Intersectoral collaboration to end HIV, tuberculosis and viral hepatitis in Europe and central Asia

A framework for action to implement the United Nations Common Position

FIRST EDITION
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Abstract
Many countries in the WHO European Region are facing significant challenges in ending the epidemics of HIV, tuberculosis (TB) and viral hepatitis. Addressing them demands a holistic approach, reaching beyond the health sector alone. In response to this, several United Nations agencies made a joint commitment to support Member States in scaling up cross-sectoral approaches to address the risk factors and determinants of these three diseases. The United Nations Common Position on Ending HIV, TB and Viral Hepatitis through Intersectoral Collaboration was signed in May 2018; this included the recommendation to support countries in operationalizing this approach. This first edition of the Framework for Action is intended to guide and support the country process of implementing intersectoral strategies to address the social, environmental, economic and other non-health determinants related to HIV, TB and viral hepatitis. This document builds on the respective regional action plans for the three diseases and the recommendations for intersectoral action contained therein. It is also intended to support countries in examining how various sectoral policies and legislation can help people live healthier lives, and more specifically reduce the risk of contracting HIV, TB and viral hepatitis and minimize the economic, social and health impacts for those affected by these diseases.

Keywords
UNITED NATIONS COMMON POSITION, VULNERABLE POPULATIONS, HIV, TUBERCULOSIS, VIRAL HEPATITIS

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Encouraged by the pioneering vision of Health 2020 (1) and the spirit of the 2030 Agenda for Sustainable Development, and its Sustainable Development Goals (SDGs), 15 United Nations and civil society organizations came together in May 2018 to see how a whole-of-society approach could be applied to ending the epidemics of HIV, tuberculosis (TB) and viral hepatitis in the WHO European Region. The resulting United Nations Common Position on Ending HIV, TB and Viral Hepatitis through Intersectoral Collaboration (2) was launched the following November at the United Nations High-Level Meeting on Tuberculosis, underlining the role of each agency in supporting countries towards achieving health equity and the common strategic goal of stopping the epidemics. A common range of social, economic and environmental determinants affect HIV, TB and viral hepatitis. These factors are outlined in more detail in the present document, meant as a concrete framework for intersectoral action, to deliver on the collective promise to leave no one behind in halting these epidemics.

In 2015, Member States of the European Region adopted the decision Promoting intersectoral action for health and well-being in the WHO European Region: health is a political choice (3), and requested support from WHO in the development and implementation of multisectoral and intersectoral action towards improving the health of populations. The approach taken in this document builds on the concept of “health in all policies” as applied in Health 2020, the European health policy framework, which is presently being implemented in all Member States of the European Region.

This Framework for Action also follows the recommendations of the Minsk Declaration of 2015, in which Member States of the European Region unanimously agreed that “the adoption of the life-course approach across the whole of government would improve health and well-being, promote social justice, and contribute to sustainable development and inclusive growth and wealth in our countries”, and that

public policies should recognize and act on the interdependence of human lives within and across generations. These policies... should aim to promote the health of each generation, and to minimize the intergenerational transmission of disadvantage. They should recognize and address the reciprocal link between deprivation and psychosocial morbidity (4).

This document will help Member States and partners strengthen the multisectoral response to HIV, TB and viral hepatitis despite the burden the coronavirus pandemic has placed on national systems.

Joint Tuberculosis, HIV and Viral Hepatitis Programme, WHO Regional Office for Europe
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# ABBREVIATIONS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tr>
<td>ARV</td>
<td>antiretrovirals</td>
</tr>
<tr>
<td>CBVCT</td>
<td>community-based voluntary counselling and testing</td>
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<tr>
<td>CSO</td>
<td>civil society organization</td>
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<tr>
<td>EU</td>
<td>European Union</td>
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<tr>
<td>GDP</td>
<td>gross domestic product</td>
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<td>HCV</td>
<td>hepatitis C virus</td>
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<tr>
<td>ICD</td>
<td>International Classification of Diseases</td>
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<td>ILO</td>
<td>International Labour Organization</td>
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<td>IOM</td>
<td>International Organization for Migration</td>
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<tr>
<td>MIPEX</td>
<td>Migration Integration Policy Index</td>
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<tr>
<td>OECD</td>
<td>Organization for Economic Co-operation and Development</td>
</tr>
<tr>
<td>PLHIV</td>
<td>people living with HIV</td>
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<td>SDG</td>
<td>Sustainable Development Goal</td>
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<tr>
<td>SRHR</td>
<td>sexual and reproductive health and rights</td>
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<tr>
<td>TB</td>
<td>tuberculosis</td>
</tr>
<tr>
<td>UNAIDS</td>
<td>Joint United Nations Programme on HIV/AIDS</td>
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<tr>
<td>UNESCO</td>
<td>United Nations Educational, Scientific and Cultural Organization</td>
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<tr>
<td>UNFPA</td>
<td>United Nations Population Fund</td>
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<tr>
<td>UNHCR</td>
<td>United Nations High Commissioner for Refugees</td>
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<tr>
<td>UNICEF</td>
<td>United Nations Children’s Fund</td>
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<td>UNODC</td>
<td>United Nations Office on Drugs and Crime</td>
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INTRODUCTION

Many countries in the WHO European Region are facing significant challenges in ending the epidemics of HIV, TB and viral hepatitis. Addressing them demands a holistic approach, reaching beyond the health sector alone, taking into consideration the changing donor environment and the transition from external to domestic funding. In response to this, a joint commitment was made to support Member States in scaling up cross-sectoral approaches to addressing the risk factors and determinants of these three diseases. Underlining this commitment, the United Nations Common Position on Ending HIV, TB and Viral Hepatitis through Intersectoral Collaboration (2) was signed in May 2018. Subsequently, four countries in the European Region (Belarus, Georgia, Portugal and Tajikistan) expressed their wish to pilot this approach, on the basis of already initiated intersectoral work in the context of individual disease prevention strategies or national plans.

The purpose of this first edition of the Framework for Action – which is meant to continuously build on, and be adapted to, country experience and implementation in the future – is to guide and support the country process of implementing intersectoral strategies to address the social, environmental, economic and other “non-health” determinants related to HIV, TB and viral hepatitis. This document builds on the recommendations of the respective regional action plans for the three diseases. It is intended to support countries in examining how various sectoral policies and legislation can help people live healthier lives.

Falling ill with HIV, TB or viral hepatitis can be life changing, not only in terms of personal health, but also in terms of impoverishment, marginalization and stigmatization. It is intended that this document will contribute to action on the three diseases that will reduce the suffering of all those affected.

ADDRESSING SOCIAL DETERMINANTS

Many decades of research have shown that social determinants have a much larger impact on health than biological and genetic determinants do. It is therefore imperative to address these if we want to reduce risks of ill health, and to improve chances for patients to get well and be able to return to their previous levels of activity and participation. The current burden caused by these epidemics is illustrated in the figures presented in Annex 1.

“Social determinants are relevant to communicable and non-communicable disease alike. Health status, therefore, should be of concern to policy makers in every sector, not solely those involved in health policy.”

Social determinants of health inequalities. M Marmot (5).

Fig. 1 provides a model for the determinants of health, emphasizing the importance of social factors (6). Fig. 2, in turn, illustrates the relative impact of socioeconomic factors as determinants of health. According to estimates made by the Canadian Institute for Advanced Research, socioeconomic factors account for 50% of all determinants, whereas the health-care system only accounts for 25%, and biology and genetics 15%, with physical environment in last place at 10% (7).
This means that, even if we invest enormously in additional health care and services, we would influence health outcomes to a much smaller extent than by investing in improving those socioeconomic factors that have an impact on health, such as poverty, education, living conditions, legal status and many others, which we will come to in the following sections.

Box 1 shows an example from Scotland, United Kingdom, of intersectoral action to address the social determinants of health.
While the connection between social determinants and poorer health outcomes holds true for many diseases, both of infectious and chronic nature, it applies particularly to TB (8), HIV (9) and viral hepatitis.

Though the five main types of viral hepatitis – hepatitis A, B, C, D and E – differ with respect to their transmission routes, affected and vulnerable populations, geographical distribution and socioeconomic environments, and result in a range of health outcomes, the Common Position addresses them jointly as "viral hepatitis", as their socioeconomic risk factors are similar. Box 2 highlights the risks to key populations from hepatitis C.

"Poverty spreads HIV/AIDS: Malaria, tuberculosis and sexually transmitted diseases that predispose to HIV infection are more common among the poor. Poor people know less about HIV/AIDS and are less able to protect themselves. Young women are especially vulnerable, and especially uninformed... The impact of AIDS further impoverishes the families affected."


1 Hepatitis A and E are associated with food- and waterborne transmission but can also be transmitted sexually and typically resolve without long-term pathology, while hepatitis B, C and D are bloodborne infections with a high risk of transmission through unsafe injections and other medical practices, sexual contact and sharing of equipment for injection drug use. In addition, hepatitis B transmission can occur from mother to child and horizontally through household contacts in early childhood. Hepatitis B, C and D often result in chronic infection, which may remain undetected for decades, though they lead progressively to liver cirrhosis and cancer.
What the different types of viral hepatitis infections have in common with HIV and TB is that both the risk of contracting them and the disease outcome are largely determined by the conditions people live in, the knowledge they have, and the personal and financial resources they have available to access information, diagnosis, treatment and care – highlighting the need to work with key population groups (see boxes 3a and 3b).

**BOX 2.** British newspaper headline highlights risk of death from hepatitis C

![Image of a British newspaper article headline and photo](https://example.com/ hepatitisC.jpg)

*Source: reproduced by permission of The Guardian (10).*

**BOX 3A.** Populations most affected and at risk of viral hepatitis

Each country should define the specific populations within their borders that are most affected by viral hepatitis epidemics, and their particular response should be based on the epidemiological and social context. Such populations may differ according to local contexts but could include: (a) people who have been exposed to hepatitis viruses through unsafe blood supplies and unsafe medical injections and procedures; (b) transgender people and men who have sex with men; (c) sex workers; (d) prisoners; (e) people who inject drugs; and (f) mobile populations and people affected by conflict and civil unrest. People who will require specific attention include those with coinfections such as: hepatitis B and C combined; viral hepatitis and TB; and HIV and viral hepatitis.

*Source: WHO Regional Office for Europe (11).*
**BOX 3B. The relevance of working with key and vulnerable populations to reduce HIV infections**

**Key populations and their sexual partners account for:**
- 54% of new HIV infections globally;
- more than 95% of new HIV infections in eastern Europe and central Asia;
- 88% of new HIV infections in western and central Europe and north America.

**The risk of acquiring HIV is:**
- 22 times higher among men who have sex with men (than the general population);
- 22 times higher among people who inject drugs;
- 21 times higher for sex workers;
- 12 times higher for transgender people.

For definitions of key and vulnerable populations see Annex 2.

*Source: Joint United Nations Programme on HIV/AIDS (UNAIDS) (12).*

The right to health makes it imperative for society to help people overcome these illnesses without being stigmatized or marginalized. The other reason to make a joint and comprehensive effort lies in the enormous public health costs which the treatment of these three diseases incurs. As an example, the implementation of the Tuberculosis Action Plan for the WHO European Region 2016–2020 (13) alone, which it is estimated could save 3.1 million lives, was costed at US$ 15 billion. However, it was estimated that the plan could potentially result in savings of US$ 48 billion, based on the economic analysis of lives saved and avoidable suffering prevented. The main group of patients is of working age, thus there is an added cost of the loss of their productivity to society, which is difficult to quantify in absolute terms, but could be estimated to be even higher.

For the populations living in countries with a high disease prevalence and a lack of services or expensive or unavailable diagnosis or treatment, these factors may present a socioeconomic motive, or a so-called “push-factor”, for migrating to those countries providing better overall living conditions, and better access to services and care in case of need. Investing in better health and social services can thus decrease this push factor and protect people from the stress and mental health costs which are often linked to emigration and uprooting.

“There is growing evidence to suggest that a significant proportion of refugees and migrants who are HIV positive, including those who originate from countries of high HIV prevalence, acquire infection after they have arrived in the Region. … In the 47 Member States of the Region with available data, 21% of new HIV diagnoses in 2016 were reported in individuals who originated outside of the reporting country…. Where location of infection was believed to be known, 10 countries in the east of the Region reported that only 10% of people living with HIV were infected prior to migration. For this 10%, the majority contracted the infection in neighbouring countries of central and eastern Europe.”

Report on the health of refugees and migrants in the WHO European Region. WHO Regional Office for Europe (14).
While this is true, and accessible and affordable health care should be available in countries of origin, we also know that migration itself is a risk factor for HIV. Therefore, access to diagnosis, treatment and follow-up care in countries of transit and destination is also a high priority.

Making targeted investments in various non-health sectors to reduce the risk of infection with diseases, as well as to improve their treatment outcomes, contributes both to the personal well-being of citizens and to the socioeconomic progress of a country.
HOW TO USE THIS DOCUMENT

In this document, we suggest interventions that may be implemented in various sectors to contribute towards resolving the complex health and socioeconomic issues around HIV, TB and viral hepatitis. The aim is to help countries opt for and scale up concrete action, which can have a meaningful impact on people’s lives and contribute to and complement the health system response.

Taking intersectoral action sounds straightforward, but the challenges often lie in the details of separate budgets, different work processes, and different ways of measuring outcomes and results. Intersectoral action also requires resources and incurs costs, and while it may result in long-term savings for the health sector, it is important to also include calculations of the necessary resources and allocate these appropriately.

This document seeks to elaborate on different possible entry points from various sectors to facilitate action to address the epidemics. It can and should be used in connection with the opportunities identified for action in achieving the SDGs (15). It is also meant as a tool to help answer the question of who should be at a round table to contribute to resolving issues around the three diseases.

Each section contains suggestions that are relevant to different SDGs and facilitate the review of which intersectoral policies already exist and their respective progress in implementation, thus allowing a “gap analysis” and identification of missing interventions. Annex 3 contains exemplary tables that identify risks for each sector, related to different phases of life, with the corresponding possible interventions at policy or practice level. These tables serve an exemplary function, as the process of identifying risks and defining interventions should be relevant to each specific context.

In the discourse on health promotion and protection and in line with the life-course approach, it is expected that all sectors have a responsibility in protecting and improving health, as well as intervening against risk factors relevant to their sectors. However, while this is the general goal and common understanding, there may be a lack of knowledge on how to address more specific health challenges, such as outbreaks or spread of diseases through the interventional approaches available to and mainly used in other sectors. Annex 4 provides a list of additional instruments created by different actors to facilitate specific intersectoral interventions, complementing the tools mentioned throughout each section. These resources can also be useful in organizing the consultative processes around HIV, TB and viral hepatitis work.

This Framework for Action builds on the experiences of countries in bringing different sectors together to focus on how adapting their respective policies can contribute to better health for society. The analytical work already done on how action on SDG targets in one sector can impact those in other sectors can serve as an inspiration to the intersectoral approach required to reduce the risks and negative impacts of the three diseases. Fig. 3 gives an overview of interventions related to other SDG targets that can also have a positive impact on SDG 3, “ensure healthy lives and promote wellbeing for all at all ages”.

In order to facilitate recognition and linkages between already existing monitoring frameworks, first and foremost the SDGs, Annex 5 captures the relevant indicators to measure how each sector can contribute to advancing health and sustainable development, reflecting a twin-track approach.
The life-course approach may help to make interventions more focused and targeted to the respective stages of life and the respective needs of each age group, especially in vulnerable population groups. At the same time, a life-course approach can prevent future risks of vulnerability by focusing on the early phases of life. Each sector has the potential to reduce risk factors in any stage of life. Fig. 4 illustrates the life-course approach to different risk factors, and the tables in Annex 3 detail examples of life-course related interventions for some sectors.
The conditions to which children are exposed shape their lifelong trajectories and opportunities for health, and can contribute to combatting or exacerbating the intergenerational transmission of disadvantage. Interventions effective for adults will have beneficial effects on their children: if it is possible, for example, to reduce HIV or TB transmission and prevalence in the adult population, this will potentially reduce the overall likelihood of parent-to-child transmission. Protecting men and women who are at risk of contracting HIV by providing them with appropriate prevention of parent-to-child transmission measures, which can include pre-exposure prophylaxis when indicated, is essential. Effective treatment of HIV to achieve undetectable viral load, also prevents transmission ("undetectable = untransmittable" U=U) (16). Increasing testing and diagnosis of HIV in the adult population, through awareness-raising and making information and tests available, will increase the likelihood of people wanting to receive treatment, both for themselves and to protect their partners from getting infected. This will also reduce the overall burden of disease, and thus the likelihood of parent-to-child transmission.

We found it helpful to apply the life-course approach to help breakdown the analysis of interventions into more manageable units – looking at particular risks for each phase of life and identifying possible interventions for each sector relevant to particular age groups. This is illustrated in Annex 3 with examples of selected sectors and the related risk factors and interventions in different phases of life. These examples can be adapted accordingly for other sectors. Attention must be paid to the potential overlap of different risk factors, and the cumulative effect of these in specific phases of life, especially in adolescence.

Though it may seem far-fetched to speak about early childhood development in the context of diseases that affect mainly adults, the foundations for health – be they cognitive, emotional or behavioural – are laid in the early phases of life (17).
Supporting improved early childhood interventions and early recognition of emotional and behavioural risk factors increases the chances of providing the social and educational support needed to prevent long-term ill health and risk behaviour. For the educational and social protection staff working on childhood development, it is important to have the necessary resources to provide additional support and protection where it is needed, especially for families who are themselves at risk, or where addiction and substance abuse may be part of daily life.

The social protection, health and education sectors have a special responsibility in laying the foundations for a healthy life by preparing young people for their role in guiding future generations. These sectors both provide the necessary knowledge and information and ensure that there are “safe spaces” in society for parenting, educating and guiding generations to come. This entails providing a legal framework to ensure an income and protection during periods of maternal or parental leave.

As Fig. 5 shows, the life-course approach can help sectors to define their interventions in the various stages of life.

**FIG. 5.** Applying interventions through the life-course approach

“Adverse experiences can affect brain development in young children and can lead to health harming behaviours, such as alcohol and drug misuse, smoking and self-harm. These behaviours may ultimately affect adult health, resulting in ill health and early death.”

The effect of multiple adverse childhood experiences on health. Hughes et al. (18).

“Adverse experiences can affect brain development in young children and can lead to health harming behaviours, such as alcohol and drug misuse, smoking and self-harm. These behaviours may ultimately affect adult health, resulting in ill health and early death.”

The effect of multiple adverse childhood experiences on health. Hughes et al. (18).
IN VOLVING AND ENABLING CIVIL SOCIETY

The involvement of civil society and its organizations is essential in reaching and working with communities at risk because such organizations are close to the felt needs of populations and affected communities, and are often more flexible and faster at responding to these. The role of civil society in these responses can include awareness-raising and prevention activities; service provision and community-based services; representing the interests of key and vulnerable people; advocacy for removing barriers in access to services and promoting access to affordable and quality medicines; operational research; and policy advocacy. Civil society organizations (CSOs) also have an important role to play in holding authorities and institutions accountable to their commitments. Identifying the most relevant CSOs in the national context and sustainably engaging them in the formulation and execution of action plans can lead to faster progress towards the goal of reducing the risks for HIV, TB and viral hepatitis. CSOs may have tried out effective interventions on a small scale, which may be worthy of scaling up and may contribute to the adaptation of the national strategies chosen.

Box 4 shows examples of intersectoral governance for health involving CSOs from two countries of the European Region. Box 5 presents an example from Ukraine of how involving civil society can provide benefits for the whole health system and for people affected by the epidemics.

CSOs may include patient interest groups, human rights organizations, advocacy organizations, faith-based organizations, charities and foundations, but also professional associations, youth organizations, organizations working on gender or on sexual and reproductive health, volunteer organizations working with marginalized groups, and many others. Some CSOs can be large, such as international charity organizations or trade unions, others very small and working with local development issues. Listening to their voices and supporting their work through targeted resource allocations, as is being done successfully in the distribution of grants by the Global Fund to Fight AIDS, Tuberculosis and Malaria, could be a valuable approach in the context of reducing the risks for the three diseases. In the transition to domestic financing of resources allocated, with the gradual withdrawal of the Global Fund, attention should be paid to developing sustainable and human rights based models of service delivery.

BOX 4. Involving all stakeholders: examples of governance in intersectoral work for health from Ireland and Kyrgyzstan

Source: WHO Regional Office for Europe (19, 20).
The organization of intersectoral work to reduce the risks of HIV, TB and viral hepatitis will depend on the specific country context, the organizational structure of the government, and the responsibilities of the relevant sector ministries. It will also depend upon existing actors from civil society and the overall political commitment. From the pilot countries visited (Belarus, Georgia, Portugal and Tajikistan) it seems that it is useful to link the process to already existing intersectoral mechanisms, such as the Country Coordinating Mechanism, initially created for the coordination of the Global Fund grants; intersectoral mechanisms set up by the cosponsors of UNAIDS; or national interministerial round tables and working groups. These can include national initiatives with respect to the Multisectoral Accountability Framework for TB, which is being implemented under the commitments made at the United Nations General Assembly High-Level Meeting on TB. Whichever organizational form is chosen by each country, based on its particular situation, the quality of the data used for making the decisions is crucial; thus, a monitoring and evaluation mechanism including accompanying operational research should be built in from the start to allow evaluation of impact, permit appropriate adjustments when necessary to ensure sustainability, and facilitate the sharing experiences with others. Furthermore, the national processes around adaptation and achievement of the SDGs create unique opportunities to find new approaches and to evaluate their impact on specific health-related challenges.

**BOX 5. Civil society action on drug pricing for HIV in Ukraine**

In Ukraine, the Alliance for Public Health has been successful in reducing the price of medicines for HIV and hepatitis. To increase access to HIV and hepatitis C virus (HCV) treatment, the Alliance for Public Health and the All-Ukrainian Network of People Living with HIV/AIDS have been actively addressing the limitations posed by patent medicine exclusivity since January 2015. As a result of their joint advocacy interventions in the procurement cycle and the entry of generic versions into the market, the price has significantly decreased (see Table 1).

**TABLE 1. Prices for HIV and HCV drugs before and after the introduction of generic versions, Ukraine**

<table>
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<tbody>
<tr>
<td>Dolutegravir (HIV), per pack</td>
<td>228.00</td>
<td>5.00</td>
</tr>
<tr>
<td>Tenofovir/emtricitabine/efavirenz (HIV), per person per year</td>
<td>353.67</td>
<td>95.04</td>
</tr>
<tr>
<td>Abacavir (HIV), per pack</td>
<td>24.22</td>
<td>9.24</td>
</tr>
</tbody>
</table>

*Source: WHO Regional Office for Europe (21).*

These price reductions may lead to improved access to affordable treatment and increase coverage with antiretrovirals (ARVs) in Ukraine for an additional 80 000 patients. As the Network expected, entry of generic versions reduced prices of ARVs on average by 2–4 times (25).

**ORGANIZING THE PROCESS**

The organization of intersectoral work to reduce the risks of HIV, TB and viral hepatitis will depend on the specific country context, the organizational structure of the government, and the responsibilities of the relevant sector ministries. It will also depend upon existing actors from civil society and the overall political commitment. From the pilot countries visited (Belarus, Georgia, Portugal and Tajikistan) it seems that it is useful to link the process to already existing intersectoral mechanisms, such as the Country Coordinating Mechanism, initially created for the coordination of the Global Fund grants; intersectoral mechanisms set up by the cosponsors of UNAIDS; or national interministerial round tables and working groups. These can include national initiatives with respect to the Multisectoral Accountability Framework for TB, which is being implemented under the commitments made at the United Nations General Assembly High-Level Meeting on TB. Whichever organizational form is chosen by each country, based on its particular situation, the quality of the data used for making the decisions is crucial; thus, a monitoring and evaluation mechanism including accompanying operational research should be built in from the start to allow evaluation of impact, permit appropriate adjustments when necessary to ensure sustainability, and facilitate the sharing experiences with others. Furthermore, the national processes around adaptation and achievement of the SDGs create unique opportunities to find new approaches and to evaluate their impact on specific health-related challenges.
NON-HEALTH SECTOR ENTRY POINTS TO REDUCING HEALTH RISKS FROM TB, HIV AND VIRAL HEPATITIS

The following chapter gives an overview of how various sectors can have an impact on health risks for HIV, TB and viral hepatitis and which respective policies and actions can be developed. The sectors addressed in the following sections are those which have the most potential for positive impact in tackling the cumulative risk factors for the three diseases (see Fig. 6).

POVERTY ALLEVIATION

Investment in health has increasingly been recognized as an important means of economic development and a prerequisite to breaking out of the cycle of poverty, because good health contributes to development in many ways – increasing labour productivity, educational attainment and investment. Addressing poverty in the context of improving health is of prime importance, as people living under the poverty line suffer worse health and die younger; they experience higher than average child and maternal mortality, higher levels of disease, and more limited access to health care and social protection. Gender and racial inequality add further disadvantages for people living in poverty, for whom health is also a crucially important economic asset. When becoming ill or injured, the entire household can become trapped in a downward spiral of lost income and high health-care costs (22).

FIG. 6. Entry points for interventions in different sectors
Beyond the general effect of poverty on ill health, there is increasing evidence of the ways in which poverty increases the risks of viral hepatitis, HIV and TB. The link between poverty and TB goes both ways and the same is true for HIV and hepatitis. TB is a driver of poverty through months off work, income loss and high health expenditures. The risk factors associated with poverty, such as poor housing conditions and poor nutrition, also increase susceptibility to TB. Poverty can also limit access to care resulting in delays in diagnosis and treatment, and consequently in longer infectiousness and higher mortality.

Box 6, taken from the Borgen Project, a non-profit organization based in the United States of America that is working towards addressing poverty and hunger, describes four ways in which poverty affects the spread of viral hepatitis. As the treatment for hepatitis B can be very long, the price of drugs can have a detrimental effect on household expenses in the absence of insurance schemes or other financial support. This is also true for treatment of HIV and multidrug-resistant TB. As this example shows, high drug prices due to patents restrict access to treatment, worsen health outcomes and put enormous financial strains on health systems, not only in lower-income countries but even in high-income European countries.

**Box 6**

“There is a social gradient in health – the lower a person’s social position, the worse his or her health. Action should focus on reducing the gradient in health.

Health inequalities result from social inequalities. Action on health inequalities requires action across all the social determinants of health.

Focusing solely on the most disadvantaged will not reduce health inequalities sufficiently. To reduce the steepness of the social gradient in health, actions must be universal, but with a scale and intensity that is proportionate to the level of disadvantage. We call this proportionate universalism.”

The Marmot review: Fair society, health lives.
M Marmot (23).

**Focusing on poverty alleviation policies**

Ensuring that people living in poverty have access to affordable and quality health services is not sufficient to improve their health. The major determinants of their health depend on actions that lie outside the health sector. To start with, implementing effective pro-poor growth policies as outlined in the DAC Guidelines on Poverty and Health (22) is crucial: without higher or more secure incomes, poor people will not be able to afford food or health services (see Box 7).

Other sectoral policies, too, are critically important, especially those for affordable housing, education, food security, safe water, sanitation and energy. The health of the poor can also be improved by reducing their exposure to the risks of addiction to tobacco or alcohol, road traffic or other injuries, and of the devastating impacts of conflict and natural disasters.
**BOX 6. Four ways in which poverty impacts the hepatitis epidemic: an example from the United States of America**

Hepatitis has become a global epidemic. Such viral infections can cause cirrhosis of the liver and hepatocellular carcinoma. Nine percent of the global population, or 550 million people, are infected and one million die from the disease every year. Most of these deaths are in lower-income countries. Hepatitis infections have definitive links with poverty beyond death rates; poverty is an identified risk factor for the disease. Here are four ways poverty impacts the hepatitis epidemic:

1. **Poverty Impedes Diagnosis**
   
   Many people are unaware they have hepatitis. Indeed, 90 percent of people with hepatitis C are not diagnosed. Undiagnosed people may not take precautions in preventing transmission. Many diagnostic tests are expensive, putting them out of reach for lower-income countries. For example, the liver biopsy test is not only expensive, but it requires trained histopathologists to analyze the tissue sample. … Furthermore, lower-income countries don’t typically have high-quality laboratories that can test for hepatitis. The centers that do exist are usually found in urban areas, neglecting those in rural locations.

2. **Poverty Reduces Access to Treatment**
   
   Lower-income countries have limited access to hepatitis treatment. Forty-one percent of the population lives in places without public hepatitis funding. … There are also tests which guide the treatment of hepatitis. They identify the strain and how much virus is in a person. They’re expensive and as such not always routine.

3. **Patents Make Drugs More Expensive Than They Need to Be**
   
   Drugs are protected as intellectual property by patents. These protection laws prevent other companies from creating comparable, generic drugs at lower prices for twenty years after invention. The intention is to encourage research and development by drug companies. … These patents make some hepatitis drugs too expensive for patients in lower-income countries.

4. **Reuse of Syringes is Common in Lower-Income Countries**
   
   Syringes can be contaminated with hepatitis. When they are reused without sterilization, they can pass along the infection. One reason that dirty syringes are reused is because of poorly trained healthcare workers. Also, lack of funding forces medical professionals to reuse syringes. If this practice continues, so will the epidemic.

*Source: reproduced with permission from the Borgen Project (24).*
Proper nutrition, food security and clean water are basic prerequisites for good health. Proper nutrition refers to both quantity and quality of food, ensuring a good level of energy and ability to combat diseases when these occur. Malnutrition and micro-nutrient deficiencies are risk factors with respect to how quickly the health status of a person who has contracted TB, HIV or hepatitis can deteriorate, while proper nutrition during the period of treatment and convalescence can have a very positive effect on the healing process. Compounding the problems of those infected with any of the three diseases, ill health and undergoing treatments that last many months can result in a reduction of income to support nutritional needs for oneself and one's family.

Other risk factors, such as drug use or imprisonment affect the ability for self-care, for hygiene and for being able to afford, think about or choose a healthy diet. Thus, issues of food security and nutrition are important in many contexts. Assessments of nutritional status, micro-nutrient levels and needs for supplementation should be a routine part of clinical treatment and monitoring. Food supplement policies, cash transfers or food vouchers for patients on treatment are already being provided in many countries to help patients get over times of hardship during treatment; such support is sometimes extended to the patient's family members.

Assessments of food pricing and accessibility, and availability of food in regions at particular risk, also due to climatic and environmental challenges, provide important baseline information in the context of the health of a population.

The prevention of diabetes through the promotion of healthy lifestyles and control of sugar intake can also be addressed with food and nutrition policies. This is especially important for people living with HIV, who are at higher risk of developing type 2 diabetes, as substantial evidence has shown (25,26). People with diabetes and or poor nutrition are also more likely to contract TB (27).

Cultural practices around food, giving advantages or disadvantages to different groups – for example serving food to adults before children, old before young, men before women, or vice-versa – may have an impact on healing and rehabilitation processes in periods of increased nutritional requirements. At critical stages of physical
development, such as in infancy, childhood and adolescence, lack of nutrition can lead to irreparable delays in cognitive development, as well as to damage in the development of the immune system. Poor nutrition in pregnancy can lead to pregnancy complications, foetal developmental problems and prolonged sickness of the mother and the newborn. This applies especially if the pregnant woman is also infected with, or in treatment for TB or HIV. A lack of proper nutrition in old age can lead to a fast deterioration of health status, particularly in the presence of concomitant disease.

**Agriculture and food production**

Proper nutrition is of course linked to the production and availability of food, and the agriculture sector has a prime role to play in the delivery of good quality primary food products, including crops and foods of animal origin, as well as being a potential employment sector. Safe and sustainable food production is also essential to control some forms of hepatitis and TB.

Sustainable agricultural interventions can include support and incentives for the growth of diversified crops that are more economically viable in the long term than crops which generate money more quickly or the use of high-yield seeds that are more robust to droughts. These are strategies that can shape agricultural practice in low-income and middle-income countries in a way that has a positive effect on TB and other health outcomes.
“The agriculture sector can help to create healthier people and communities through:

- working together with the health sector and other areas of government to ensure that safe and nutritious foods are available and affordable for all;
- promoting healthy sustainable rural communities, including by exploring the potential of short and sustainable supply chains and by addressing food and nutrition insecurity; …
- strengthening the prevention of foodborne and zoonotic diseases, including AMR [antimicrobial resistance].

Linking with the agriculture sector presents an opportunity for the health sector to increase the supply of and demand for healthier and safer food. Agriculture policies can assist by ensuring the greater availability and affordability of a diverse range of healthier food and food products.”

Health 2020: Agriculture and health through food safety and nutrition. WHO Regional Office for Europe (28).

Unlike the main form of TB, spreading from human to human, zoonotic TB is spread from animal to human, mainly through the consumption of unpasteurized dairy products, but also – less commonly – of raw or uncooked meat or direct physical contact with infected animals. Safe food production includes veterinary control and rational and responsible use of antibiotics in the treatment of animals, as antibiotic resistance can be passed on through the food chain, leading to multidrug resistance (see Box 8) and lack of options for treatment of diseases – including the treatment of opportunistic infections and coinfections in patients with HIV or TB. Lack of food hygiene and controls, both for veterinary and non-veterinary products, can increase the risk of hepatitis A and E infections, both of which can be transmitted by eating contaminated foods. In most countries of the European Region, veterinary controls are well organized and functioning, both for locally produced and for imported and exported foods, but it may be necessary to ensure that this also applies to more remote rural areas, and there is no illegal traffic of food products of animal origin across borders. This is also an issue of trade and cross-border cooperation.
Intersectoral collaboration to end HIV, tuberculosis and viral hepatitis

Air, water and soil pollution are major threats to human health. The social inequalities that affect people who are more vulnerable to TB, HIV and hepatitis can have an environmental dimension. Lack of access to clean drinking water and to safe waste management can be connected to risks for hepatitis. Lower income groups and marginalized populations are more likely to settle in less expensive parts of cities and towns, which tend to have worse access to basic services and worse environmental conditions. These neighbourhoods can be near industrial areas, hence characterized by higher levels of ambient air, water and soil pollution, compounding the risk to health. Air pollution increases the risks of respiratory diseases, which may be non-infective and of a more chronic nature, but which will still increase the risks of contracting other respiratory infections, for example, TB. Ensuring that environmental policies address these issues is an important factor in decreasing ill health risks in general, and of infectious diseases in particular. More on the built environment can be found in the sections on cities, transport and housing.

Source: WHO Regional Office for Europe (29).
The creation of so-called green jobs can also be explored as an opportunity to provide further education, vocational training and employment possibilities for those struggling to return to the labour market after illness and treatment for HIV, TB and viral hepatitis, combining social and environmental sustainability.

To address all these issues, the European Region has been holding a series of high-level ministerial conferences on the topic of environment and health, the last of which was held in Ostrava, Czechia in June 2017. The resulting Ostrava Declaration (30) (see Box 9) focuses on:

- improving indoor and outdoor air quality;
- ensuring equitable and universal access to safe drinking water, sanitation and hygiene, and the integrated management of waste resources;
- minimizing the adverse effects of chemicals on health;
- preventing and eliminating adverse environmental and health effects, costs and inequalities related to waste management and contaminated sites;
- strengthening adaptive capacity, resilience to climate change and mitigation measures;
- supporting efforts of European cities and regions;
- building environmental sustainability of health-care systems.

Building on the Ostrava Declaration, further work has been done by countries and partner agencies to develop tools for the mapping of environmental inequalities, which particularly put disadvantaged populations groups at much higher exposure levels than advantaged groups (31).
BOX 9. The Ostrava Declaration

“We:

1. Recognize that the 2030 Agenda for Sustainable Development highlights critical and inseparable links between development, environment, human health and well-being, and the economy as central to the attainment of a wide range of human rights, including: the rights to life; the enjoyment of the highest attainable standard of physical and mental health; an adequate standard of living; safe food, drinking-water and sanitation; safety; and clean soil, waters and air, which are key to promoting just, peaceful, inclusive and prosperous societies today and in the future;”

Source: WHO Regional Office for Europe (30).

GENDER EQUITY

European Member States are increasingly working to identify the effects of gender inequalities in their countries, and to design responses. This is particularly relevant in the context of reducing the risks from diseases which are aggravated by stigma. Taking a gender-sensitive approach to reducing these risks entails establishing adaptive services for all, regardless of their sex, gender identity and expression.

“Women and men differ in biology, the roles and responsibilities that society assigns to them and their positions in the family and community. This affects the risk they take, those they are exposed to, their efforts to improve their health, and how the health system responds to their needs. It may also have implications for the causes, consequences and management of disease and ill health.

A gender approach to health begins with the recognition of these differences and promotes the integration of gender as a social determinant of health into policy development, research, health services, resource allocation and project and programme planning, monitoring and implementation.

It aims to achieve greater impact on health and reduce inequities by:

- collecting and using quantitative and qualitative sex disaggregated data;
- understanding and analysing the differences (gender analysis);
- developing gender responsive policies and interventions.”

Gender [website]. WHO Regional Office for Europe (32).
Including organizations and institutions working on gender equity and protection of sexual minorities, and representing cis- and transgender population groups, in the intersectoral work around HIV, TB and hepatitis will ensure that all programmes are implemented with a gender perspective and will thus be more beneficial to the needs of the population served.

The International Classification of Diseases 11th Revision (ICD-11) has redefined gender identity-related health, replacing diagnostic categories like ICD-10’s “transsexualism” and “gender identity disorder of children” with “gender incongruence of adolescence and adulthood” and “gender incongruence of childhood”, respectively. Gender incongruence has thus broadly been moved out of the “Mental and behavioural disorders” chapter and into the new “Conditions related to sexual health” chapter. This reflects evidence that trans-related and gender diverse identities are not conditions of mental ill health and classifying them as such can cause enormous stigma (33).

Inclusion of gender incongruence in the ICD should ensure transgender people’s access to gender-affirming health care, as well as adequate health insurance coverage for such services. Recognition in the ICD also acknowledges the links between gender identity, sexual behaviour, exposure to violence and sexually transmitted infections (33). The transition from gender-responsive to gender-transformative approaches, including the education of girls and boys towards gender equity, as a part of health and leadership interventions, would lead to empowerment of individuals and mitigate the barriers to services related to gender.

EDUCATION

General educational attainment and health literacy are linked to improved health outcomes throughout the life-course. Educational attainment has a positive impact on health through its effects on adult income, employment and living conditions. Health literacy has a marked impact on the health and well-being of individuals and their families, and should play a part in lifelong education.

“Education has positive lifelong effects on health through increased employment opportunities and income, better living conditions, confidence levels and literacy, including health literacy. In addition, adult learning can have positive effects on life satisfaction, mental health and changes in health-supporting behaviour such as smoking cessation, active lifestyles, healthy eating and duration of breastfeeding. Offering opportunities for continual education as well as a second chance for education in adulthood is crucial in promoting equity. Getting the courage to go back to learning is a particular challenge for people who have poor experience with education in their youth. Investing in accessible education throughout the life-course is therefore a priority in breaking the cycle of poverty, exclusion and the effects on people's health and well-being.”

Health 2020: Education and health through the life-course. Sector brief. WHO Regional Office for Europe (34).

The education sector has unique access to all members of society in their childhood and youth, but also during their training and professional life. This sector therefore has a particularly strong impact on the development of healthy behaviour, and health-care seeking behaviour in particular. Examples of effective healthy behaviour that can be taught include appropriate cough etiquette, which can reduce the risk of TB transmission; washing your food, which can reduce the risk of hepatitis transmission; and safe sex practices, which reduce the risk of sexually transmitted
intersections, including HIV and viral hepatitis. The education sector also has a key role to play in contributing to the reduction of stigma and discrimination towards people affected by diseases, starting from the school environment and leading to the establishment of a more tolerant and inclusive attitude toward high-risk populations.

Investing in the education of girls and women

The education of girls and women is particularly important in achieving gender equality. It can have a direct influence on the risk of contracting sexually transmitted infections, including HIV and HCV, as it leads to greater equity, self-esteem and respect for women and girls in society, and as such will contribute to sexual relations more likely to be based on mutual consent. Concretely, educating girls on the use of dual protection – condoms, including female condoms, and pre-exposure prophylaxis against HIV – can decrease the risk of heterosexual HIV and HCV transmission. Also, educating girls and women on the risk of mother-to-child transmission of HIV is likely to enhance self-protective behaviour, motivated by the desire to protect their future offspring.

As women are often the caretakers of children and of other older family members, their education can enhance health outcomes for their family. Mothers and grandmothers are often those who are the providers of health- and sex education to their children and grandchildren, especially to their girls. Educating mothers to recognize early signs of diseases, for example TB, and giving them knowledge of where and when to find help can lead to early and more effective treatment of children and other family members.

Educational content and health literacy

The educational settings of schools, kindergartens, universities and vocational training provide optimal environments for health literacy: learning about health and ill health, and practising health-protective behaviour, as well as about those diseases that are prevalent in the area they live in. This is particularly important in the vocational training for those professions who, like law enforcement, often have contact with vulnerable groups at risk for HIV, TB and viral hepatitis.

Children and adolescents can be taught facts about the three diseases, and how to protect themselves from contracting them. There are many ways of educating children and young adults to protect themselves, including by teaching girls and boys mutual respect and self-assertive behaviour that can lead to prevention of gender-based and domestic violence, unwanted sexual approaches and sexual violence, and thus also help prevent sexually transmitted infections such as HCV and HIV.

Finally, the public and civil educational setting provides opportunities to teach avoidance of risky behaviour, such as drug and alcohol abuse and unprotected sex, protecting both the future of the children and of the community. This requires the school system, parental organizations, school boards and community-based organizations to recognize the reality of contemporary society, which includes earlier sexual relations among peers and sexual relations among unmarried couples. It is therefore necessary that young people and young couples are appropriately prepared and have knowledge on sexual health risks, on contraceptives and on dual protection from unwanted pregnancies and sexually transmitted infections.

Preparing teachers and curricula

Teachers are generally not sufficiently prepared for providing sexual health education, and it may be a difficult area to address for many because of its sensitivities, testing of personal boundaries, and possible societal resistance. It is therefore important that the education sector prepares teachers through training, both on the content and on the best and most age-appropriate methods to teach this. Many curricula have been developed, by international
organizations such as the UNFPA, United Nations Children’s Fund (UNICEF), International Planned Parenthood Federation (IPPF) and the United Nations Educational, Scientific and Cultural Organization (UNESCO) (see Box 10), and by national education or health promoting institutions. These resources are available and can be adapted accordingly.

Peer to peer education
Another intervention, which has been shown to be particularly effective for adolescents, especially those marginalized, is peer to peer education and youth counselling by trained youth volunteers. Useful resources on peer education have been developed by UNICEF (36). The formal education sector, schools and universities, are good settings to prepare young people for such tasks, as well as providing the physical facilities for peer to peer interactions. These types of approaches can however also be implemented in the non-formal sector of youth and sports clubs, holiday camps and similar initiatives (37).

Equal rights for affected students
In a context or community where a high prevalence of TB, HIV or viral hepatitis may be affecting young people and students, the education sector must have strategies and guidelines on how to deal with students who have fallen ill or are in treatment, in order to help teachers, parents and students to respond in a way that respects the affected students.

BOX 10. International technical guidance on sexuality education

Source: UNESCO (35).
Can it be ensured that they still have access to their curricula and receive teaching while they are on treatment? How can they remain integrated in the school community without being stigmatized? How should other students be informed for possible screening and/or preventive treatment? Are all these issues dealt with on an ad-hoc basis, or do schools and teachers have guidelines which can help them make the right decisions? Review of guidelines and laws governing the participation of students when infected or under treatment is essential to fight stigma and ensure continued participation of students in their community.

**Educating health-care providers**

Particularly with respect to HIV, TB and viral hepatitis, ensuring that the educational curricula for all categories of future health-care workers are continuously updated to include both destigmatization and the latest developments in research and treatment is crucial. As mentioned in the 2001 annual report of the United Nations High Commissioner for Refugees (UNHCR) (38), discriminatory laws, and xenophobic, homophobic, sexist, transphobic and narcophobic practices and attitudes from health-care institutions and personnel may deter people from seeking public health services.

Strategies for continuous postgraduate medical and paramedical education should be in place to ensure updated practices. An example of this is the need for further dissemination of the latest recommendations on pre-exposure prophylaxis for HIV negative people who are at risk of HIV infection (see Box 11).

**BOX 11. Information about PrEP for health-care providers**

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**Not enough health care providers know about PrEP.**

Pre-exposure prophylaxis (PrEP) is a medicine taken daily that can be used to prevent HIV infection. PrEP is for people without HIV who are at very high risk for acquiring it from sex or injection drug use.

- **90%** Daily PrEP can reduce the risk of sexually acquired HIV by more than 90%.
- **70%** Daily PrEP can reduce the risk of HIV infection among people who inject drugs by more than 70%.
- **1 in 3** 1 in 3 primary care doctors and nurses haven’t heard about PrEP.

*Source:* reproduced by permission of the Centers for Disease Control and Prevention (39).
RESEARCH AND INNOVATION

The most effective response to new developmental and epidemiological challenges requires the best use of scientific and technological developments. A continuous review of the availability and safety of new diagnostic tools, treatment methods, potential cures, means of communication, and ways of collecting and processing data is essential for providing the most efficient and cost-effective diagnosis, treatment and follow-up for patients. All sectors concerned, but especially civil society, should be involved in operationalizing and setting the biomedical and operational research and development agenda for new means of prevention, treatment and cure (40).

Technological developments and new breakthroughs in information technology can help overcome significant limitations in access to health services. Digital technology allows for the immediate transfer of health data, such as radiology or laboratory results or a patient’s vital signs scores. These can be transferred to centres with more highly specialized health personnel, and immediate feedback can be provided with further treatment or diagnostic instructions.

Innovative communication tools should be further piloted and scaled up. Digital communication tools are very popular and are available to many people today and may allow health-care professionals to keep close contact with a patient under long-term treatment, as well as enabling conferences with more specialized centres. Studies have shown that SMS text messaging and internet-based interventions improve prevention, treatment adherence and treatment outcomes for TB and HIV (41). Studies have also reported that TB cure rates were 2.3 times higher in patients that received SMS reminders for treatment compared with another group receiving standard treatment without SMS reminders (36,42).

Research is also vital for creating bodies of evidence to help us to know what works and what does not, especially when trying out new interventional approaches at national or local level. In adapting to efficient and more effective models of care and/or embarking on non-traditional approaches, such as intersectoral action, it is important to analyse and document what is effective in decreasing the number of new infections and reducing morbidity and mortality. There are significant challenges associated with data collection, registration of patients and data transfer between countries in the case of refugees and migrants. Disaggregated data collection on refugee and migrant health status is of paramount importance to provide evidence-informed policy recommendations; however, significant ethical and legal barriers must also be considered.

EMPLOYMENT

The linkages between employment and health are complex. In general, being in employment rather than being unemployed is beneficial for health, as employment and a steady income can lead to increased social protection, better diets, better mental health and less social stigma. Steady employment can also contribute to better self-esteem and in this way, reduce the risk of self-destructive behaviour, alcoholism and substance abuse, and thus also reduces the risk of contracting one or all three diseases in question. Tuberculosis is often more common among the unemployed.
Unwanted unemployment and loss of work create both economic and emotional stress, through lack of belonging, lack of self-respect, and loss of respect by the community and family members. Lack of employment can lead to marginalization, increased risk of criminal behaviour and drug or alcohol abuse, thus creating a vicious cycle both of decreasing chances of employment and increasing risk of ill health.

On the other hand, some types of work and employment and precarious working conditions can be health risks in themselves, as they may expose workers to dangerous/toxic substances, noise, dust and lack of fresh air. Heavy physical work may increase risks of accidents and musculoskeletal problems, tiredness and other chronic health problems. Working in closed and poorly aired workplaces, such as mines and prisons, can increase the risk of airborne disease transmission, including TB (43).

“For more than 100 years, studies have linked silica dust in the workplace with increased risk of tuberculosis.”

The prevention of silicosis in the mines of Witwatersrand. Miners’ Phthisis Prevention Committee (44).

“Beyond mining, workers in construction, pottery, marble stone industries, and sand extraction have high rates of tuberculosis. For individuals with confirmed silicosis, the risk of active tuberculosis increases by more than three-fold, whereas for individuals with HIV, the risk increases by five-fold. Among workers with HIV and silicosis, the risk increases synergistically by more than 15 times making this one of the deadliest combinations in high-burden countries.”

HIV infection and silicosis. Corbett et al. (45).

Working in the sex industry without adequate protection or as a consequence of human trafficking can significantly increase the risk of contracting sexually transmitted infections, especially where legal restrictions can be a barrier to accessing services that prevent HIV and hepatitis transmission, for example. Professional groups involved in extensive travel activities and long placements away from home – such as seafarers, lorry drivers, members of the military and labour migrants – may be at greater risk of contracting communicable diseases in general and are particularly at risk for sexually transmitted infections through occasional sexual contacts and contacts and contacts with sex workers (see Box 12).

Workplaces are ideal settings for the implementation of health information and education initiatives. Some examples of risk prevention at the workplace include the provision of regular information to staff on health risks and protective behaviour through the intranet or lectures, offers of screening through occupational health services and referral to treatment, and the distribution of condoms or placement of condom vending machines. In response to the HIV epidemic, special HIV workplace policies were developed – comprising also issues of social protection, protection of co-workers, care for family members and employment security – and have been widely applied (47).
People who are suffering from chronic diseases may not be able to return to full-time work, but may well be able and wish to work in part-time positions appropriate for their ability and physical capacity. It may be worth considering creating such opportunities through professional retraining and vocational training schemes for people affected by HIV, TB or viral hepatitis who cannot return to full-time work, in order to enable them to find appropriate jobs and earn an income. Employers should not discriminate against health status or history of illnesses when considering the hiring of staff. Employment policies may include the creation of employment opportunities with public funding.

“Today health is one of the world's largest and most rapidly growing industries, associated with more than 10% of the gross domestic product of most high-income countries and about 10% of their workforce. It encompasses a wide range of business sectors, services, manufacturers and suppliers, ranging from the local to the global.”

Health 2020. WHO Regional Office for Europe (1).

Employment in health care

The health service itself is a workplace which needs to be prioritized in discussing employment with high health risks. Health service workers are constantly exposed to patients with infections and are usually in close physical contact. They may also suffer from airborne infections or needlestick injuries or be exposed to infected blood or body fluids. Protecting health workers from contracting diseases and infections at their workplace and establishing special policies for their social protection should they fall ill, is a task for the health sector itself, but also falls under the overarching issues of health legislation and protection.

Box 13 shows an example from the United Kingdom of an initiative to protect health workers from needlestick injuries.

Employment in the military and law enforcement

The military and law enforcement agencies have highly mobile workforces, which has associated health risks, but are also well organized in the training and management of their staff. They therefore offer a good setting for providing information on prevention of the three diseases, and on their symptoms and treatments. Law enforcement officers potentially have more frequent contact with vulnerable groups, for which specific education on the role of determinants of health, non-discrimination, health promotion and diseases prevention are required.

Informal work

The proportion of the population working in the informal sector varies from country to country; however, informal work is always present to some extent. Men, women and children are employed in the informal sector, for example in domestic labour, agriculture, construction, arts and crafts, and minor trade. Generally, they do not benefit from health insurance and therefore have less access to health care, treatment follow-up and social protection, posing special challenges to the prevention and control of infectious diseases, such as TB, HIV and viral hepatitis.

BOX 13. A banner from the United Kingdom reminding health workers and policy-makers of the need to prevent needlestick injuries
PUBLIC FINANCE

It is essential that the political will to accelerate action on HIV, TB and viral hepatitis is accompanied by the allocation of resources. Whether these resources are allocated for the strengthening of health systems in general or whether they are disease-specific will depend on the respective national and epidemiological context and budgetary systems.

In most countries, a large part of the health sector is dependent on public funding and programme-specific allocations. Even in those countries where health-care services have been partially privatized, the services focusing on disease prevention – classically information campaigns, distribution of free condoms, or needle exchange – are covered by public funding. This can be national funding, or as is the case in some countries of the European Region, international funding through mechanisms such as UNAIDS, the Global Fund and others. To ensure sustainability, applications for donor support should already include a plan for a transition to sustainable domestic funding.

Where TB, HIV and viral hepatitis patients in long-term treatment are in need of food supplements and unemployment support, these funds need to be allocated to the social protection sector, including for the human resources necessary to implement change. Additional allocations may also be required for the education sector, to support the production of new school materials addressing stigma and prevention issues.

Public finance decision-makers may want to consider funding a basic package for intersectoral collaboration to reduce the risks from the three diseases, allocating sub-packages to each of the sectors involved. This process requires advocacy between the government sectors, as well as a good planning of activities and realistic budgeting of their costs. In the division of labour between national and international organizations, the latter may provide technical support based on their experiences with other programmes and countries.

SOCIAL PROTECTION

Comprehensive social protection policies, a core element of human rights, are a prerequisite to improve the determinants and behaviours that drive risk factors and increase the chances of contracting HIV, TB and hepatitis. Social justice and well-functioning social protection systems thus contribute to primary prevention of these diseases and can protect from the consequences of loss of income due to health conditions.

Policies or legislation, such as social protection and social health insurance, should be in place to cover health costs and loss of income for the affected patients. It is, however, necessary to review existing policies to ensure that they do not contain special clauses which could disadvantage these population groups (e.g. dismissal allowed due to length of absence from the workplace because of disease/treatment, legal status in the country, previous imprisonment, or history of drug use).

Social protection and strong social welfare schemes for people who are both economically disadvantaged and affected by TB, HIV and/or viral hepatitis, are essential in ensuring that such citizens are not further marginalized or thrown into impoverishment, that their rights to social benefits are not endangered and that patients who have completed treatment can be reintegrated. This includes reintegration into appropriate housing and schools, but

“A growing body of evidence on the economics of disease prevention shows how health costs can be contained, but only if they also address inequalities across the social gradient and support the most vulnerable people.”

Health 2020. WHO Regional Office for Europe (1).
also into employment, possibly supported by special initiatives, taking into account the potentially decreased working capacity of these population groups. Social protection policies must also take into account the dependants of affected individuals, their children, their partners and possibly elderly family members.

A study of 21 European countries showed that between 1995 and 2012, each increase in social protection spending of US$ 100 per person was associated with: a 1.5% decrease in the number of TB case notifications, a 1.7% decrease in estimated TB incidence, a 2.7% decrease in the rate of non-HIV-related TB mortality, and a 3.2% decrease in the rate of all-cause mortality (49).

“Comprehensive social protection policies can be especially powerful in protecting health in economic crises. Evidence shows that investing in social protection helps to protect individuals and families from the adverse effects of economic crises. Social protection and social investment present an opportunity to prevent sickness and disability and, ultimately, to improve health and reduce health inequalities. Societies investing in social protection, including countercyclical measures, achieve greater health progress overall and can also more rapidly improve the health of the most vulnerable people.”

Health 2020: Social protection and health. WHO Regional Office for Europe (50).

The HIV and Social Protection Assessment Tool developed by UNAIDS (51) supports policy-makers in identifying the gaps and challenges in existing policies with respect to the goal set in the UNAIDS 2016–2021 Strategy: “Ensure that 75% of people living with, at risk of and affected by HIV benefit from HIV sensitive social protection by 2020” (52).

Social protection also goes beyond purely financial support to people affected by the three diseases: it includes advocacy for public understanding and acceptance, for destigmatization and protection from discrimination. It also includes having a structure in place in which affected individuals know who to turn to and have a contact person, social worker or mentor they can rely on.

Being ill is physically and emotionally stressful. Being ill with diseases associated with sexual transmission, same-sex relations and drug dependence, or poverty, unemployment and risk factors such as excessive use of alcohol and tobacco, may inculcate a sense of shame and feelings of personal failure. This often makes it difficult for people affected to turn to health or social services for help. This increases the risk of falling through the social safety net and entering a vicious circle of deteriorating health and increasing poverty and isolation.

It is therefore of prime importance that social services make provisions for and allocate resources to home visits, and visits to at-risk, vulnerable and marginalized populations, to actively offer them screening, consultation and referral to treatment and to the network of social protection. In times of general lack of resources in the public sector, these types of services tend to be cut; however, it is unrealistic to expect that people from vulnerable groups can be reached by sedentary services and self-referral. It is also important that social workers working in these outreach services receive special training on how to work with vulnerable groups, respecting the rights of patients in life crisis situations. Resources should be set aside for such trainings. Public–private partnerships are becoming a popular way to share responsibilities for social protection between the private and the public sector. The development of corporate social responsibility programmes is also a good example of this contribution from the private sector.
MENTAL HEALTH AND ADDICTIVE BEHAVIOURS

Mental illness, particularly anxiety and depression often not addressed by health services, prevents individuals from properly caring for themselves, contributing to malnutrition and a weakened immune system, and increasing the risk of developing infections such as TB (54). It also worsens compliance with and thus the effectiveness of medical care and treatment, including for TB. On the other hand, mental illness can develop or be worsened by social isolation during treatment and by the stigmatization of TB, HIV and HCV. It can also emerge as a side-effect of some treatment drug regimens (54). Mental illness can also increase the risk of unprotected sex and use of psychoactive substances, thus contributing to an increased risk of contracting the three diseases. Mental illness is also strongly associated with homelessness, making it difficult for individuals to secure employment (55).

Ensuring that comprehensive mental health services are available and easily accessible, to all age groups and throughout countries, is an important factor in early recognition and assistance to people suffering from addictive behaviours, as well as in supporting people affected by the diseases. Mental health services are also important in providing psychological counselling and therapy during diagnosis and treatment for the three diseases.

To date, there has been little specialization of health personnel in how to work therapeutically with people suffering from addiction, or how to effectively prevent the initiation of substance use, especially in the case of using drugs for sex (so-called “chemsex”). Furthermore, little training on addressing mental health and addiction issues that can be associated with the three diseases (alcohol, substance abuse, smoking) is available for healthcare professionals working in TB and hepatitis. More training has been provided in counselling and mental health issues in the HIV context, due to the nature of the disease, which was seen as equivalent to a death sentence before access to and affordability of antiretrovirals was improved. The introduction of such training was also a response to the community engagement of people living with HIV (PLHIV), pioneering psychological support in the 1980s.

It is recommended that intersectoral action against HIV, TB and viral hepatitis be closely linked with efforts on primary prevention of substance abuse. Content on the three diseases should be included in post-graduate training for medical staff specializing in the prevention and treatment of substance abuse. CSOs and former patients should be involved in designing training content and in its delivery, providing a patient perspective.

Substance use and addictive behaviours

Substance use does not usually start with injection drug use. Most frequently, people engaged in substance use have started by using legal drugs (both prescription and non-prescription) as well as alcohol and tobacco, or even prescription drugs purchased on the black market. The harms related to alcohol and tobacco use are addressed in the respective sections below.

In the European Region, most deaths among people who use or inject drugs are related to AIDS, overdose, suicide or trauma. Better TB, HIV and viral hepatitis care can improve health outcomes for people who use or inject drugs.
In the Region, the use of illicit drugs was responsible for 2.4 million life-years lost due to disability and mortality in 2004. The use of illicit drugs thus ranks as the ninth most important cause of disability-adjusted life-years (DALYs) lost. In eastern Europe, 70–90% of all people acquiring HIV infection are people who inject drugs and, in the European Region as a whole, injection drug use leads to most new cases of HCV (56).

“The international drug control conventions have been created to protect and promote public health, particularly of vulnerable groups such as children and adolescents at risk, marginalized persons, individuals affected by social exclusion or disadvantages, or people with a history of affective trauma, psychological problems and mental health concomitant disorders. The conventions unambiguously provide support for people with drug use disorders and people who need controlled drugs for medical purposes and their provisions should and can be implemented in full respect of the human rights and the dignity of individuals.”


We cannot look at injection drug use in isolation; it must be considered in the context of the use and control of other addictive substances, legal or otherwise. In the last 10 years, the use of amphetamine type stimulants and new psychoactive substances have become a significant concern (58, 59).

Intersectoral action to reduce the risks of the three diseases must incorporate drug, alcohol and tobacco policies and their implementation, which are usually intersectoral themselves. Decriminalization of drug use in combination with decriminalization of behaviours in which drug use may be more apparent, such as sex work, also helps to ensure that at-risk populations have continuous access to the treatment, care and support they need to live healthy lives. This increases the likelihood of early diagnosis and treatment for HIV and viral hepatitis, and thus leads to a decrease in the rate of new infections.

Box 14 emphasizes the need for international collaboration to address the harms associated with substance abuse.

**BOX 14. Collaboration to reduce the harms associated with substance abuse**

“Built upon the success of the first World Health Organization (WHO) Forum on alcohol, drugs and addictive behaviours held in 2017 in Geneva, the Second Forum is envisaged to bring a new impetus to international activities led or implemented by WHO in reducing the health and social burden associated with substance use and addictive behaviors.

Against a rapidly changing global health landscape and increasing commercialization, strong international collaboration and partnerships are needed to address the harmful use of alcohol and public health dimensions of drug use and achieve Universal Health Coverage for people suffering from disorders due to substance use and addictive behaviours.”

Dr Ren Minghu
Assistant Director-General
Universal Health Coverage/Communicable and Noncommunicable Diseases

Source: World Health Organization (60).
**Alcohol**

Alcohol intake in the European Region is the highest in the world. The harmful use of alcohol is related to premature death and avoidable disease and is a major avoidable risk factor for neuropsychiatric disorders, cardiovascular diseases, and alcohol-related liver disease, including cirrhosis and liver cancer. It is also a risk factor for reduced immunity and increased risk of infection, and in reduced self-care, including hygiene and nutrition. It is associated with several infectious diseases and contributes significantly to unintentional and intentional injuries. Excessive alcohol use during a woman’s pregnancy can lead to severe mental handicap of her child. Furthermore, alcohol has a disinhibiting effect and lowers the threshold for risky behaviour, including the use of other addictive substances, unsafe sex and gender-based violence.

Table 2 illustrates the high degree of medically diagnosed alcohol dependency among TB patients in the Portuguese region of Porto.

**TABLE 2.** TB in vulnerable groups – Porto region, Portugal

<table>
<thead>
<tr>
<th>Alcohol addiction</th>
<th>Injection drug addiction</th>
<th>Other drug addiction</th>
<th>Inmates</th>
<th>Homeless</th>
<th>Social housing residents</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>10.7</td>
<td>194</td>
<td>2.9</td>
<td>52</td>
<td>6.1</td>
<td>110</td>
</tr>
</tbody>
</table>


The European Action Plan to Reduce the Harmful Use of Alcohol 2012–2020 (61) was endorsed by all 53 Member States in the Region in September 2011. It includes a range of intersectoral evidence-based policy options to reduce the harmful use of alcohol, a list of indicators (with definitions) linked to those used in the European Information System on Alcohol and Health and a checklist for Member States.

The primary audience for the action plan includes: national authorities in the Region responsible for alcohol policy, such as health and other ministries (including finance, industry and trade, education, social welfare, transportation and criminal justice); nongovernmental and civil society organizations; researchers; the private sector; and international partners.

**Tobacco**

Cigarette smoking increases the risk of respiratory diseases and vulnerability to infections, the latter also being exacerbated by alcohol. Smoking is a risk factor for TB, independent of alcohol use and other socioeconomic risk factors. Smoking increases the risk of TB infection by more than 2.5 times and increases death from TB. More than 20% of global TB incidence may be attributable to smoking (62). Figures 7 and 8 illustrate the prevalence of tobacco smoking and the number of new TB cases respectively, based on the latest data.
**FIG. 7.** Age-standardized prevalence of current tobacco smoking among people aged 15 and over (%)

White colour: data not available.

*Source: WHO Regional Office for Europe (63).*

**FIG. 8.** Number of new TB cases

White colour: data not available.

*Source: WHO Regional Office for Europe (63).*
An extensive review of the association between tobacco use and the risk of TB is provided by a WHO/The Union monograph on TB and tobacco control: Joining efforts to control two related global epidemics (64). It makes a number of suggestions on how to control these two epidemics by integrating national strategy implementation for TB with tobacco strategy interventions at primary health care level. It recommends providing training in TB diagnosis, prevention and treatment to primary health care providers in smoking prevention and cessation programmes, so that patients can be diagnosed and treated for both, and so that TB patients can be offered counselling and treatment for tobacco use.

Links have also been shown between smoking and HIV. PLHIV are more likely to develop the harmful consequences of smoking such as bacterial pneumonia, candidiasis, hairy leukoplakia, cancer, serious lung diseases such as chronic obstructive lung disease, and heart diseases. PLHIV who smoke have a poorer response to antiretroviral therapy in terms of viral suppression (65) and are more likely to die of both AIDS-related conditions and other causes of mortality than PLHIV who are non-smokers (66). Helleberg et al (2012) revealed an excess mortality rate of 17.6% related to smoking among PLHIV compared to an excess mortality rate of 4.8% among controls (HIV negative smokers vs. HIV negative non-smokers). They indicated that PLHIV in treatment can benefit enormously from smoking cessation programmes, and that it would be beneficial to offer these as part of HIV treatment programmes (66).

There are also studies indicating that among individuals coinfected with HIV and HCV, non-smoking is associated with reduced HCV mortality. A study on HCV-related mortality among HIV/HCV coinfected individuals concluded that people living with HIV/HCV coinfection should be referred for tobacco and alcohol control interventions (67). In another study on cause of death among PLHIV in London in 2016, smoking, along with alcohol consumption in the year before death, was identified as a risk factor (68).

With respect to the available evidence on the enhanced harmful effects of tobacco on patients living with, or in treatment for the three diseases, and the beneficial outcomes of smoking cessation in this patient group, countries may wish to review the linkages between the implementation of the respective policies, and ensure that health staff working with HIV, TB and hepatitis patients are trained in communication regarding the harmful use of tobacco as well as in guiding patients through smoking cessation.

The burden of tobacco use on health is enormous, with over 7 million estimated deaths worldwide in 2016, many of them occurring prematurely, and large losses of healthy life due to morbidity and disability (69). It also imposes enormous economic costs on society, both directly from health-care needs and indirectly from loss of productivity, fire damage, environmental harm from cigarette litter and destructive farming practices. Understanding of how to reduce the economic and health costs of this deadly epidemic is now greater, but despite the availability of cost-effective tools, many countries still face a challenge in designing and implementing comprehensive and sustainable tobacco-control strategies.

To address these challenges, Members States of the WHO European Region have agreed over the past 15 years on several policy frameworks, such as the WHO Framework Convention on Tobacco Control (70). Progress has been seen on the implementation of these frameworks in countries, but the levels achieved so far are insufficient to reach a target of reducing tobacco-use prevalence among the adult population in the European Region by 30% by 2025 (71).
SEXUAL AND REPRODUCTIVE HEALTH AND RIGHTS

The importance of strengthening sexual and reproductive health and rights in order to be more effective in responding to HIV, viral hepatitis and other sexually transmitted infections, has been widely recognized and documented in a number of national and international resources and commitments (72), such as in the International Conference on Population and Development Programme of Action (73), the Convention on the Rights of the Child (74), and the International Guidelines on HIV/AIDS and Human Rights (75), and is underlined in the United Nations Common Position on Ending HIV, TB and Viral Hepatitis through Intersectoral Collaboration (2). These rights, among others, include that of individuals to decide on whether they want to continue a pregnancy, irrespective of their HIV status.

HIV and viral hepatitis can be transmitted through unprotected sexual intercourse (vaginal, oral or anal) with someone who has contracted the infections and, in the case of HIV, has a detectable viral load. Thus, ensuring that linkages to HIV and sexually transmitted infection prevention are included in national policies and strategies on sexual and reproductive health is crucial in preventing infection in young people and adults. It is also essential in reducing or eliminating parent-to-child transmission of HIV, as well as congenital syphilis.

In the Call to action to the global community: attaining universal health coverage through sexual and reproductive health and rights and HIV linkages, 10 key actions towards improving sexual and reproductive health and rights are listed, including ensuring meaningful community engagement, generating broad-based political will with accountable leadership and governance, and amending harmful laws and practices (see Box 15).

BOX 15. Call to action to attain universal health coverage through linked sexual and reproductive health and rights and HIV interventions

In the context of SRHR [sexual and reproductive health and rights] and HIV linkages, special attention should be given to people living with HIV, sex workers, transgender people, men who have sex with men, people who use drugs, and people in prisons and closed settings, with additional attention for adolescents and young key populations.

Key action: National governments and parliaments work with the criminal justice system and civil society partners to amend national laws and policies that are proven to prevent people from accessing SRH and HIV services they need.

5. Improve alignment and coordination within and between stakeholders across the health system to ensure coherent and efficient systems that support delivery of a continuum of integrated SRHR and HIV prevention, treatment and care services, especially at the primary health care level.

Source: World Health Organization (76).
Most countries of the European Region have developed and begun implementation of comprehensive sexual and reproductive health strategies. These have been introduced since 1994, following the recommendations and Programme of Action of the International Conference for Population and Development (73), organized by UNFPA in Cairo, Egypt. These generally include intersectoral action, particularly with respect to interventions in the educational and youth sector, including prevention of sexual violence. However, they do not always cover sexual and reproductive health rights of sexual minorities, transgender people, and people living with HIV, TB and viral hepatitis.

Information and scientific evidence are increasingly available on connections between TB treatment and reproductive health. There is sufficient evidence available for the use during pregnancy of first-line TB drugs for drug-susceptible TB, and for most of the second-line TB drugs for multidrug-resistant TB. More evidence is being developed, while access to newly recommended treatment regimens is scaling up.

“Sexual and reproductive health and rights (SRHR) are fundamental to people’s health and survival, to economic development, and to the wellbeing of humanity. Several decades of research have shown—and continue to show—the profound and measurable benefits of investment in sexual and reproductive health. Through international agreements, governments have committed to such investment. Yet progress has been stymied because of weak political commitment, inadequate resources, persistent discrimination against women and girls, and an unwillingness to address issues related to sexuality openly and comprehensively.”

Accelerate progress—sexual and reproductive health and rights for all. Starrs et al. (77).

**MIGRATION**

Migrants are often exposed to greater risks of infection from HIV, TB and viral hepatitis. The process of migration, and the risks and exposures in the origin, transit and destination environments interact with biological and social factors to create greater vulnerabilities among these populations. Addressing these vulnerabilities requires structural adaptation and inclusive government policies, involving the national health systems of countries of origin, transit and destination.

However, in reality, migration policies often prioritize short-term interventions and security concerns over the health needs and rights of refugees and migrants. It is for this reason that strong and effective health leadership and governance are required to implement effective long-term structural policies across all sectors and at all levels of governance. The Strategy and Action Plan for Refugee and Migrant Health in the WHO European Region (78) was adopted by all 53 Member States of the Region in 2016 and is a roadmap for the types of actions that can be taken by Member States and WHO.

It is important to note that there is no evidence that refugees and migrants pose a significant threat in the transmission of disease to host communities. It is possible that refugees and migrants arriving from countries with a high prevalence of TB might reflect the prevalence of TB in their countries of origin. However, the proportion of refugees and migrants among the total of a country’s TB cases varies from more than 90% to less than 1%, depending on the prevalence in the host country.
The same is true for HIV. A significant proportion of those refugees and migrants who are HIV positive acquire infection after they have arrived in the Region, and they are more likely to be diagnosed later in the course of infection than the general population. Infections with hepatitis B and C are more common among refugees and migrants arriving from countries with high endemic disease, but prevalence of these infections among refugee and migrant populations varies across the Member States of the Region (14).

“Human mobility causes an increase in diversity across societies, posing several integration and demographic challenges. Health systems must be flexible and adapt to people’s diverse health profiles and needs. Further, the right to health is a universal value inspiring many countries’ constitutional laws. The health of migrants must therefore be ensured in accordance with respecting human rights principles to enable migrating populations to contribute socially, economically and politically to societies. This notion formed the basis of resolution WHA61.17 on the health of migrants endorsed by the World Health Assembly in 2008.

Migrants are a heterogeneous population encompassing diverse and overlapping categories including labour migrants and their families, international students, undocumented migrants, internally displaced people, asylum-seekers, refugees, unaccompanied minors and victims of human trafficking. The lack of consensus on definitions highlights the complexity of this area.

Moreover, addressing migration and health engages a variety of non-state and government actors, such as home and foreign affairs, justice, labour, social affairs, education and health, whose policies and interventions have implications across sectors. Multisectoral, multilevel and trans-national approaches are the way forward to enable coordinated, structural and sustainable change in this area.”

Health 2020: Multisectoral action for the health of migrants. WHO Regional Office for Europe (79).
Restrictive laws and regulations may also affect migrants and immigrant groups not coming from disadvantaged settings. It is therefore very important to closely examine legal barriers to access to diagnosis and treatment and remove these as soon as possible to halt the spread of diseases. There are also several countries which are still imposing restrictions on residence and travel based on HIV status (82).

The Migration Integration Policy Index (MIPEX) questionnaire is a tool designed to assess policies on the integration of migrants, including access to health services. The latest edition of MIPEX (2015) covers 38 different countries. The health strand questionnaire is based on the recommendations on mobility, migration and access to health care which were developed from a consultation process which lasted two years and involved researchers, intergovernmental and nongovernmental organizations and a wide range of specialists in health care for migrants. The questionnaire includes over 167 indicators, and measures the equitability of policies relating to four issues: (i) migrants’ entitlements to health services; (ii) accessibility of health services for migrants; (iii) responsiveness to migrants’ needs; and (iv) measures to achieve change. The research for the health strand of the index was cofunded by the International Organization for Migration (IOM), and the European Commission’s Directorate-General for Health and Food Safety and Consumers, Health, Agriculture and Food Executive Agency, and is managed in collaboration with the Migration Policy Group (MPG) and the Barcelona Centre for International Affairs (83).

Fig. 9 shows total scores on MIPEX in 2016, and the large variation within Europe.

**FIG. 9.** Migration Integration Policy Index – health, Europe 2016

![Migration Integration Policy Index](image)

Note: The map illustrates the overall MIPEX rating on health policies related to migrants in Europe, based on indicators including levels of health-care coverage and access to services.

*Source*: reproduced by permission from IOM (84).
In countries where there are clear migration paths and points of entry or exit, it may be effective to offer mobile health services for testing, initiating treatment or following up on previously received treatment. Diaspora communities can be used as entry points to help migrants reach health services.

A coordinated public health mechanism to guarantee TB prevention, diagnosis, treatment and care across borders is not yet in place in the European Region. As a response to this challenge, the WHO Regional Office for Europe developed a minimum package for cross-border control and care in the Region (see Box 16) (85,86).

**BOX 16. What measures of TB prevention, treatment and care are effective and efficient among refugees and migrants?**

Because of the diversity of settings across the European Region, it is unlikely that a single harmonized approach to management of TB among migrants will be effective or efficient. However, the following policy options can be considered:

- incorporate screening and treatment for latent TB infection and multidrug-resistant TB into refugee and migrant screening programmes (e.g. at the first point of contact for newly arrived migrants with health services in the host country) in an accessible and culturally sensitive manner as part of a basic free package of care;
- improve cross-border collaboration for TB screening and care along the entire migration trajectory, with focus placed on implementing a minimum package of TB screening and care;
- develop a more holistic approach to migrant health across the Region, recognizing the rights of migrants to health, and work towards removing legal, social and cultural barriers to health services to facilitate better TB control among migrants;
- develop health education/health literacy around prevention, treatment and care for TB to increase knowledge, awareness and, subsequently, patient involvement;
- align TB policies with initiatives within the social programme, as poverty and destitution are well-known risk factors for TB transmission and reactivation;
- strengthen approaches to data collection to provide an intercountry evidence base on TB in refugees and migrants for monitoring and evaluation within national health systems;
- encourage research to understand patterns of TB and to define innovative implementation approaches, in particular cost-effectiveness and how to improve screening and treatment completion.

*Source: WHO Regional Office for Europe (85).*

The blue health insurance card for citizens of the European Union (EU) ensures access to emergency health care in EU countries other than that of residence. This is a good example of cross-border coordination in health-care financing. However, it does not provide for continued treatment of previously diagnosed conditions, nor does it ensure cross-border access to patient records.
LEGISLATION

Legislation on health care, disease prevention, sick leave, protection from loss of employment and on gain of new employment has a direct effect on access to treatment, as well as on the possibility to remain in long-term treatment, which is particularly relevant for HIV, TB and viral hepatitis. Working with legislators is key to ensuring that these health considerations are streamlined across all policies.

Another area of legislation which is just as relevant is human rights. Where existing laws do not ensure the protection of human rights for all, including at-risk and vulnerable groups, it is difficult to implement health programmes that address and are used by everyone. Fig. 10 illustrates the intersection of health and human rights.

FIG. 10. Health and human rights

Source: WHO Regional Office for Europe.
Where the personal use of drugs and addiction are seen as criminal acts and not as health problems, it will be difficult to get affected people into drug treatment programmes, and most importantly, more difficult to get them treated for HIV, TB or HCV, as attending the health centre may be linked to fear of being caught or arrested. The same applies to other key and at-risk populations such as men who have sex with men or commercial sex workers.

Discriminatory and stigmatizing legislation makes outreach work with the groups that most require support and intervention very difficult, as it also puts health staff at risk of being seen as supporting actions that are deemed criminal, and thus being placed in a nearly criminal role themselves. Laws which are specifically restrictive and discriminatory for sex work and drug use make it more likely that these population groups will not seek health care, leading to delays in diagnosis and treatment.

In reviewing the efficiency of working in and with key populations, in particular with migrants and refugees, a useful step could therefore be an analysis of the laws affecting people living with HIV, TB and HCV, and an assessment of how far they create obstacles to accessing diagnosis, treatment, care and reintegration. Assessment of the legal environment would benefit from including stakeholders from the various affected sectors, such as health, education and employment, as well as the legal sector itself (see Annex 4, toolkits).

**JUDICIAL AND CORRECTIONAL SYSTEM**

The health of prison populations is poorer than that of the general population, as are standards of health care. At the same time, the proportion of the prison population infected with HIV, TB and HCV tends to be larger than in the general population. This may be linked to the higher likelihood of criminalization within the groups at risk for intravenous drug use. It can also be a consequence of criminal behaviour; for example, theft and illegal sex work can be a means to access the necessary money to purchase drugs.

“More than 1.5 million people are held in European penal institutions, including prisons, on any one day. The number of people who pass through European prisons each year is considerably greater. There is overwhelming evidence that people who are incarcerated disproportionately experience complex, co-occurring health problems, including mental illness, cognitive disability, substance dependence, noncommunicable diseases, and HIV, tuberculosis, hepatitis C and other infectious diseases.”

Health in prisons: factsheets for 38 European countries. WHO Regional Office for Europe (87).

These problems are often compounded by the characteristics of the correctional system's infrastructure and management. Infrastructure within the correctional system often does not comply with modern standards of hygiene and living, and the often-crowded living conditions – with insufficient airing, ventilation and infection control practices – can increase the risk of contracting TB or infecting others with the disease.
“The poor health experienced by this population typically occurs in the context of entrenched socioeconomic disadvantage. While the health of incarcerated people is important in its own right, prison health is also a concern for the whole of society, as prisons are closely linked to communities. Most people in prison return to the community, and many people repeatedly come into contact with both settings.”

Health in prisons: fact sheets for 38 European countries. WHO Regional Office for Europe (87).

Furthermore, the time spent in the correctional system is often not used for rehabilitation and resocialization to empower detainees to avoid falling back into risk behaviour when returning to the world outside. Sometimes, the time within the system can lead to the acquisition of new risk behaviours, such as injecting drug use or risky sexual behaviour. Ensuring psychosocial support, such as preventing homelessness and return to crime, for those leaving the correctional system, is crucial to avoid repeat offending and further imprisonment.

The fact sheets on health in prisons in 38 European countries published by WHO in 2019 provide a good overview of existing health services, screening policies and prevalence of HIV, TB and viral hepatitis among detainees (87).

Though the majority of detainees are adults, youth are also incarcerated in specific correctional systems and institutions, and children are born to mothers who are detainees. It therefore also makes sense to take a life-course approach here and ensure the human rights and needs of each age group are fulfilled, protected and promoted. Concretely, it may be relevant to review the standards for prison health care, and the data available (see Box 17), in particular with respect to the prevention and diagnosis of HIV, TB and viral hepatitis, and their subsequent treatment for all age groups of detainees. In doing so, the culture and hierarchies that exist among populations in prison should be considered. Classical prevention and care should be adjusted according to the specific conditions governing prison life.

**BOX 17. Lack of comprehensive data on health in prisons in the WHO European Region**

People in prison are deprived of their freedom - they should not be deprived of their health.

Out of 39 countries in the WHO European Region only

- 2% have data on overweight
- 9% have data on tobacco smoking
- 15% have data on injection drug use
- 19% have data on high blood pressure
- 21% have data on hepatitis B
- 19% have data on tuberculosis
- 21% have data on hepatitis C

More and better data is needed to improve health in prisons and ensure a better transition back into society

Source: WHO Regional Office for Europe (88).
“Numerous countries can count on specialized agencies in charge of providing aftercare assistance and supervision to recently released offenders. In some instances, such programmes are offered by probation services; in others, they may be offered by NGOs [nongovernmental organizations]. While most re-entry programmes have not been subjected to controlled evaluations and the most successful approaches have yet to be fully identified, much is known about factors affecting programme retention and/or completion. Improving employment, housing and education, in particular, can improve programme retention and have a positive impact on the social reintegration of offenders.”
Introductory handbook on the prevention of recidivism and the social reintegration of offenders. UNODC (89).

TRANSPORT
Transport is crucial in the daily life of people who require regular visits to health-care services, such as people living with HIV, chronic hepatitis and TB. Many such people rely on public transport to access treatment.
Overcrowded trains and buses, where passengers are standing in very close contact with each other, are a risk environment for infectious diseases, particularly those spread by droplet infections, such as TB. In some parts of the world, passengers have taken to wearing masks to protect themselves against air pollution, from contracting diseases spread through air, and from spreading infections to others.

“Participants reaffirmed commitment to enhancing the role of sustainable transport in connecting people and communities to jobs, schools and health care and in the delivery of goods and services to rural and urban communities, thus providing all with equal opportunities and leaving no one behind.

It was emphasized that public transport services and infrastructure were critical to enable the mobility of people and goods, in particular taking into account needs of vulnerable groups (women, children, youth, persons with disabilities, people living with HIV/AIDS, older persons, indigenous peoples, refugees and internally displaced persons and migrants).”


“Transport is not only a matter of developing transport infrastructure and services, but rather the ease of reaching destinations in terms of proximity, convenience and safety.

Transport offers the means for all to reach ameliorative opportunities while providing job opportunities. …Transport provides accessibility while ensuring inclusiveness and social equality – with the cost of transport being the determining factor.”

Analysis of the transport relevance of each of the 17 SDGs. UN-Habitat; United Nations Environment Programme; SLOCAT Partnership on Sustainable, Low Carbon Transport (91).

The transport sector can also be considered a subsection of the employment sector. The reason for treating it separately is that the enormous movement of goods by sea, air and road worldwide, brings with it a large movement of people: those engaged in physically transporting the goods, as well as those engaged in distribution
and sale. Transport can occur from low to high disease prevalence countries or vice versa. Globalization and work abroad also entails that people are away from their families and partners for long periods of time and may enter sexual relationships while abroad. This population group, though not a key population group in and of itself, as it is not necessarily socially vulnerable, is however, a risk group requiring special attention. It is important to identify mechanisms of how to reach and inform this group at risk of infection due to increased mobility (93).

These mechanisms may either be through the general training of lorry drivers, sailors and flight crew – including modules on self-protection, recognizing symptoms and seeking help – or though introduction programmes of companies employing people in transport services. Both health and education sectors could be involved in helping to prepare such materials and trainings, and possibly provide resource people for the training.

CITIES

Two thirds of the Region's population live in urban environments, which can provide opportunities for individuals and families to prosper, and can promote health through enhanced access to services, income generating activities, culture and recreation. Yet, while cities are the engines of economic prosperity and often the locations of the greatest wealth in the country, they can concentrate poverty and ill health, both physical and mental. People in towns and cities face a triple threat: infectious diseases such as TB, pneumonia and diarrhoeal diseases; increased rates of noncommunicable disease such as heart disease, cancer and diabetes; and violence and injuries, including road-traffic injuries (94). High levels of pollution and social isolation can also make cities unhealthy places to live. Crucially, it is the most deprived within society that are typically exposed to the worst environments (95).
Urbanization is one of the defining forces of our era and many people are drawn to cities from poorer rural areas. It is a challenge for urban planners to take into account the exact numbers of migrants into cities, and to provide for the establishment of health and education infrastructure and services accordingly. Paradoxically, it is the perception of urban areas having better services that is a pull factor for internal migrants from underserved rural areas.

Urbanization is set to continue and planning for this expansion with health and well-being at the forefront of policy development will save lives. Improving the built environment with health in mind also brings benefits to other areas beyond direct health effects; for example, better roads improve access to health services, food markets and schools. Unregulated growth of cities in countries where there is intensive rural–urban migration, and therefore unregulated settlement without services, creates additional risks for the spread of diseases for those people who live in informal settlements or underserved neighbourhoods. This is particularly the case for TB, HIV and HCV, as well as other communicable diseases (96). Rapid and unregulated urbanization with high population density, unsuitable living design, lack of social support and increased inequities can create ideal conditions for these epidemics to thrive.

Urban planning practices, including governance, management, planning and design, must be put in place to deal with the challenges to people’s health and well-being, and to address health equity. As a means of addressing health and engaging a variety of non-state and government actors, urban planning can be a powerful tool. It includes the planning of safe transport systems which do not increase air pollution and provide sufficient space for people travelling daily. It also entails good urban governance, which is sufficiently flexible to respond adequately to new needs, and new risks and threats to the health of people living in cities. It should also compensate for unequal situations and ensure that those who are among the most vulnerable receive the extra attention they need. Governance styles which are participatory and embrace a community-centred grassroots approach are more likely to result in the development of safe, healthy and pleasant cities to live in (see Box 18). Cities can also take on specific commitments and focus on areas of intervention in their development plans, examples of such health-related focus areas include the Fast-Track Cities initiative on HIV (97) and the Zero TB Initiative city declarations (98). With the Paris Declaration of 2014 (99), mayors from all over the world committed to putting their cities on the fast track to ending the AIDS epidemic.

**BOX 18. The potential of cities in health, well-being and equity**

- **Regulation.** Cities are well positioned to influence land use, building standards, and water and sanitation systems, and to enact and enforce regulations on tobacco use, and occupational health and safety.
- **Integration.** Local governments are capable of developing and implementing integrated strategies for health promotion.
- **Intersectoral partnerships.** Cities’ democratic mandate conveys authority and sanctions their ability to convene partnerships and encourage contributions from many sectors.
- **Citizen engagement.** Local governments have everyday contact with citizens and are closest to their concerns and priorities. They have unique opportunities to partner with the private and non-profit sectors, civil society and citizens’ groups.
- **Equity focus.** Local governments can mobilize local resources and deploy them to create more opportunities for poor and vulnerable population groups, and to protect and promote the rights of all urban residents.

*Source: WHO Regional Office for Europe (100).*
Intersectoral collaboration to end HIV, tuberculosis and viral hepatitis

Overcrowding, indoor air pollution and poor ventilation in homes, hospitals and public transport encourage the spread of airborne infections. Innovative technologies that improve exhaust emissions, general ventilation, room filtration and ultraviolet air disinfection can enhance natural ventilation and reduce transmission risk. Improving the built environment has enormous effects on TB. A study from South Africa showed that the risk of TB transmission could be decreased from 55.4% to 9.6% by opening windows and doors to increase airflow (101).

Sustainable development requires adequate housing for all, ensuring access to safe water and sanitation, waste management, light and air. Ensuring the provision of such safe housing would have a significant positive effect on the health of residents. Policies regarding eligibility criteria for social housing should therefore avoid excluding key populations for HIV, TB and viral hepatitis.

“It is well understood that housing is an important determinant and lever for health and health equity. Housing and health are universal concerns and basic human needs. They are so closely tied that, historically, health and housing ministries were integrated in many countries, reflecting a synergistic relationship. Improving housing boosts health; and investing in health assures employability and, therefore, helps people to access and maintain adequate housing.

Many factors of housing have a critical influence on health, including location and design; the standard of construction and maintenance; amenities and service equipment, such as hygiene installations or heating; and the match of a given dwelling with the residing household.
Improvements in housing conditions in Europe have played a major role in increasing life expectancy, and housing improvement has been one of the main public health interventions. Living in poorly ventilated, unsafe and overcrowded settings with high levels of environmental pollution has a negative impact on health. Poor-quality built environment and inadequate housing conditions affect health and trigger inequities: dampness, mould and cold are only a few of the major risk factors linked to inadequate housing. These, in turn, increase the risk of musculoskeletal conditions, allergies, injuries, cardiovascular disorders and respiratory diseases, including asthma and tuberculosis.\textsuperscript{102}

\textbf{THE ARTS}

Building on the enormous creative potential of the arts, both as a vehicle of communication and as an activity of self-expression, can open up unexpected ways of achieving a change in behaviours, knowledge and well-being. Performing arts especially have been used extensively in community information campaigns on HIV in Africa and increasingly on sexual and reproductive health and drugs in school education in northern Europe.

\textsuperscript{102}Health 2020: Social protection, housing and health. WHO Regional Office for Europe.
“The arts, including performing arts, visual arts, design and crafts, digital and electronic arts, literature, cultural activities and events, have a crucial role to play in ensuring healthy lives and promoting well-being for all throughout the life-course. Engagement with the arts can help to address social determinants of health, such as by developing social cohesion, reducing loneliness and social isolation and building individual and group identity. Arts programmes have been shown to reduce conflict by promoting intercultural understanding and promoting tolerance and cooperation across different groups. Arts programmes can also help to reduce both social inequalities and increase equity in health by developing skills, building capacity and promoting social inclusion.

The arts can also help to give every child the best start in life by enhancing mother–infant bonding and speech and language acquisition, supporting behavioural adjustment and enhancing educational attainment. Engagement with the arts can promote healthy living. Activities such as dance provide opportunities for engaging in physical activity, improving strength and reducing obesity. Targeted arts programmes have been found to improve awareness of health, support healthier eating and reduce risky behaviour such as using drugs and alcohol and engaging in unprotected sex.

Health communication programmes that use the arts, such as plays, murals and stories, have been found to improve health literacy in a way that is sensitive to local cultural traditions and challenges the hierarchical divisions and tensions that can exist in health communication. … The arts can also be used to reduce stigma surrounding health, such as through representations in media storylines, and participating in arts programmes has been found to improve empathy, ensure positive attitudes towards people with mental and physical illness and promote resilience among people with health conditions.

The arts are also effective in reaching people who are either less likely to seek health care or who experience more barriers when seeking it and therefore may have a higher risk of adverse health outcomes. This can include children in care, individuals who are homeless and individuals who may face discrimination based on their race, ethnicity, gender or sexuality. Arts programmes have been shown to promote engagement with health services, often by reducing the stress or anxiety associated with visiting health-care settings, and to improve adherence to treatment by building self-efficacy and reducing side-effects such as pain or fatigue.

For health-care professionals, the arts can build understanding of illness and disease by representing experiences and symptoms in art forms. They can also build the skills of professionals, including their communication skills, empathy and understanding and diagnostic skills. Arts programmes in medical education and in health-care organizations have been found to improve the mental health and well-being of personnel and to reduce stress and burnout. Similar programmes in the community for informal caregivers have been found to improve resilience and coping.”

Intersectoral action: the arts, health and well-being. WHO Regional Office for Europe (103).
FOREIGN AFFAIRS

“…health policy today requires joint action to address collective problems facing all countries. The link between health and foreign policy in a globalized world has been most obvious in the response to communicable disease outbreaks and builds on the historical tradition of sanitary agreements between states. …

Foreign policy and diplomacy offer important instruments to address intersectoral, multilevel and multilateral policy-making and can complement and support national policy efforts. Ensuring that foreign policy supports health and makes effects on health a key consideration for foreign policy, development and investment strategies is crucial.

Health as a vital component in foreign policy, when engaging in post-conflict development and responding to natural disasters, has been increasingly acknowledged, mainly through humanitarian action frameworks. … Many countries implement health programmes as part of their development and humanitarian commitments. Health can also be an important instrument of soft power and relationship-building between countries, especially when cooperating in other areas of foreign policy is difficult.”

Health 2020: Foreign policy and health. WHO Regional Office for Europe (104).

The health component of foreign policy security concerns could be the most significant interlinkage between health and foreign affairs. This is particularly the case in relation to mitigating and responding to the outbreak of infectious diseases, as well as building international cooperation and development. With respect to the specific issues of HIV, TB and viral hepatitis, countries which have large migrating populations – either into, out of, or back to the country – face specific challenges.

Mutual agreements on patient treatment, continuation of treatment, or respective access to services can be concluded in areas with predictable migration between countries. The International Health Regulations also provide guidance on international cooperation in the control of infectious diseases, which can be relevant for infectious forms of TB among people who may travel while not on treatment (105). It is important to note that HIV or hepatitis status should not be a reason to limit people’s travel or integration into a new country. Health issues, particularly issues regarding infectious diseases, should be a regular point on the agenda of talks between countries with common borders. This would help in identifying risks early and quickly developing risk-mitigating interventions, such as providing immediate access to treatment upon diagnosis in the new country. Dialogue on cooperation with respect to sexually transmitted infections and infections of which drug use is a risk factor requires openness, but also evidence and reliable data.

International cooperation includes foreign assistance to countries. With regards to health, this can be either of a humanitarian nature or supporting health systems strengthening. The provision of diagnostic tests and drugs, as well as capacity-building are typically included, supported additionally by bilateral or regional development agencies. Trade-Related Aspects of Intellectual Property Rights (TRIPS) including of pharmaceuticals, are also dealt with in international agreements at the World Trade Organization.
Today, most international support for HIV, TB and viral hepatitis is channelled through multilateral organizations and institutions such as the Global Fund, WHO, Stop TB, UNAIDS and others. However, this funding is dependent on the World Bank income classification of countries, and as countries graduate from low to middle income, the availability of funds is reduced.

The discussions around funding and replenishing international organizations, such as the Global Fund, have shown that advocacy can be successful, not only in providing additional funding to countries, but also in the negotiation of international pricing of drugs and commodities, making treatment more affordable overall. The Global Fund has also developed tools for increasing domestic funding and ensuring sustainability – such as attaching the condition that a certain share of domestic funding be included in country funding applications – and addressing diseases through integrated and system-wide interventions (106).

To be effective, international cooperation requires continuous dialogue and regular monitoring of programmes, including the collection of reliable data and the identification of gaps so that the needs for prevention and treatment can be addressed in a timely and comprehensive manner, avoiding shortfalls in the provision of services or drugs. Box 19 illustrates an example of such international cooperation. The challenge in this context is that these diseases tend to spread in certain population groups, reflecting general social challenges in a country, and it is not always easy to address the needs of these groups, or issues of sexual transmission, in high-level policy negotiations.

**BOX 19. The COBATEST Network**

An example of cooperation between countries is the COBATEST Network, formed to standardize the monitoring and evaluation of community-based voluntary counselling and testing (CBVCT) for HIV. Currently the network comprises 48 CBVCT services from 21 different countries (Austria, Bulgaria, Croatia, Cyprus, Czechia, Denmark, France, Germany, Hungary, Italy, Latvia, Lithuania, North Macedonia, Poland, Portugal, Republic of Moldova, Serbia, Slovenia, Spain, Switzerland and Ukraine).

Source: WHO Regional Office for Europe (107).

The engagement of all sectors in meeting the challenges of HIV, TB and viral hepatitis will ensure harmonized action towards the common goal of halting the further spread of the three epidemics in the European Region.

“Social determinants are relevant to communicable and noncommunicable disease alike. Health status, therefore, should be of concern to policy-makers in every sector, not solely those involved in health policy.”

The social determinants of health inequalities. M Marmot (5).
No - health sector entry points to reducing health risks from TB, HIV and Viral Hepatitis

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Intersectoral collaboration to end HIV, tuberculosis and viral hepatitis


ANNEX 1.
Statistics on HIV, TB and viral hepatitis in the European Region, latest data

FIG. A1.1. New viral hepatitis cases (latest data) (number of cases)

Note: White colour indicates no data.
Source: European Health for All family of databases, accessed 5 December 2019.

FIG. A1.2. Standardized death rate, viral hepatitis (deaths per 100 000)

**FIG. A1.3.** Rate of new HIV diagnoses (latest data) (cases per 100 000 population)

Note: White colour indicates no data.

**FIG. A1.4.** Trend of AIDS-related deaths in eastern Europe and central Asia

*Source:* UNAIDS 2019 estimates.
**Fig. A1.5.** Incidence of tuberculosis (latest data) (cases per 100 000 population)

Note: White colour indicates no data.

**Fig. A1.6.** Standardized death rate, tuberculosis (deaths per 100 000)

ANNEX 2.
Definitions of key terms

The terms used in this document are aligned with current consensus definitions used in the Global Health Sector Strategy on HIV/AIDS 2011–2015 and by the United Nations, as described in the UNAIDS Guidance note on HIV and sex work and other relevant WHO and United Nations documents.

Key populations

Key populations are defined groups who, due to specific higher-risk behaviours, are at increased risk of HIV, TB and viral hepatitis, irrespective of the epidemic type or local context. Also, they often have legal and social issues related to their behaviours that increase their vulnerability to the three diseases. These six key populations are: 1) men who have sex with men, 2) people in prisons and other closed settings, 3) people who inject drugs, 4) people who use drugs, 5) sex workers and 6) transgender people.

People in prisons and other closed settings are included in these guidelines also because of the often high levels of incarceration of the other groups and the increased risk behaviours and lack of HIV, TB and viral hepatitis services in these settings. The key populations are important to the dynamics of transmission of the three diseases. They also are essential partners in an effective response to the epidemics.

Many individuals will relate to more than one key population. For example, some men who have sex with men and some transgender people may also engage in sex work and/or inject drugs.

Men who have sex with men

Men who have sex with men refers to all men who engage in sexual and/or romantic relations with other men. The words “men” and “sex” are interpreted differently in diverse cultures and societies and by the individuals involved. Therefore, the term encompasses the large variety of settings and contexts in which male-to-male sex takes place, regardless of multiple motivations for engaging in sex, self-determined sexual and gender identities, and various identifications with any particular community or social group.

People in prisons and other closed settings

There are many different terms used to denote places of detention, which hold people who are awaiting trial, who have been convicted or who are subject to other conditions of security. Similarly, different terms are used for those who are detained. In this document, the term “prisons and other closed settings” refers to all places of detention within a country, and the terms “prisoners” and “detainees” refer to all those detained in criminal justice and prison facilities, including adult and juvenile males and females, during the investigation of a crime, while awaiting trial, after conviction, before sentencing and after sentencing. This term does not formally include people detained for reasons relating to immigration or refugee status, those detained without charge, and those sentenced to

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compulsory treatment and to rehabilitation centres. Nonetheless, many of the considerations in this document apply to these people as well.⁴

**People who inject drugs**

People who inject drugs refers to people who inject psychotropic (or psychoactive) substances for non-medical purposes. These drugs include, but are not limited to, opioids, amphetamine-type stimulants, cocaine, hypnosedatives and hallucinogens. Injection may be through intravenous, intramuscular, subcutaneous or other injectable routes. People who self-inject medicines for medical purposes – referred to as “therapeutic injection” – are not included in this definition. The definition also does not include individuals who self-inject non-psychotropic substances, such as steroids or other hormones, for body shaping or improving athletic performance. While this document focuses on people who inject drugs because of their specific risk of HIV or HCV transmission due to the sharing of blood-contaminated injection equipment, much of this guidance is relevant also for people who inject other substances.

**People who use drugs**

People who use drugs include people who use psychotropic substances through any route of administration, including injection, oral, inhalation, transmucosal (sublingual, rectal, intranasal) or transdermal. Often this definition does not include the use of such widely used substances as alcoholic and caffeine-containing beverages and foods.

**Sex workers**

Sex workers include female, male and transgender adults (18 years of age and above) who receive money or goods in exchange for sexual services, either regularly or occasionally. Sex work is consensual sex between adults, can take many forms, and varies between and within countries and communities. Sex work also varies in the degree to which it is “formal” or organized.⁵

As defined in the Convention on the Rights of the Child, children and adolescents under the age of 18 who exchange sex for money, goods or favours are “sexually exploited” and not defined as sex workers.⁶

**Transgender**

Transgender is an umbrella term for people whose gender identity and expression does not conform to the norms and expectations traditionally associated with the sex assigned to them at birth; it includes people who are transsexual, transgender or otherwise gender non-conforming.⁷,⁸

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Transgender people may self-identify as transgender, female, male, transwoman or transman, trans-sexual or, in specific cultures, as hijra (India), kathoey (Thailand), waria (Indonesia) or one of many other transgender identities. They may express their genders in a variety of masculine, feminine and/or androgynous ways. The high vulnerability and specific health needs of transgender people necessitates a distinct and independent status in the global HIV response, taking this into account.

**Vulnerable populations**

Vulnerable populations are groups of people who are particularly vulnerable to HIV, TB and viral hepatitis infection in certain situations or contexts, such as adolescents, orphans, street children, people with disabilities, and migrant and mobile workers.

**Children**

According to Article 1 of the Convention on the Rights of the Child, “A child means every human being below the age of 18 years unless, under the law applicable to the child, majority is attained earlier”.

**Adolescents**

Individuals between the ages of 10 and 19 years old are generally considered adolescents. Adolescents are not a homogenous group; physical and emotional maturation comes with age, but its progress varies among individuals of the same age. Also, different social and cultural factors can affect their health, their ability to make important personal decisions and their ability to access services.9

This document primarily uses the term “adolescents”. Other terms covering overlapping age groups include:

**Youth**

This term refers to individuals between the ages of 15 and 24.10

**Young people**

This term refers to those between the ages of 10 and 24.

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## ANNEX 3.
Tables on life-course approaches, risks and interventions for selected sectors

### TABLE A3.1. Food security and nutrition: risks and interventions throughout the lifespan

<table>
<thead>
<tr>
<th>Risks/Interventions</th>
<th>Newborn/Infancy</th>
<th>Childhood</th>
<th>Adolescence</th>
<th>Adulthood</th>
<th>Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Risks</strong></td>
<td>Insufficient development, small for date/low birthweight/ incomplete organ maturation</td>
<td>Stunting, delayed cognitive development, delayed motoric development, insufficient immunity against TB, HIV and hepatitis B or C</td>
<td>Low immunity increasing the risk of infection Additional risk factors in this age group: drug abuse, low income, unemployment</td>
<td>Low immunity, inability to recover after disease</td>
<td>Cost and regional availability of food Cultural practices</td>
</tr>
<tr>
<td></td>
<td>If infected with TB, HIV or viral hepatitis, increased risk of premature death</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Interventions</strong></td>
<td>Ensuring qualitatively and quantitatively sufficient food in pregnancy/food and iron supplements</td>
<td>Ensuring the availability of healthy food for all children Teaching about healthy nutrition Ensuring free availability of food supplements and security for all children affected by any of the three diseases</td>
<td>Advocating balanced diets and collecting information on food security inside and outside the home setting Ensuring availability of sufficient food of good quality for adolescents affected by or in treatment for the diseases</td>
<td>Ensuring affordability of food for home and work Ensuring availability of sufficient food and supplements for adults in treatment</td>
<td>Policies on nutrition security for all age groups, all socioeconomic groups and groups at risk, including prisoners Public resources for providing additional nutrition for groups with special needs, including HIV, TB and hepatitis B or C patients in treatment</td>
</tr>
</tbody>
</table>
**TABLE A3.2.** Education: risks and interventions throughout the lifespan

<table>
<thead>
<tr>
<th>Risks/Interventions</th>
<th>Childhood</th>
<th>Adolescence</th>
<th>Adulthood</th>
<th>Old age</th>
<th>Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Risks</strong> (of insufficient general education and specific health education)</td>
<td>Lack of parental knowledge on how to protect yourself from mother-to-child transmission of HIV, lack of knowledge of TB risk factors for children, lack of knowledge on recognizing early signs of disease and showing appropriate health-seeking behaviour</td>
<td>Lack of self-protective knowledge, gender inequity in education leading to increased risks for young women to catch sexually transmitted infections, including HIV and HCV, lack of disease-specific knowledge</td>
<td>Lack of self-protection and recognizing early signs of diseases, lack of compliance with treatment</td>
<td>Increased risk for malnutrition with simultaneous lack of economic resources (insufficient payments)</td>
<td>School enrolment, surveys on knowledge of health and health protection</td>
</tr>
<tr>
<td><strong>Interventions</strong></td>
<td>Teaching about health and diseases, teaching self-assertiveness, teaching about health-seeking behaviour</td>
<td>Access to adolescents who have dropped out of education, to ensure they have access to jobs and income, but also to the knowledge needed to protect themselves from diseases, especially HIV, TB and HCV</td>
<td>Offering adult education, identifying adult education gaps, providing specific disease risk-related education and parental education to teach children</td>
<td>Maintaining knowledge on self-care and health-seeking behaviour, providing information on diseases, in particular TB and its early signs, promoting knowledge about healthy eating and drinking</td>
<td>Knowledge, attitude and practice (KAP) surveys, existence of health education in curricula, existence of sex education in curricula, existence of information/mass media campaigns with specific information on HIV, TB and viral hepatitis</td>
</tr>
</tbody>
</table>
### TABLE A3.3. Employment: risks and interventions throughout the lifespan

<table>
<thead>
<tr>
<th>Risks/Interventions</th>
<th>Infancy</th>
<th>Childhood</th>
<th>Adolescence</th>
<th>Adulthood</th>
<th>Old age</th>
<th>Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Risks</strong></td>
<td>Parental unemployment and lack of protective employment policies can lead to developmental problems in foetus and infant</td>
<td>Parental unemployment reduces family income and can have negative effects on living conditions and food safety, increasing risks for both TB and viral hepatitis, with negative effects on childhood development, risk of malnutrition, increased risk of lowered immune status, and increased risk of family violence</td>
<td>Youth unemployment is a risk for drug abuse (thus increased risk of contracting HIV and hepatitis), low self-esteem, mental health problems, malnutrition, migration</td>
<td>Unemployment can lead to low family income, mental health problems, malnutrition, increased risk of alcohol and drug abuse, increased risk of domestic violence, inadequate living conditions – thus increased risk of diseases, in particular TB</td>
<td>Unemployment in adulthood leads to insufficient income in old age, low pensions, and the respective risks of living in inadequate housing, and having inadequate nutrition</td>
<td>Statistics on employment/unemployment rates, family income, income distribution</td>
</tr>
<tr>
<td><strong>Interventions</strong></td>
<td>Protective employment policies for pregnancy and maternity and parental leave</td>
<td>Securing employment for parents and finding flexible options with part-time work, providing for safe unemployment schemes ensuring a minimal income for individuals and families</td>
<td>Youth employment schemes, good youth training and vocational schemes, preparing young people professionally for the world of work</td>
<td>Employment and investment incentives, protection from unemployment</td>
<td>Protective work pension policies</td>
<td>Employment incentives and policies, social protection against unemployment, existence of trade unions</td>
</tr>
</tbody>
</table>
### TABLE A3.4. Social protection: risks and interventions throughout the lifespan

<table>
<thead>
<tr>
<th>Risks/Interventions</th>
<th>Infancy</th>
<th>Childhood</th>
<th>Adolescence</th>
<th>Adulthood</th>
<th>Old age</th>
<th>Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Risks</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parental unemployment and lack of protective employment policies can lead to developmental problems in foetus and infant</td>
<td>Parental unemployment reduces family income and can have negative effects on living conditions and food safety, increasing risks for both TB and hepatitis, with negative effects on childhood development, risk of malnutrition, increased risk of lowered immune status, and increased risk of family violence</td>
<td>Youth unemployment is a risk for drug abuse (thus increased risk of contracting HIV and viral hepatitis), low self-esteem, mental health problems, malnutrition, migration</td>
<td>Unemployment leads to low family income, mental health problems, malnutrition, increased risk of alcohol and drug abuse, increased risk of domestic violence, inadequate living conditions – thus increased risk of diseases, especially TB</td>
<td>Unemployment in adulthood leads to insufficient income in old age, low pensions, and the consequent risk of living in inadequate housing and having inadequate nutrition</td>
<td>Unemployment rate</td>
<td>Youth unemployment</td>
</tr>
<tr>
<td><strong>Interventions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protective employment policies for pregnancy and maternity and parental leave</td>
<td>Securing employment for parents and finding flexible options with part-time work, providing for safe unemployment schemes ensuring a minimal income for individuals and families</td>
<td>Youth employment schemes, good youth training and vocational schemes, preparing young people professionally for the world of work</td>
<td>Employment and investment incentives, protection from unemployment</td>
<td>Protective policies to ensure minimum income and resources for housing, heating and food, basic requirements for the maintenance of good health</td>
<td>Employment incentives and policies, social protection against unemployment, existence of trade unions, existence of outreach social protection services, existence of reintegration policies and programmes</td>
<td>Gender sensitive employment statistics</td>
</tr>
</tbody>
</table>
## TABLE A3.5. Imprisonment: risks and interventions throughout the lifespan

<table>
<thead>
<tr>
<th>Risks/Interventions</th>
<th>Infancy</th>
<th>Childhood</th>
<th>Adolescence</th>
<th>Adulthood</th>
<th>Old age</th>
<th>Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Risks</strong></td>
<td>Lack of protection against mother-to-child transmission of HIV, if pregnant detainees are not given appropriate pre-natal care. Newborns who are with their mothers in prisons are at a greater risk of contracting TB through poor hygienic and living conditions.</td>
<td>Parental imprisonment reduces family income and can have negative effects on living conditions and food security for the detainee’s family. Infection of an adult detainee with TB, HIV or viral hepatitis can increase the risk of contracting the diseases for their children.</td>
<td>Infection of young people with TB, HIV or viral hepatitis while in prison. Insufficient treatment of adolescents already infected prior to becoming detainees. Insufficient screening of adolescents in prison.</td>
<td>Infection with TB, HIV or viral hepatitis while in prison. Insufficient treatment of detainees already infected prior to becoming detainees. Insufficient screening for HIV, TB and viral hepatitis in prisons.</td>
<td>Increased risk of infection in a subpopulation already weakened due to age and possible comorbidity.</td>
<td>Epidemiological studies on detainee health/prison health.</td>
</tr>
<tr>
<td><strong>Interventions</strong></td>
<td>Policies for ensuring that pregnant detainees are screened and referred for treatment if necessary, including treatment for prevention of mother-to-child transmission.</td>
<td>Policies for protecting visiting children from infection, contact tracing, treatment of family members.</td>
<td>Screening of adolescents and referral for treatment if necessary. Making use of the period of incarceration for health education and information on prevention strategies.</td>
<td>Screening and referral for treatment if necessary. Making use of the period of incarceration for health education and information on prevention strategies.</td>
<td>Particular attention to be payed to elderly and long-term detainees with respect to immune status and screening, and respective referral for treatment.</td>
<td>Existing prison health policies and services. Specific policies for TB, HIV and viral hepatitis prevention in prisons, including screening, treatment, information services and contact tracing.</td>
</tr>
</tbody>
</table>
ANNEX 4. Toolkits for applying intersectoral action addressing the socioeconomic determinants of HIV, TB and viral hepatitis


**TOOLS FOR WORKING WITH KEY POPULATIONS**

**Urban populations**


**Children**


**Health-care workers**


**People who use drugs**

Mobile populations

Miners

Prisoners

Rural populations

People living with HIV

Indigenous people

Key, vulnerable and underserved populations
ANNEX 5.
Indicators of progress in the different sectors

In this annex, examples of indicators are provided for each sector, linking to the topics addressed in the document and also connecting to several relevant SDGs targets, building on the data collection that will feed into national reporting.

**Poverty alleviation**

- Percentage of people living below the international poverty line, disaggregated by age and gender
  (Data source: United Nations SDG database)

- Gross domestic product (GDP) per capita
  (Data source: United Nations SDG database)

- Gini index
  (Data source: United Nations SDG database)

**Food security and nutrition**

- Prevalence of undernourishment
  (Data source: United Nations SDG database)

- Prevalence of diabetes
  (Data source: WHO)
Environment

- Proportion of population with primary reliance on clean fuels and technology
  (Data source: WHO)

Gender equity

- Participation rate of youth and adults in formal and non-formal education and training in the previous 12 months, by sex
  (Data source: Institute for Health Metrics and Evaluation)

Education

- Percentage of children enrolled in primary school, disaggregated by gender
  (Data source: UNICEF)

Research and innovation

- Research and development expenditure as a proportion of GDP (SDG indicator 9.5.1)
- Researchers (in full-time equivalent) per million inhabitants (SDG indicator 9.5.2)
  (Data sources: UNESCO Institute of Statistics, Organisation for Economic Co-operation and Development, Eurostat, national statistics)
Employment

- Percentage of unemployed, disaggregated by gender
  (Data source: national statistics)

Public finances

- Percentage of GDP spent on health
  (Data source: national statistics)

- Health expenditure per capita
  (Data source: national statistics)

Social protection

- Existence of social protection policy for sickness and disability
  (Data source: national policy)

- Proportion of population covered by social protection floors and systems
  (Data source: United Nations SDG database)
Mental health and addictive behaviours

- Prevalence of alcohol use disorder
  (Data source: WHO)

- Prevalence of smoking among those aged 15 years and over
  (Data source: WHO)

Sexual and reproductive health and rights

- Proportion of maternal mortality due to abortion
  (Data source: WHO)

Migration

- MIPEX index
  (Data source: IOM)

Legislation

- Existence of non-discriminatory laws regarding sex work, men who have sex with men
  (Data source: national legislation)
Judicial and correctional system

- Rate of imprisonment
  (Data source: UNODC)

Transport

- Proportion of population that has convenient access to public transport, by sex, age and people with disabilities
  (Data source: national data, United Nations SDG database)

- Proportion of the rural population who live within 2 km of an all-season road
  (Data source: national data, United Nations SDG database)

Cities

- Percentage of population living in cities
  (Data source: United Nations SDG database)

Housing

- Proportion of urban population living in slums, informal settlements or inadequate housing
  (Data source: United Nations SDG database)
Foreign affairs

- Existence of policies and agreements on cross-border cooperation on disease control
  (Data source: WHO)

- Implementation of International Health Regulations (IHR)
  (Data source: WHO)
The WHO Regional Office for Europe

The World Health Organization (WHO) is a specialized agency of the United Nations created in 1948 with the primary responsibility for international health matters and public health. The WHO Regional Office for Europe is one of six regional offices throughout the world, each with its own programme geared to the particular health conditions of the countries it serves.

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