A DISCUSSION PAPER

HIV, UNIVERSAL HEALTH COVERAGE AND THE POST-2015 DEVELOPMENT AGENDA





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Acronyms used in this document

3TC lamivudine

AIDS acquired immunodeficiency syndrome

ART antiretroviral therapy

d4TstavudineEFVefavirenzFTCemtricitabine

Global Health Sector Strategy on HIV/AIDS 2011–2015

GPRM Global Price Reporting Mechanism
HIV human immunodeficiency virus
MDG Millennium Development Goal

MEPI Medical Education Partnership Initiative

MSM men who have sex with men
NCD noncommunicable disease

NEPI Nursing Education Partnership Initiative

NVP nevirapine

PEPFAR President's Emergency Plan for AIDS Relief

(of the United States of America)

PMTCT prevention of mother-to-child transmission (of HIV)

SDGsustainable development goalTDFtenofovir disoproxil fumarateUHCuniversal health coverage

UNAIDSJoint United Nations Programme on HIV/AIDS

UNICEF United Nations General Assembly
UniceF United Nations Children's Fund

VAT value-added tax

WHA World Health Assembly
WHO World Health Organization

ZDV zidovudine

Executive summary

Since 2000 the Millennium Development Goals (MDGs) have guided international development policies and investments and significantly influenced HIV and broader health policies and programmes. During this time impressive progress has been made, with new HIV infections falling by more than a third, a forty-fold increase in the number of people on life-saving antiretroviral therapy and declining AIDS-related mortality. As 2015 approaches — the date set for achievement of the MDG targets — there is a call for the MDGs to be replaced by a much broader framework aimed at eradicating poverty and promoting sustainable social, economic and environmental development.

An intergovernmental process, with broad stakeholder consultation, has been established to develop a post-2015 development framework. Consensus is emerging around a possible 17 focus areas for sustainable development goals, of which "healthy lives for all at all ages" is one. To achieve this specific health goal, particular attention will need to focus on a number of areas, including:

- tackling the "unfinished business" of the three health-related MDGs MDG4 to reduce child mortality, MDG5 to improve maternal health and MDG6 to combat HIV, malaria and other diseases;
- addressing noncommunicable diseases and mental health; and
- promoting universal health coverage to unify a somewhat fragmented health agenda and ensure adequate attention to equity and human rights.

This discussion paper describes the progress made towards achieving the MDGs, the process for developing the post-2015 development framework, the possible position of health in the framework, and the concept of universal health coverage, all with a specific focus on HIV. Particular attention is given to the relationship between universal health coverage and the HIV response. With this information, readers will be better able to take part in discussions on

the post-2015 development agenda, whether at the global level, in national strategic planning, or within local constituencies and communities.

There is general agreement that the MDG agenda will not be completed by the 2015 milestone, and that commitment and action will need to be maintained and even intensified beyond 2015 to achieve the goals. We are at a defining moment in the HIV response: technically, the knowledge and tools we now have make it feasible to end HIV as a major public health concern; financially, global and domestic economic pressures are demanding new thinking around HIV funding and financing mechanisms; and politically commitments will need to be made for a renewed HIV framework and targets to take us into the future. The MDGs represent a strong foundation on which to build. There is now growing momentum to set a target of "ending the AIDS epidemic" by 2030 with three possible subtargets related to: reducing new adult HIV infections and eliminating new infections among children; reducing stigma and discrimination faced by people living with HIV and key populations; and reducing AIDS-related deaths.

Expanding the scope of the health goal to include other health areas, such as noncommunicable diseases, provides an opportunity for the HIV response not only to build on the MDG achievements but also to be more effectively integrated in the broad health and development agenda. In addition to their core business of HIV prevention, diagnosis, treatment and care, and their clear links with maternal and child health and tuberculosis, HIV programmes now have opportunities to link up with other post-2015 priority health areas, notably noncommunicable diseases, mental health and sexual and reproductive health.

Central to the post-2015 development agenda is the eradication of poverty. At the global level, 150 million people experience financial catastrophe and 100 million people suffer impoverishment every year as a result of out-of-pocket health expenses. Therefore, ensuring financial security and health equity will be a critical component of the post-2015 health goal, with a universal health coverage framework providing the means to do so. Universal health coverage is an aspirational goal that all people use the promotive, preventive, curative, rehabilitative and palliative health services they need, of sufficient quality to be effective, without suffering financial hardship. People's ability to pay for health services should be reflected in all policies, to protect the poor and vulnerable from financial hardship. Public compulsory health financing systems, including general taxation and compulsory health insurance, are the most equitable and efficient systems. In many ways the response to HIV has been a trail-blazer for universal health coverage, while at the same time the universal health coverage framework can be used to strengthen HIV responses.

The response to HIV has promoted innovation in the way health services are delivered and funded, including in six areas that are particularly relevant for the achievement of universal health coverage:

- defining comprehensive intervention and service delivery packages that should be funded through the public system;
- strengthening quality assurance and quality improvement systems;
- developing and applying multisectoral costing methods and tools;
- championing health access strategies, which have reduced the price of health commodities and improved the efficiency of service delivery;
- pioneering innovative financing models and increasing overall investments in health; and
- addressing health inequities, particularly by engaging civil society and key populations.

The HIV response to date has embraced most of the principles of universal health coverage and contributes significantly to its goals. However, there are further opportunities to use the universal health coverage framework to strengthen and accelerate HIV programmes. Key areas for action include:

- ensuring that financial protection schemes cover the full range of HIV interventions and services required by a population, including relevant out-of-pocket expenses;
- integrating HIV into broader health planning and using a single framework for situation analysis, costing, planning and budgeting for all major health issues;
- identifying new approaches for sustainable financing of comprehensive HIV responses, including through domestic funding opportunities;
- removing financial and other barriers to enable equitable access to services, with particular focus on those populations most vulnerable and in need; and
- promoting greater efficiency in programmes and eliminating waste, including through integration and decentralization of services.

There are opportunities to refocus the HIV response using the universal health coverage framework, to address some of the key shortcomings in the response so far. Universal health coverage can focus greater attention on promoting health equity, improving the quality of services, ensuring financial and social security, strengthening health and community systems, building coherence across different health areas, addressing the social and economic determinants of HIV and guaranteeing human rights.

Introduction

For the past 14 years, the Millennium Development Goals (MDGs) have guided global development policies and investments. Over the same period, huge advances have been made in dealing with human immunodeficiency virus (HIV) infection. As 2015 approaches — the date set for achievement of the MDG targets — there is a call for these targets to be replaced by a much broader framework aimed at eradicating poverty and promoting sustainable social, economic and environmental development.

An intergovernmental process has been established, with broad stakeholder consultation, to formulate such a framework. Consensus is emerging around 17 focus areas for sustainable development goals, of which "healthy lives for all at all ages" is one (see Box 1). The key role of health in poverty reduction and sustainable development has been acknowledged, and there is broad agreement that health should be included both as a goal in its own right and in other development goals. Furthermore, the concept of universal health coverage (UHC), defined as universal access to quality health services and financial risk protection, is being promoted as a fundamental element of the health focus area. HIV has featured prominently in the discussions, which have sought to determine how it can best be reflected in the relevant focus areas.

Objectives of paper:

This document provides background information for policy-makers at national and international levels on the relationship between the post-2015 development agenda, universal health coverage and HIV, covering:

- the integration of health and HIV into the post-2015 development agenda
- the completion of the "unfinished business" of the Millennium Development Goals:
- the contribution of the HIV response to universal health coverage; and
- the role of universal health coverage in strengthening the HIV response.

This paper describes the progress made towards achieving the MDGs, the discussions related to the post-2015 development agenda, the possible position of health in the framework, and the concept of universal health coverage, all with a specific focus on HIV. Particular attention is given to the relationship between UHC and the HIV response. With this information, readers will be better able to take part in discussions on the post-2015 development agenda, whether at the global level, in national strategic planning, or within local constituencies and communities.

This is an exciting time, with the opportunity to articulate a development agenda for the next 15 years that will set the course for ending the AIDS epidemic. We are at a defining moment in the HIV response: technically, the knowledge and tools we now have make it feasible to end HIV as a major public health concern; financially, global and domestic economic pressures are demanding new thinking around HIV funding and financing mechanisms; structurally, it is time to reflect on the global health and HIV architectures, as reform processes affect key global institutions, such as the World Health Organization;² and politically, with the completion of existing global HIV strategies^{3,4} in 2015, commitments will need to be made for a renewed HIV framework to take us into the future.

Box 1:

Focus areas proposed by the Open Working Group on Sustainable Development Goals (as of June 2014)⁵

- 1. End poverty in all its forms everywhere
- 2. End hunger, achieve food security and adequate nutrition for all, and promote sustainable agriculture
- 3. Attain healthy life for all at all ages
- 4. Provide equitable and inclusive quality education and life-long learning opportunities for all
- 5. Attain gender equality, empower women and girls everywhere
- 6. Secure water and sanitation for all for a sustainable world
- 7. Ensure access to affordable, sustainable, and reliable modern energy services for all
- 8. Promote strong, inclusive and sustainable economic growth and decent work for all
- 9. Promote sustainable industrialization
- 10. Reduce inequality within and among countries
- 11. Build inclusive, safe and sustainable cities and human settlements
- 12. Promote sustainable consumption and production patterns
- 13. Promote actions at all levels to address climate change
- 14. Attain conservation and sustainable use of marine resources, oceans and seas
- 15. Protect and restore terrestrial ecosystems and halt all biodiversity loss
- 16. Achieve peaceful and inclusive societies, rule of law, effective and capable institutions
- 17. Strengthen and enhance the means of implementation and global partnership for sustainable development

2. The post-2015 development agenda

The United Nations General Assembly (UNGA) has established a broad-based, somewhat complex, consultation process to articulate the post-2015 development agenda, including the formulation of goals, subgoals and targets. Parallel processes have been established to examine a range of thematic areas, including health.⁶ These processes feed into the deliberations of the United Nations Open Working Group on Sustainable Development Goals, which has been tasked with developing a set of sustainable development goals.⁷ The Working Group will report on its progress to the UN General Assembly in September 2014. The UN Secretary-General will then produce a synthesis report, which will be the basis for negotiations between Member States in 2015, with the aim of reaching consensus at the UN General Assembly in September 2015.

2.1. BUILDING ON THE MILLENNIUM DEVELOPMENT GOALS TO ACHIEVE SUSTAINABLE DEVELOPMENT

Key Messages

- The MDGs have played a key role in guiding the HIV, health and broader development agendas since 2000.
- Among the health-related MDGs, greatest progress has been made in the response to HIV, with significant reductions in HIV incidence in many countries, an impressive scale-up of antiretroviral therapy and significant reductions in HIV-related mortality.
- The process for developing a post-2015 development framework and sustainable development goals is well advanced; agreement on the framework is expected at the United Nations General Assembly in September 2015.
- Health is expected to be represented by a single over-arching goal with a set of targets related to the unfinished business of the MDGs (child health, maternal health, HIV, malaria, tuberculosis and neglected tropical diseases), noncommunicable diseases and mental health, and universal health coverage.
- HIV will need to be positioned within the health goal and reflected in other relevant goals.

The MDGs have catalysed major progress around the world in health and development, and have played a key role in advancing the response to HIV. Health features prominently in the MDGs: MDG4 aims to reduce child mortality, MDG5 to improve maternal health, and MDG6 to combat HIV, malaria and other diseases. Within the health goals, HIV is given special attention; there are two dedicated HIV targets – to halt and begin to reverse the spread of HIV by 2015 (target 6A) and to achieve universal access to HIV treatment by 2010 (target 6B) (see Box 2).

There is a growing consensus that the MDG agenda will not be completed by the 2015 milestone, and that commitment and action will need to be maintained and even intensified beyond 2015 to achieve the goals. The MDGs represent a strong foundation on which to build. Analysis of the path taken towards the MDGs can provide critical lessons to help accelerate current efforts and inform the formulation and operationalization of future sustainable development goals.

Box 2:

Progress towards achievement of the health-related MDGs⁹

During the past decade, significant progress has been made in reducing child mortality (MDG4), improving maternal health (MDG5), and combating HIV, malaria and other diseases (MDG6).

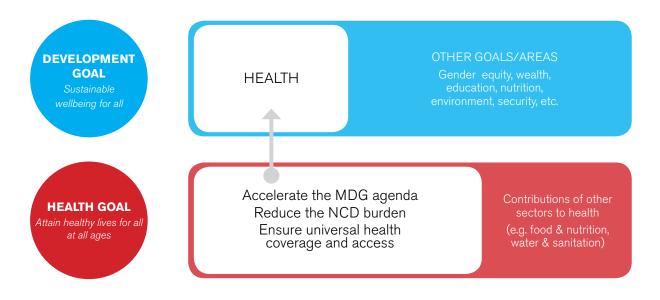
- **MDG4.** Between 1990 and 2012, the mortality rate among children under five years old declined by 47%, from 90 to 48 deaths per 1000 live births. This decline, however, falls short of what is needed to achieve target 4A of the MDGs (a two-thirds reduction from 1990 levels of mortality by 2015).
- **MDG5.** Between 1990 and 2010, the maternal mortality rate almost halved from an estimated 543 000 to 287 000 deaths in 2010. However, in order to achieve target 5A, the rate of decline would need to nearly double.
- **MDG6.** Between 2000 and 2012, the incidence of malaria decreased by an estimated 29% globally, and mortality rates fell by 42%. As of 2012, mortality related to tuberculosis had fallen by 45% since 1990 and a 50% global reduction is likely to be achieved by 2015. Between 2001 and 2012, new HIV infections declined by 33% (target 6A). At the end of 2013, 11.7 million people in low- and middle-income countries were receiving antiretroviral therapy, compared with 300 000 in 2002 (target 6B). Among neglected tropical diseases, dracunculiasis, yaws, and lymphatic filariasis are targeted for elimination or eradication between 2015 and 2020.

A global consultation process on health, co-convened by the Governments of Botswana and Sweden, WHO and the United Nations Children's Fund (UNICEF), took place between October 2012 and February 2013. The post-2015 development agenda has also been the subject of high-level policy dialogue at the World Health Assembly, resulting in the adoption, at the 67th Health Assembly in 2014, of a resolution promoting the centrality of health and

the key position of universal health coverage in the evolving post-2015 framework. HIV has been specifically considered¹¹ in the thematic health consultation process. These discussions have been complemented by a UNAIDS and Lancet Commission,¹² which examined the feasibility of, and strategies for, "ending AIDS", the contributions of the HIV response to broader global health and development, and a possible global health and HIV architecture for the post-2015 era.

Negotiations are continuing within the Open Working Group, but views are converging around a possible framework to take to the UN General Assembly, particularly with regard to health, in which "sustainable well-being for all" could be the overarching development goal and "attaining healthy lives for all at all ages" the specific health goal (see Figure 1). To achieve the specific health goal, particular attention will need to be given to tackling the "unfinished business" of the health MDGs and addressing key noncommunicable diseases (NCDs). Universal health coverage has been identified as having the potential to unify a somewhat fragmented health agenda and ensure adequate attention to equity and human rights. It is also recognized that other sectors, such as those dealing with food and nutrition, education, and water and sanitation, are essential contributors to the achievement of the specific health goal. In turn, the health goal is a major contributor to the overall development goal. Health, and HIV in particular, are relevant to most of the 17 thematic areas under consideration, and specifically to poverty eradication, promoting equality, gender equality, education, employment and peaceful societies.

Figure 1: Health in the post-2015 development agenda, adapted from the thematic consultation on health¹³



2.2 THE UNFINISHED BUSINESS OF THE MDGS

Key Messages

- Finishing the MDG agenda should be a core element of the post-2015 development framework, and specifically the health goal, with expanded scope and more ambitious targets.
- Ending the AIDS epidemic by 2030 is a possible target within the health goal.
- The HIV target could have three subtargets: reducing HIV incidence; reducing AIDS-related mortality; and reducing stigma and discrimination.
- Strengthening the links between HIV and other health areas (including tuberculosis, maternal and child health, sexual and reproductive health, drug dependence, and noncommunicable diseases and mental health) could be highlighted in the framework.

A key element of the post-2015 health goal will be intensified efforts to complete and expand the MDG agenda, with accelerated action on HIV and other communicable diseases, maternal mortality and child health, and a new focus on noncommunicable diseases. This element of the health goal is being formulated with inputs on specific diseases, such as tuberculosis and malaria, from existing and projected global strategies and targets. ^{14,15,16} A process has been initiated to develop a new global HIV strategy for 2016–21.

The goal of the global tuberculosis strategy – to end the global tuberculosis epidemic – was endorsed by the World Health Assembly in May 2014. There is now growing momentum to set a target for HIV of "ending the AIDS epidemic" by 2030. Three areas for subtargets have been proposed: reducing new adult HIV infections and eliminating new infections among children; reducing stigma and discrimination faced by people living with HIV and key populations; and reducing AIDS-related deaths¹⁷ (see Figure 2).

The post-2015 framework provides an opportunity for the HIV response not only to build on the MDG achievements but also to expand in scope and to be more effectively integrated in the broad health and development agenda. In addition to their core business of HIV prevention, diagnosis, treatment and care, and their clear links with maternal and child health and tuberculosis, HIV programmes now have opportunities to link up with other post-2015 priority health areas, notably noncommunicable diseases and mental health.

Efforts to respond to HIV have made significant contributions to all other MDGs, particularly MDGs 4 and 5. Similarly, after 2015, HIV will need to be addressed as a cross-cutting issue, reflected not only in the health goal and targets, but through HIV-sensitive indicators in other areas, such as education, gender equality and poverty eradication.

Figure 2: Possible HIV target and sub-targets for the post-2015 development framework, as proposed to the UNAIDS Programme Coordinating Board¹⁷

TARGET: ENDING THE AIDS EPIDEMIC BY 2030 3 SUBTARGETS New HIV AIDS-related **Discrimination** deaths infections 90% reduction in new adult 90% reduction in stigma 90% reduction in AIDS-related deaths HIV infections, including and discrimination faced by people living with HIV and among key populations key populations Zero new infections among children

Delivering equity:

indicators to be disaggregated by: age, sex, key population, and income status to measure progress on leaving no one behind. The baseline year is 2010

3. The evolution of universal health coverage

Key Messages

- Millions of people experience severe financial hardship each year because of out-of-pocket spending on health.
- Universal health coverage has three dimensions: ensuring access to comprehensive and quality health services;
 covering all populations and countries; and covering all health service costs through pre-payment systems.
- Universal health coverage is an aspirational goal that all people access and use the health services they need, and which are of sufficient quality to be effective, without suffering financial hardship.
- Universal health coverage should be a fundamental element of the post-2015 health goal.

At the global level, 150 million people experience financial catastrophe and 100 million people suffer impoverishment every year as a result of out-of-pocket health expenses. Moreover, a substantial proportion of the world's population does not have access to health services for various reasons, including high costs. Countries need not only to provide a comprehensive range of quality health services and make them widely available, but also to make them affordable and acceptable to those in need.

The concept of universal health coverage was significantly elevated in the global health dialogue as a result of the 2010 World Health Report on health systems financing. The report considered health systems financing as a means to achieve universalism, tackle poverty, ensure development and address health issues in the post-2015 development agenda. UHC is an aspirational goal that all people use the promotive, curative, rehabilitative and palliative health services they need, of sufficient quality to be effective, without suffering financial hardship. 18

UHC is based on the WHO Constitution of 1948, which declares that health is a fundamental human right. It also builds on the Health for All agenda, which, through the Alma Ata Declaration of 1978¹⁹, recognized health as essential to human welfare and economic and social development. Financial risk protection was introduced as a key element of ensuring access to health services for all in 2005, in World Health Assembly resolution WHA58.33. And, most recently, in May 2014, the World Health Assembly urged countries to promote universal health coverage as fundamental to the health component of the post-2015 development agenda.

Box 3:

Universal health coverage in the global agenda

- In May 2005, the 58th World Health Assembly adopted resolution WHA58.33 on Sustainable health financing, universal coverage and social health, which called for financial risk protection to be included as a key element of ensuring access to health for all²⁰.
- The 2011 United Nations Political Declaration on Noncommunicable Diseases recognized the importance of UHC as part of broader efforts to strengthen national policies and systems to address NCDs. The Declaration drew attention to primary health care, social protection and access to health services for everyone, especially the poorest segments of the population ²¹.
- In June 2012, the United Nations Conference on Sustainable Development (Rio+20) recognized the importance of universal health coverage in improving health and social cohesion and fostering sustainable human and economic development. Member States pledged to strengthen their health systems by moving towards the provision of equitable universal coverage⁶.
- In December 2012, the Sixty-Seventh session of the United Nations General Assembly adopted a resolution on "Global Health and Foreign Policy" to accelerate the transition towards UHC²².
- In July 2013, the United Nations Secretary-General, in his report to the General Assembly, called on Member States to address universal health coverage, access and affordability in order to improve health²³.
- In May 2014, the 67th session of the World Health Assembly, adopted a resolution, Health in the post-2015 development agenda, which calls for UHC to be promoted as fundamental to the health component of the post-2015 development agenda¹. The same Assembly endorsed the post-2015 global tuberculosis strategy and targets, which is dependent upon an effective HIV response¹⁴.

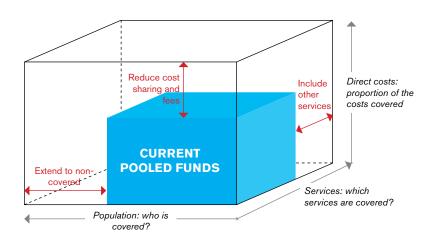
4. The three dimensions of universal health coverage

UHC embodies three related objectives.²⁴

- The full spectrum of health services should be available according to need and their quality should be good enough to improve the health of those receiving them.
- Financial-risk protection mechanisms need to be in place to ensure that the cost of using care does not put people at risk of financial hardship.
- There should be equity of access to health services, whereby the entire population is covered, not only those who can pay for services.

The inter-relationship between these three objectives can be illustrated by the "UHC cube" (Figure 3).

Figure 3: The Universal Health Coverage Cube



UHC aims to bring better health and protection from poverty; it is the achievement of total population coverage, with a comprehensive set of interventions, and zero out-of-pocket expenses for all interventions.

The three dimensions of UHC are represented in the UHC cube: the percentage of the population covered, the percentage of services covered, and the percentage of costs covered. When resources are scarce, it may not be possible to ensure full coverage of all these dimensions. There is therefore a need to set priorities and scale up interventions through a process of "progressive realization", so as to achieve sustainable UHC as equitably and as quickly as possible. The path to UHC will vary for each country and should be tailored to the individual country context.

4.1 PROVIDING HEALTH SERVICES

Each country needs to define a comprehensive set of interventions and services that respond to its critical health issues, and that should be available to the whole population as needed, financed through the public system. Intervention packages should cover the continuum of health promotion, prevention, diagnosis, care, treatment, rehabilitation and palliation, and address the full life course from antenatal through to terminal care. Selected interventions should be evidencebased, acceptable, of high quality and relevant, to ensure high uptake and impact. As services are scaled up, care should be taken not to compromise their quality. Enabling interventions and policies should be included to create a supportive environment that will help ensure maximum effectiveness and sustainability of services. Robust monitoring and evaluation systems should be in place to measure progress in coverage and to ensure the equity and quality of services. The package of services will vary from country to country and may change over time. With limited resources, countries face the challenge of prioritizing, phasing in, combining and sequencing interventions to achieve greatest impact, ensure equity, and find the most rapid and efficient pathway to universal coverage.

4.2 COVERING POPULATIONS

The term "universal" means inclusion of all populations, in all circumstances, in all countries. UHC is about equity; it is about delivering health services according to need, and not according to financial power. It provides a framework for addressing health inequities, and ensuring that disparities in access to and uptake, coverage and impact of health services are minimized across populations. Particular attention needs to be given to individuals and populations that are most vulnerable, at risk and affected, marginalized or underserved. Services should not discriminate against individuals or populations on the basis of sex, ethnicity, race, sexual orientation, socioeconomic status, age or beliefs. Policies, laws and regulations may be required to promote equity and prevent discrimination, and to give priority to vulnerable groups most in need of health services.

4.3 COVERING COSTS

Central to universal health coverage is financial protection to avoid catastrophic health expenditures. The way in which health care is financed is of critical importance for UHC.²⁵ Governments should take overall responsibility for health financing, including:

- raising funds to pay for the health system, including through public and private domestic funding and external sources, such as donor grants or development loans;
- establishing effective, efficient and equitable mechanisms to pool funds to provide financial risk protection related to ill-health, such as through taxation and health insurance schemes;
- optimizing the use of health resources, by improving the efficiency and effectiveness of services and facilitating access to affordable health commodities, for example by investing in community and primary health care and developing access strategies for medicines and diagnostics.

Requiring payment for health services at the point of use can cause financial hardship, or simply discourage people from using the services. Furthermore, both direct and indirect health costs can compromise adherence to treatment and retention in care, particularly for chronic health conditions. People's ability to pay for health services should be reflected in all policies, to protect the poor and vulnerable from financial hardship. Public compulsory health financing systems, including general taxation and compulsory health insurance, are the most equitable and efficient systems. Private insurance, to some extent, favours better-off groups and strengthens social inequalities, by leaving behind the poorest and most vulnerable.²⁶

Prepayment systems for funding of health services are necessary, and country experiences have shown that three issues should be considered when formulating policies to set up such systems.¹⁸

- Contribution to the health financing system should be compulsory, and based on ability to pay; in this way, payments are dissociated from health care needs.
- In every country, a proportion of the population cannot afford to contribute to the health financing system; these people need to benefit from other resources, pooled mainly from government budgets.
- Funding pools that protect only a small proportion of the population are not effective in the long term; multiple pools favour privileged people, and do not cross-subsidize poorer people's costs.

Several low- and middle-income countries have successfully instituted prepaid funding systems, based on national investments, to finance UHC.¹⁸ Within a few years, these countries (which include Ghana, Indonesia and Peru) had established national plans that expanded health services while lowering costs, thereby avoiding the impoverishment of millions of their citizens as a result of health expenditure.²⁷ Many high-income countries have well-established UHC systems that were set up after the Second World War (for example, France and Japan). These systems have had to adapt to new challenges, such as changing patterns of disease burden requiring different health services, escalating costs of health care as health technologies evolve, and increasing pressures on national health budgets because of competing demands from other sectors and the impact of the global financial crisis.

Clearly, there is no single universal model for UHC. Countries have to adapt their health financing systems to the local economic, political and social contexts. ¹⁸ But there are common important aspects for countries to consider, including: the replacement of direct payments with some form of prepayment (most commonly a combination of taxes and insurance contributions); the consolidation of existing pooled funds into larger pools; and a more efficient use of funds. ¹⁸

Rnx 4

HIV programme strengthened the health system and helped progress towards UHC in Rwanda

In the aftermath of the genocide and in an environment of extreme poverty, Rwanda decided to tackle its HIV and malaria epidemics. In 2000, the country set a strategy for social and economic development called Vision 2020, in which health was a major pillar for efforts to tackle poverty.²⁸

Rwanda's HIV programme was characterized by efforts not only to integrate prevention, care and treatment but also to address concomitant problems, such as tuberculosis and malnutrition, and to strengthen the health care system. Also, its national HIV and tuberculosis programmes include social support components, such as the funding of travel costs and provision of food supplements.²⁸

Rwanda achieved MDG target 6B (universal access to HIV treatment) in 2012, and is committed to achieving universal health coverage; the national health insurance programme, *Mutuelles de santé*, currently offers financial risk protection to almost 91% of the population.

However, this success has been dependent on significant external funding, through, among others, the Global Fund to Fight HIV, Tuberculosis and Malaria, along with direct programme budget support from the United States President's Emergency Plan for AIDS Relief.

5. HIV as a trail-blazer towards universal health coverage

Key Messages

- Since the introduction of the MDGs in 2000, a series of global strategies and plans have guided the health sector response to HIV. With each successive strategy there has been progress towards the realization of universal health coverage.
- The Global Health Sector Strategy on HIV/AIDS 2011–2015 effectively integrates all three dimensions of universal health coverage.
- The HIV response has been a trail-blazer in promoting universal health coverage in six main areas:
 - defining comprehensive intervention and service delivery packages;
 - strengthening quality assurance and quality improvement systems;
 - developing and applying multisectoral costing methods and tools;
 - championing health access strategies, which have reduced the price of health commodities and improved the efficiency of service delivery;
 - pioneering innovative financing models; and
 - addressing health inequities, particularly by engaging civil society and key populations.

The global health sector response to HIV over the past decade has been guided by a number of plans and strategies. With each strategy has come progress towards UHC. Until 2002, the high cost of HIV treatment meant that it was mainly restricted to high-income countries; global efforts, and actions in low- and middle-income countries, focused on prevention, care for people living with HIV, and actions to address stigma and discrimination. This focus changed at the turn of the millennium, as demands for antiretroviral therapy in the developing world began to dominate the global HIV agenda. In response, the "3 by 5 Strategy 2003-2005"²⁹ was launched, which contributed to rapid scale-up of antiretroviral therapy in low- and middle-income countries,

addressing the huge disparities in access to treatment between rich and poor. At the same time, new HIV funding mechanisms were established, including the Global Fund to Fight HIV, Tuberculosis and Malaria (Global Fund) and the United States President's Emergency Plan for AIDS Relief (PEPFAR).

The next phase of the health sector response, the WHO Universal Access Plan, 2006–2010,³⁰ aimed to operationalize the 2006 United Nations General Assembly Political Declaration on HIV/AIDS³¹ This included a commitment to pursue the goal of universal access to comprehensive prevention programmes, treatment, care and support by 2010. The Universal Access Plan expanded the intervention focus beyond HIV treatment to also emphasize HIV prevention, diagnosis and care, health systems strengthening and strategic information. However, it still had a strong HIV-specific focus and did not maximize linkages with other major health areas, such as maternal and child health and sexual and reproductive health.

Next came the Global Health Sector Strategy on HIV/AIDS 2011–2015 (GHSS),³ which was influenced by the discourse on UHC around 2010 and builds on the universal access movement. The GHSS was developed to move the HIV response beyond a vertical disease-specific programme to one that promotes long-term sustainable action through strengthening of health and community systems, integration and linking of HIV programmes with other health areas, tackling of the social determinants of the HIV epidemic and responses, and promotion of human rights and health equity. The GHSS aims to contribute to a broad range of health and development goals and targets beyond those specific to HIV (see Box 5).

In many ways, the HIV response³² over the past 30 years has been a trailblazer in global public health. It has mobilized political figures, the international community, donors, health care providers, civil society, academia and the private sector around a common purpose. It has stimulated unprecedented investments in health, and has played an important role in shaping the global health and development architecture. It has catalysed major breakthroughs in science and technology and demonstrated the feasibility of rapidly scaling up clinical and public health programmes in challenging environments. It has inspired new models of service delivery, such as decentralized and integrated services, task shifting and sharing, and intersectoral collaboration. Moreover, it has demonstrated the importance of engaging communities and advocates in decision-making processes and highlighted their role in strengthening accountability mechanisms and championing affordable access to treatment and care. However, it is likely that the level of international solidarity and unprecedented levels of new funding that have characterized the HIV response would be difficult to replicate for other health conditions.

With this wealth of experience, HIV programmes can contribute to each of the three dimensions of UHC: by better defining the package of comprehensive, quality health services; demonstrating innovation in health system financing; and ensuring equity in access to and coverage of services.

Box 5

The Global Health Sector Strategy on HIV/AIDS 2011-2015

In May 2011, the 64th World Health Assembly adopted the Global Health Sector Strategy on HIV/AIDS, 2011-2015. The GHSS was developed by WHO with a view to realizing the vision of a world with zero new HIV infections, zero AIDS-related deaths and zero discrimination, where people living with HIV are able to live long and healthy lives.

The GHSS is structured around four strategic directions.

- 1. Optimize HIV prevention, diagnosis, treatment and care outcomes: the Strategy outlines a comprehensive package of HIV-specific interventions along the continuum of HIV prevention, treatment and care.
- 2. Leverage broader health outcomes through the HIV response: the Strategy identifies opportunities for linking HIV with other health programmes to improve both HIV and broader health outcomes, particularly related to sexual and reproductive health, maternal and child health, tuberculosis and drug use problems.
- 3. Build strong and sustainable systems: the Strategy examines how the HIV response can strengthen health and community systems and how strengthening these systems can improve HIV outcomes.
- 4. Reduce vulnerability and remove structural barriers to accessing services: the Strategy promotes human rights, gender equality and health equity as key elements of the HIV response and advocates for HIV and broader health issues to be considered in the policies and programmes of other sectors.

5.1 PROVIDING COMPREHENSIVE SERVICES OF HIGH QUALITY

Key Messages

- Various HIV intervention packages have been developed that outline the set of core services that should be made available for different populations and settings.
- Quality assurance and improvement systems can do much to guarantee the quality of services so that investments achieve greatest impact and significant risks are averted.
- The HIV prevention, care and treatment "cascade" provides a good framework for structuring quality assurance and improvement systems.
- HIV programmes have contributed to strengthening and expanding quality assurance programmes for medicines, diagnostics, medical devices and other commodities.
- Investments in HIV responses have stimulated research and innovation in basic, clinical, social and public health sciences.

Defining comprehensive HIV health service packages

For UHC, each country needs to define core intervention packages for different health conditions that will be made available to the whole population and funded by the public system. HIV programmes have considerable experience in developing and costing such packages, which could benefit other health areas. It was recognized early in the HIV epidemic that comprehensive and multisectoral action would be required. Over time, various frameworks have been developed to help countries and donors prioritize, structure and cost comprehensive HIV packages. An HIV strategic investment framework,33 developed by the Joint United Nations Programme on HIV/AIDS (UNAIDS), WHO and a number of other stakeholders, proposes three categories of investments, including six basic programme activities, a set of critical social and programme enablers, and efforts to establish synergies with other development sectors. The framework has been used by development agencies, such as the Global Fund, and countries to guide their HIV strategies and investments, and has been applied to other public health issues, such as tuberculosis.

Other frameworks have been developed for specific intervention packages for different populations and thematic components of the HIV response (see Box 6). Common to all these packages is the understanding that the greatest

impact will be achieved through delivery of the whole package rather than individual interventions, and the recognition that each package will have to be adapted to different contexts.

Box 6: **Examples of WHO intervention packages related to HIV**

Intervention package	Areas covered
Technical guide for countries to set targets for universal access to HIV prevention, treatment and care for injecting drug users ³⁴	 Nine core interventions for HIV prevention, treatment and care among people who inject drugs; is being adapted to address other health issues such as viral hepatitis.
Consolidated guidelines on HIV prevention, diagnosis, treatment and care for key populations ³⁵	 Clinical and service delivery interventions for comprehensive HIV health services for men who have sex with men, sex workers, transgender people, people who inject drugs and prisoners
Consolidated guidelines on the use of antiretroviral drugs for treating and preventing HIV infection ³⁶	 Set of interventions structured along the continuum of HIV prevention, diagnosis, care and treatment, with a focus on the use of antiretroviral drugs and care for people living with HIV.
WHO policy on collaborative TB/HIV activities: guidelines for national programmes and other stakeholders ³⁷	 Set of 12 activities to strengthen collaboration between HIV and tuberculosis programmes
Prisons and health ³⁸	Comprehensive health services for prison settings.

Improving the quality of interventions and services

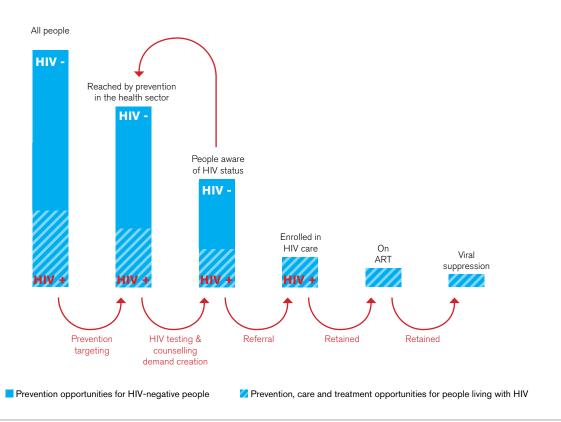
The quality of interventions and health services should be ensured, so that investments achieve greatest impact and significant risks are averted. At an individual level, the quality of care can be assessed in terms of the ability of the health care delivery system to provide safe, effective and patient-centred care in an efficient, timely and equitable manner. Rapid expansion of programmes to improve coverage should not compromise the quality of services or contribute to inequities in access to services and health outcomes.

Quality assurance and improvement systems can do much to guarantee the quality of services across the continuum of prevention and care. Quality of care can be optimized by ensuring that services adhere to national and international norms and standards, are continuously monitored and improved and are made more acceptable and accessible to patients' needs and preferences. Quality of care approaches should be integrated into all levels of the health care system. HIV programmes have done much to promote quality assurance and improvement measures that are relevant to a broad range of health areas.

The HIV prevention, care and treatment "cascade" (Figure 4) demonstrates the importance of retaining people along the continuum of care, to ensure that they are tested for HIV, referred to prevention services or enrolled in care, initiated early on antiretroviral therapy if eligible, and then retained on effective treatment to achieve sustained viral suppression. At every step of the cascade, there is a risk that individuals will drop out and be lost to follow-up. A monitoring and evaluation framework, structured around the cascade, can help countries to identify failures at the different stages, such as poor targeting of testing strategies, poor-quality diagnostics or testing approaches, barriers to effective referral, low treatment uptake and adherence, treatment failure, and the emergence of drug resistance. Specific aspects of service organization and delivery can be monitored and improved, such as waiting lists, facility waiting times, frequency of visits and competencies and supervision of health care workers. As coverage of antiretroviral therapy has expanded, HIV infection has become a chronic, manageable condition, and the HIV treatment and care cascade can provide a model for organizing and monitoring health services for other chronic health conditions. Issues related to noncommunicable diseases and ageing are now being integrated into the comprehensive package of services for people living with HIV.

There have also been significant investments aimed at improving the quality of individual interventions and commodities. For example, WHO's work on treatment optimization³⁹ aims to improve the quality of, and promote innovation in, HIV diagnostics and medicines. Areas of interest include point-of-care diagnostics, simpler, safer and more effective antiretroviral therapy regimens, and improved models of service delivery. Quality assurance of medicines and health commodities has been critical for the scale-up of antiretroviral therapy, roll-out of new HIV and tuberculosis diagnostics, programming for male and female condoms, and introduction of innovative devices for male circumcision. This in turn has stimulated the strengthening of other quality assurance mechanisms, such as the WHO prequalification programme,⁴⁰ which has also benefited products relevant for other health conditions.





HIV responses have contributed to the strengthening of broader health systems in many countries, which in turn has benefited other health areas, leading to better quality services. For example, HIV investments in the health care workforce, ⁴¹ particularly in countries with a high HIV burden, have led to more and better-trained health workers. At the same time, HIV treatment keeps many health care workers alive and productive. The quality of national health procurement and supply management systems for commodities and of general laboratory services has been improved with HIV funding and experience. The monitoring, evaluation and supervision systems established for expansion of HIV programmes provide models for other health programmes.

Research and innovation are critical elements for improving quality of care and assuring universal health coverage. HIV programmes have already spearheaded research in a broad range of relevant areas (see Box 8).

Using the HIV prevention, care and treatment cascade framework, WHO is articulating an implementation research agenda, with a particular focus on quality improvement and efficiency, to identify interventions that could address specific failures and improve the overall integrity of the cascade.

Rnx 7

HIV investments build stronger health workforces in sub-Saharan Africa41

It is estimated that there is a shortage of 2.4 million doctors, nurses and midwives worldwide. Shortages in the trained health workforce have been identified as a critical barrier to achieving HIV targets for 2015. PEPFAR has set a target of training 140 000 health care workers. WHO has joined with PEPFAR to support the transformative scale-up of health professional education through the Nursing Education Partnership Initiative (NEPI) and the Medical Education Partnership Initiative (MEPI). These initiatives, which focus on health education systems in Africa, aim to expand clinical and research capacity, and support innovative retention strategies for doctors, nurses, midwives and teaching staff.

Rnx 8

Research for UHC, the HIV experience

The World Health Report 2013 raised the question of why research is important for UHC.⁴² Currently most research aims to develop new technologies rather than make better use of existing knowledge. Many research questions related to UHC are specific to local situations (for example, how to organize services to reach specific populations, how to achieve the right balance of interventions). Therefore, all countries need to be both producers and consumers of research. The research should be carried out not only in academic centres but also in public health programmes, close to the delivery of health services. Capacity-building in operational research and implementation science needs to be strengthened.

The global HIV response has driven extraordinary progress in basic, clinical, social and implementation science. HIV research funding has expanded south-south and north-south collaboration in health sciences and focused new energy on the social, cultural, economic and political context of health, vulnerability and risk. HIV research has led to a broadening of the definition of scientific evidence to address the social and epidemiological complexity of HIV risk and vulnerability. It has established a global consensus on good participatory practice and ethics in HIV research. "HIV research is rendering obsolete the dichotomies between biomedical and social-behavioural approaches as well as between treatment and prevention"⁴³.

5.2 FINANCING HIV SERVICES

Key Messages

- Robust national strategic planning and costing have played a critical role in mobilizing both domestic and donor resources for national HIV programmes.
- The threat of HIV epidemics has stimulated unprecedented new investments in health and a range of innovative financing mechanisms that benefit broader health areas.
- HIV programmes have significant experience in improving the efficiency and reducing the costs of services, through such approaches as decentralization, task shifting and sharing, and community systems strengthening.
- HIV treatment access initiatives have resulted in dramatic reductions in the costs of medicines and other health commodities.

Financing the rapid expansion of HIV programmes has been a major challenge in most countries, and sustainable financing models will be required as HIV infection evolves into a manageable chronic condition. Consideration of how HIV responses have been funded until now can help inform approaches to financing of other health conditions and, more generally, UHC.

Building a case for investment

For most countries, the HIV epidemic is a long-term public health issue that requires national strategies and plans, and sustainable and equitable financing mechanisms. "Know your epidemic, know your response" is the principle for tailoring the HIV response to the country context. National situation assessments play a critical role in informing national strategies and plans, including multisectoral HIV strategies and the integration of HIV into national health and other sectoral plans. A range of tools has been developed to help with costing of plans.

In addition, considerable experience has been gained in preparing proposals for various development agencies and donors, such as funding proposals and concept notes for the Global Fund, loan and grant proposals for the World Bank, and country operational plans for PEPFAR. While much of this expertise and the supporting tools are HIV-specific, the experience can benefit other health areas. For example, the UNAIDS Investment Framework has supported costing of "critical enablers" and "programme synergies",

which are relevant across broader health areas.³³ The national strategic planning process involves more than just defining and costing the package of interventions. It also decides on the most strategic use of resources, the most cost-effective interventions, and the allocation of resources across the different levels of the health care system and the different interventions.

Estimating resource needs for HIV has been a critical element of global HIV advocacy efforts and guidance for international development investments. Methodologies developed for modelling the dynamics of the HIV epidemic, costs, cost-effectiveness and cost-benefits can be adapted for other health issues and for assessing the potential benefits of integrated and linked health services.⁴⁴

Innovative financing and new funding approaches

The HIV response has done much to establish new funding mechanisms and to stimulate innovation in health system financing, at both the global and country levels. Two of the largest-ever global health funding initiatives were established to respond to HIV epidemics. The Global Fund, a publicprivate partnership, was established in 2002 to finance HIV, tuberculosis and malaria responses and health systems strengthening in low- and middle-income countries. And PEPFAR, a United States Government bilateral aid programme, was established in 2003 to provide financial and technical support to countries to expand their HIV responses. Together, these initiatives transformed HIV responses in low- and middle-income countries. One of the most significant contributions has been the support for rapid scale-up of antiretroviral therapy. Unprecedented levels of new funding have been channelled directly to countries, allowing dramatic expansion of therapy, but also often stretching the capacity of national health systems and, in some cases, contributing to the establishment of HIV programmes that ran parallel to - and risked duplicating - national efforts.

Both the Global Fund and PEPFAR have evolved over the years, and are moving their investments from a strong project-based and grant approach towards supporting national programmes, with emphasis on country ownership, shared responsibility and accountability. In doing so, both initiatives are strengthening national strategic planning capacity and promoting greater domestic financing, as a way of fostering long-term sustainability. A critical element of this approach is the mobilization of all stakeholders and greater coordination of development assistance, such as through country dialogue processes and the Country Coordinating Mechanism of the Global Fund.⁴⁵

Over recent years there has been considerable debate over the scope of support provided by both PEPFAR and the Global Fund. While some argue in support of broadening their mandates to include other communicable diseases, such as viral hepatitis and neglected tropical diseases, or other health issues, such as noncommunicable diseases and sexual and reproductive health, others argue that these initiatives have had a major impact specifically as a result of their clear focus. Nevertheless, both initiatives are currently investing in critical issues related to HIV that benefit broader health areas, such as strengthening maternal and child health services through investing in the elimination of mother-to-child transmission of HIV, expanding harm reduction services, and improving procurement and supply management systems for medicines and diagnostics. To strengthen the overall health system and address system-wide constraints, the Global Fund has included health systems strengthening investments in its new funding model.46 The principle of country ownership, in which a bottom-up approach to planning country needs is applied, has played a critical role in determining the relative allocations of resources across different disease areas and interventions.

To complement these new funding bodies, innovative financing mechanisms have been established at both global and regional levels, to focus financial and technical assistance in certain niche areas. For example, UNITAID, a global financing initiative that gets approximately half of its revenue from a levy on airline tickets, aims to increase access to medicines and diagnostics for HIV, tuberculosis and malaria in low- and middle-income countries, and focuses on strategies for influencing market dynamics.

Box 9

(RED): mobilizing resources from the private sector for the HIV response⁴⁷

(RED) is a division of the ONE Campaign, an international non-profit advocacy organization focusing on poverty reduction. It was established in 2006 to mobilize resources from the private sector to help fund HIV responses in Africa. A broad range of international companies sell (RED)-branded products and services. generating profits that are channelled to the Global Fund. This mechanism has raised over US\$240 million, which has been used to support HIV activities in Africa, particularly the prevention of mother-to-child transmission of HIV.

Domestic funding is playing an increasingly significant role in HIV financing in low- and middle-income countries, and accounted for 53% of global HIV funding in 2012. Countries are adopting a range of new financing approaches to fund their HIV responses, and more broadly their health systems, including dedicated tax levies (such as Zimbabwe's AIDS levy, and levies imposed on mobile phone use in Rwanda and Uganda)^{48,49} and HIV trust funds.^{50,51} Savings, such as those achieved by reforming tender processes in South Africa and Swaziland in the past three years, have been used to expand treatment coverage.⁵²

Box 10:

The "AIDS levy": a taxation pooling mechanism to raise revenues for the HIV response in Zimbabwe

In 1999, Zimbabwe introduced a national HIV/AIDS levy by special act of Parliament to finance the HIV response. Revenues from the levy, which represent 3% of all taxable income, go into the National AIDS Trust Fund, managed by the National AIDS Council. The Council and its district structures disburse the funds directly to beneficiaries with around 50% going to ART programmes, 10% to prevention activities and 6% to monitoring and evaluation.⁵³

The levy is used to fund the National AIDS Council secretariat, as well as key HIV and AIDS interventions in Zimbabwe, and complements international funding.⁵⁴

Reducing prices and improving efficiencies

Experience from HIV programmes has shown that countries should not rely only on domestic pooling of funds, international support and innovative financing mechanisms. They also need to increase the efficiency of services, select the most effective interventions and approaches, reduce the prices of medicines and other health commodities, and target their activities to the populations and settings where they will have greatest impact.

A major achievement of the HIV response has been the development and implementation of access strategies, which have focused on making HIV services and commodities more affordable for those who need them. Reduced prices for

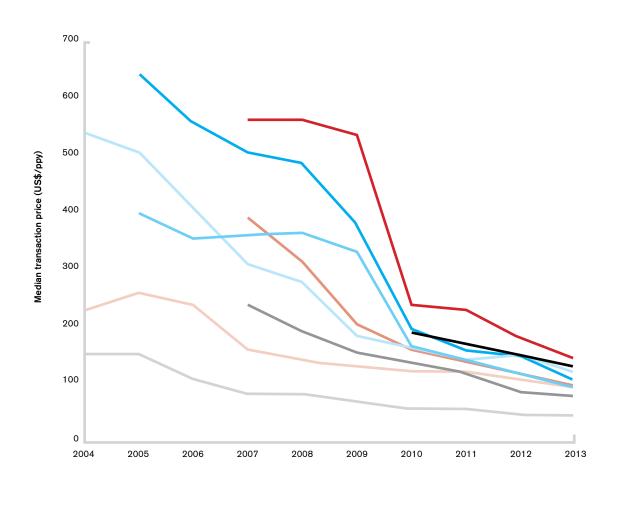
antiretroviral drugs and HIV diagnostics have been a major factor in bringing down the per patient costs of HIV treatment, and overall HIV resource needs. In the 1990s, HIV activists led a civil society movement that was to change pricing strategies and the broader market dynamics of HIV medicines, paving the way for access strategies for medicines for other health conditions. The cost of first-line antiretroviral therapy (ART) in low- and middle-income countries has been reduced to a median of US\$ 97 for the cheapest, preferred regimen per person per year in 2013⁵⁵ from a high of US\$ 10 439 in 2000.⁵⁶

Increased competition from manufacturers of generic products and voluntary licensing agreements – an approach promoted by the Medicines Patent Pool⁵⁷ – have played a key role in reducing prices. The ability to forecast treatment needs, greater predictability of demand, and economies of scale as ART programmes are expanded have also helped to drive down prices. Supporting these efforts, the WHO Global Price Reporting Mechanism (GPRM)⁵⁸ and the Regulatory Status database, which provide key information on manufacturers and prices of HIV medicines, facilitate price negotiations and planning for sustainable supplies. In addition, improved procurement mechanisms and reductions in logistic expenses have contributed to the savings.

However, not everyone is benefiting from these reduced prices, with middle-income countries facing particular challenges. A study of 20 middle-income countries⁵⁹ in 2013 reported that there was great variation in the prices paid by different countries for the same product, largely because patent protection was limiting the use of generic products, but also as a result of the geographical scope of licence agreements. For example, some middle-income countries in sub-Saharan Africa are paying relatively low prices, comparable to those paid by low-income countries in the region. In contrast, most middle-income countries in Eastern Europe and central Asia pay high prices, comparable to those paid by high-income countries. Prices for second- and third-line antiretroviral drugs remain high for most middle-income countries in all regions. In June 2013, a Consultation on Access to HIV Medicines in Middle-Income Countries⁶⁰ was held in Brazil to consider strategies that could address the specific issues of middle-income countries in accessing affordable HIV treatment.

While access strategies have revolutionized access to HIV medicines, this is not necessarily true for other medicines. Increasingly, people living with HIV and receiving affordable HIV medicines are confronted with other, often chronic, health conditions, such as viral hepatitis or various HIV-related cancers, for which treatment and care options may be unaffordable. Such a dilemma reinforces the need for health systems to address the full health needs of individuals, not just of one disease or condition.

Figure 5: Median prices of WHO preferred first-line regimens per patient year, in US\$, in low- and middle-income countries, 2004-2013⁶¹



- [TDF+FTC+EFV] [300+200+600]mg
- [TDF+3TC]+EFV [300+300]mg+600mg
- [ZDV+3TC+NVP] 2*[300+150+200]mg
- [TDF+FTC]+EFV [300+200]mg+600mg
- [TDF+FTC]+NVP [300+200]mg+2*200mg
- [ZDV+3TC]+EFV 2*[300+150]mg+600mg
- [TDF+3TC+EFV] [300+300+600]mg
- **[TDF+3TC]+NVP** [300+300]mg+2*200mg
- = [d4T+3TC+NVP] 2*[30+150+200]mg

Source: Data from the WHO Global Price Reporting Mechanism.

The organization of HIV and broader health services has a major influence on costs. HIV programmes, particularly in high-burden settings, have spearheaded efforts to integrate, link and decentralize services and to promote task-shifting and task-sharing. This has resulted in cost savings, while extending the reach and improving the quality of many HIV services. Most notable has been the decentralization of HIV treatment services, which has been made possible by the development of simpler and safer antiretroviral therapy regimens and innovations in point-of-care diagnostics. ^{62,63,64} For example, in a study in South Africa, the cost of providing antiretroviral therapy to nurse-managed patients at decentralized facilities was 11% lower than for doctor-managed patients in hospitals. ⁶²

However, expansion of HIV treatment programmes, decentralization and task-shifting within the formal health system may place stress on primary health care services and risk diverting attention from other priority health issues. Therefore, community health workers, and broader community systems, are becoming increasingly important in sustaining and expanding HIV responses, particularly as HIV becomes a manageable chronic condition. A recently published systematic review of 21 studies from sub-Saharan Africa⁶⁵ found that community health workers and volunteers enhanced the reach, uptake and quality of HIV services, as well as the dignity, quality of life and retention in care of people living with HIV. In addition, their presence at clinics was reported to reduce waiting times, streamline patient flow and reduce the workload of health workers. Apart from their role in supporting expansion of HIV treatment, community health workers and community systems play a critical role in delivering comprehensive prevention services, particularly to key populations who are marginalized and do not use formal health services. Community service delivery models provide opportunities for reducing costs, improving reach and focus, and expanding the impact of HIV programmes to achieve broader health and social outcomes.

5.3 EQUITY IN ACCESS TO HEALTH SERVICES

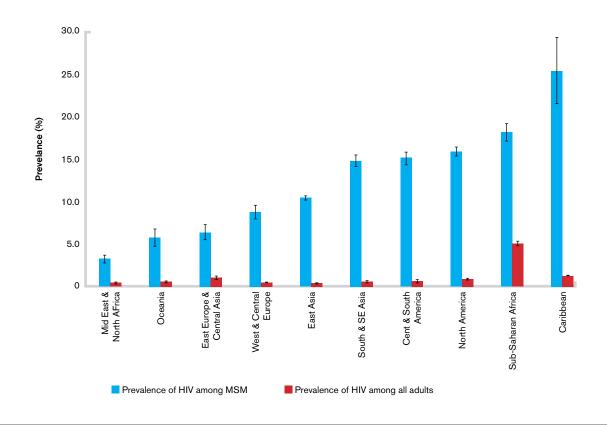
Key Messages

- HIV epidemics tend to be concentrated among vulnerable, marginalized and often criminalized populations, who
 also are likely to be excluded from health services.
- Innovative models of HIV service delivery have been developed to reach marginalized populations and mobilize communities.
- HIV programmes have played a key role in addressing stigmatization and discrimination against key populations, confronting harmful gender norms and gender-based violence and promoting human rights — delivering interventions that have a broad impact on health and social wellbeing.

HIV is one area of public health in which major inequities exist in terms of vulnerability and risk, access to services, and health and social outcomes. At the same time, the HIV response has been innovative in tackling inequities, hence addressing social determinants of health, and in building partnerships that have far-reaching benefits. Strong strategic information systems, which can provide appropriately disaggregated data, are critical for identifying where inequities exist and how they are being addressed.

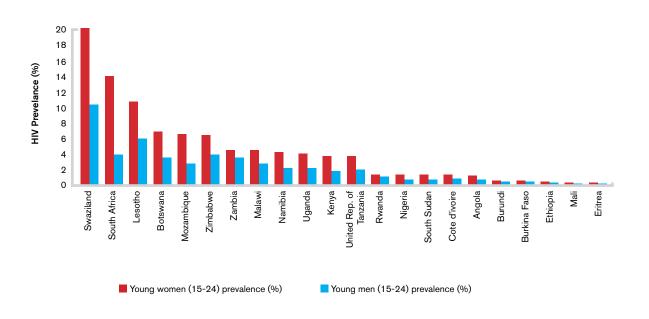
Most apparent are the inequities that affect key populations. In all countries, certain groups are disproportionately affected by HIV, including people who inject drugs, men who have sex with men (MSM) (Figure 6), sex workers, transgender people and prisoners. These often marginalized and criminalized groups have spearheaded HIV responses in many settings, communities and countries. For example, gay movements in many countries have played a key role in treatment activism, resulting in price reductions that have allowed treatment to be scaled up, even in the poorest communities and countries.⁶⁶ Many of the HIV treatment activists are now leading efforts to increase access to affordable treatment for other health conditions, such as tuberculosis and hepatitis B and C.67 Sex workers in Asia, threatened by increasing rates of HIV infection, developed innovative community-based programmes, which have not only benefited HIV prevention efforts but also tackled such diverse issues as sexual and reproductive health, income generation and gender-based violence.⁶⁸ The harm reduction movement, largely driven by explosive HIV epidemics among people who inject drugs, has contained HIV epidemics in many communities, while also improving access to drug dependence treatment and addressing other health issues, such as drug overdose and viral hepatitis.⁶⁹ Nevertheless, in all countries, key populations continue to be underserved by HIV services and by health services in general. Efforts to address these inequities remain a major challenge everywhere, requiring multisectoral commitment to address entrenched stigma and discrimination, and legal and policy barriers. The GHSS recommends that countries provide comprehensive, integrated services for key populations. It calls for harm reduction services for people who inject drugs, access to expanded services for men who have sex with men, sex workers and transgender people, and actions to reduce HIV risk in settings of humanitarian concern.³

Figure 6: HIV prevalence among men who have sex with men and the general population⁷⁰



HIV epidemics have drawn attention to the specific vulnerabilities of women and girls, highlighted the public health importance of gender-based violence, and alerted us to the importance of gender equality for an effective response. For example, HIV prevalence among young women (15–24 years of age) in southern and eastern Africa is twice as high as among their male counterparts (Figure 7). Various factors contribute to such differences, including, for women, physiological susceptibility to sexual transmission of HIV, poor access to HIV prevention and broader sexual and reproductive health services, economic dependence on their male partners, and intimate partner violence. Increasingly, HIV funds are being used to tackle gender inequalities, particularly the vulnerability of women and girls, through interventions such as sexuality education, promotion of female and male condoms for dual protection against HIV and STIs and pregnancy, and community empowerment, all of which deliver benefits far beyond improved HIV outcomes.

Figure 7: **HIV prevalence among young women in Africa, 2012**⁶¹



As countries move towards universal health coverage, it is anticipated that some inequities will persist, or may even be exacerbated, as progress is made in certain health areas or populations and not in others. Specific initiatives may be required to focus attention on populations being left behind, for example infants, children and adolescents in the response to HIV. For example, in 2012 antiretroviral therapy coverage of eligible children (under 15 years) was only 34%, and of pregnant women 59%, compared with 65% for eligible adults. While overall HIV-related mortality is declining globally, mortality among adolescents has increased threefold since 2000.71 Increasing concern about these disparities has resulted in a number of initiatives. The Global plan towards the elimination of new HIV infections among children by 2015 and keeping their mothers alive 2011-201572 outlines a pathway to virtually eliminate HIV infection in infants, in combination with efforts to eliminate congenital syphilis and improve the overall survival of women and children. The Double Dividend Initiative 73 aims to improve diagnosis and treatment of HIV infection in children and to link up with the broader child survival agenda.

The GHSS promotes gender equality and the removal of harmful gender norms by including women in the development of policies to ensure that HIV services meet their needs, and by providing guidance on the implementation of programmes to address violence against women. It also aims to advance human rights and promote health equity, by endorsing policies, practices and laws that protect human rights and eliminate discrimination. Finally, it provides public health evidence to inform policies, plans, laws and regulations across multiple sectors, and advocates for increased attention to the health needs of key and underserved populations.³

Implementation of the different dimensions of UHC should be based on human rights and equity.²⁵ The entire population should be included in national health programmes, policies and laws, and all forms of discrimination should be removed to allow everyone to have access to the health services they need.

6. How can universal health coverage strengthen the HIV response?

Key Messages

- HIV remains a critical global public health concern, requiring dedicated action and resources.
- The next phase of the HIV response should learn from, and be guided by, the universal health coverage framework.

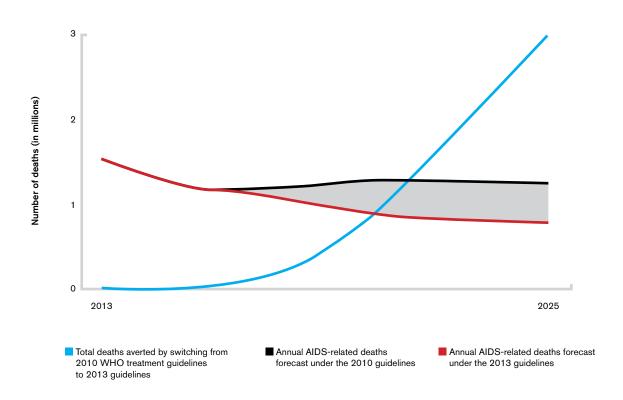
The Global Update on the Health Sector Response to HIV 2014⁶⁰ reviews progress made over the past three years, highlighting a number of achievements, and identifying some critical areas where the HIV response is lagging. Still, every year, the number of people newly infected with HIV surpasses the number of people who start treatment. Prevention efforts lag behind, particularly for key populations. While the target of having 15 million people on antiretroviral therapy by the end of 2015 is within reach, children, adolescents and key populations are being left behind. Changes in global treatment guidelines, recommending earlier initiation of antiretroviral therapy, mean that the number of people eligible for ART increased from 16.7 million to 28.6 million in 2013.⁷⁴ It is estimated that changing from the 2010 WHO guidelines to the 2013 guidelines will save an additional three million lives between 2013 and 2025 (see figure 8).

HIV-related and TB-related mortality is rapidly declining globally, but more people living with HIV are dying from other causes, including noncommunicable diseases and the complications of chronic viral hepatitis and other infections. Links between HIV and other health programmes are often weak and health systems strengthening has not kept pace with the demands for more intensified HIV prevention and treatment efforts. Finally, many persisting social, legal and other structural factors contribute to

vulnerability to HIV and discrimination, and undermine HIV responses. Highly effective HIV interventions, tools and approaches exist that make ending the AIDS epidemic in the long term a feasible proposition. However, there are still many ways in which HIV prevention technologies, diagnostics, medicines and models of service delivery could be improved. A major challenge is to ensure that HIV programmes are sustainable and that HIV investments contribute to broader health and development goals.

The HIV response to date has embraced most of the principles of UHC and contributes significantly to UHC goals. However, there are further opportunities to use the UHC framework to strengthen and accelerate the HIV response. Key areas for action include integrating HIV into broader health planning, raising sufficient revenues to ensure sustainability of the response, removing financial barriers to allow equitable access to services, promoting efficiency and eliminating waste.¹⁸

Figure 8: AIDS-related deaths that could be averted if WHO treatment guidelines were implemented 14



6.1 HIV AS AN ESSENTIAL COMPONENT IN NATIONAL HEALTH PLANS AND HEALTH SERVICES

Key Messages

- To ensure sustainability and maximize impact, HIV issues should be integrated into sector-wide national strategic health plans and other sectoral plans.
- The health sector component of national HIV strategic planning should be undertaken within a single sector-wide
 framework for health planning, to ensure consistency in costing, health impact analysis, financing mechanism
 and health system strengthening.
- National health plans should define key programme and operational linkages between different health areas, such as HIV with tuberculosis, sexual and reproductive health, maternal and child health, mental health, harm reduction and drug dependence, noncommunicable diseases and primary health care.

There are many pathways to achieving UHC, and each country has to select the one most appropriate for its situation. This will include defining a core package of health services most relevant to the country's health needs, health system and broader context. HIV issues should be adequately addressed in both national health and other sectoral plans.

HIV investments have supported the development of national HIV strategies (both multisectoral and sector-specific) and structures (such as multisectoral HIV councils) that have been critical in advancing national HIV responses. However, such approaches have often reinforced the vertical nature of HIV programmes and to some extent isolated HIV from other public health issues. There is currently an increasing awareness of the risks of such isolation and efforts are being made to change this 75. The "universalism" of UHC can help guide and accelerate this reorientation.

Already HIV programmes are reaching out to other health areas. Packages for linked and integrated services across different health areas have been developed, such as for the prevention and management of HIV and tuberculosis co-infection and for linking HIV, family planning and maternal and child health services in the context of preventing mother-to-child transmission of HIV. The need for other intervention packages has been identified, such as for the integrated management of HIV and noncommunicable diseases. Guidance for national strategic planning⁷⁶ and national HIV programme reviews⁷⁷ has been developed to help integrate these various packages into coherent national HIV programmes.

Specific intervention packages have also been developed in other health areas, such as child health, tuberculosis and mental health.^{78,79,80} A major challenge for achieving UHC targets is to link the various vertical packages into a coherent whole, recognizing the importance of maintaining disease-specific interventions, promoting synergies across different health areas and strengthening the generic health and community systems required to support the broad range of services.

A number of tools and approaches have been developed to support national strategic planning processes, and to ensure that planning addresses the full range of health needs of the country.

- A WHO initiative, Choosing Interventions that are Cost-effective (WHO-CHOICE), provides evidence to help policy-makers in countries decide which interventions and programmes will deliver maximum health benefits for the available resources.⁸¹ It promotes a standardized approach to estimating resource needs so called global price tags for a number of disease-and programme-specific analyses. The use of consistent methodologies and uniform assumptions on costs, allows greater comparability between estimates for different health areas.
- The One-Health tool informs sector-wide national strategic health plans by providing a single framework for situation analysis, costing, health impact analysis, budgeting and financing of strategies for all major diseases and health system components.⁸²
- The WHO Health Accounts Country Platform provides countries with a framework, tools and technical support to set up and institutionalize a harmonized, integrated platform for annual and timely collection of health expenditure data, essential to devising policies for financial risk protection and reducing inequities in health.⁸³

6.2 REVENUE COLLECTION AND MOBILIZATION

Key Messages

- As countries become wealthier, they may no longer be eligible for international development assistance.
- Globally, the majority of poor people live in middle-income countries.
- Domestic funding is playing an increasingly important role in financing the HIV response, influenced by development
 policies that emphasize country ownership and shared responsibility.
- HIV should link with other key health areas to facilitate joint resource mobilization.
- National coordinating and convening mechanisms can identify opportunities for sustainable financing and promote
 accountability for more efficient and transparent allocation and utilization of resources.
- Methods for revenue collection should be diversified, and should include routine taxation complemented by innovative financing, such as levies on specific goods and services.

Over the past decade, international and domestic mechanisms for the mobilization and disbursement of funds for HIV programmes have proliferated. During this time, HIV received wide attention as a public health emergency, international security threat and critical development issue. While remaining a public health priority, both globally and in many individual countries, other health and development priorities have emerged to compete for attention and funding. These changing priorities have been reflected in the negotiations about the post-2015 agenda, and the possible areas for sustainable development goals. Changing development priorities and the continuing impact of the global financial crisis are likely to have implications for future HIV funding. As HIV epidemics mature, there is a need to ensure the long-term sustainability of funding, to protect the gains already made while also investing in an expanded programme to end the AIDS epidemic. Universal health coverage, with its focus on health systems financing, will play a key role in shaping HIV financing post-2015.

The convening power of HIV programmes, through for example national AIDS commissions and Global Fund Country Coordinating Mechanisms, provides an opportunity to bring together a broad range of stakeholders, including ministries of health and finance, civil society, the private sector and donors. These groups can consider sustainable financing options, facilitate the integration of HIV into national health and other sectoral plans, and promote greater accountability in the allocation and use of resources. HIV programmes can learn from other health areas that have used multisectoral and participatory approaches to mobilize and manage health resources, such as the health councils of Brazil (Box 12).

Box 11:

UHC benefits the HIV response in Ghana

Ghana is implementing UHC across its three dimensions. However, the system needs further development and capacity-building to address all populations and their health needs.²⁷

Ghana covers 70–75% of the funding needed for its National Health Insurance Scheme from general tax revenues. The country increased the value-added tax (VAT) by 2.5% to 12.5%, to contribute to the pool, with some funds earmarked for HIV treatment.⁸⁴ "Premiums, the traditional revenue source, account for only 3% of total income. The VAT-based National Health Insurance Scheme has been able to support an increase in total health expenditure through domestically generated pooled funds. At the same time it has lessened the system's dependence on direct payments such as user fees as a source of finance." ¹⁸

Over 90% of the Ghanaian population are covered by health insurance.

Box 12:

Participatory health councils contribute to the success of Brazil's HIV response

The Brazilian National Health System provides universal free access to health care, through a decentralized health system governed through a participatory process of health councils. The National Health Council of Brazil, an organ of the Ministry of Health comprised of representatives of health consumers, health care workers, health care providers and the government, has the role of supervising and monitoring public health policies, approving the health budget and monitoring spending. The structure is replicated at district and municipal levels.

Health councils have played a key role in the success of the Brazilian HIV response, which includes universal access to free antiretroviral therapy, effective outreach programmes to key populations, and strong participation by civil society.⁸⁵

Innovative funding mechanisms can be efficient in raising revenues for health; for example, taxes on harmful products, such as tobacco and alcohol, have been used to fund noncommunicable disease programmes.⁸⁶ The HIV response was among the first, in the health sector, to introduce innovative funding mechanisms, such as levies on airline tickets, mobile phones or income tax. These funding mechanisms will need to be adapted to the post-2015 health and development agenda, and consideration needs to be given to how they could best contribute to the achievement of UHC.

Box 13:

Innovative funding mechanisms for the HIV response in sub-Saharan Africa

In Africa, only six countries have met the Abuja Declaration target of allocating 15% of national public sector spending to health;⁸⁴ this highlights the need for improved revenue collection and pooling in the region. As an alternative to donor support, innovative financing mechanisms are gaining increasing support from governments in sub-Saharan Africa. Examples of such innovative financing include the following.

- 1. Airline ticket levy: a small levy is added to outbound airline tickets. Several African countries (Cameroon, Congo, Madagascar, Mali, Mauritius and Niger) have introduced such a levy, which has allowed them to increase access to quality medicines and diagnostics.⁸⁷
- 2. **Mobile telephone levy:** Rwanda and Uganda have placed levies on mobile phone use, with proceeds going to support HIV programmes.⁸⁴
- **3. Alcohol excise tax:** Cape Verde and Comoros have earmarked funds from alcohol excise taxes for HIV programmes.⁸⁴

6.3 POOLING FUNDS AND FINANCIAL RISK PROTECTION

Key Messages

- User fees result in inequities in access and uptake of HIV and other health services and compromise adherence to treatment and care.
- HIV services should be made available free of charge to all at the point of service delivery.
- Financial protection schemes should take into consideration all relevant out-of-pocket expenses, such as laboratory tests, transportation costs and nutritional supplements.
- Financial risk protection schemes need to be universal, particularly for those who are most vulnerable and marginalized and least able to pay.

People who have to make out-of-pocket payments for access to health services often suffer financial hardship, and may avoid using such services because of the cost and their inability to pay.85 The scale-up of antiretroviral therapy has highlighted the challenges of financing the HIV response where treatment is accessible only to those who can pay. As early as 2005, WHO was advocating for countries to make antiretroviral therapy free at the point of service delivery.88 However, even in countries that have introduced such policies, national schemes may not cover additional costs, such as clinic fees, laboratory tests, second- and third-line drugs, treatment of co-infections and other co-morbidities, food supplements and transport to clinics.89 User fees not only result in inequities in access to HIV treatment, but contribute to poor adherence, suboptimal treatment monitoring and treatment interruptions, with the risk of treatment failure and the consequent emergence of HIV drug resistance.90 The impact of user fees on service utilization and treatment adherence has been noted in other health areas, particularly for chronic health conditions, 91 and solutions are needed that ensure free access to all relevant health services, not just those related to HIV.

Many of the groups that are most vulnerable to and affected by HIV are also in greatest need of financial risk protection, because of poverty or their economic dependence on others. Financial risk protection schemes need to be universal, covering all populations, including those who are criminalized and marginalized, women and girls, adolescents, migrants and displaced persons.

Rapidly changing global demographics have major implications for the future funding of HIV and health care, and for financial protection schemes. In 2011, an estimated 72% of the world's poor were living in middle-income countries, a dramatic change from 1990 when 93% of the world's poor were living in low-income countries. The majority of the world's poor now live in five middle-income countries – China, India, Indonesia, Nigeria and Pakistan – all of which have significant HIV epidemics. This trend is likely to continue as countries become richer. Countries that were previously dependent on international development assistance may no longer be eligible for such support, even though they may not have sufficiently developed national social and financial protection schemes to address the needs of the poor and those in greatest need of health services. An effective and equitable HIV response in these countries will depend on the strengthening of national health financing systems.

6.4 EQUITABLE AND EFFICIENT USE OF RESOURCES

Key Messages

- With limited health resources, the efficiency and effectiveness of HIV and broader health programmes will need to be improved.
- Decentralization and integration of services, task-shifting and task-sharing provide opportunities to improve efficiency, save costs and improve quality and acceptability of services.
- Additional research is required on appropriate models of service delivery.

When resources are limited, there needs to be greater focus on improving the efficiency and effectiveness of health programmes, including those for HIV, and avoiding waste. Efficiency can be improved at every level of the health system, and that can benefit HIV programmes. Examples include; strengthening community and primary health care systems and supporting task-shifting to allow decentralization of services; integrating and linking health services and programmes, to share resources and avoid duplication; reforming procurement and supply management systems to avoid waste and secure lower commodity prices; improving management and coordination mechanisms across all relevant stakeholders; revising and costing national strategies and plans to ensure that evidence-based interventions and policies are implemented; establishing robust monitoring and evaluation systems to monitor progress and guide reprogramming (see Box 14); and aligning donor and development agency support with national plans and programmes.

Much has been achieved in optimizing HIV service delivery in many countries, particularly those with high HIV prevalence. Most notable have been the efficiency gains from decentralizing HIV services to the primary health care level. However, in many countries decentralization is now challenging the capacity of these lower-level services. Additional capacity and cost-savings may be achieved by further investing in community-based models for providing HIV prevention, testing, treatment and care services. Specific research is required to guide strategic investments in community systems. Furthermore, community systems strengthening does not come free – adequate training, supervision and remuneration for community health workers are needed.

Box 14:

HIV in the UHC monitoring framework

In December 2013, WHO and the World Bank Group published a discussion paper aimed at developing a common framework, at local and global levels, for monitoring progress towards UHC. The monitoring focuses on two components of health system performance: the levels of coverage for health interventions, and financial risk protection, with a focus on equity, with the following two targets:⁹⁴

- by 2030, at least 80% of the poorest 40% of the population will have coverage that ensures access to essential health services;
- by 2030, everyone (100%) will have coverage that protects them from financial risk, so that no one is pushed into poverty or kept in poverty because of expenditure on health services.

The tracer indicator proposed for monitoring HIV progress is ART coverage among adults and children.⁹³ Other relevant indicators are also needed to measure progress towards ending the AIDS epidemic, such as prevention coverage, retention in care, mortality and incidence.

Opportunities for greater integration and linking of HIV with other relevant health services should be pursued, with the aim of reducing costs, improving efficiency and achieving better outcomes. Building on experience in linking HIV with tuberculosis, sexual and reproductive health, maternal and child health, and harm reduction services, links with the noncommunicable disease area now need to be improved. As people with HIV live longer on treatment, they will experience a range of noncommunicable diseases related to ageing as well as complications of their HIV infection or treatment. Both HIV and noncommunicable disease programmes require robust health systems that can deliver chronic care. Noncommunicable disease programmes can benefit from the experience of HIV programmes in advocacy, rapid programme scale-up (notably of treatment), community mobilization and engagement, and development of strategies for reducing the price of medicines and other health commodities. On the other hand, HIV programmes can learn from the experience of noncommunicable disease programmes in the areas of health promotion, chronic care and management of specific conditions, such as hypertension, ischaemic heart disease, diabetes, cancers and depression. Integrating and linking HIV and noncommunicable disease services offers the potential to reduce costs and provide holistic prevention, treatment and chronic care services, resulting in improved overall health.95

The most appropriate models of integrated or linked services will depend on the epidemic profile, the health system, and the resources available. Various options can be considered, from full integration, in which the full range of services is provided in one facility by one health team, co-location, in which different services are provided by different health teams in the same place, and linked services, which may be located at different sites but with well-established referral, communication and joint management mechanisms. Integration will not necessarily reduce costs, and may actually require additional investments, but should deliver better health outcomes and contribute to health equity. Research is required to identify when and how best to integrate or link services to achieve the greatest benefit.

Box 15:

An integrated health service for sexual and reproductive health and HIV

Lebanon's health system is characterized by an unregulated private sector for financing and provision of health care, minimal pooling of resources and high out-of-pocket expenditure, which exposes households to financial risks, and minimal public expenditure on primary health care compared with secondary and tertiary care. 96

Marsa Sexual Health Center is a community-based health care facility. It delivers a range of health and psychosocial services, at subsidized prices, for people with HIV, hepatitis B or C, sexually transmitted infections, or sexual health problems, as well as laboratory screening and cervical cancer screening.⁹⁷

In a conservative setting, Marsa provides anonymous and confidential sexual and reproductive health services, and outreach services to young people, unmarried sexually active women and marginalized communities with limited access to sexual health care, including key populations living with HIV. Marsa provides integrated services, addressing both infectious and noncommunicable diseases among vulnerable groups.

7. Conclusions

The world today is a different place from what it was in 2000 when the MDGs were adopted. At that time, health was placed central in the development agenda, with three out of the total eight MDGs being health-related, and HIV highlighted as a critical development issue with its own goal and targets. For the post-2015 agenda, there is an emerging consensus that health will be represented by a single sustainable development goal. Furthermore, under that goal, it is likely that an expanded scope of health priorities will be addressed, beyond those covered by the MDGs, with the notable additions of noncommunicable diseases and universal health coverage. There are many opportunities to strategically position HIV in the evolving post-2015 framework, giving it a prominent place under the health goal and incorporating HIV-sensitive indicators in a number of other relevant areas.

Completing the unfinished business of the MDGs, and building on achievements, should be key components of the post-2015 agenda. This would provide a solid platform for advancing the target of ending the AIDS epidemic by 2030. A global process to better define this target and establish possible subtargets and indicators is well advanced. Within 15 years there should be well-defined interim milestones to monitor progress towards ending the epidemic, which will enable countries to set national targets and develop concrete plans and help development agencies make strategic investment decisions.

UHC is emerging as a core element of the health goal and an important tool for eradicating poverty. There are opportunities to refocus the HIV response using the UHC framework, to address some of the key shortcomings in the response so far. UHC can focus greater attention on promoting health equity, improving the quality of services, ensuring financial and social security, strengthening health and community systems, building coherence across

different health areas, addressing the social and economic determinants of HIV and guaranteeing human rights. Several low- and middle-countries have already included UHC as a national priority, including Brazil, Cambodia, Gabon, Ghana, Rwanda, Senegal, Thailand, Turkey and Viet Nam. In 2012, the Sixty-Seventh General Assembly of the United Nations adopted a resolution on Global Health and Foreign Policy⁹⁸ in support of UHC. And in May 2014 the 67th session of the World Health Assembly adopted a resolution "Health in the post-2015 development agenda", which calls for UHC to be promoted as fundamental to the health component of the post-2015 development agenda.

The future HIV architecture needs to be part of a broader approach to health, as vulnerable populations and people living with HIV face a range of health risks and challenges, including poverty, ageing, mental health and substance use disorders, environmental pollution, climate change, food insecurity and noncommunicable diseases.⁹⁹

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