not addressed at all (e.g. SDGs 3.5, 3.7, 3.8, 3.9 and 3.b). Revision and alignment of the global and national targets and indicators is something that should be considered and addressed as this would facilitate better reporting, data collection and international comparison of country progress.

Table 3. Comparison of national and global indicators within SDG 3 in Ukraine and status for global targets

National indicator	Global SDG target	Status
Reduce maternal mortality (3.1)	3.1 By 2030, reduce the global maternal mortality ratio to less than 70 per 100 000 live births	
Minimize preventable mortality among children under-5 (3.2)	3.2 By 2030, end preventable deaths of newborns and children under-5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1000 live births and under-5 mortality to at least as low as 25 per 1000 live births	
End the epidemics of HIV/AIDS and TB (3.3)	3.3 By 2030, end the epidemics of AIDS, TB, malaria and neglected tropical diseases and combat hepatitis, waterborne diseases and other communicable diseases	
Reduce premature mortality from NCDs (3.4) Reduce by a quarter premature mortality, including through the introduction of innovative approaches to diagnosing diseases (3.5)	3.4 By 2030, reduce by one third premature mortality from NCDs through prevention and treatment and promote mental health and well-being	

Table 3 (contd)

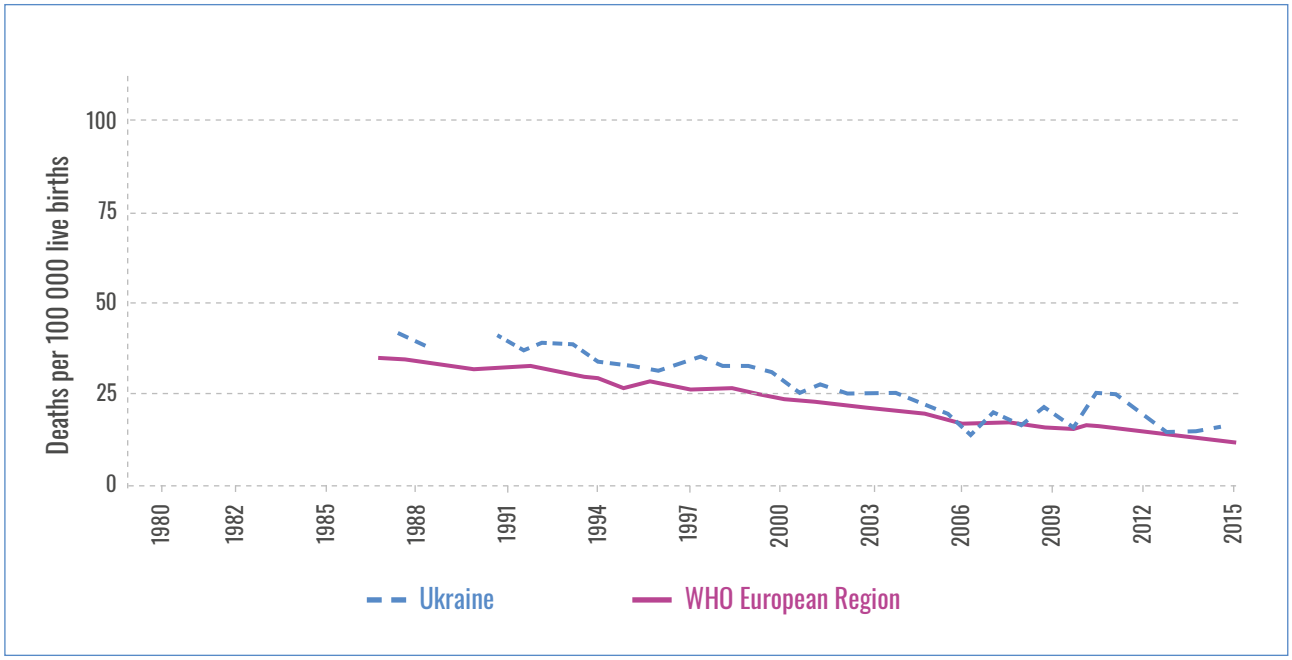
National indicator	Global SDG target	Status
Not stated as a national target	3.5 By 2030, strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol	
Reduce serious injuries and deaths from road traffic accidents, including through innovative practices of resuscitation, treatment and rehabilitation after road traffic accidents (3.6)	3.6 By 2030, halve the number of global deaths and injuries from road traffic accidents	
Not stated as a national target	3.7 By 2030, ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes	
Ensure UHC, quality immunization with innovative vaccines (3.7)	3.8. Achieve UHC, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all	
Not stated as a national target	3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination	
Reduce the prevalence of smoking among the population through innovative media to inform about negative effects of smoking (3.8)	3.a Strengthen the implementation of the WHO Framework Convention on Tobacco Control in all countries, as appropriate	
Not stated as a national target	3.b Support the research and development of vaccines and medicines for the communicable and noncommunicable diseases that primarily affect developing countries, provide access to affordable essential medicines and vaccines, in accordance with the Doha Declaration on the TRIPS Agreement and Public Health, which affirms the right of developing countries to use to the full the provisions in the Agreement on Trade-Related Aspects of Intellectual Property Rights regarding flexibilities to protect public health, and, in particular, provide access to medicines for all	
Reform health-care financing	3.c Substantially increase health financing and the recruitment, development, training and retention of the health workforce in developing countries, especially in least developed countries and small island developing States	
Not stated as a national target	3.d Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks	

Notes: green represents a high possibility of attainment of the target by 2030, orange the need for further acceleration in efforts to achieve the target and red that considerable efforts will be needed for the target to be achieved.

3.1.1 Reduce maternal mortality (SDG 3.1)

The maternal mortality ratio in Ukraine has mirrored the steady reduction within the Region; in Ukraine it decreased between 1981 and 2014 from 41 to 15 deaths per 100 000 live births (Fig. 8) *(15)*. More recent data show that this trend stayed at a plateau through to 2017 (19 deaths per 100 000 live births, point estimates) but that there has been an overall total reduction of 46% between 2000 and 2017 *(15)*. Ukraine's 2020 target for the maternal mortality ratio indicator of 11.8 has yet to be met.

Fig. 8. Maternal mortality ratio in Ukraine and the WHO European Region, 1980–2015



Source: WHO Regional Office for Europe, 2020 *(15)*.

The decline in the maternal mortality ratio in Ukraine is likely attributable, in part, to consistent improvements in the quality and accessibility of antenatal and postnatal care, as well as improved survival following the termination of pregnancies *(25,26)*. The share of births attended by health-care staff barely changed between 1989 (98.7%) and 2015 (99.9%), and rates of postpartum haemorrhage, a leading cause of maternal mortality worldwide, have also decreased *(10)*. However, because of the conflict in the eastern part of Ukraine, data collected after 2014 is incomplete; information from the Donetsk and Lugansk regions has been received irregularly and not in full.

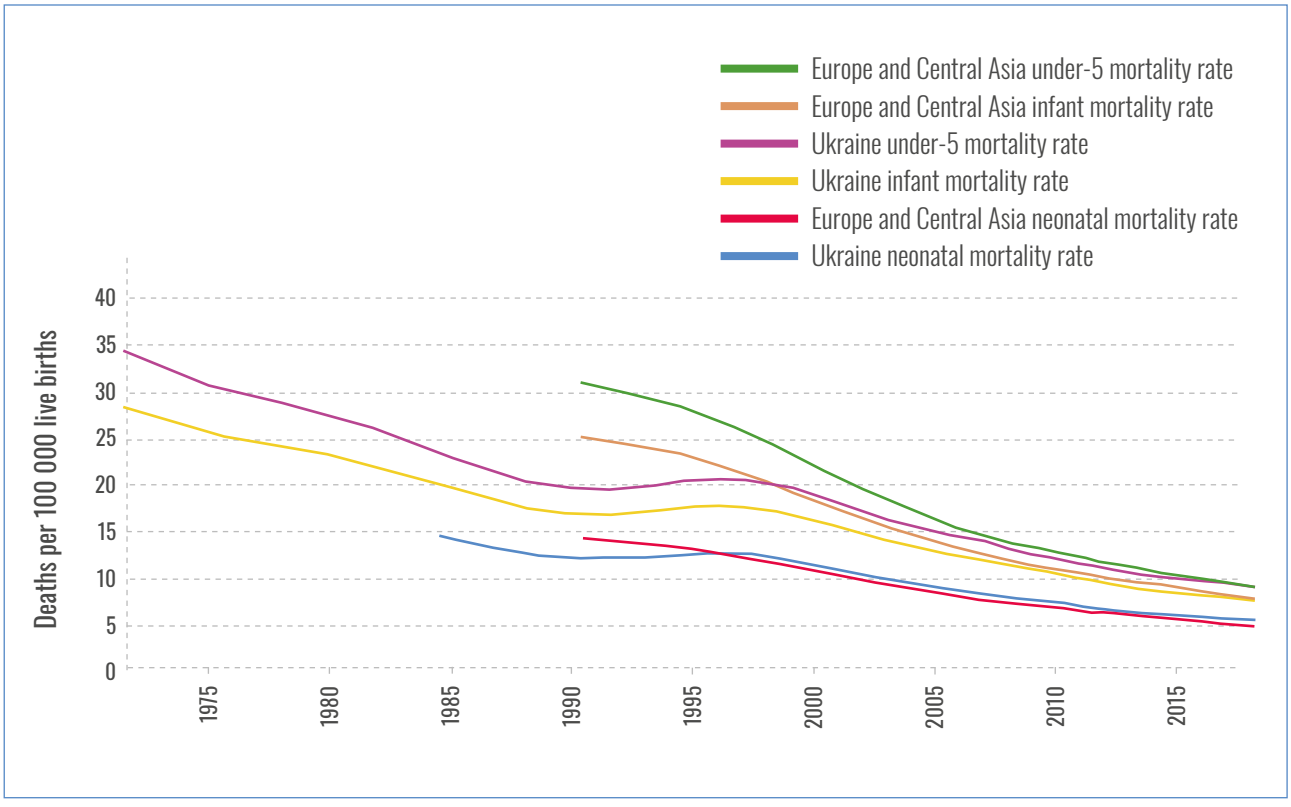
Despite these improvements in the maternal mortality ratio, challenges remain. In 2018, an 18% higher maternal mortality ratio was reported in urban settings compared with rural ones (Ministry of Health, communication 2019). This may be linked to the significant number of IDPs and ongoing conflict in eastern Ukraine *(27)*.

The inclusion of maternity health-care services in the medical guarantees programme is expected to further improve access to required maternity services and is an important part of the Ministry of Health's strategy, On Approving Priority Areas of Health Care Development for 2020–2022 *(28)*.

3.1.2 End preventable deaths of newborns and children under-5 years of age (SDG 3.2)

The under-5 mortality rate decreased from 19 to 9 deaths per 1000 live births between 1990 and 2018, exhibiting an annual rate of reduction of 2.8% (Fig. 9). A comparable slope of reduction was seen in the infant mortality rate, decreasing from 17 deaths per 1000 live births in 1990 to 7.5 in 2018. The neonatal mortality rate decreased from 12 deaths per 1000 live births in 1990 to 5 in 2018. All three curves in Ukraine showed increases during the 1990s and only returned to their 1990–1991 nadir levels by 1999–2000. When compared with the rest of the WHO European and Central Asian Region, where under-5 and infant mortality rates were 51–58% higher in 1990 than those in Ukraine, a greater annual rate of reduction occurred for both rates, ultimately reaching nearly the same rate by 2018. Neonatal mortality rates showed a similar trend. Overall, Ukraine's 2020 target for an under-5 mortality rate of 8.5 deaths per 1000 live births seems on track to be achieved, based on internationally reported data (national data indicated 8.3 deaths per 1000 live births in 2018).

Fig. 9. Mortality rates for infants and children under-5 years in Ukraine and regional averages, 2019



Note: data are total mortality for each group obtained from the Inter-agency Group for Child Mortality estimates for 2019.

Source: based on data in the Child Mortality Report 2019 *(29).*

National statistics show that the under-5 mortality rate was 20% higher in rural areas in 2018 than in urban areas (9.5 deaths per 1000 live births in rural areas compared with 7.8 in urban areas; Ministry of Health, compiled data). While no single cause can be identified, a relative lack of access to timely health care has been reported as health service coverage and timely referrals are not as extensive in rural areas of Ukraine as in urban areas *(30)*.

Since 2000 improvements in child health have been driven primarily by policies expanding immunization programmes and access to neonatal and infant care. Since 2012, Ukraine has centralized its procurement of vaccination-related goods and switched to a multiyear vaccine procurement and delivery cycle in order to predictably meet its vaccination demands from health-care facilities; this has occurred with the assistance of international organizations. However, coverage for immunizations has fallen (see Table 2) and in January 2019 Ukraine had the lowest vaccine coverage rates for all vaccinations among WHO European Region Member States *(13,15)*.

However, Ukraine had 110 500 cases of measles in 2018 and 2019, corresponding to 57.2% of all the cases reported in the WHO European Region in that period. The incidence reached 1302.05 cases per million population in 2019, more than 10 times the incidence for the Region *(19,30)*.

Measles outbreaks in Ukraine have been increasing. Although vaccination rates remained around 99% from 1990 to 2006, by 2016 Ukraine had one of the lowest vaccination rates against measles in the WHO European Region at 31%, down from 95% in 2008. As a result of the outbreak of political instability and conflict in 2014, shortages in the measles vaccine stock and previously ineffective or undelivered vaccines in certain areas, vaccination rates fell to well below the 93–95% herd immunity threshold *(31)*. This spurred a significant measles outbreak in Ukraine, with more than 114 800 cases since the most recent 2017 outbreak. While the incidence rate has decreased in response to national vaccination campaigns, more work remains to be done to fight vaccine hesitancy and to foster the life-course approach to vaccination in Ukraine.

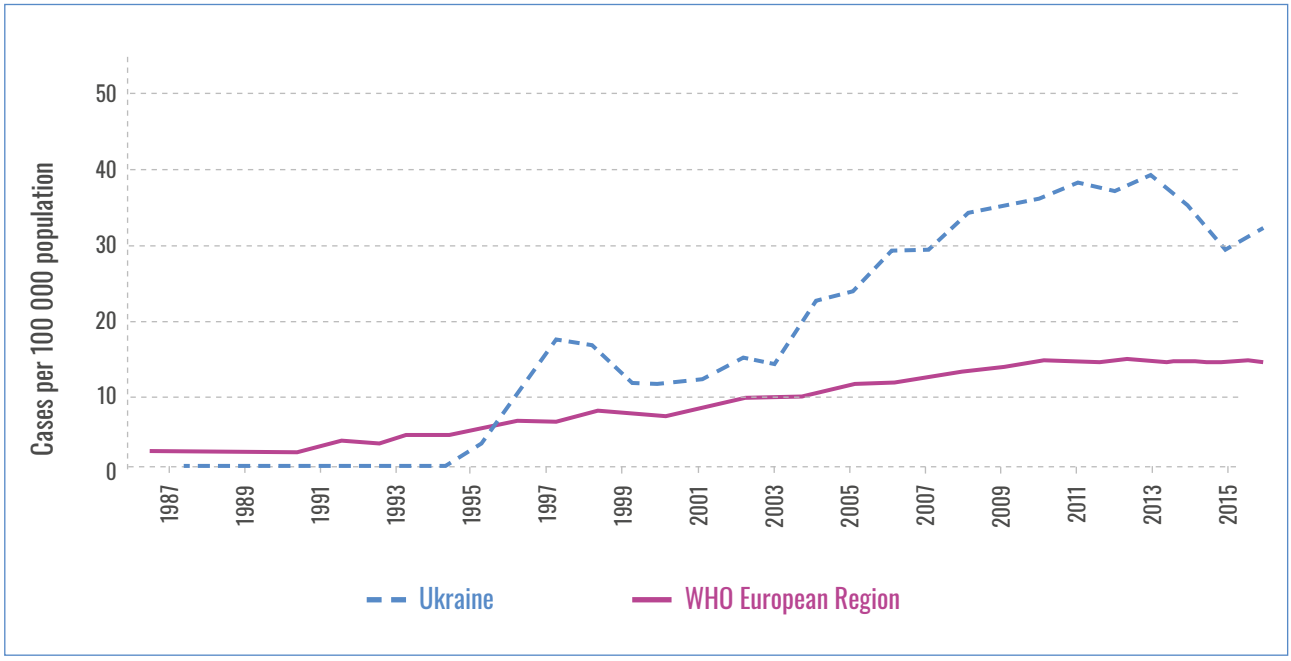
To accelerate the process, the Strategic Response Plan for the measles emergency in the WHO European Region for period September 2019 to December 2020 was initiated, which covered several countries including Ukraine where measles outbreaks were found *(32)*. The Plan calls for action to increase vaccination coverage through high-level advocacy for political and financial commitment on measles immunization; improved interactions between health workers and patients/caregivers for identifying and addressing vaccine hesitancy; measures to strengthen acceptance and encourage vaccination within susceptible groups; use of behavioural insights research to understand barriers and drivers to vaccination; and the development of interventions for increased vaccination uptake accordingly *(32)*. The Strategic Response Plan will be reviewed and, if necessary, updated towards the end of 2020.

3.1.3 End the epidemic of HIV/AIDS and TB and other communicable diseases (SDG 3.3)

SDG 3 encompasses malaria, neglected tropical diseases, hepatitis and waterborne diseases as well as HIV/AIDS and TB.

Rates of newly diagnosed HIV increased steadily in Ukraine from 14 cases per 100 000 population in 2003 to 40.8 new cases per 100 000 population in 2018 (Fig. 10) *(15,33)* The rate in 2018 was more than double the average for the WHO European Region (16.2 cases per 100 000) and the second highest rate in the Region *(33)*. The 2018 data indicated a male-to-female ratio for all new HIV diagnoses of more than 1.5; modes of transmission were 72% through heterosexual contact, 21% via intravenous drug use, 3% via men who have sex with men and less than 1% as mother-to-child transmission *(33)*.

Fig. 10. Rate of new HIV infection in Ukraine and the WHO European Region, 1986–2016

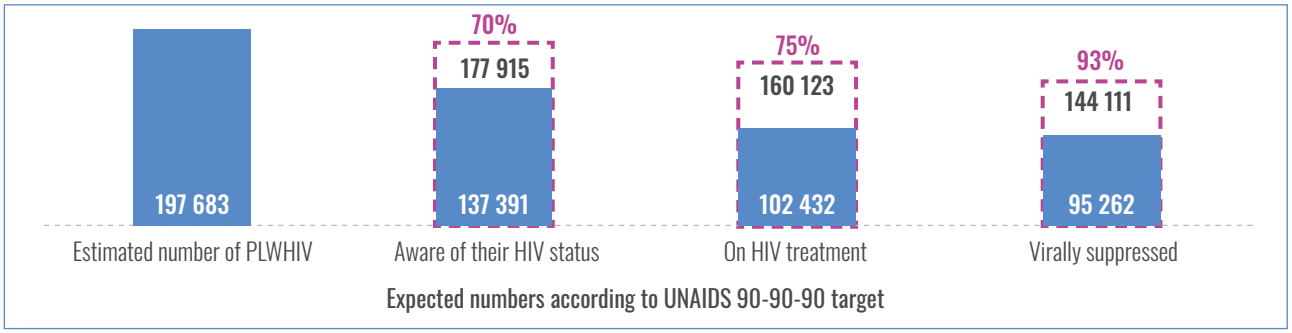


Source: WHO Regional Office for Europe; 2020 *(15).*

Despite these increases, there are signs of stabilization in Ukraine and recently introduced initiatives are making headway in reducing HIV transmission. Measures are being taken to reach the target for the number of patients diagnosed with HIV for the first time (target set for 2020 is 30.9 per 100 000 population). The Cabinet of Ministers of Ukraine in June 2019 adopted Resolution No. 497 on some issues of service delivery for HIV/AIDS risk groups and for people living with HIV. This allowed purchasing of public health services using the state budget instead of donor budgets to support people living with HIV. HIV/AIDS tests and screenings were included in the guaranteed package of primary care, and treatment schemes for HIV were optimized in 2018, enabling 102 432 people (compared with 74 780 people in 2016) to be covered by antiretroviral therapy (excluding those in territories not controlled by the Government). Ukraine has the biggest opioid substitution therapy programme in eastern Europe and central Asia and is one of the few countries in eastern Europe to start procurement of HIV prevention services using the state budget and to introduce pre-exposure prophylaxis for people at high risk of HIV transmission. In addition, the provision of prevention, control and treatment services for infectious diseases (HIV/AIDS, TB, hepatitis B and hepatitis C) was prioritized within the Programme of Medical Guarantees.

In 2017, Ukraine committed to the UNAIDS 90-90-90 fast-track targets and has made good progress towards achievement of these targets, increasing the number of people living with HIV who know their status from 132 800 (52%) in 2013 to 169 433 (71%) in 2019 (target 1) and scaling up provision of antiretroviral therapy to these people from 55 784 (42%) in 2013 to 122 697 (72%) in 2019 (target 2) (Fig. 11). Introduction of WHO recommendations on HIV testing and treatment in national legislation allowed a simplified HIV testing algorithm and optimized antiretroviral drug regimens, which resulted in up to 93% of those receiving treatment achieving viral load suppression (target 3). However, despite considerable progress in HIV response, there were still a large number of new HIV infections in 2018 and 30% of those infected were still unaware of their HIV status. Only 23% of those aged 15–24 years correctly identified ways of preventing the sexual transmission of HIV.

Fig. 11. Ukraine progress towards the 90-90-90 targets, 2019



Notes: the numbers in the white boxes are the expected numbers based on the 90-90-90 target; the numbers on the blue box are the actual numbers achieved; the percentages indicate the percentages achieved out of the proceeding target number.

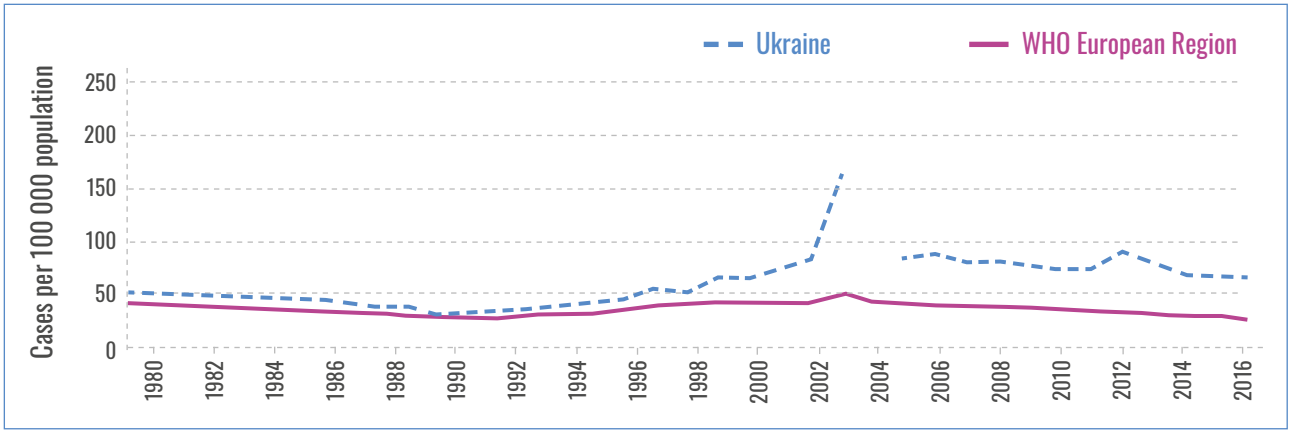
Source: data provided by the Centre for Public Health, 1 January 2019.

In 2018, UNAIDS reported that 240 000 people were living with HIV; 36% of these were women. Among those aged 15 years and over, 52% were on treatment, compared with more than 95% of children aged 0–14 years living with HIV (34). More than 95% of pregnant women living with HIV accessed antiretroviral medicine to prevent mother-to-child transmission. Early infant diagnosis (percentage of HIV-exposed infants tested for HIV before 8 weeks of age) was 65%. In 2017, the percentage of people living with HIV and TB who were being treated for both diseases was 55.0%, increased from 44.9% in 2015 *(34).*

In November 2019, the Government of Ukraine approved the National Strategy on HIV/AIDS, Tuberculosis and Viral Hepatitis Response for the period until 2030, which will serve as a guide to end HIV/AIDS as a public health threat *(35)*.

While the burden of TB in all forms has been steadily decreasing in the WHO European Region, the opposite is true in Ukraine. The incidence of TB has been persistently above the average for the Region since 1980, with 84 cases per 100 000 in 2005, compared with 42 in the Region, and 65 cases per 100 000 in 2016, when the Region average was 28 (Fig. 12). Notification rates were highest in those aged 15–44 years, and 22.4% of total TB infections in 2017 were in patients with TB/HIV coinfection *(15)*. Of great concern is the high prevalence of multidrug-resistant TB; 34.9% in 2017, with 16.6% having extensively drug-resistant TB. Poor treatment outcomes, with 7.8% failure rates and 9.5% mortality rates (2017) remain causes for concern.

Fig. 12. Incidence of newly diagnosed TB (all forms) in Ukraine and the WHO European Region, 1980–2016



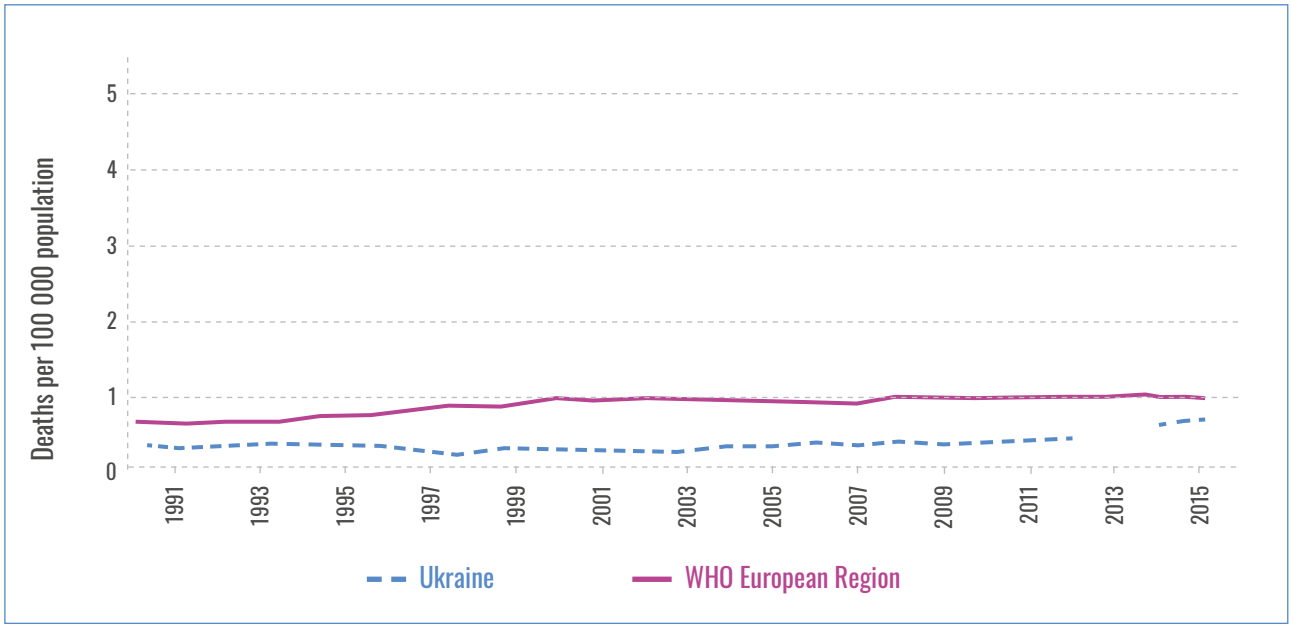
Source: WHO Regional Office for Europe; 2020 *(15).*

Key challenges faced by Ukraine in tackling the rise of TB have included limited case detection, laboratory capacity, limited capacity for directly observed therapy (DOT), inadequate TB medication supply management and an overreliance on hospital-based treatment and financing *(36)*. The national TB budget has decreased from US$ 75 million in 2015 to US$ 60 million in 2019 and it is suggested that increased prioritization of funds to address persistently high TB incidence rates would be helpful *(37)*. However, financing of TB control activities remains the purview of oblast health administrations and, consequently, commitment and capacity varies from oblast to oblast.

Efforts have been ongoing to reorient Ukraine's TB approach to a comprehensive disease management model. Increased standardization in clinical treatment protocols was introduced in 2017, and the procurement of medicines for TB treatment has been fully financed from the state budget since the last budget. New drug regimens have been registered to provide treatment for patients with multidrug-resistant TB and for the early detection of TB, including multidrug-resistant TB, and 71 modern GeneXpert machines were delivered in 2018–2019 to 66 health-care facilities to enable diagnosis of TB within 2–4 hours.

Between 1991 and 2005, the age-standardized death rate for viral hepatitis in Ukraine remained between 0.14 and 0.59 deaths per 100 000, which is consistently below the average for the WHO European Region (Fig. 13) *(15)*. Other estimates show a spike between 2013 and 2015 of 34% in the death rate (0.29 to 0.39 deaths per 100 000) *(38)*. Since 1995, men have been more than twice as likely to die from hepatitis (all subtypes) than women in Ukraine *(39)*.

Fig. 13. Age-standardized death rate for viral hepatitis in Ukraine and the WHO European Region, 1991–2015



Source: WHO Regional Office for Europe; 2020 *(15)*.

Findings from recent reviews of viral hepatitis response in Ukraine have found three main areas requiring improvements *(40,41)*. First, the governance of response efforts has been found to be fragmented. The Ministry of Health does not have a clear mandate to manage protocols and procurement at all levels for hepatitis response and improved coordination is needed between testing, treatment and care services provided by various health sector stakeholders. Secondly, surveillance

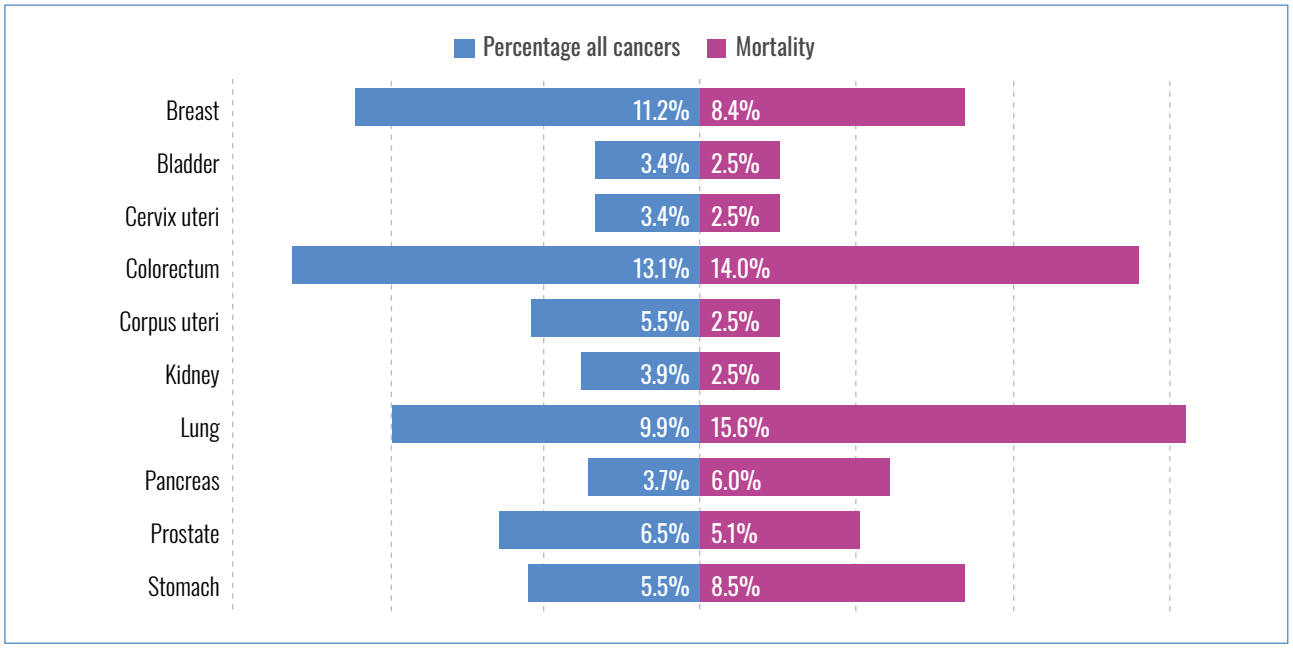
mechanisms need to be upgraded to provide more strategic data insights than are currently available in order to detect outbreaks. For example, no nationally representative serological survey for hepatitis B virus surface antigen (indicating infection with hepatitis B) has been carried out since the late 2000s for cohorts of children who have been vaccinated. Thirdly, vaccination and prevention efforts need to be scaled up. Although hepatitis B vaccine coverage has improved since dipping to 22–26% between 2015 and 2016 (third dose coverage rates), supply chain difficulties, vaccine hesitancy and insufficient health workforce training are among the complex issues that have led to insufficient vaccination rates. Additionally, poor compliance and standardization has been noted for infection prevention and control measures.

3.1.4 Reduce mortality from NCDs (SDG 3.4)

NCDs are the main causes of premature death in Ukraine and exposure to risk factors such as tobacco use and harmful alcohol use is common. Overall, NCDs accounted for six out of the top 10 causes of death, nine of the top 10 causes of premature death from 2007 to 2017 (see Figs 4 and 5) and 84% of all annual deaths *(42)*. The burden of the major NCDs (cardiovascular diseases, cancer, type 2 diabetes and chronic respiratory disease) in Ukraine have remained above the WHO European Region average for several decades, although this has been declining since a relative peak in 2005 of 867 deaths per 100 000 population, to a low of 617 deaths per 100 000 in 2016.

According to WHO data, cancer caused 30.4% of all NCD-linked premature deaths in 2018. The most common types of cancer were colorectal (13.1%), breast (11.2%) and lung (9.9%) *(43)*. Lung cancer and colorectal cancer are responsible for 15.6% and 14% of deaths, respectively, followed by stomach (8.5%) and breast (8.4%) (Fig. 14).

Fig. 14. The 10 most common cancers in Ukraine, 2018



Note: cancer incidence is calculated as the percentage of all cancer cases, with the respective mortality percentages.

Source: WHO, 2019 *(43)*.

Morbidity and mortality rates for most of the NCDs are closely linked to the high prevalence in Ukraine of alcohol consumption and tobacco use, in addition to global trends of decreases in physical activity and unhealthy diets. However, Ukraine does not yet have nationally representative data on major risk factors for NCDs; this impedes both sound decision-making and proposal of tailored interventions to improve the situation.

Public policy and surveillance interventions have, however, contributed to reducing NCD incidence in recent years. In April 2017, the Affordable Medicines Programme was launched. This allowed patients diagnosed with cardiovascular diseases, type 2 diabetes or bronchial asthma to receive medications without charge or at a small cost. The National Action Plan on Non-communicable Diseases Prevention, Control and Health Promotion was adopted in 2018 *(24)* and the STEPwise approach to surveillance (STEPS, a standardized method for collecting, analysing and disseminating data on NCDs and their risk factors) began in 2019.

These efforts to reduce the prevalence of NCDs in Ukraine have had positive effects. Among women aged 30–59 years, progress has been made in reducing deaths from NCDs: in 2018 the target for reducing the number of deaths from cerebrovascular disease was reached (25.5 deaths per 100 000 women); the number of deaths from breast cancer had decreased, reaching 24.0 deaths per 100 000 women in that age group; and the number of deaths from cervical cancer was reduced to 11.5 deaths per 100 000 women of that age group (target was 10.1; Ministry of Health of Ukraine, personal communication 2019).

Nevertheless, closer attention needs to be paid to the health of rural men and women, as the probability of premature mortality is higher in rural settings, with men living in rural areas having the highest probability of premature mortality among all groups. Overall, the probability of premature mortality for men is double that for women; consequently, further gender-based responses to NCDs would help to narrow the life expectancy gap between men and women.

Even though Ukraine is one of six countries in the Region with a stand-alone mental health policy, significant progress is required in scaling up mental health services and improving the care for patients with mental health disorders on every level. Human resources for mental health are a major issue; Ukraine has the second lowest number of mental health workers in the WHO European Region (9.0 workers per 100 000 population) *(44)*. Years of socioeconomic hardship and periods of political instability have further decreased the resources for mental health, impacting service availability and uptake and health promotion and prevention efforts.

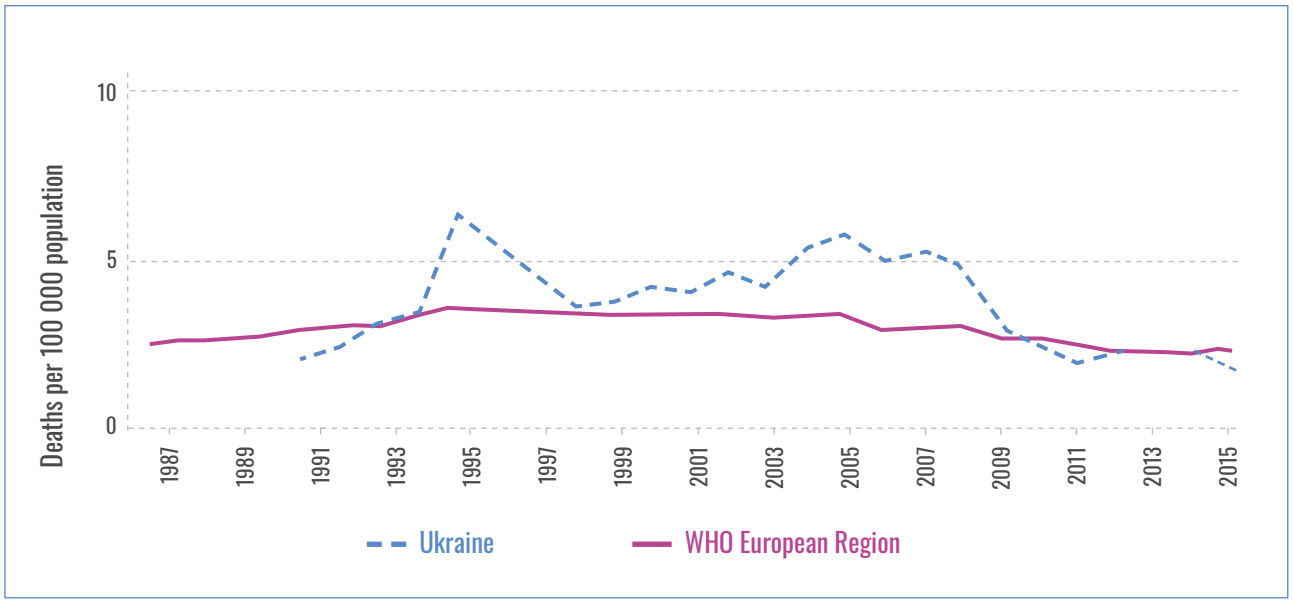
The conflict in the east of Ukraine has also had a deleterious effect on the mental health of many people. A large treatment gap in mental health and psychosocial support among IDPs in Ukraine is reported, creating the need for a scaled-up, comprehensive and trauma-informed response to provision of mental health and psychosocial support as well as overall health system strengthening *(45)*.

Nevertheless, in 2017 the Mental Health Care Development Concept Note in Ukraine up to 2030 was endorsed *(46)* and the Mental Health Action Plan was developed. These commitments paved the way for supporting the rollout of community-based mental health services, enhancing the skills and licensing of health professionals to address mental health issues, and decentralizing governance and resources for mental health *(47)*.

3.1.5 Strengthen prevention and treatment of substance abuse (SDG 3.5)

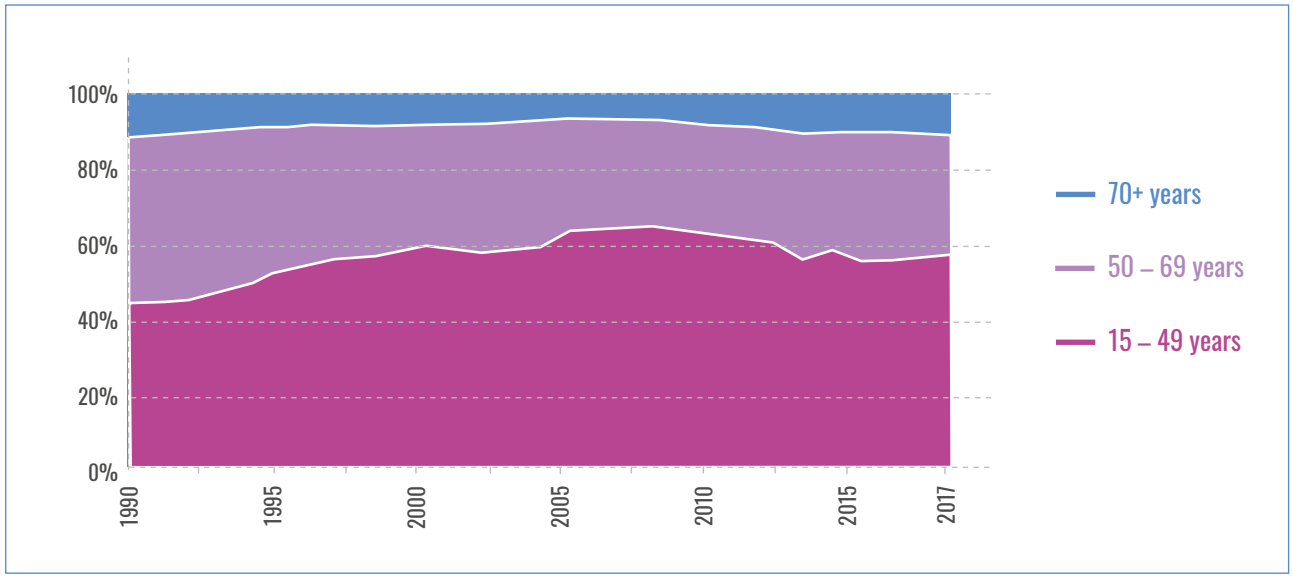
The standardized death rate from psychoactive substance use (including alcohol and narcotic drugs) peaked in 1995 in Ukraine at 6.23 deaths per 100 000 population; by 2015 it had fallen to 1.69, which was below the average for the WHO European Region (Fig. 15) *(15)*. Global estimates of premature deaths from illicit drug use in Ukraine have, on average, remained relatively unchanged between 1999 and 2017, at 57% for those aged 15–49 years and 33% for those aged 50–69 years (Fig. 16).

Fig. 15. Age-standardized death rate from psychoactive substance use, 1987–2015



Source: WHO Regional Office for Europe; 2020 *(15)*.

Fig. 16. Premature deaths from illicit drug use by age groups, 1990–2017



Source: Ritchie & Roser, 2018 *(48)*.

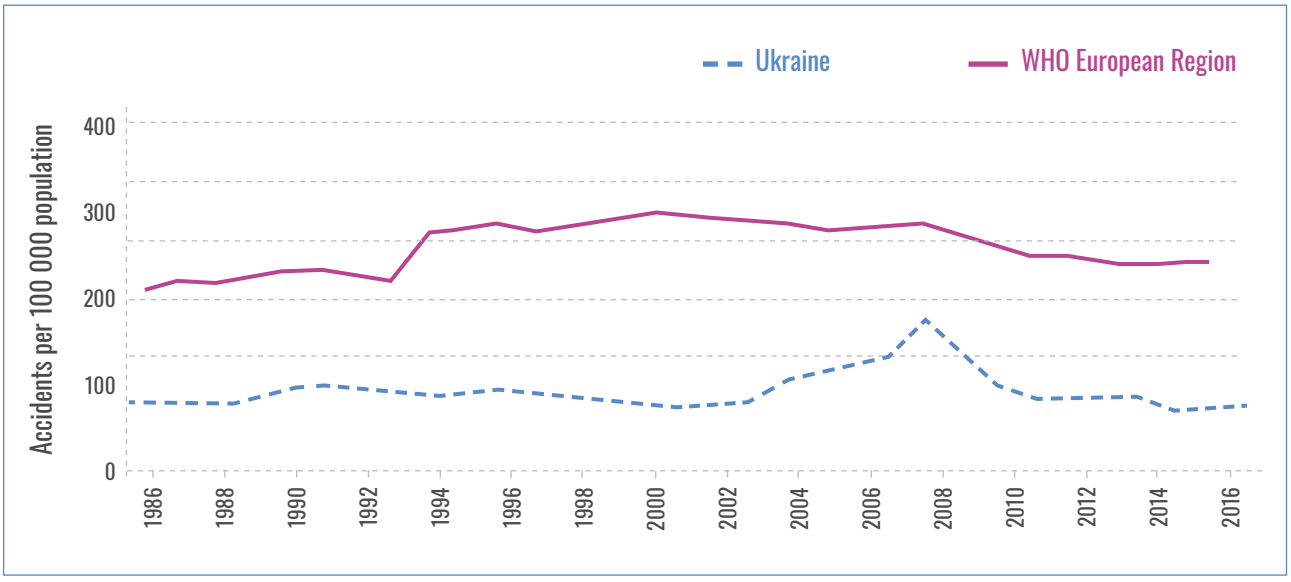
In 2013 the Government of Ukraine adopted the State Drug Policy Strategy for the period up to 2020 *(49)*, which outlined a humanistic, people-centred approach for State and society to tackle the problems associated with drugs in Ukraine. The Strategy focused on the development and application of evidence-informed methods for harm reduction, drug prevention, treatment, rehabilitation and reintegration of people who use drugs, and the prevention of negative health and social consequences of drug use. The Strategy also highlighted the need to strengthen international cooperation and to develop research and scientific support for the development and implementation of a drug policy in Ukraine. As a result of the Strategy, the country also shifted its focus to treatment and recovery, recognizing that strong multiagency collaboration was needed to achieve and sustain a life free from drugs.

The current Strategy has a balanced and integrated approach aimed at reducing both supply and demand; it identifies treatment and preventive measures as priorities and establishes a reasonable balance between control and licensing components of drug control. The linked Action Plan for 2019–2020 was endorsed by the Government in February 2019 and is currently being implemented *(50)*.

3.1.6 Reduce deaths and injuries from road traffic accidents (SDG 3.6)

SDG 3.6 is unusual among the SDG targets in having a goal date of 2020 instead of 2030; the goal of halving the global number of deaths from road incidents from 2010 levels by 2020 was set to align with the United Nations Decade of Action for Road Safety (2011–2020) *(51)*. Compared with regional and past national data, Ukraine has maintained a low number of deaths and injury from road traffic accidents but has not significantly reduced their levels, particularly since 2010 (Fig. 17) *(15)*. In 2015 there were 71 accidents per 100 000 population in Ukraine that caused injuries, which was less than one third of the average for the WHO European Region (239) (Fig. 17) *(15)*. Estimates for total deaths from road traffic accidents were reduced by 45% in Ukraine between 1990 and 2017 (12 185 deaths in 1990 versus 6681 in 2017) *(52)*.

Fig. 17. Road traffic accidents causing injuries, 1985 to latest available year



Source: WHO Regional Office for Europe; 2020 *(15)*.

International estimates show an average number of accidents with injury of 80 per 100 000 population between 2000 and 2016, suggesting that additional improvements would bring the target of 70 accidents within reach. National statistics show that the target for reducing the number of deaths from traffic accidents was reached in 2018 (10.5 deaths per 100 000 population, with a target of 11.0).

On 14 October 2019 a law on road safety management was adopted that provided for an audit of safety on public urban and rural roads *(53)*. Through this, Ukraine became the first post-Soviet country to incorporate Directive 2008/96/EU *(54)* on road infrastructure safety management into its legislation. In addition, later in October 2019, a law establishing liability for failure to use child seats was adopted (Law on amendments to the code of administrative offenses for establishing responsibility for violations of the rules of carriage of children *(55)*). Alongside these legal initiatives, there have also been infrastructure solutions to reduce the risk of road accidents, such as creation of roundabouts and security islands.

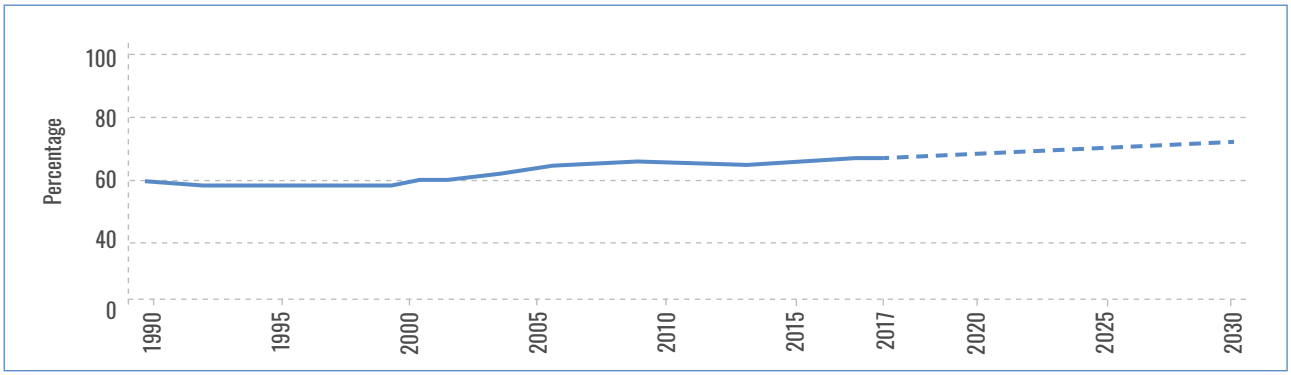
A pilot project was initiated in 2019 in five oblasts and the city of Kyiv to reform emergency and disaster medicine, with further planned expansion to all oblasts in the following year. The project had the goal of reducing mortality and disability rates among the population as a result of emergency situations, including road traffic accidents. The provision of emergency services (from prehospital to hospital-based emergency care) has also been formally made a priority in the Ministry of Health's 2020–2022 plan on priority areas for health-care development.

3.1.7 Ensure universal access to sexual and reproductive health-care services (SDG 3.7)

Sexual and reproductive health-care services within SDG 3.7 include family planning, information and education, and the integration of reproductive health into national strategies and programmes.

International reporting on indicators related to SDG 3.7 in Ukraine suffers from sporadic reporting, with the most recent available data being for 2012: demand for family planning satisfied by modern methods (68%); unmet need for contraception among married women of reproductive age (4.9%); and contraceptive prevalence by any methods in women aged 15–49 years (65.4%). The most recent IHME estimates of the proportion of women of reproductive age (15–49 years) who have their need for family planning met with modern contraception methods show a clear increase from 58.5% in 1999 66.8% in 2017 (Fig. 18) *(56)*.

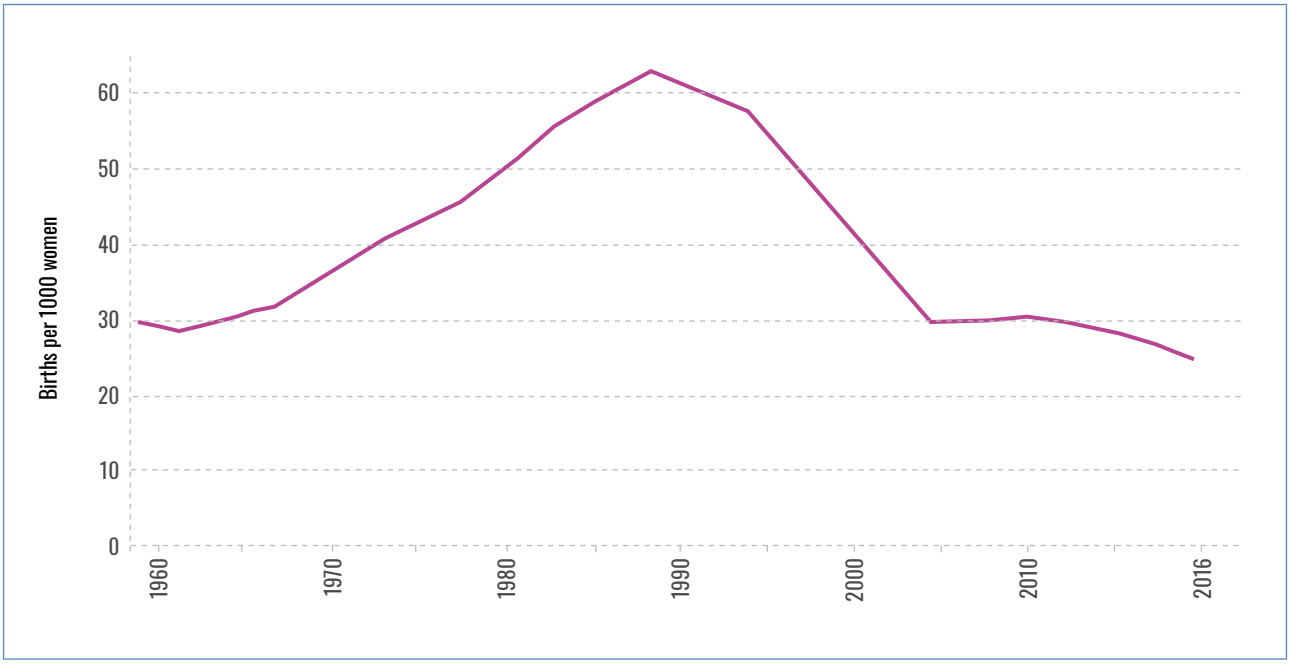
Fig. 18. Proportion of women of reproductive age (15–49 years) who have their need for family planning met with modern contraception methods in Ukraine, 1990–2017 and projection to 2030



Source: IHME, 2019 *(56)*.

Although sexual and reproductive health services are widely available in Ukraine, significant variations in their accessibility and quality result in an unequal distribution of health benefits for adolescents. The adolescent birth rate halved in the decade following independence, from 58.8 births per 1000 women in 1991 to 29.3 in 2002, and further decreased to 23.7 in 2017 (Fig. 19) *(10)*. Despite these improvements, the adolescent birth rate remains high by regional standards, and since 2015 there has been a steady increase in sexually transmitted infections among people under 19 years of age *(57)*. These indicators are worse for those young people who are not in school, are unemployed or are living with disabilities.

Fig. 19. Adolescent birth rate (aged 15–19 years), 1960–2016



Source: World Bank, 2018 *(10).*

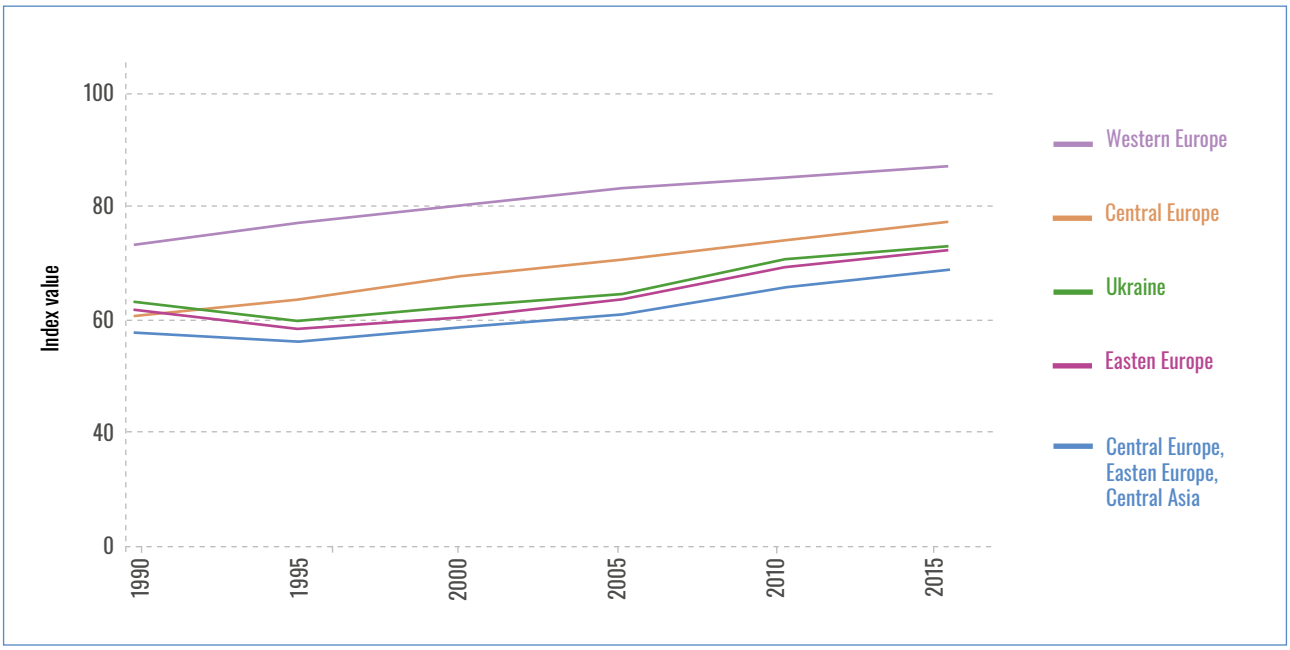
3.1.8 Achieve UHC, including financial risk protection and access to quality essential health-care services (SD 3.8)

UHC refers to a country's ability to ensure that all people have access to needed health services (including prevention, promotion, treatment, rehabilitation and palliation) of sufficient quality to be effective while also ensuring that the use of these services does not expose the user to financial hardship.

The Healthcare Access and Quality Index[2] for Ukraine has shown an average improvement in access and quality of 1% per year from 2000 to 2016, reaching 74.6 in 2016 *(13)*. Ukraine has mirrored regional gains in amenable mortality improvement *(58).* Its index score of 72.7 in 2015 lagged behind the western and central Europe means but was within a margin of error of its eastern European counterparts (Fig. 20) *(59)*. Unfortunately, these data do not capture the likely decline that occurred following 2014; for this, the UHC service coverage index provides additional insight (Fig. 21).

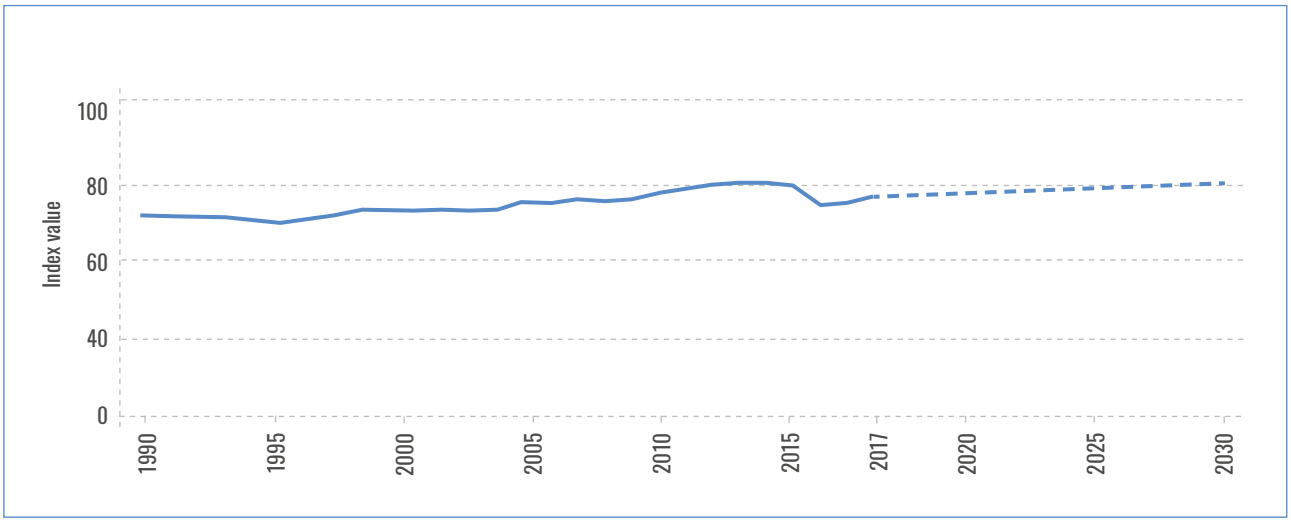
[2] *The Healthcare Access and Quality Index provides a summary measure for a given location based on risk-standardized mortality rates or mortality-to-incidence ratios from causes that, in the presence of quality health care, should not result in death (also known as amenable mortality).*

Fig. 20. Healthcare Access and Quality Index in Ukraine and regional comparators, 1990–2015



Source: Global Change Data Lab, 2019 *(59).*

Fig. 21. Coverage of essential health services in Ukraine as defined by the UHC service coverage index, 1990 to 2017 and projection to 2030



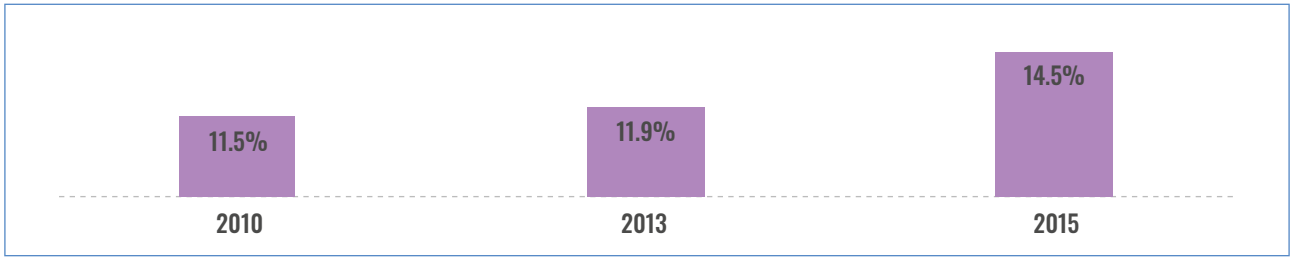
Source: IHME, 2019 *(56).*

The UHC service coverage index[3] is an indication of coverage based on 14 tracer indicators. Estimates by IHME show a dip after 1991 followed by a recovery by 1998 to pre-independence levels. Annual increases were recorded until 2014 (index, 75.3) when a precipitous fall coincided with political instability and the onset of conflict in eastern Ukraine; in 2015 the index value was reduced to 67.7, close to the value a decade earlier (66.8 in 2003) *(60)*. Although there has been a rising trend in the index following 2015, projections do not show a return to 2014 levels until 2026 *(56)*.

[3] *Average coverage of essential services among the general and the most disadvantaged population based on 14 tracer interventions organized by four components of service coverage: (i) reproductive, maternal, newborn and child health; (ii) infectious diseases; (iii) NCDs; and (iv) service capacity and access. The index uses a scale of 0 to 100 and values are computed as the geometric mean of the tracer indicators.*

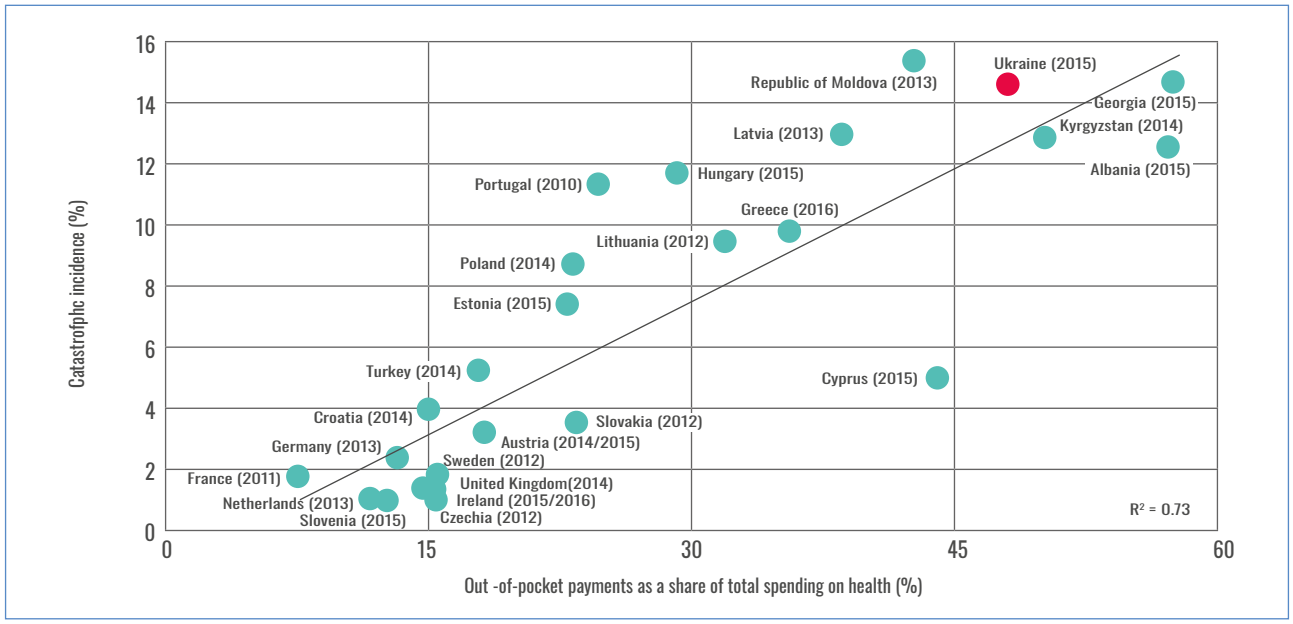
Declines in service coverage are linked to health access and the affordability of care. Ukraine's health system has suffered from underfunding and economic declines since the early 2000s that have resulted in high OOP payments. Between 2010 and 2015, the proportion of households with impoverishing OOP payments increased from 7.6% to 9.0%, while the proportion with catastrophic OOP payments rose from 11.5% to 14.5% (Fig. 22) *(60)*. Ukraine was one of the top three Member States in the Region with the highest catastrophic incidence percentage in 2015 and among the top four with the highest OOP payments as a share of total spending on health (Fig. 23). National data tracking the population's share of general health expenditure has shown a range between 47.5% and 52.3% of total health expenditure between 2015 and 2017, with a 2020 target of 40.0% that is unlikely to be met given current trends, although Government projections expect the indicator to be met by February 2020.

Fig. 22. Share of households with catastrophic OOP payments



Source: Goroshko et al., 2018 *(60)*.

Fig. 23. Catastrophic spending on health and OOP share of total spending on health in 25 WHO European Region Member States, latest year available



Note: R^2 is the coefficient of determination; data for OOP payment and catastrophic spending are from the same year for each Member State.

Source: Goroshko et al., 2018 *(60)*.

A history of low public health expenditure, fragmented distribution of health financing and resources and a culture of informal payments has perpetuated a system where private payments make up for public health financing and resource shortfalls, despite legislation mandating publicly financed health services to be

free at the point of care. Ukraine's health transformation agenda recognized these deficiencies and set health financing reforms as one of its major goals; this has led to a new national health financing programme, centralized procurement and an initiative for primary health care.

In November 2016, the Government of Ukraine initiated a major transformation of the health-care system and approved the Concept of Reforming of the Health Care Financing. Almost a year later in October 2017, the Ukrainian Parliament adopted the Law on state financial guarantees of medical services to the population *(61)*, which defined new principles of financing medical services. In particular, health-care reform envisaged the separation of the functions of the purchaser and provider, the introduction of the programme of medical guarantees for the population, the introduction of new payment methods for medical services and a new approach to collection of health data.

The NHSU was launched in 2018 as a single national purchaser and from April 2020 has contracted 1546 public and private health-care institutions and self-employed therapists to provide primary health care, and 1645 public and private health-care institutions to provide secondary health care *(62)*. Patients can choose their health-care providers regardless of the form of ownership; the NHSU covers the state guaranteed package of services, which includes primary medical care, emergency medical care, secondary care (inpatient and outpatient), rehabilitation, palliative care and diagnostics. In addition, medications related to the most prevalent chronic diseases, including cardiovascular diseases, asthma, and type 2 diabetes, remain free of charge or at a greatly reduced price from that in the Affordable Medicine Programme *(61)*.

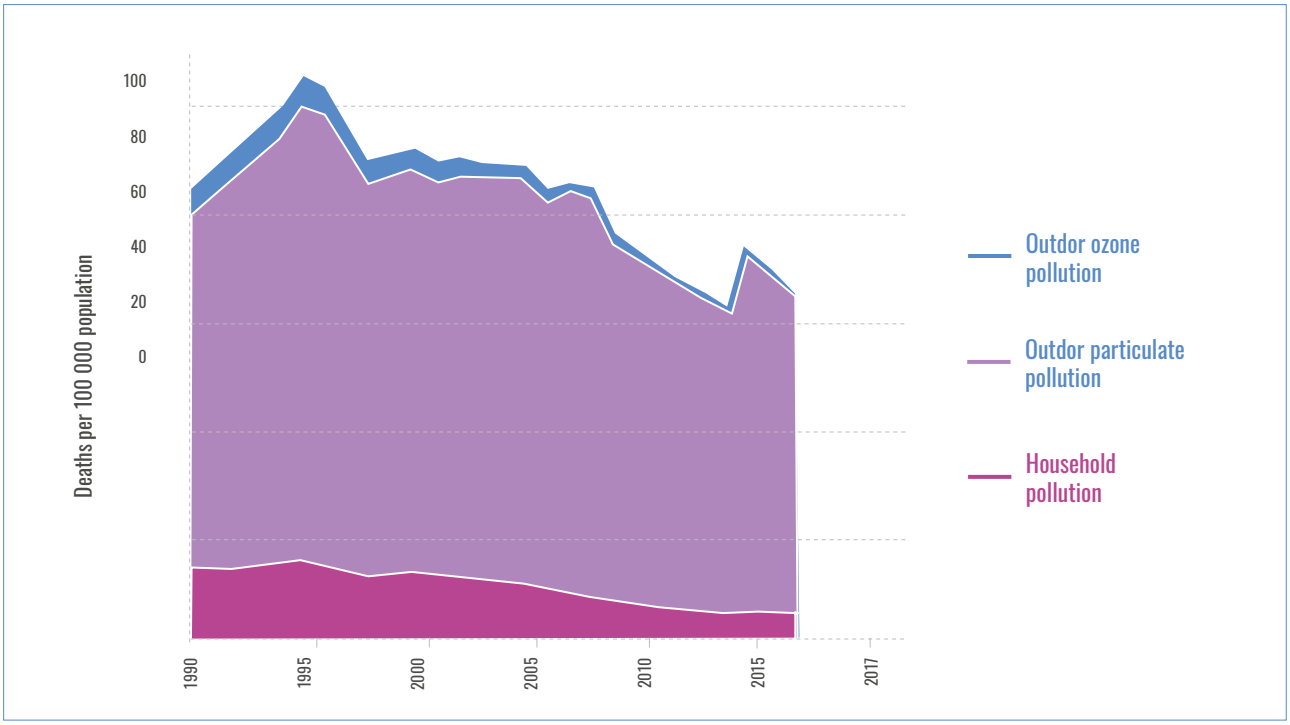
The health system transformation is intended to improve the health and well-being of the population, reduce health inequalities, strengthen public health services and ensure a people-centred health system that is universal, equitable, sustainable and of high quality. It is intended to ensure access to good-quality health services and increased financial protection for the population and, as a result, reduce barriers in accessing health-care services and support achievement of UHC in Ukraine.

3.1.9 Reduce deaths and illness from hazardous chemicals and pollution (SDG 3.9)

More than 80% of people living in urban areas, and 91% of the world's population in low- and middle-income countries such as Ukraine, are exposed to air quality levels exceeding WHO guideline limits *(63)*. As the second leading cause of deaths from NCDs, air pollution contributed to 550 000 deaths in the WHO European Region in 2016 and has been identified as a significant risk factor for ischaemic heart disease, stroke, chronic obstructive pulmonary disease and lung cancer *(64)*. Recently published analyses of air pollution readings from 2014 to 2016 in the Kharkiv and Dnipro regions (part of the Donetsk–Prydnistrovsky economic macrodistrict that hosts many metallurgy and machine-building companies) found that noncarcinogenic risk from atmospheric air pollution in all studied cities exceeded permissible levels *(65)*.

Age-standardized death rates from outdoor pollution have declined from a peak of 104.25 deaths per 100 000 population in 1995 to 64.19 deaths per 100 000 population in 2017 (Fig. 24) *(66)*. The decline has been primarily achieved through decreases in the proportion from household pollution (15.59% in1990 to a low of 7.6% in 2017) and outdoor ozone pollution (5.99% in 1990 to 2.27% in 2017); 90% of the deaths from 2015 to 2017 was from outdoor particulate pollution.

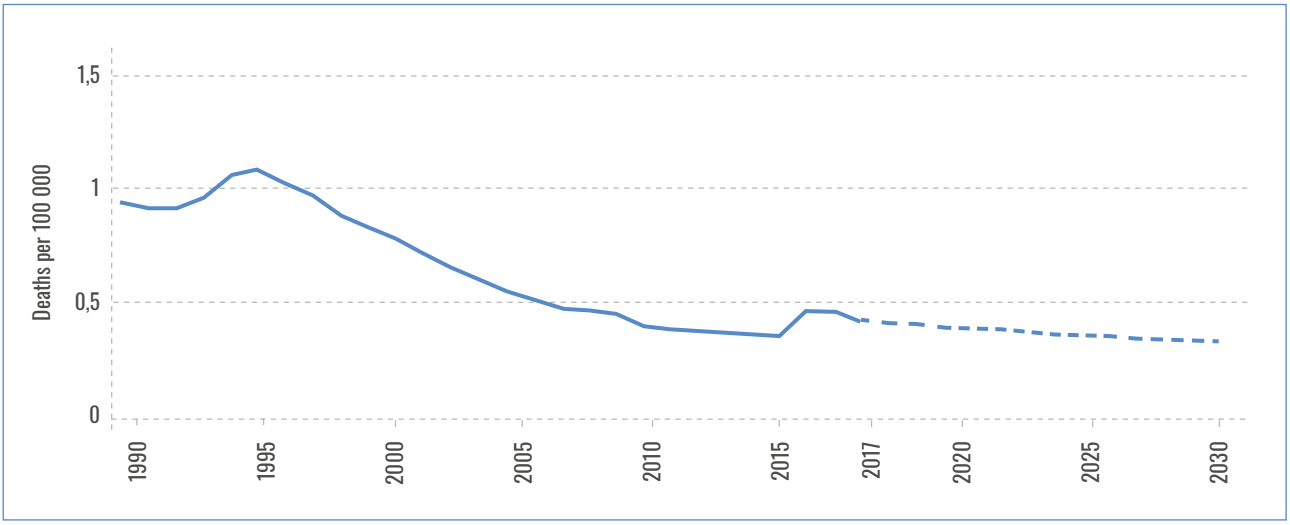
Fig. 24. Age-standardized death rates attributable to air pollution in Ukraine, 1990–2017



Note: household pollution is from indoor fuel usage.
Source: Global Change Data Lab, 2019 *(63).*

Similar to the death rate from air pollution, mortality linked to unsafe water, sanitation, and hygiene (WaSH) peaked in 1995 at 1 death per 100 000 people and reached a low in 2016 of 0.32 deaths per 100 000 people (Fig. 25) *(56)*. Disaggregating this into component indicators of deaths attributed to an unsafe water source *(67)* and deaths from unsafe sanitation *(68)* allows for regional comparisons. Both showed a similar pattern, with a 16–20% increase between 1992 and 1994, then a steady decrease in Ukraine from 1994 onwards until, by 2014–2015, the increase was only 0.02 deaths per 100 000. By 2017 values in Ukraine were similar to the averages for eastern Europe.

Fig. 25. Mortality rate attributable to unsafe WaSH in Ukraine, 1990 to 2017 and projection to 2030



Source: IHME, 2019 *(56).*

More than 2.3 million people in 2018 received assistance from the WaSH cluster in Ukraine, primarily in Donetsk and Luhansk regions of Ukraine. Overall, in the Government-controlled areas of Luhansk and Donetsk, 51% of people needed support for WaSH issues. This figure rose to 68% for people living within 20 km of the contact line and 86% for people living in rural areas; 66% of households with disabled people need assistance, well above the average value *(69)*.

Children in these regions are particularly affected by unsafe WaSH conditions. Mortality rates for children under the age of 15 years living in protracted conflicts reveal a three-fold increased risk of death from water-related diseases compared with their risk of death from violence *(69)*.

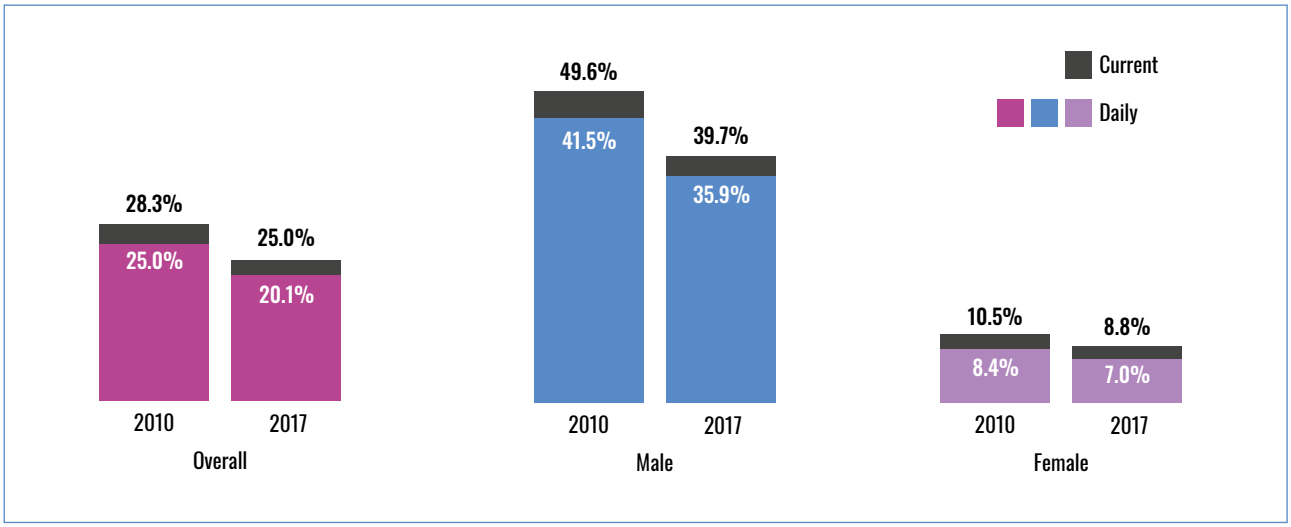
3.1.10 Strengthen tobacco control under the WHO Framework (SDG 3.a)

Tobacco use is one of the main causes of preventable NCDs and premature deaths, and the introduction of comprehensive measures to reduce tobacco use has proven effective in many countries. All these measures are included in the WHO Framework Convention on Tobacco Control, which Ukraine ratified in 2006. The need to implement the provisions of the Convention was also included in the Association Agreement between Ukraine and the European Union of 2014 *(70)*, which is another impetus to move towards the fight against tobacco.

Since 1996 Ukraine has legislated bans on tobacco advertising, promotion and sponsorship and has worked to strengthen enforcement, including further amendments to the legislation made in 2012 *(71)*. In addition to bans on direct advertising (except for advertising on the Internet and at point of sale), tobacco companies are not allowed to publicize their activities or submit contributions (including in-kind donations) to smoking prevention campaigns. While a number of the Convention's recommended measures have been implemented in Ukraine, compliance has been also described as moderate and as a result smoking remains prevalent *(72)*.

Between 2010 and 2017, prevalence of adults reporting current tobacco use declined from 28.3% to 25% and of daily smoking from 25% to 20.1%. As in many countries of the Region, more men smoke than women, with men almost five times as likely to smoke as women: 39.7% of men compared with 8.8% of women were current smokers, and 35.9% of men compared with 7% of women were daily smokers in 2017 (Fig. 26) *(73)*. In comparison, prevalence of current tobacco smoking among those aged 13–15 years was 13.5% in 2017 *(74)*. Use of e-cigarettes in this group was reported as 18.4% for both sexes, which is more than 10 times higher than for adults (Table 4) *(72)*. Current legislation does not have a comprehensive definition of smoking, and shisha waterpipes and novel tobacco and nicotine products are growing in popularity and not clearly banned; therefore, decision-makers will need to pay additional attention to these areas and revise tobacco policies to address the issues.

Fig. 26. Prevalence of current and daily tobacco smoking in men and women, 2010 and 2017



Source: WHO Regional Office for Europe, 2017 *(73).*

Table 4. Tobacco use prevalence in Ukraine, 2018

	Tobacco use		Tobacco smoking		Cigarette smoking		Smokeless tobacco use		E-cigarette use	
	Current	Daily	Current	Daily	Current	Daily	Current	Daily	Current	Daily
Global Adult Tobacco Survey, 2017 (15 years and over)										
Male	40.1	–	39.7	35.9	39.6	–	0.4	–	2.5	–
Female	8.9	–	8.8	7.0	8.8	–	0.0	–	1.0	–
Both sexes	23.0	–	22.8	20.1	22.8	–	0.2	–	1.7	–
Global Youth Tobacco Survey, 2017 (13–15 years)										
Male	17.8	–	16.2	–	10.8	–	3.1	–	22.6	–
Female	12.1	–	10.7	–	7.7	–	3.2	–	14.0	–
Both sexes	14.9	–	13.5	–	9.2	–	3.1	–	18.4	–

Source: WHO, 2019 *(72).*

Smoking-cessation services have been expanded through primary care facilities, but costs have remained a barrier, as the national health system does not cover the service costs (or those for nicotine replacement therapy). Further reductions in the prevalence of tobacco use have been highlighted as a priority in the Ministry of Health 2020–2022 strategy on priority areas for health-care development.

3.1.11 Provide access to affordable essential medicines and vaccines (SDG 3.b)

SDG 3.b encompasses research and development of vaccines and medicines for the communicable diseases and NCDs that primarily affect developing countries and the provision of access to affordable essential medicines and vaccines for all. According to statistics from the World Intellectual Property Organization, Ukraine is ranked among the top countries globally in terms of the number of patents within medical areas among all patents granted in all fields of technology in 1998–2016, with approximately 9.91–12.2% in medicine (and approximately 3.54–5.54% in pharmacy). However,

the high percentage of granted patents in the field of medicine and pharmacy does not correspond with the available scientific and technical capacities in Ukraine and indicates imperfections within the national patent system.

The legal basis for carrying out patent reform in the field of health care in Ukraine is the Association Agreement between Ukraine and the European Union. In particular, the provisions of Art. 219 on health priorities and the Doha Declaration on the Trade-Related Aspects of Intellectual Property Rights (TRIPS) and Public Health Agreement. This outlines the principles of application of the flexible provisions of the TRIPS Agreement, a liability that was imposed on Ukraine at its accession to the World Trade Organization in 2008 as a TRIPS-plus obligation (additional obligations). However, to date, Ukraine has not used the flexibility of the TRIPS Agreement, which has been included in bills in the field of health-care intellectual property reform.

Imperfections in the national patent system for the protection of inventions in medicine and pharmacy create significant obstacles to further reform of the health-care sector; for example, high prices established for some drug treatments have created an artificial monopoly. Consequently, Ukraine continues to fund foreign research centres instead of financing domestic science and supporting its national pharmaceutical industry.

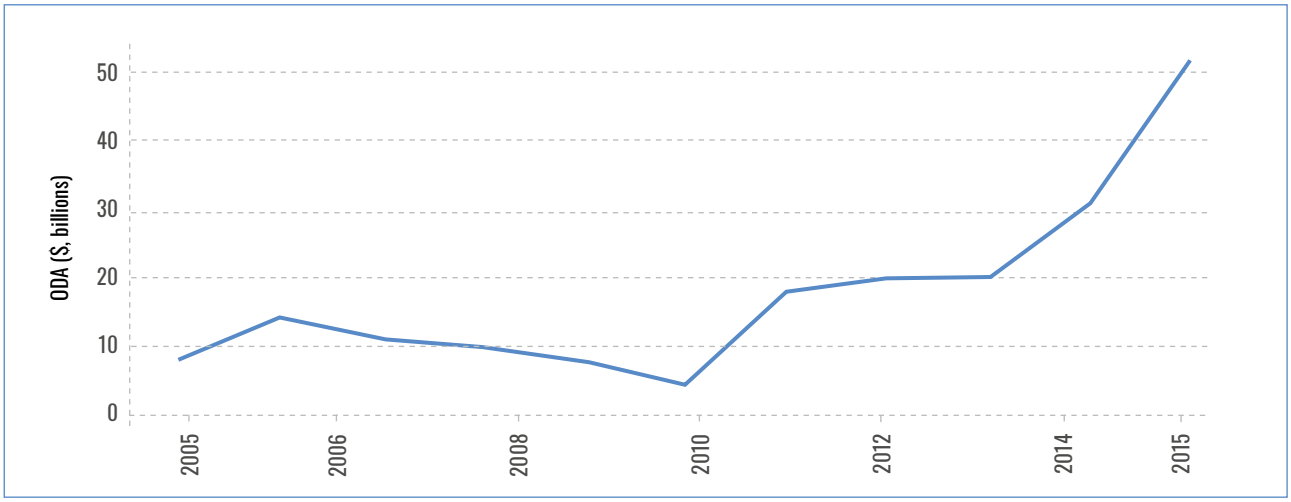
The purpose of patent reform is to align patent law with the European Patent Convention and best European law enforcement practices, which will strike a fair balance between the interests of patent owners and the rights of Ukrainian citizens to access medicines. Such a mechanism should be a special procedure for the examination of inventions that are medicinal products, as set out in the Guidelines for the Examination of an Application for Inventions, the Object of which are Medicinal Products. The Guidelines should be based on the WHO Guidelines for the Examination of Pharmaceutical Patents: Developing a Public Health Perspective and the United Nations Guidelines for the Examination of Patent Applications Relating Pharmaceuticals.

At the end of 2018, the Government took a number of measures with regard to patent reform: among these were adoption of the State Strategy for the Implementation of the State Policy for the Provision of Medicine by 2025 and the registration of the Order on Amendments to Certain Legislative Acts of Ukraine on the Implementation of Certain Legislation of the European Union in the area of Intellectual Property.

Patent reform will not undermine the level of protection of intellectual property rights in Ukraine as a whole, instead it will foster fair competition in the domestic pharmaceutical market by enabling patients nationally to have access to effective and cheaper medicines and for Ukraine to be a fully fledged and equal domestic pharmaceutical manufacturer for the international drug market.

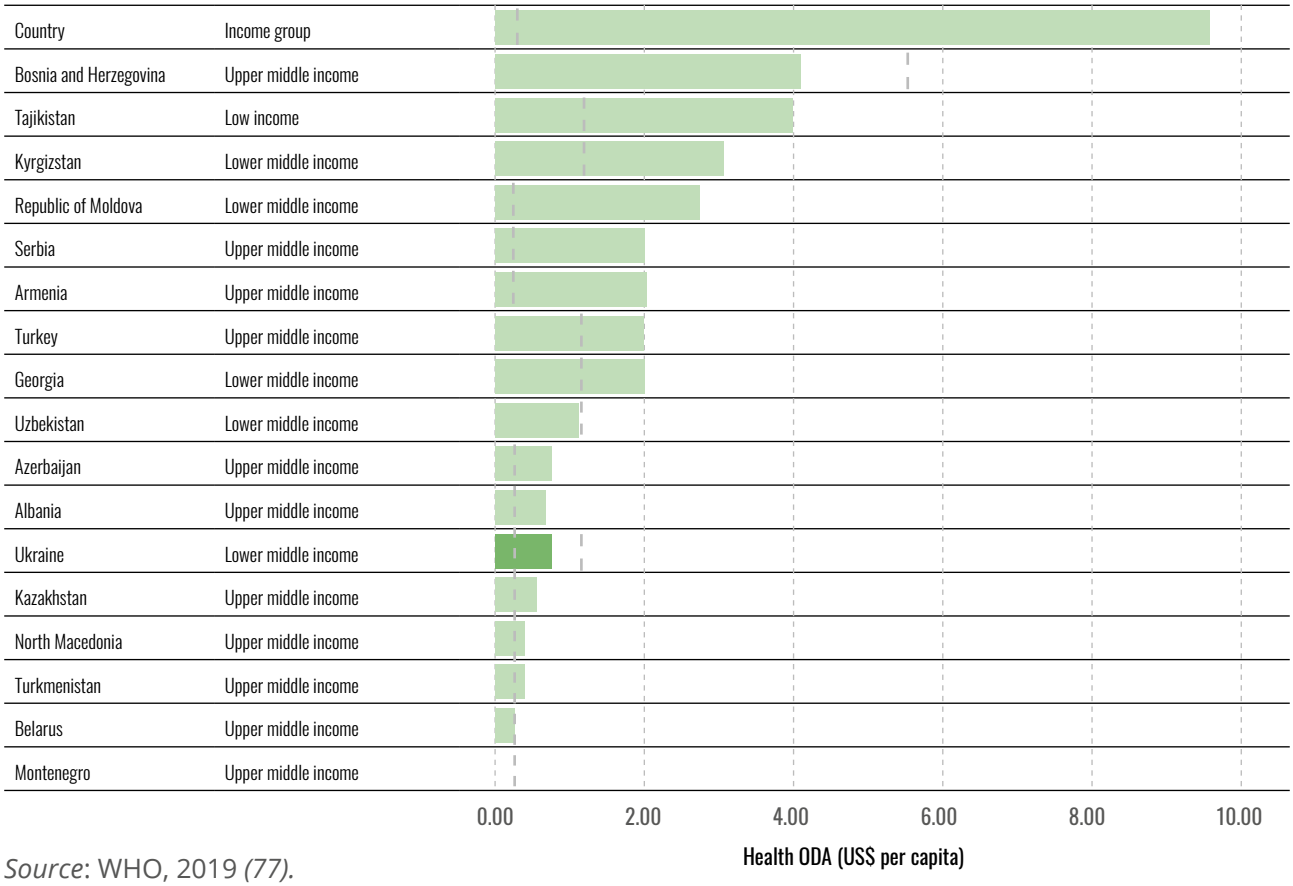
Official development assistance (ODA) from all donors to medical research and basic health sectors rose sharply between 2010 and 2011, and subsequently more than doubled from 2013 to 2015, from US$ 20.43 billion to US$ 51.27 billion (constant 2015 US$) (Fig. 27) *(75)*. The sharpest increase coincided with the outbreak of conflict in eastern Ukraine in 2014 and significant declines in vaccination rates. In 2017, Ukraine received health ODA of US$ 34 million per capita; the second-highest amount of total ODA (Fig. 28) among the lower-middle-income Member States in the WHO European Region after Uzbekistan *(76,77)*.

Fig. 27. Gross ODA for medical research and basic health sectors in Ukraine, 2005–2015



Source: Global Change Data Lab, 2019 *(75)*.

Fig. 28. ODA for medical research and basic health sectors per capita, by recipient country, 2017

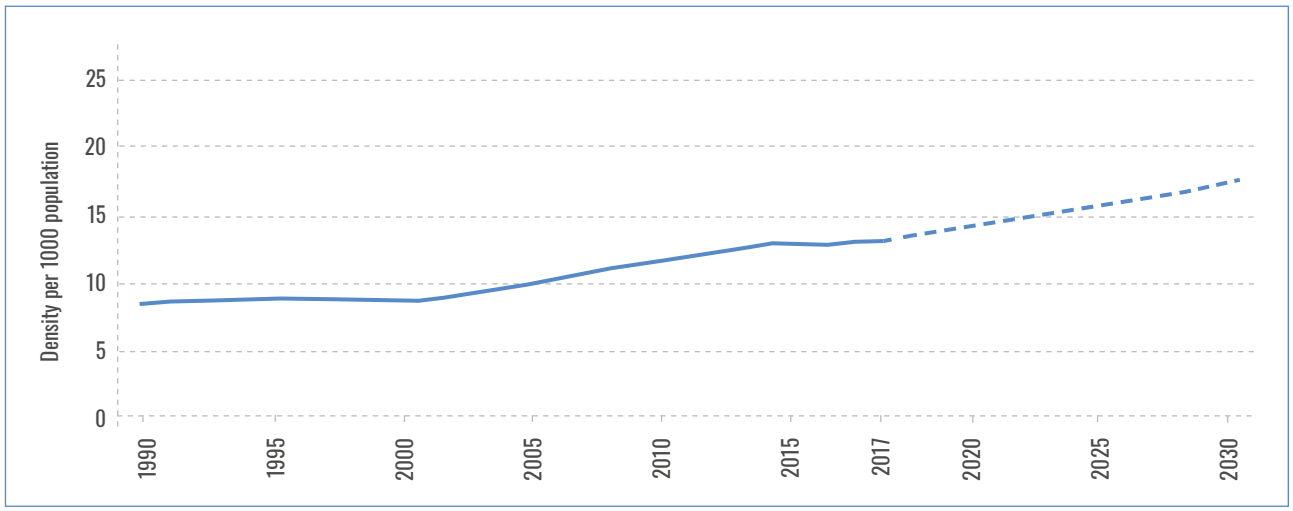


Source: WHO, 2019 *(77)*.

3.1.12 Increase health financing and the recruitment, development and retention of the health workforce (SDG 3.c)

The overall health worker density (including physicians, nurses and midwives) increased from 8 workers per 1000 population in 1990 to 8.4 in 2000, and 12.9 in 2017 *(56)*. If this trend continues, IHME estimates suggest an increase in overall health worker density to 17.4 by 2030 (Fig. 29).

Fig. 29. Health worker density (physician, nurses, midwives and pharmacists) in Ukraine, 1990–2017 and projected to 2030



Source: IHME, 2019 *(56).*

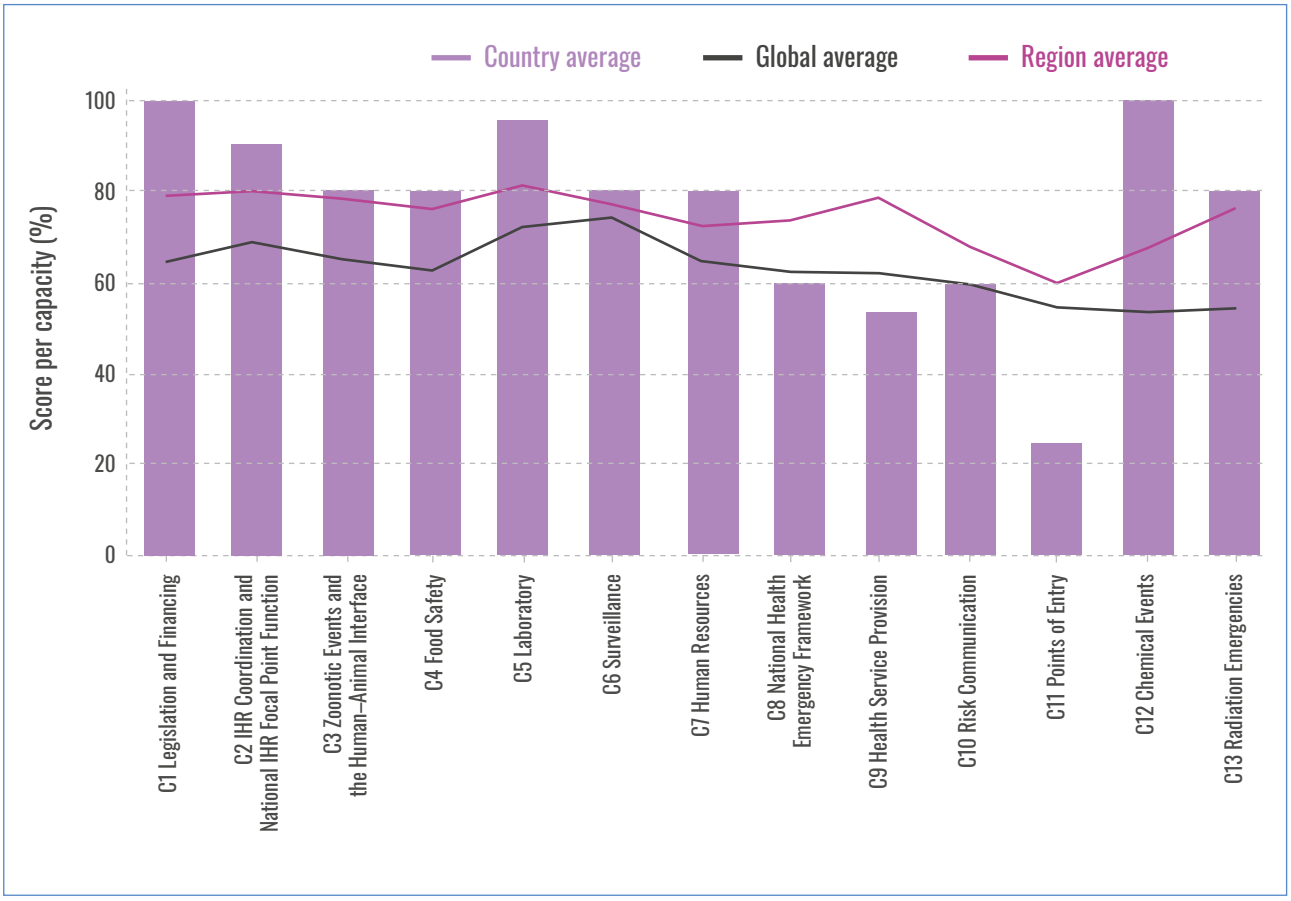
Physicians increased between 1990 and 2017 from 2.7 to 4.0 per 1000 population *(56)* and similar trends have been noted for nurses, dentists and pharmacists *(26)*. However, absolute numbers across all professions have been falling because of high net migration of professionals out of the country and ageing of the workforce; almost 25% of physicians are of retirement age. The numbers of nurses (who work alongside clinicians), feldshers (who can diagnose, prescribe treatment or refer a patient to a specialized doctor in a similar manner to a general practitioner) and midwives have all fallen since 1990 due to declining wages and poor career development opportunities.

3.1.13 Strengthen health emergency preparedness (SDG 3.d)

Early warning, risk reduction and management of national and global health risks have become particular relevant issues with the onset of the COVID-19 pandemic.

Ukraine's submissions to the 2018 State Party Self-Assessment Annual Reporting Tool (e-SPAR) revealed its top four challenges to be risk communication (score 60%), national health emergency framework (score 60%), health service provision (score 53%) and points of entry (score 20%). Points of entry had the lowest IHR score per capacity (consistent with regional deficits), with no designated points of entry at ports, airports or ground crossings (Fig. 30) *(78)*. The average for all IHR core capacities for Ukraine was 75%, which is slightly above the WHO European Region average (73%) and above the global average of 60%. No external evaluation is available for Ukraine although this is planned to be completed by the end of 2020. A formal joint external evaluation of the IHR core capacities is important as current public health surveillance and control systems in Ukraine require significant improvements at the policy, organizational and technical levels. Given that Ukraine's public health system has undergone significant reorganization in recent years, such an assessment would enable the Ministry of Health to evaluate progress, identify gaps and prioritize actions needed to further health security measures. Presently, four important gaps remain in strengthening IHR in Ukraine: enhancing national legislation in support of IHR, identifying stakeholder responsibilities in the national surveillance system, strengthening points of entry, and empowering preparedness and response focal points.

Fig. 30. IHR score per capacity, Ukraine 2018



Source: WHO, 2018 *(78).*

First, national legislation that ostensibly supports the implementation of IHR in Ukraine has limited practical application (V Esemanov, Reporting and information sharing under the International Health Regulations in Ukraine, WHO internal mission report, 2015). The available regulatory framework is based on the Decree No. 400/2011 on the rules of the sanitary protection of Ukraine *(79)* and Article 28 of the Law of Ukraine No. 1645/2000 on protection of the population from infection diseases *(80)*. Although the regulation endorses a multihazard and communicable disease-centric approach, the provisions it stipulates are outdated, since the national stakeholders empowered by it do not exist anymore (e.g. Sanitary Epidemiological Service of Ukraine).

Secondly, with the abolishment of the State Sanitary Inspection in 2016, functional components of the national surveillance system have yet to be definitively distributed among other stakeholders. This has left unclear the distribution of responsibilities between the Ministry of Health, the State Food and Consumer Rights Protection Agency, the Ukrainian Public Health Centre and regional public health laboratories. Of note, the early warning system is rather fragmented and paper-based data sharing occurs among public health institutions and other relevant national stakeholders, which poses a significant risk to the timeliness of the epidemiological surveillance and operational response to a public health emergency.

Thirdly, Ukraine has limited response capacities at points of entry and has instituted insufficient public health measures. Trained authorities have yet to be designated

with appropriate mandates to oversee points of entry and their related facilities. For example, there remains an unclear delineation of responsibilities between border guards and personnel from the Ukrainian Public Health Centre.

Finally, preparedness and response activities are dispersed between various sectors since no national all-hazards response approach has been developed. Rapid and effective multisectoral response remains a significant challenge because of the paucity of linkages between various agencies in the national response system. In addition, neither the Ukrainian Public Health Centre nor its regional counterparts possess comprehensive risk assessment tools; therefore, the magnitude of response cannot be estimated using evidence-informed approaches. This deteriorates public health spending and prevents efficient utilization of the scarce financial resource available for the health system.

4 Progress in Ukraine on health-related targets within the SDGs

4.1 Health in the SDG era

Realizing the vision of the 2030 Agenda and attaining full integration into Europe's political, economic and legal space poses a colossal challenge of implementation. The National Action Plan on the Strategy Implementation by 2020 (Ukraine 2020) listed an enormous list of targets and indicators to advance economic growth, governance, the rule of law, security, defence and other development objectives. The health-care system reform has been prioritized by the Government together with eight other areas, including reforms of the judiciary, law enforcement, national security and defence systems, decentralization, state governance and anticorruption reform, tax reform, deregulation and entrepreneurship development.

High premature mortality and disease-related morbidity impose a large socioeconomic burden through disability, early retirement, deaths, rising demand for social care and welfare support, absenteeism from school or work, falling productivity, high employee turnover and heightened inequality. Addressing this major issue would boost all SDGs (see Fig. 1). The right to health is central to SDG 3, a core value recognized in the Constitution, a goal of the Government and a top priority identified by national counterparts.

The indivisibility of the SDG agenda calls for effective ongoing intersectoral and intergovernmental coordination, which will also help in pursuing the synergies arising from the interdependence of SDGs. There is significant room for improvement in integrating SDG 3 targets into policies in non-health sectors. This is envisaged in Ukraine 2020, which includes substantial health sector reform and a programme for healthy lifestyle and longevity. While health sector reforms have begun, there is as yet no overarching national health programme that addresses the major risk factors, aligns reforms and programmes and ensures that no one is left behind. Developing and implementing such a programme would help to improve access to services and significantly reduce unacceptable rates of premature mortality and disease.

4.2 GAP signatories supporting Ukraine's achievement of the SDG 3+ targets

The Government of Ukraine and its Ministry of Health have a long history of collaborating with international partners on various initiatives from which can be traced measurable improvements in the health of Ukrainians. The analysis here will only consider the role of the GAP signatories in order to better understand the alignment between their global commitments and the projects and activities they have undertaken in Ukraine to advance SDG 3+ targets.

The GAP document on shared SDG priorities and areas of work provides a target-by-target mapping of institutions by categorizing agencies as having either a "contribution linked to core mandate" or an "indirect contribution" to the indicators of every health and health-related SDG target *(81)*. The report for Ukraine aligns itself with these targets and indicators and uses information from the United Nations in Ukraine to assess how aligned agencies are with the mandates listed in the GAP. The United Nations Partnership Framework (UNPF) in Ukraine lists 16 implementing agencies (Table 5). Those that are listed in the GAP but whose activities are not mapped to targets in the UNPF include the

following five organizations: GAVI, the Vaccine Alliance; the Global Fund; the Global Financing Facility, Unitaid and the World Bank. Consequently, while these organizations certainly work on many of the health and health-related targets in Ukraine, this analysis is restricted to understanding how the activities of six United Nations agencies listed in the GAP and tracked in the Ukraine UNPF (UNAIDS, UNFPA, UNICEF, UNDP, UN Women and WHO) are linked to SDG 3+ targets.

Table 5. GAP partners active in SDG 3 and health-related SDGs in Ukraine, 2019

	SDG	GAP partners
	SDG 1. End poverty	UNDP, UNHCR, UNICEF, World Bank, WHO
	SDG 3. Good health and well-being	Global Fund, ILO, IOM, UNAIDS, UNDP, UNFPA, UNICEF, UNODC, UNOPS, WHO, World Bank
	SDG 4. Inclusive and equitable quality education	IOM, UNICEF
	SDG 5. Gender equality	Global Fund, IOM, UNDP, UNFPA, UNHCR, UNICEF, UN Women, World Bank
	SDG 6. Clean water and sanitation	UNDP, UNICEF, UNOPS, World Bank
	SDG 7. Affordable and clean energy	UNDP, UNODC, World Bank
	SDG 8. Decent work and sustainable economic growth	FAO, ILO, UNIDO
	SDG 11. Sustainable cities and communities	IOM, UNHCR, UNICEF, UN Women, World Bank
	SDG 12. Sustainable consumption and production	UNDP, UNIDO
	SDG 13. Climate action	FAO, UNDP, World Bank
	SDG 16. Peace, justice and strong institutions	OHCHR, UNDP, UNICEF, UNOPS, WHO
	SDG 17. Partnerships for sustainable development	IOM, UN Women, World Bank, WHO

Notes: FAO: Food and Agriculture Organization of the United Nations; ILO: International Labour Organization; IOM: International Organization for Migration; OHCHR: Office of the United Nations High Commissioner for Human Rights; UNHCR: United Nations High Commissioner for Refugees; UNIDO: United Nations Industrial Development Organization; UNODC: United Nations Office on Drugs and Crime; UNOPS: United Nations Office for Project Services.

In juxtaposing these core and indirect contributions against the projects underway and planned per the Government of Ukraine with the UNPF for 2018–2022, three important insights emerged in an analysis undertaken on 2 September 2019 by UN INFO.

- Almost one-third of projects in the UNPF are related to health: cross-referencing Table 5 with this analysis showed that 554 projects were planned and/or underway with United Nations agencies between 2018 and 2022; of these 37% (203 projects) were on SDG 3 and health-related SDGs while 12% (69 projects) were specifically SDG 3-related projects.[4] Of note, 47% (39/83) of the targets covered in the UNPF address health *(13)* or health-related *(26)* targets.
- More than four-fifths of the health and health-related SDG targets were captured in the UNPF: of the health and health-related SDGs that are monitored across 83 global indicators, 81% (67 indicators) are captured in the UNPF. Those that are not attributed to specific SDG 3+ goals and targets relate to SDGs 1.1.a, 2.1, 2.2, 5.3, 6.3, 9.5, 11.5, 11.6, 16.9 and 17.16.
- One-third of organizations with GAP core mandates do not have active projects on the SDG 3+ targets in Ukraine; across SDG 3 targets almost one-third of organizations have a target listed as part of their core mandate, but do not have projects to fulfil that mandate in Ukraine. Interestingly, eight organizations (Food and Agriculture Organization of the United Nations, International Labour Organization, International Organization for Migration, Office of the United Nations High Commissioner for Human Rights, United Nations High Commissioner for Refugees, United Nations Industrial Development Organization, United Nations Office on Drugs and Crime and United Nations Office for Project Services) active in Ukraine are not listed in the GAP but are listed as the primary agency for 48 health and health-related SDG projects.

4.3 Progress on the SDG 3+ targets

Health is deeply rooted across the 2030 Agenda. This is why a broader focus than solely SDG 3 is needed to capture fully progress on health matters in a country. The vast majority of other SDG targets have linkages with health and impact on health outcomes, on health services, on access to health services; on determinants of health or on risks to health. A wider look at health in the SDGs clearly shows that health is crucial for progressing on SDGs and is a powerful accelerator for policies in a wide variety of different sectors.

Table 6 outlines the SDGs and their relationship to health, while demonstrating the national targets and progress to date for these. For reviewing and assessing the current status, both national SDG reports *(82)* and the 2020 Voluntary National Review *(83)* were consulted. Data from these reports have been reviewed and status has been determined according to the baseline and current trends, as national data represent.

[4] In the UNPF, each project (and corresponding United Nations agency) is linked to an SDG target. In the GAP, each project is linked to an indicator. For this analysis, GAP agencies were linked with their corresponding targets.

Table 6. Progress on the SDGs in Ukraine

SDG	Relation to health	National health-related targets	Status
	Prioritizing the health needs of the poor	1.1. Reduce the poverty level by 75%, in particular through the elimination of poverty in its extreme forms	
		1.2. Increase the coverage for poor people with targeted social assistance programmes	
		1.3. Increase the resilience of socially vulnerable groups of the population	
	Addressing the causes and consequences of all forms of malnutrition	2.1. Ensure access to balanced nutrition at scientifically based standards for all population groups	
	Support high-quality education for all to improve health and health equity	4.1. Ensure access to quality school education for all children and adolescents	
		4.2. Ensure access to quality pre-primary development for all children	
	Fighting gender inequalities, including violence against women	5.1. Create an environment for ending all forms of discrimination against women and girls	
		5.2. Reduce the level of gender-based and domestic violence, ensure efficient prevention of its manifestations and timely assistance for victims	
		5.3. Encourage shared responsibility for housekeeping and child-rearing	N/A
		5.4. Increase the population's access to family planning services and reduce teenage pregnancies	
	Preventing diseases through safe water and sanitation for all	6.1. Provide access to quality services for safe drinking-water, and ensure the construction and reconstruction of centralized drinking-water supply systems using the latest technologies and equipment	
		6.2. Provide access to modern sanitation systems and ensure the construction and reconstruction of water intake and sewage-treatment facilities using the latest technologies and equipment	
		6.3. Reduce the discharge of untreated wastewater, primarily through innovative technologies of water purification at the national and individual levels	
		6.4. Increase the efficiency of water use	
	Promoting sustainable energy for healthy homes and lives	7.1. Expand the infrastructure and modernize networks for reliable and sustainable energy supply through the introduction of innovative technologies	

Table 6 (contd)

	Promoting health employment as a driver of inclusive economic growth	8.1. Promote a safe and secure working environment for all workers, including through the application of innovative technologies in terms of health and safety	
	Promoting national R&D capacity and manufacturing of affordable essential medical products	9.1. Create financial and institutional systems (innovative infrastructure) that will ensure the development of scientific research and scientific and technical (experimental) development	
	Ensuring equitable access to health services through universal health coverage based on stronger primary care	10.1. Ensure access to social services	
	Fostering healthier cities through urban planning for cleaner air and safer and more active living	11.1. Ensure access to housing	
	Promoting responsible consumption of medicines to combat antibiotic resistance	12.1. Reduce the amount of waste generation, and increase recycling and reuse through innovative technologies and production	
	Protect health from climate risks, and promote health through low-carbon development	13.1. Reduce the amount of waste generation, and increase recycling and reuse through innovative technologies and production	
	Support the restoration of fish stocks to improve safe and diversifies healthy diets	14.1. Reduce marine pollution	
	Promoting health and preventing disease through healthy natural environment	15.1. Ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems	
	Empowering strong local institutions to develop, implement, monitor and account for ambitious national SDG responses	16.1. Reduce the prevalence of violence	
		16.2. Increase detection of victims of human trafficking and all forms of exploitation	
		16.3. Strengthen social stability, and promote peacebuilding and community security	N/A
	Mobilizing partners to monitor and attain the health-related SDGs	17.1. Develop a partnership between government and business to achieve the SDGs	

Notes: green represents a high possibility of attainment of the target by 2030, orange the need for further acceleration in efforts to achieve the SDG and red that considerable efforts will be needed for the target to be achieved; N/A: not applicable.

5 Recommendations to accelerate progress on SDG 3+ in Ukraine

The following recommendations are based on the SDG 3+ targets and indicators reviewed in this report. They reflect a consensus among the authors of this report and from consultations with Government counterparts, United Nations agencies, development partners and other health sector stakeholders regarding the most timely and high-impact interventions that can be undertaken to accelerate improvements in health in Ukraine. The recommendations are grouped into three areas.

5.1 Engage and align

Engagement focuses on aligning all sector stakeholders with priority actions to support healthy population and ensure that the health-enabling SDGs and their targets are reached.

Align national SDG targets and indicators with global ones. Key to enabling the attainment of the SDGs is the need to establish a common understanding around the targets and indicators that need to be reached. While each country undoubtedly needs to undertake its own measure to localize these within the local context, this can be done within the structure of the established global targets and indicators. This has unfortunately not been achieved in Ukraine; however, with concerted political will and collaboration among sector stakeholders, alignment can be achieved in short order. This will allow for the generation of comparable datasets, common understanding and collective action.

Align the national development strategy and health system transformation agenda with the SDGs. The national development strategy provides a framework for the allocation of national budgets and development assistance. However, it is not entirely aligned with Ukraine's SDG targets and the global SDG targets. Similarly, while the health system transformation agenda is steering relevant and timely initiatives that will improve health and well-being, it is not clear how each transformation will accelerate the priority targets needed to allow Ukraine's attainment of the SDGs. Both of these important aspects should be reviewed to explicitly link their goals with how they will allow Ukraine to meet its SDG commitments. This will allow for synergies in policy and action and thus accelerate impact.

Align the United Nations system and activities of international partners with priorities of the Prime Minister and Government for the SDGs. Integrating the SDGs into national policies and work plans should be a central focus of the United Nations system and international partners in Ukraine. With the appointment of the Prime Minister as the focal point for SDG action, strong moves should be made to mainstream relevant SDG targets, indicators and priorities into national plans, policies and processes relevant to SDG 3+ targets at all levels of Government. This will require convening high-level discussions to prioritize SDG 3+ targets in Ukraine's national policies. Once synergy is achieved, collective action between all health stakeholders will drive sustained progress towards health goals.

5.2 Cultivate an enabling environment for SDG attainment

Broaden the fiscal space for sustainable health financing. Actions must move beyond commitments and towards implementation. Ukraine's expenditure on health of US$ 77 per capita remains among the lowest in the WHO European Region *(84).* Securing the legislated 5% of GDP for health financing is an investment that can provide societal and economic returns well beyond the principle and can help to bridge the policy–planning–budget gap for the achievement of the SDGs. Key to this commitment must be a focus on reducing financial burdens for the poor and most vulnerable (particularly catastrophic health expenses). The Addis Ababa Action Agenda *(85)* provides concrete policy considerations for Ukraine for sustainable financing of the SDGs. Front-loading investments in the health sector could have cascading effects on other sectors and facilitate sustainable financing through domestic public resource mobilization.

Expand disaggregated health data systems. Health investments can only be as evidence-informed as the systems that underlie them. Ukraine's digital transformation of Government services should prioritize the health sector and boost e-health initiatives. The focus on relevant, timely and accurate data should drive considerations for the expansion of data sources (including routine information and civil registration and vital statistics systems, surveys of health facilities and households, among others) and how they can be structured to enhance health equity. For example, data systems should enable disaggregation by sex, gender, residence location and other factors that can help to reduce inequalities in health access or utilization.

Develop international partnerships and celebrate initiatives. Ukraine should strengthen its links with and contributions to SDG 3+ institutions and initiatives, such as the GAP and the International Health Partnership for UHC 2030. This should be undertaken with a focus on how the Government's roadmap to achieve the SDG 3+ targets for all people can benefit from partner resources. In addition, celebrating an annual landmark day, such as UHC Day on 12 December, can help to focus not just a whole-of government but also a whole-of-society approach for the attainment of UHC. This will help to continually reorient people and policies around the importance of achieving the SDGs by 2030. Moreover, it is important that the current partnership of the Government with international partners around the SDGs continues and involves partners beyond the United Nations and GAP signatory agencies to involve also nongovernmental organizations, civil society and more, since the common effort is the key to amplify SDGs attainment.

5.3 Prioritize foundation health system improvements

Engender a whole-of-government and participatory approach to UHC. Collaboration with other ministries and agencies outside the traditional health sector will be important as many actions needed for health require multisectoral cooperation and policies that address the social determinants of health. Establishing a body at the highest political level focused on UHC can facilitate policy coherence and mainstreaming of Health in All Policies. Putting forwarding a signature legislation focused on a participatory approach led by an accountable and inclusive body will be helpful to refocus

the goal of UHC as a time-bound, concrete effort. Establishment of concrete indicators for the achievement of SDG 3.8.1 and SDG 3.8.2 by the Inter-Ministerial Working Group and the State Statistics Service is paramount to endorse a formal road map that includes all ministries working together with the support of the United Nations development system and partners in Ukraine.

Improve access to quality health services. Timely access to quality health services is paramount for improving overall health status, particularly in a country like Ukraine where nine out of 10 premature deaths are related to NCDs or injuries. In moving towards UHC, one of the most important so-called best-buys is to provide improved access to preventive and curative health services. Examples include improving outreach to marginalized and vulnerable people and populations and decreasing resource-related, cultural and geographical barriers. Additionally, streamlining IDP registration for access to pensions and social benefits can help to accelerate access to services. As an example of a low-cost, high-impact intervention, one focused on primary prevention can catalyse improvements in health status; primary prevention measures include addressing risks for poor health, substance use, alcohol consumption, unsafe roads and violence and the promotion of healthy behaviours. A broader view on health of the population needs to be taken to ensure that determinants of health are tackled and that social protection is also in place.

Support the development of a resilient health workforce. Efforts must be redoubled to train, recruit and retain knowledgeable health workers and to provide them with access to opportunities to enhance the competencies needed for their positions. Ukraine's workforce also needs to be incentivized to provide care in rural and hard-to-reach areas. Lastly, for health workers facing violence, discrimination, and other forms of abuse or dangerous working conditions, adequate protections must be put in place to allow them to fulfil their duties in a safe manner.

6 Conclusions

Notable achievements have been highlighted in this review, including declines in neonatal and maternal mortality, improvements in health-care access and expansions of immunization programmes, as Ukraine undertakes one of the most ambitious health system transformations in the world. In addition, rates of extreme poverty, severe malnutrition and greenhouse gas emissions have markedly declined, and gender equality, health service coverage and IHR capacities have all risen.

However, significant challenges remain as evidenced by the deleterious effects of conflict on health outcomes and marked increases in IDPs, persistently high OOP and catastrophic health expenditures, and persistently high rates of NCDs and high mortality rates among young men.

To accelerate the attainment of SDG 3+ targets, three important categories of actions need to be undertaken focused on aligning, enabling and prioritizing actions. First, health and health-related SDG stakeholders must align with the key targets that need to be improved, and the priority actions that will accelerate their achievement. This can be started by aligning national and global SDG targets and indicators. Further agreement on a strategic level (between the national development strategy and health system transformation agenda) and stakeholder level (between the United Nations system and the Government's priorities for SDG attainment) will be paramount. Secondly, an enabling environment must be developed to stimulate this achievement. This includes broadening the fiscal space for sustainable health financing, expanding disaggregated health data systems and developing international partnerships to achieve the SDG targets. Thirdly, foundational health system improvements need to be prioritized. One of the key initiatives that need to be renewed with urgency is the rollout of a UHC strategy via a whole-of-government approach. A resilient health workforce and policies will thus be needed to ensure access to quality health services for all.

Given the country’s strong political will to demonstrate marked improvements in the SDGs, the next decade will see Ukraine move swiftly to enact policies and implement roadmaps to accelerate the attainment of SDG 3+, following the recommendations that seek to strengthen policy dialogues among key actors engaged in advancing a coordinated effort to improve health and well-being in Ukraine and accelerate the achievement of Ukraine’s SDG 3+ goals. With these actions in mind, Ukraine’s path to achieving the health and health-related SDGs is entirely possible. Its success will come from deep engagement with people, institutions and initiatives that are focused on fulfilling the SDGs’ drive to improve "people, planet, partnership, peace and prosperity" in a manner that is inclusive and leaves no one behind.

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