



# Ending disease in Africa

vision, strategies and special initiatives,  
2023-2030

**UHC/CN**

Universal Health Coverage/Communicable  
and Non-communicable Diseases

WHO Regional Office for Africa



# **Ending disease in Africa: vision, strategies and special initiatives, 2023-2030**

UHC/UCN Cluster  
World Health Organization  
Regional Office for Africa  
Brazzaville • 2023

## Ending disease in Africa: vision strategies and special initiatives, 2023-2030

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# Foreword

The 2030 Agenda for Sustainable Development was adopted by all United Nations Member States in 2015 as a shared blueprint for global peace and prosperity. The 17 Sustainable Development Goals (SDGs) recognise that ending poverty and developing economies sustainably can only be achieved through equitable access to health and education, and safe, healthy, and resilient ecosystems and human environments.

SDG 3 aims to ensure healthy lives and promote well-being for all, at all ages with 2030 targets for communicable and noncommunicable disease prevention and control. Real progress in disease prevention and control - reducing the incidence of malaria, tuberculosis, polio, HIV, measles, and hepatitis B; introducing new vaccines; and increasing access to clean water and sanitation - had been made in the African Region before the COVID-19 pandemic, which disrupted essential health services in 92% of countries worldwide. In the area of disease control, by the end of 2021, the WHO African Region was off track in terms of the expected progress towards significant SDGs targets. Key strategic investments are required in order to strengthen essential service delivery and, in turn, improve health outcomes of interest.

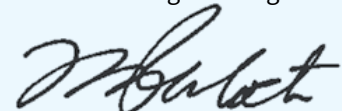
Even before the pandemic the limitations of sectoral and vertical planning and programme implementation in addressing complex sustainable development challenges, including health, were well recognised. Moreover, there is a rapidly expanding body of evidence showing the interdependencies and interlinkages between communicable and noncommunicable diseases. These have resulted in a move towards an integrated, systems approach to disease prevention, control, elimination and eradication.

To support countries in renewing and accelerating their efforts to deliver health services and get back on track towards achieving the 2030 SDG 3 targets, WHO has published new strategies and guidance to fast track priority actions. Countries are encouraged

to shift their approach and accelerate programmatic actions and investments and move from vertical disease control programmes to integrated and cross-cutting approaches.

In support of country efforts, the WHO Regional Office for Africa has restructured its Universal Health Coverage, Communicable and Noncommunicable Diseases (UCN) cluster to foster a systems approach and is introducing four Special Initiatives informed by national and international successes in the response to COVID-19. These interdependent initiatives are designed to energise and diversify models of technical support delivered by WHO through intensive support to disease prevention and control systems and governance; new partnerships with African institutions and bodies to expand the pool of localised technical support available to national health authorities; investments in data science capacities for evidence-driven decision making; and strengthened research and innovation addressing current and future public health priorities in the African Region. This approach will also serve to enhance pandemic preparedness in the region.

There continues to be a significant funding gap for public health programmes, and research and innovation. There is an urgent need to both ramp up investment, and improve efficiencies. The African region faces many challenges, but by better defining the risk to health in the region, improving data to support decision making, building technical self-sufficiency through systems strengthening and localised partnerships, and nurturing local capacities in research and innovation, I am sure that we can strengthen disease control and accelerate progress towards achieving the SDG health targets and goal.



Dr Matshidiso Moeti  
Regional Director for Africa  
World Health Organization



# Preface

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The concept of ‘ending disease’ in this document encompasses eradication, elimination and control of the diseases that currently burden the WHO African region. The concept is firmly rooted in the sustainable development goal targets relating to disease control:

- ▶ SDG 3.3 By 2030, end the epidemics of AIDS, tuberculosis, malaria and NTDs and combat hepatitis, water-borne diseases and other communicable diseases.
- ▶ SDG 3.4 By 2030, reduce by one-third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being.

‘Ending’ is used to describe a process of setting targets, as prescribed by the SDGs, with measurable end points, that are monitored and evaluated using scientifically determined indicators. ‘Ending disease in Africa’ defines a vision and is an aspirational goal.

A range of factors determine the management strategy best suited to address individual diseases, including the type of disease, the disease vector, and the likelihood of success. There are several diseases in the African Region that are considered significant public health threats, and as such, have been prioritized for disease management using a range of regional eradication, elimination, and control strategies.

Priority diseases by management strategy			
Goal	Communicable diseases	Noncommunicable diseases	Neglected tropical diseases
Eradication	Poliovirus (polio)	-	Dracunculiasis (Guinea worm disease) Yaws
Elimination	Hepatitis B Malaria Maternal & neonatal tetanus Measles & rubella Meningitis Yellow fever	Noma	Human African trypanosomiasis (HAT) Leprosy Visceral leishmaniasis Lymphatic filariasis Onchocerciasis Schistosomiasis Soil-transmitted helminthiasis (STH) Trachoma
Control	Human immunodeficiency virus (HIV) Sexually transmitted infections (STIs) Tuberculosis (TB) Viral hepatitis	Cervical cancer Childhood cancer Diabetes Ear health Eye health Mental, neurological, & substance abuse (MNS) disorders Oral diseases Sickle cell disease	Buruli ulcer Cutaneous leishmaniasis Taeniasis



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# Abbreviations

<b>ACEGID</b>	African Centre of Excellence for Genomics of Infectious Diseases
<b>ACT</b>	Access to COVID-19 Tools
<b>AfDB</b>	African Development Bank
<b>Africa CDC</b>	Africa Centres for Disease Control and Prevention
<b>AFRO</b>	WHO Regional Office for Africa
<b>AHO</b>	African Health Observatory
<b>AHRI</b>	Africa Health Research Institute
<b>AIDS</b>	Acquired immunodeficiency syndrome
<b>AIRA</b>	Africa Infodemic Response Alliance
<b>AMR</b>	Antimicrobial resistance
<b>ARCC</b>	Africa Regional Certification Commission for polio eradication
<b>AU</b>	African Union
<b>AUDA-NEPAD</b>	African Union Development Agency-New Partnership for Africa's Development
<b>AVAREF</b>	African Vaccine Regulatory Forum
<b>BHBM</b>	Be He@lthy, Be Mobile
<b>CAR</b>	Central African Republic
<b>CC</b>	Collaborating centre (WHO)
<b>CDs</b>	Communicable diseases
<b>CDC</b>	Centres for Disease Control and Prevention (United States)
<b>CEPI</b>	Coalition for Epidemic Preparedness Innovations
<b>COPD</b>	Chronic obstructive pulmonary disease
<b>COVID</b>	Coronavirus disease (COVID-19)
<b>DALY</b>	Disability-adjusted life years
<b>DELTAS</b>	Developing Excellence in Leadership, Training and Science in Africa
<b>DRC</b>	Democratic Republic of the Congo
<b>DFID</b>	Department for International Development (United Kingdom)
<b>DHIS2</b>	District Health Information Software 2
<b>DTP1</b>	Diphtheria-tetanus-pertussis vaccine dose 1
<b>DTP3</b>	Diphtheria-tetanus-pertussis vaccine dose 3
<b>EAC</b>	East African Community
<b>ECCAS</b>	Economic Community of Central African States

<b>ECOWAS</b>	Economic Community of West African States
<b>EDL</b>	Essential diagnostics list
<b>EPI</b>	Expanded Programme on Immunization
<b>ESPEN</b>	Expanded Special Project for Elimination of Neglected Tropical Diseases
<b>ETEC</b>	Enterotoxigenic <i>Escherichia coli</i>
<b>FAO</b>	Food and Agriculture Organization of the United Nations
<b>Gavi</b>	The Vaccine Alliance
<b>GBD</b>	Global Burden of Diseases, Injuries, and Risk Factors Study
<b>GDP</b>	Gross domestic product
<b>GET</b>	Global Emerging Pathogens Treatment Consortium
<b>GIS</b>	Geographic information system
<b>GOARN</b>	Global Outbreak Alert and Response Network
<b>GPEI</b>	Global Polio Eradication Initiative
<b>GPW 13</b>	Thirteenth General Programme of Work, 2019–2025 (WHO)
<b>HIV</b>	Human immunodeficiency virus
<b>HPV</b>	Human papillomavirus
<b>HQ</b>	Headquarters
<b>HTH</b>	HIV, tuberculosis, hepatitis and STIs
<b>IA2030</b>	Immunization Agenda 2030
<b>IANPHI</b>	International Association of National Public Health Institutes
<b>ICC</b>	Immunization Inter-agency Coordination Committee
<b>IFRC</b>	International Federation of Red Cross and Red Crescent Societies
<b>IHR</b>	International Health Regulations
<b>IPD</b>	Institut Pasteur de Dakar
<b>IPV1</b>	Inactivated polio vaccine dose 1
<b>LMIC</b>	Low- and middle-income country
<b>MCV1</b>	Measles containing vaccine dose 1
<b>MCV2</b>	Measles containing vaccine dose 2
<b>MDA</b>	Mass drug administration
<b>MDR</b>	Multidrug resistant
<b>MDR/RR-TB</b>	Multidrug/rifampicin-resistant tuberculosis
<b>MERS</b>	Middle East respiratory syndrome
<b>MPAG</b>	Malaria Policy Advisory Group
<b>NCDs</b>	Noncommunicable diseases
<b>NITAG</b>	National Immunization Technical Advisory Group
<b>NTD</b>	Neglected tropical disease
<b>OPV3</b>	Oral polio vaccine type 3
<b>OSC</b>	Organized social context
<b>PLHIV</b>	People living with HIV
<b>PCR</b>	Polymerase chain reaction
<b>PEN</b>	Package of essential noncommunicable disease interventions
<b>PEPFAR</b>	President's Emergency Plan for AIDS Relief (United States)

<b>PHC</b>	Primary health care
<b>PMI</b>	President's Malaria Initiative (United States)
<b>PPH</b>	Precision public health
<b>RC72</b>	Seventy-second session of the Regional Committee
<b>RECs</b>	Regional economic communities
<b>RITAG</b>	Regional Immunization Technical Advisory Group
<b>RPRG</b>	Regional Programme Review Group for NTDs
<b>RSPI</b>	Regional Strategic Plan for Immunization 2014–2020
<b>RSV</b>	Respiratory syncytial virus
<b>RTS,S</b>	RTS,S/AS01 malaria vaccine
<b>SADC</b>	Southern African Development Community
<b>SAGE</b>	Strategic Advisory Group of Experts on Immunization
<b>SANTHE</b>	Sub-Saharan African Network for TB/HIV Research Excellence
<b>SCORE</b>	survey, count, optimize, review, enable
<b>SDGs</b>	Sustainable Development Goals
<b>SDG3</b>	Sustainable Development Goal 3 (Health)
<b>SFA</b>	Science for Africa Foundation
<b>SI</b>	Special initiative
<b>SMT</b>	Subject matter team
<b>SPAR</b>	State Party Self-assessment Annual Reporting
<b>SPP</b>	Strategic Planning and Policy
<b>STAC</b>	Scientific and Technical Committee of the Special Programme for Research and Training in Tropical Diseases (TDR)
<b>STH</b>	Soil-transmitted helminthiases
<b>STI</b>	Sexually transmitted infection
<b>STISA</b>	Science, Technology and Innovation Strategy for Africa (STISA–2024)
<b>SWOT</b>	strengths, weaknesses, opportunities, and threats analysis
<b>TAG</b>	Technical Advisory Group
<b>TB</b>	Tuberculosis
<b>TDR</b>	Special Programme for Research and Training in Tropical Diseases
<b>TSF</b>	Technical Support Facility
<b>TVD</b>	Tropical and vector-borne diseases
<b>UCN</b>	Universal Health Coverage/Communicable and Noncommunicable Diseases Cluster, WHO AFRO
<b>UHC</b>	Universal health coverage
<b>UK</b>	United Kingdom
<b>UKZN</b>	University of KwaZulu-Natal
<b>UMIC</b>	Upper middle-income country
<b>UN</b>	United Nations
<b>UNAIDS</b>	Joint United Nations Programme on HIV/AIDS
<b>UNEP</b>	United Nations Environment Programme
<b>UNESCO</b>	United Nations Educational, Scientific and Cultural Organization
<b>UNICEF</b>	United Nations Children's Fund

x

<b>US</b>	United States
<b>USAID</b>	United States Agency for International Development
<b>USD</b>	United States dollar
<b>VPD</b>	Vaccine-preventable disease
<b>WAHO</b>	West African Health Organization
<b>WB</b>	World Bank
<b>WHO</b>	World Health Organization
<b>WOAH</b>	World Organisation for Animal Health
<b>XDR</b>	Extensively drug resistant





## Executive summary

While there has been real progress in addressing the burden of disease in the WHO African region, the COVID-19 pandemic has highlighted the link between health, economics and security, as the region saw decades of progress threatened, including positive trends in decreasing inequality. In the African Region the momentum towards achieving the 2030 SDG disease burden reduction targets (SDG targets 3.3, 3.4 and 3B) has stalled.

The COVID-19 pandemic was also a major threat to gains made, such as the eradication of polio in the region, declared in 2020; reduced numbers of new HIV infections in 2021 compared to 2010; and passing the 2020 milestone of the End TB Strategy, with a 22% reduction in new cases compared with 2015. However, the pandemic also disrupted essential health services in 92% of countries globally, 22.7 million children missed basic immunization, there was an increase in malaria and TB, and global deaths from TB rose for the first time since 2015.

Additionally, the African region is seriously affected by climate change, with little resilience since nearly 60% of the region's population is rural and highly dependent on the climate system for food production. During the COVID-19 pandemic, outbreaks of malaria and dengue fever were reported in Uganda, Rwanda, and DRC, pointing to the influence of climate change on health. This is likely to worsen with increasing climate change, thus increasing pressure on the region's fragile health system.

“In the African Region the momentum towards achieving the 2030 SDG disease burden reduction targets (SDG targets 3.3, 3.4 and 3B) has stalled.”

To get back on track there is an urgent need to accelerate progress by building on the lessons learned during the COVID-19 pandemic, as well as the region's decades of experience in responding to outbreaks and emergencies, and the progress already made in disease eradication, elimination and control.

The WHO Regional Office for Africa has implemented a Transformative Agenda to enhance accountability, value for money, and tracking of health interventions. WHO's priorities in the region include accelerating UHC, building responsive health systems, and reducing disease burden through inter-cluster communication and collaboration. The WHO/AFRO Universal Health Coverage / Communicable and Noncommunicable diseases cluster (UCN) was established in 2019 to integrate disease prevention and control programmes within a health system strengthening framework.

This document describes the vision, the strategy and the special initiatives developed by the UCN cluster, that, if appropriately implemented at country and regional levels, will contribute towards accelerating progress towards achieving disease eradication and elimination goals, universal health coverage and the SDG goals.

The vision of the UCN cluster is an African Region with affordable and equitable access to quality prevention, treatment and care services to free it of the burden of communicable and noncommunicable diseases. The cluster's mission is to deploy analytics and policy to drive delivery of relevant and tailored public health interventions to prioritized populations and communities through setting evidence-informed disease control agendas and guiding investments.

By reimagining its role and strategy, the UCN cluster adapted its business model to align with the evolving operating environment in the African region and globally, including the drive for country ownership, investment efficiency and impact, and people-centered service delivery. This will require full focus while this UCN vision is implemented in collaboration with Member States and partners, including donors, and in full collaboration with global health initiatives.

“WHO's priorities in the region include accelerating UHC, building responsive health systems, and reducing disease burden through inter-cluster communication and collaboration.”

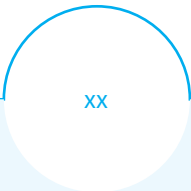


Figure 1. UCN cluster vision, strategies and special initiatives





## Introduction – Where we are today

Health and socioeconomic development in the WHO African Region (AFR) are adversely affected by rates of disease that are disproportionate to the Region's population. Communicable diseases (CDs) remain important causes of illness and deaths while countries are also undergoing demographic transition, with an increased burden of noncommunicable diseases (NCDs).

### COMMUNICABLE DISEASES

The aim of Sustainable Development Goal (SDG) target 3.3 is to end the epidemics of AIDS, tuberculosis (TB), malaria and neglected tropical diseases and combat hepatitis, water-borne diseases, and other communicable diseases.

Real progress in disease control had been made in the African Region before the COVID-19 pandemic, including increasing access to clean water and sanitation; reducing the incidence of malaria, TB, polio, HIV, measles, and hepatitis B; and introducing new vaccines.

From 1 July 2021 and 30 June 2022, 112 (86%) of the 130 acute public health events reported to the WHO Regional Office for Africa (AFRO) were infectious disease outbreaks.<sup>1</sup> Worryingly, the control of priority infectious diseases such as malaria and some vaccine-preventable diseases (VPDs) has stagnated in recent years and the SDG targets for malaria will likely not be met.

“Health and socioeconomic development in the WHO African Region (AFR) are adversely affected by rates of disease that are disproportionate to the Region's population.”

<sup>1</sup> AFR/RC72-3. Annual Report of the Regional Director on the work of WHO, 2021–2022. 22 August 2022.



Although there have been significant gains in their prevention and control, neonatal disorders, lower respiratory infections, diarrhoeal diseases, malaria, meningitis, whooping cough and congenital syphilis remain important causes of deaths and ill health in children under 10 years of age.<sup>2</sup> The prevalence of stunting and wasting in children under 5 years was 31.7% and 5.8% respectively, caused by inadequate nutrition and recurrent infections or chronic diseases.<sup>3</sup>

(EPI) and the Global Polio Eradication Initiative (GPEI). Since 1996, polio eradication efforts have protected up to 1.8 million children from life-long paralysis and saved approximately 180 000 lives.

Africa experienced a surge of VPDs in 2021–2022, impacted by the stress that COVID-19 put on immunization services. Almost 17 500 cases of measles were reported, a 400% increase compared to the same time period in 2021.<sup>4</sup> Twenty-four countries confirmed outbreaks of circulating vaccine-derived polioviruses<sup>5</sup> and 13 countries reported new yellow fever outbreaks.

Vaccines for the primary prevention of infectious diseases are one of the most cost-effective means of advancing global welfare, but according to UNICEF, for the first time in three decades, childhood immunization coverage is backsliding as a result of the COVID-19 pandemic, conflicts, displacements, and vaccine misinformation.<sup>6</sup>

Immunization coverage<sup>7</sup> for most of the antigens in the childhood immunization schedule in the African Region is lagging behind the 90% target set in the Regional Strategic Plan for Immunization (RSPI) 2014–2020. While Africa has seen significant progress towards access to immunization, coverage for the third dose of diphtheria-tetanus-pertussis-containing vaccine (DTP3) and the first dose of measles-containing vaccine (MCV1) remains far below the rate needed to interrupt or contain transmission of highly infectious diseases like measles. Delayed administration of the birth dose of hepatitis B vaccine beyond the first 24 hours after birth is a missed opportunity to prevent mother-to-child transmission of the virus and potentially the prevention of chronic hepatitis B, liver injury and hepatocellular carcinoma. In 2020, hepatitis B surface antigen (HBsAg) prevalence in the African Region was estimated at 2.5% among children under 5 years (the WHO target for 2020 is <1% and <0.1% for 2030). In 2021, only 17% of newborns received the birth dose on time.<sup>8</sup>

To reduce the burden of VPDs, Member States demonstrated their commitment by endorsing the regional Framework for the implementation of the Global Immunization Agenda 2030 in the WHO African Region<sup>8</sup> and the Immunization Agenda 2030 (IA2030) at the Seventy-first session of the Regional Committee in 2021.



## Vaccine-preventable diseases

Achievements of the past decade in immunization are far-reaching and include significant progress in the introduction of new vaccines, the establishment of sentinel surveillance systems, and the endorsement of the Addis Ababa Declaration on universal access to immunization as a cornerstone for health and development in Africa. On 25 August 2020, the independent Africa Regional Certification Commission (ARCC) for Polio Eradication declared the WHO African Region free of wild poliovirus; the last case of wild polio was detected in Nigeria in 2016. This was achieved through the work of national and regional expanded programmes on immunization

<sup>2</sup> AFR/RC69/5. Fourth progress report on the implementation of the transformation agenda of the World Health Organization Secretariat in the African Region: 2015–2020: report of the Secretariat.

<sup>3</sup> WHO Global Health Observatory World Health Statistics 2022. Annex 2. Tables of health statistics by country, WHO region and globally

<sup>4</sup> WHO Regional Office for Africa. Vaccine-preventable disease outbreaks on the rise in Africa. 28 April 2022.

<sup>5</sup> Global Polio Eradication Initiative. Global circulating vaccine-derived poliovirus (cVDPV) as of 06 December 2022

<sup>6</sup> UNICEF. Immunization.

<sup>7</sup> WHO | UNICEF Joint Reporting Form. Measles vaccination coverage 2021.

<sup>8</sup> AFR/RC71/7. Framework for the implementation of the Immunization Agenda 2030 in the WHO African Region. 26 August 2021.



The regional framework aims to achieve three impact goals: (1) reduce mortality and morbidity from VPDs throughout the life course, sustain wild polio-free status, achieve regional elimination of measles, rubella, maternal and neonatal tetanus and hepatitis B, and prevent outbreaks of meningococcal meningitis; (2) leave no one behind by increasing equitable access to new and existing vaccines; and (3) ensure good health and well-being for everyone by strengthening immunization within primary health care and contributing to universal health coverage and sustainable development.

The Regional Strategic Plan for Immunization 2.0 2021–2030 was developed by WHO in alignment with IA2030 to guide national strategic interventions to achieve immunization targets and goals, with annual performance monitoring and documentation, including progress towards IA2030.

“The African Region is home to two thirds of people living with HIV infection globally and close to 4% of adults still live with HIV in the Region.”

## The fight against HIV, tuberculosis, malaria, and epidemic-prone diseases

SDG 3.3 aims to end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases, and other communicable diseases by 2030. While considerable progress has been made in implementing global sector strategies for HIV, viral hepatitis, sexually transmitted infections (STIs) and the “End TB strategy”<sup>9</sup>, the burden of these diseases remains high in the African Region, and the expected targets for 2020 have not been met in all countries.

### HIV

The African Region is home to two thirds of people living with HIV infection globally<sup>10</sup> and close to 4% of adults still live with HIV in the Region.

The African Region has made huge inroads in reducing the incidence of HIV [SDG 3.3.1]. In 2021, reported new HIV infections per 1000 uninfected population across the African Region was 0.78 compared to the global rate of 0.19.<sup>3</sup> Although new HIV infections reduced by 44% in 2021 compared to 2010, only 78% of people living with HIV are receiving treatment, and many of them continue to die from preventable and treatable opportunistic infections. TB is the leading cause of death among people living with HIV.

Eastern and Southern Africa has the highest burden of HIV in the African Region, with rates per 1000 unaffected population from 0.96 in Tanzania to 7.65 in Eswatini. Equatorial Guinea, Congo and Guinea-Bissau reported the highest rates in West and Central Africa. Twelve of the 44 countries reporting in 2020 had rates per 1000 at or below the global average<sup>11</sup> while 16 countries (Botswana, Congo, Eswatini, Gabon, Gambia, Guinea-Bissau, Lesotho, Malawi, Mozambique, Namibia, South Africa, South Sudan, Tanzania, Uganda, Zambia, and Zimbabwe) reported rates above the regional average. Treatment coverage in West and Central Africa has improved, with more than 40% coverage for HIV treatment compared to 28% in 2015, as a result of the successful implementation of the Western and Central Africa HIV Catch-up Plan.

In 2021, key populations<sup>12</sup> (including sex workers, men who have sex with men, people who inject

<sup>9</sup> WHO. The End TB Strategy 2014.

<sup>10</sup> Marsh K, Eaton JW, Mahy M, et al. Global, regional, and country-level 90-90-90 estimates for 2018: assessing progress towards the 2020 target. *AIDS*. 2019; 33: S213–S226.

<sup>11</sup> AFR/RC72/7. Framework for the integrated control, elimination, and eradication of tropical and vector-borne diseases in the African Region 2022–2030. 3 July 2020.

<sup>12</sup> UNAIDS. Global HIV & AIDS statistics — Fact sheet. 2021.

drugs, transgender people and prisoners and migrants) and their sexual partners accounted for over 51% of new HIV infections in sub-Saharan Africa. In Eastern and Southern Africa, which account for 54% of all people living with HIV (PLHIV) globally (20.6 million people), the percentage of new infections in key populations is 46%. In West and Central Africa with 5 million PLHIV, key populations account for 74% of new HIV infections.

In most countries of the African Region, new HIV infections per 1000 uninfected population occurred more frequently in women than in men. In sub-Saharan Africa, women and girls accounted for 63% of all new HIV infections in 2021; young women aged 15–24 years are twice as likely to be living with HIV than men. Women living with HIV are more likely than HIV-negative women to develop cervical cancer. Over 40% of cervical cancer cases are attributable to HIV in nine countries of the Region, a rate significantly higher than the rate of less than 5% in 122 countries with lower HIV prevalence.<sup>13</sup>

A concerning proportion of those commencing HIV care<sup>14</sup> and patients on antiretroviral treatment who leave care and return with detectable virus<sup>15</sup> still present with advanced HIV disease in some African countries.

NCDs are an increasing problem in people living with HIV in terms of successful antiretroviral treatment.<sup>16</sup> Some antiretroviral drugs may increase the risk of heart disease and diabetes, while HIV immunodeficiency increases the risk of some cancers.

## Tuberculosis

In 2020, the milestone of the WHO Framework for implementing the “End TB Strategy” in the African Region 2016–2020 was a 20% reduction in TB incidence rates compared to the 2015 benchmark. In 2021, the African Region passed the 2020 milestone of the End TB Strategy, with a 22% reduction compared with 2015.<sup>17</sup> TB incidence fell by 19% across sub-Saharan Africa from 271 to 220 per 100 000 during that period [SDG 3.3.2].

2021 estimates of TB incidence in the African Region indicate that there were 2.5 million new cases (212 per 100 000 population), representing 25% of the global burden. Of this number, 77 000 (6.6 per 100 000) were diagnosed with MDR/RR-TB (2.8% of new cases), and 485 000 (42 per 100 000) with HIV-TB coinfection. Among previously treated cases, 19% had multidrug/rifampicin-resistant TB (MDR/RR-TB). TB treatment coverage was estimated to be 60%.<sup>17</sup> The African Region has the highest burden of HIV-associated TB. Based on global data, it is estimated that 46% of TB patients known to be living with HIV were on antiretroviral treatment.

In 2021, TB incidence rate estimates indicated that the 2020 milestone of the End TB Strategy had been reached in seven African countries: Ethiopia, Kenya, Lesotho, Namibia, South Africa, Tanzania and Zambia. New TB cases have been declining at a rate of 4% per year since 2015, and up to 8% in Eswatini, Lesotho, Namibia, South Africa, Zambia, and Zimbabwe. Best estimates indicate that the proportion of new TB cases with multidrug/rifampicin-resistant tuberculosis (MDR/RR-TB) is around 4% in the WHO African Region (compared to 26% in the European Region).

TB prevention and control programmes are still missing cases in children. An estimated 322 000 children and young adolescents aged 0–15 years, or one third of TB cases under 15 years worldwide, are reported from the African Region. At the Seventy-second session of the WHO Regional Committee for Africa in Lomé, Togo, in August 2022, WHO, the African Union and partners called for immediate measures to improve detection, bacteriological confirmation and treatment of paediatric TB.

Diabetes is associated with a two- to threefold higher risk of TB disease, a twofold risk of death during TB treatment, a fourfold risk of TB relapse after treatment completion, and a twofold risk of MDR-TB. WHO first recommended collaborative activities to address TB and diabetes in 2011 but uptake varies across the African Region. The Global tuberculosis report 2021 noted that only South Africa and Tanzania had plans for joint or bidirectional screening and co-management for TB and diabetes within their national strategic plans for NCDs.

<sup>13</sup> International Agency for Research on Cancer. Cancer Today - Cancer Incidence and Mortality Data: Sources and Methods by Country, 2020. <https://gco.iarc.fr/today/> Assessed 04 Jan. 2022.

<sup>14</sup> Ford N, Doherty M. The enduring challenge of advanced HIV infection. *N Engl J Med.* 2017; 377: 283-284.

<sup>15</sup> Meya DB, Tugume L, Nabitaka V, et al. Establishing targets for advanced HIV disease: a call to action. *South Afr J HIV Med.* 2021; 22:1266

<sup>16</sup> Achwoka, D., Waruru, A., Chen, TH, et al. Noncommunicable disease burden among HIV patients in care: a national retrospective longitudinal analysis of HIV-treatment outcomes in Kenya, 2003-2013. *BMC Public Health* 19, 372 (2019). <https://doi.org/10.1186/s12889-019-6716-2>

<sup>17</sup> WHO. Global tuberculosis report 2022. Tuberculosis profile: WHO African Region

## Tropical and vector-borne diseases

The African Region recorded an estimated 234 million cases of malaria in 2021, approximately 95% of the 247 million global cases.<sup>18</sup> The World malaria report 2022<sup>18</sup> found that Nigeria (27%), the Democratic Republic of the Congo (12%), Uganda (5%) and Mozambique (4%) reported almost half of the global cases.

These data represent extraordinary progress in malaria control. Case incidence has fallen by 39%, from 368 per 1000 population [SDG3.3.3] in 2000 to 222 in 2019.<sup>19</sup> Successes included Cabo Verde reporting zero indigenous cases for three consecutive years, ending the malaria epidemic in the island country. Despite disruptions during the COVID-19 pandemic, Botswana and South Africa continued to make progress towards elimination and reduction of their malaria burden.<sup>18</sup>

From 2015, the rate of reduction in the incidence of malaria stagnated, decreasing by less than 2% compared to 9.3% every five years from 2000 to 2014. A similar trend was seen in malaria deaths with a 17.3% reduction in global mortality every five years from 2000 to 2014, and a 15% reduction in mortality from 2015 to 2019.

Nine countries reported an incidence per 1000 population at risk of 300–400 in 2020 (Benin, Burkina Faso, Central African Republic (CAR), DRC, Guinea, Liberia, Mali, Mozambique, Niger, Nigeria and Sierra Leone), with an upward trend observed in Burundi, Chad, Congo and Gabon. Malaria mortality was highest in CAR (105.2 per 100 000) and Sierra Leone (101 per 100 000).

The SDG targets for malaria will not be met if the African Region continues at the current level of intervention. At the same time there is an increasing burden of epidemic-prone and climate-sensitive vector-borne diseases (yellow fever, chikungunya, dengue, Zika virus, Rift Valley fever and Crimean-Congo haemorrhagic fever).

## Neglected tropical diseases

Nineteen<sup>20</sup> of the 20 NTDs slated for elimination occur in the African Region. Within the Region, 36

out of the 47 countries are co-endemic for at least two NTDs. The African Region has made significant progress in the eradication, elimination and control of the five most prevalent neglected tropical diseases – lymphatic filariasis, onchocerciasis, soil-transmitted helminthiasis, schistosomiasis, and trachoma – through the Expanded Special Project for Elimination of Neglected Tropical Diseases (ESPEN). The steady decline in the proportion of people requiring interventions against NTDs in the Region continued in 2020, including for African trypanosomiasis and dracunculiasis, despite significant disruptions to health services because of COVID-19.

In September 2022, Malawi became the fourth country in the African Region after Ghana, Gambia, and Togo validated by WHO as having eliminated trachoma as a public health problem. Only one country in the African Region has yet to reach the target for elimination of leprosy, dracunculiasis (Guinea worm) is on the verge of eradication with only 27 cases reported in 2020, and countries are working to control Buruli ulcer, yaws and leishmaniasis.

Despite the progress made, in 2020, over 578 million people in the African Region required interventions against NTDs<sup>21</sup>. There were an estimated 38 million cases of lymphatic filariasis, 15 million cases of onchocerciasis, 12 million cases of schistosomiasis, and over 220 000 cases of dengue fever.

In November 2020, the virtual session of the Seventy-third World Health Assembly endorsed a new NTD roadmap, Ending the neglect to attain the Sustainable Development Goals: a road map for neglected tropical diseases 2021–2030, encouraging affected countries to shift their approach based on three pillars: accelerating programmatic actions and investments; moving from vertical disease programmes to intensified cross-cutting approaches; and changing operating models and culture to facilitate country ownership. The overarching 2030 global targets of the new roadmap are to: reduce the number of people requiring treatment for NTDs by 90%; reduce the disability-adjusted life years (DALYs) related to NTDs by 75%; eliminate at least one NTD from 100 countries; and eradicate dracunculiasis and yaws.

<sup>18</sup> WHO. World Malaria Report 2022.

<sup>19</sup> AFR/RC72/7. Framework for the integrated control, elimination, and eradication of tropical and vector borne diseases in the African Region 2022–2030. 3 July 2020.

<sup>20</sup> Buruli ulcer, cysticercosis, dengue fever, dracunculiasis, echinococcosis, fascioliasis, human African trypanosomiasis, leishmaniasis, leprosy, lymphatic filariasis, mycetoma, onchocerciasis, rabies, schistosomiasis, soil-transmitted helminths, trachoma.

<sup>21</sup> WHO Global Health Observatory World Health Statistics 2022. Annex 2. Tables of health statistics by country, WHO region and globally

## Sexually transmitted infections

WHO estimates that more than 86 million cases of chlamydia, gonorrhoea, syphilis and trichomoniasis are acquired every year in the 15–45 years age group, and an estimated 25% of women have HPV infection. The prevention of cervical cancer is hindered by the HPV immunization coverage among 15-year-old girls of only 17% in 2020.<sup>3</sup>

## Antimicrobial resistance

WHO estimates that 4.1 million people across Africa could die from antimicrobial resistance (AMR) by 2050, owing to the high rates of infectious diseases in the region. For example, sub-Saharan Africa accounts for a disproportionately high share of the global malaria burden, with around 96% of all cases and deaths in 2020. In response to reports that *Plasmodium falciparum* had developed partial resistance to the antimalarial drug artemisinin in Eritrea, Rwanda and Uganda, WHO published a new strategy to address antimalarial drug resistance in Africa in November 2022.

Antimicrobial resistance increases the cost of health care with lengthier stays in hospitals and more intensive care required.

## NONCOMMUNICABLE DISEASES

SDG targets for noncommunicable diseases and their risk factors are listed below:

- 3.4 : By 2030, reduce by one third premature mortality from noncommunicable diseases through prevention and treatment and promote mental health and well-being.
- 3.5 : Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol.
- 3.a : Strengthen the implementation of the World Health Organization Framework Convention on Tobacco Control in all countries, as appropriate.

## NCDs in the African Region

NCDs in the African Region are posing an increasing challenge for health systems, which have, to date, focused on infectious diseases and maternal, neonatal and child deaths. In 2017, NCDs represented 71% of all deaths globally, killing 41 million people each year.<sup>22</sup> In the African Region, deaths attributed to NCDs ranged from 27% to 88% of all deaths<sup>23</sup>, and the probability of dying between the ages 30 and 70 years from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases (SDG3.4.1) was estimated at 20.8%.

“NCDs in the African Region are posing an increasing challenge for health systems, which have, to date, focused on infectious diseases and maternal, neonatal and child deaths.”

<sup>22</sup> Bigna, JJ and Noubiap, JJ. The rising burden of noncommunicable diseases in Sub-Saharan Africa. *Lancet Global Health*. Published: October 2019. DOI: [https://doi.org/10.1016/S2214-109X\(19\)30370-5](https://doi.org/10.1016/S2214-109X(19)30370-5)

<sup>23</sup> WHO. Global Health Observatory. Noncommunicable diseases: Mortality





WHO launched the global Cervical Cancer Elimination Initiative in 2020 to reduce cervical cancer incidence to less than 4 cases per 100 000 women-years globally, and to narrow disparities between countries. WHO set 90-70-90 targets that must be met by 2030 for countries to be on the path to cervical cancer elimination. There are geographical and socioeconomic inequalities in cervical cancer globally, with a clear association between increasing rates and lower levels of human development. The African Region has some of the highest reported rates of cervical cancer cases and deaths,<sup>27</sup> contributing 21% of global cervical cancer mortality, although human papillomavirus (HPV) vaccines are 90–100% effective at preventing HPV type-specific persistent infection and cervical disease if administered before infection. The cervical cancer survival rate is only 12–20% compared to over 80% survival in developed countries.

NCDs are the largest cause of productivity losses in the African Region (37%), followed by communicable diseases (infectious and respiratory diseases combined, 36%).<sup>28</sup> All-age total DALYs due to NCDs increased by 67% from 1990 (90.6 million) to 2017 (151.3 million).<sup>21</sup> This corresponds to an increase in the proportion of total DALYs attributable to NCDs from 19% to 30% of the total burden of disease. The authors of the analysis concluded that although most of this increase can be explained by population growth and ageing, the age-standardized DALY rate per 100 000 population due to NCDs in 2017 approached that of communicable, maternal, neonatal, and nutritional diseases combined.

More recently, a WHO analysis of 14 countries in the African Region found that hypertension, diabetes, cardiovascular disease and asthma were the co-morbidities most often associated with COVID-19 patients.<sup>29</sup> These data and similar research into the associations between infectious diseases and NCDs, and the risks posed by chronic diseases to the development and severity of infectious diseases, highlight the need for a convergence in the approach to disease prevention and control programmes.

The burden of NCDs is growing rapidly, driven by an ageing population, and increasing incidence of cardiovascular risk factors. Cardiovascular diseases, sickle cell disease, diabetes, cancer, and chronic respiratory diseases account for 70% of the burden of NCDs.<sup>24</sup> Age-standardized prevalence rates of rheumatic heart disease continue to increase in the Region.<sup>25</sup> The number of people living with diabetes was 19 million in 2019 and is expected to reach 47 million by 2045, representing the highest projected rise across all WHO regions. Type 1 diabetes, rheumatic heart disease and sickle cell disease typically affect younger populations.

NCD-related mortality has increased from 24.2% of all deaths in 2000 to 37.1% in 2019.<sup>26</sup> NCDs are set to overtake communicable, maternal, neonatal and nutritional diseases combined as the leading cause of death in sub-Saharan Africa by 2030.

<sup>24</sup> Gouda HN, Charlson F, Sorsdahl K, et al. (2019) Burden of noncommunicable diseases in Sub-Saharan Africa, 1990–2017: results from the Global Burden of Disease Study 2017. *Lancet Global Health*. DOI:[https://doi.org/10.1016/S2214-109X\(19\)30374-2](https://doi.org/10.1016/S2214-109X(19)30374-2)

<sup>25</sup> AFR-RC72/R2 PEN-plus a regional strategy to address severe noncommunicable diseases at first-level referral health facilities 23 August 2022

<sup>26</sup> WHO. Global health Observatory. Cause specific mortality 2000-2019.

<sup>27</sup> Singh D, Vignat J, Lorenzoni V, et al. Global estimates of incidence and mortality of cervical cancer in 2020: a baseline analysis of the WHO Global Cervical Cancer Elimination Initiative. *Lancet Global Health* 2022 DOI:[https://doi.org/10.1016/S2214-109X\(22\)00501-0](https://doi.org/10.1016/S2214-109X(22)00501-0)

<sup>28</sup> WHO Africa 2019. A Heavy Burden: The Productivity Cost of Illness in Africa.

<sup>29</sup> WHO Africa. Noncommunicable diseases increase risk of dying from COVID-19 in Africa.



## NCD risk factors

Changing consumption patterns, rapid urbanization, people living longer, and household and outdoor air pollution have contributed to an increase in NCDs. NCD risk factor surveillance in sub-Saharan Africa over the past decade indicates that most adults are exposed to at least one risk factor, including tobacco consumption, harmful alcohol use, unhealthy diet, physical inactivity, obesity, high blood pressure or unhealthy environment.<sup>30</sup> The age-standardized prevalence of hypertension among adults aged 30–79 years was 35.5% in 2019 [GPW13]. The prevalence of obesity among adults (18+ years) was 10.6% and 2.8% among children and adolescents (5–19 years) in 2016 [GPW13].<sup>3</sup>

The age-standardized prevalence of tobacco use among persons 15 years and older in 2020 was reported as 10.3% although rates closer to the global prevalence of 22.3% are reported in Congo, Lesotho and Madagascar [SDG3.a].<sup>3</sup> In 2021, 27 African countries had ratified the 2018 Protocol to Eliminate Illicit Trade in Tobacco Products, the highest proportion of any continent. Implementation is ongoing. As of 16 December 2022, only three countries (Eritrea, Malawi and South Sudan) had not ratified the WHO Framework Convention on Tobacco Control.

Overall, the total alcohol consumption per capita of the population over 15 years of age in the African Region was 4.8 litres of pure alcohol in 2019, compared to 5.8 litres globally [SDG3.5].<sup>3</sup>

In 2016, an estimated 24% of stroke cases, 25% of ischaemic heart disease, 28% of lung cancer, and 43% of chronic obstructive pulmonary disease (COPD) were attributable to ambient and household air pollution, with evidence on additional NCDs emerging.<sup>31</sup> In 2012, 47% of ischaemic heart disease cases (147 000), 54% of stroke (237 000), 51% of lung cancer (8000) and 40% of COPD (34 000) cases in the African Region were attributable to ambient and household air pollution.<sup>32</sup>

## NCD interventions

NCD prevention and management have been mainstreamed in the African Region with an increasing number of countries implementing the WHO package of essential noncommunicable (PEN) disease interventions for primary health care in low-resource settings. Despite the gains made against infectious, maternal and neonatal diseases, a key finding of the Global Burden of Diseases, Injuries, and Risk Factors Study (GBD) 2019<sup>33</sup> is that public health has largely failed to mitigate risk factors for NCDs and disability. Universal health coverage

“In 2016, an estimated 24% of stroke cases, 25% of ischaemic heart disease, 28% of lung cancer, and 43% of chronic obstructive pulmonary disease (COPD) were attributable to ambient and household air pollution, with evidence on additional NCDs emerging.”

<sup>30</sup> WHO Report on the status of major health risk factors for noncommunicable diseases: WHO African Region, 2015.

<sup>31</sup> Landrigan PJ, Fuller R, Acosta NJR, et al. The Lancet Commission on pollution and health. *Lancet* 2018;391:462–512. doi:10.1016/S0140-6736(17)32345-0

<sup>32</sup> WHO Regional Office for Europe. Noncommunicable diseases and air pollution. WHO European high-level Conference on noncommunicable diseases. 9–10 April 2019, Ashgabat, Turkmenistan

<sup>33</sup> GBD 2019 Universal Health Coverage Collaborators. DOI:https://doi.org/10.1016/S0140-6736(20)30750-9, 7 August 2020.

(UHC) indicators for NCDs lagged behind those for communicable diseases and maternal and child health. District hospitals have not been able to meet the functional challenge of longitudinal care for patients with chronic and severe NCDs despite their human resource capacity.<sup>34</sup>

GBD 2019 also reaffirmed that good health depends on more than health systems, with socioeconomic disadvantage (SDG 10) and unsafe water and sanitation (SDG 6) being important predictors of poorer health outcomes.

The African Region has made inroads in NCD infrastructure<sup>35</sup>, with 98% of countries in 2019 having units within the Ministry of Health with responsibility for NCDs and their risk factors, and with at least one full-time technical or professional staff member. The breakdown of NCD funding in 2019 showed that around 85% of African countries had funding allocated for NCD health care and treatment, close to 70% for primary prevention and health promotion, 70% for surveillance, monitoring and evaluation and early detection and screening, over 60% for capacity building, around 50% for palliative care, and 40% for NCD research.

WHO assessment<sup>34</sup> of national capacity for NCD prevention and control has shown a clear gradient in the availability of essential NCD medicines by World Bank income groups; for example, 45% of low-income countries had insulin generally available compared to 63% of LMICs, 90% of UMICs, and 96% of high-income countries. Availability of other essential medicines was similar: aspirin was generally available in 79% of countries (37 out of 47 countries in the African Region); 77% had thiazide diuretics; 70% (33 out of 47 countries) had metformin. Only 3% of the world's cancer treatment facilities are in Africa; oncology services are available in only 22 sub-Saharan African countries, resulting in poor cancer survival.<sup>34</sup> Africa imports 95% of all medicines used in the region, providing only 3% of all medicine production globally.

“The African Region has recorded an increase in the UHC service coverage index from 24 out of 100 in 2000 to 46 in 2019.”

### HEALTH SYSTEMS STRENGTHENING

SDG target 3.8 – Universal health coverage (UHC) provides access to: quality essential health services; safe, effective and affordable essential medicines and vaccines; and protection from financial risk by 2030. Since 2015, achievement monitoring has been the joint responsibility of WHO and the World Bank with biannual Global Monitoring Reports on UHC and financial protection in health. The African Region has recorded an increase in the UHC service coverage index from 24 out of 100 in 2000 to 46 in 2019.<sup>3</sup>

In December 2021, WHO reviewed progress in equitable health service coverage and improvements in financial protection and found that: (1) while the service coverage index has been improving globally, the incidence of catastrophic health spending has been increasing; and (2) the world is not on track to achieve the UHC objectives.<sup>37</sup>

Despite notable improvements in the health of the African Region with the widening of health coverage, success has been uneven across disease prevention and control programmes, and within and between countries. Recurring outbreaks, disasters and humanitarian emergencies, some exacerbated by climate and environmental changes, have a cascading negative impact on the resilience of health systems and the communities they serve.

<sup>34</sup> Gupta N, Coates MM, Bekele A et al. 2020. Availability of equipment and medications for non-communicable diseases and injuries at public first-referral level hospitals: a cross-sectional analysis of service provision assessments in eight low-income countries. *BMJ Open* 10: e038842. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7549470/>

<sup>35</sup> WHO. Assessing national capacity for the prevention and control of noncommunicable diseases: report of the 2019 global survey. 17 March 2020.

<sup>36</sup> WHO and the International Bank for Reconstruction and Development | The World Bank Tracking Universal Health Coverage: 2021 Global monitoring report 27 June 2022.

<sup>37</sup> World Health Organization and the International Bank for Reconstruction and Development | The World Bank Global monitoring report on financial protection in health 2021 12 December 2021.

The report of the Secretariat to the Seventy-second session of Regional Committee for Africa on UHC noted that only six countries in African Region (Algeria, Cabo Verde, Mauritius, Namibia, Seychelles and South Africa) have managed to increase health service coverage while simultaneously reducing catastrophic health spending.<sup>38</sup> In 2020, 408.6 million people in sub-Saharan Africa had no access to health care, with Somalia and Chad at 58% and 51% of their populations respectively, while South Africa had the highest coverage (87%).<sup>39</sup> Existing data suggest that coverage of NCD care remains low, with many services restricted to tertiary facilities.

Expanded disability-inclusive and accessible health services are needed in the African Region to achieve the SDG goal of leaving no one behind. Data from four African countries indicate that 26% to 55% of people received the medical rehabilitation they needed, while only 17% to 37% received the assistive devices they needed, such as wheelchairs, prostheses, and hearing aids.

A key negative impact of the COVID-19 pandemic was the diversion of health system resources, which disrupted the delivery of essential health services and exposed the ongoing weaknesses and vulnerability of national health systems to stay on track towards achieving the SDGs. A study conducted in South Africa on the impact of COVID-19 on routine primary health care services in the country showed a reduction in access to, and use and quality of, routine health services. The long-term effects are still being assessed.<sup>40</sup>

WHO estimates that disease will cost 2.4 trillion international dollars (USD equivalent) of the region's gross domestic product annually if Africa fails to achieve UHC and the health-related SDGs (based on 2015 data adjusted to 2019 price indices).<sup>41</sup> Five countries (DRC, Ethiopia, Nigeria, South Africa and Tanzania) accounted for almost 50% of the total years lost in healthy life accrued in the WHO African Region.

WHO has been supporting countries to build responsive, resilient health systems, including putting in place comprehensive national health policies and plans that have been jointly assessed with partners and coordinated with overall national development plans. WHO has also supported the region to scale up communicable disease control, reduce the burden of priority communicable diseases, avert deaths, and save lives.

Reported improvements in global health have resulted from the implementation of universal health coverage initiatives to strengthen health systems. According to WHO, a well-functioning health system has strong governance, trained and motivated health workers who provide high quality service delivery, a well-maintained infrastructure, improved health information systems for decision support, a reliable supply of medicines and technologies, adequate funding, and strong health plans and evidence-based policies. However, since 2020, the diversion of resources to respond to the COVID-19 pandemic means that some health-related targets of the 2030 SDGs are at risk of getting further off track.

In 2018, the Declaration of Astana called on governments, non-governmental organizations, professional organizations, academia and global health and development organizations to recommit to primary health care (PHC) as the cornerstone of UHC. In the African Region, efforts continue to transition from vertical health programmes to well-planned, integrated health services that can respond to health needs throughout the life course and ensure that necessary services reach the most vulnerable.<sup>42</sup>

GBD 2019<sup>32</sup> reported that since 2010, sub-Saharan Africa has shown accelerated gains on the UHC effective coverage index, a trend that continued till 2019. The largest decreases in disease burden globally have occurred in countries of sub-Saharan Africa such as Ethiopia, Angola, Rwanda and Malawi, although others have seen less progress.

<sup>38</sup> AFR/RC72/6 Financial risk protection towards universal health coverage in the WHO African Region. 25. August 2022.

<sup>39</sup> UN Development Programme (UNDP). A chance for universal healthcare in sub-Saharan Africa. 13 May 2020.

<sup>40</sup> Pillay Y, Pienaar S, Barron P, Zondi T. Impact of COVID-19 on routine primary healthcare services in South Africa. *South African Medical Journal*. 2021;111:714-719. <https://doi.org/10.7196/SAMJ.2021.v111i8.15786>

<sup>41</sup> WHO Regional Office for Africa. A heavy burden: The indirect costs of illness in Africa. 2019.

<sup>42</sup> Sixty-fifth session of the WHO Regional Committee for Africa. WHO global strategy on people-centred and integrated health services – Interim Report [https://www.afro.who.int/sites/default/files/2017-07/who-global-strategy-on-pcihs-main-document\\_final.pdf](https://www.afro.who.int/sites/default/files/2017-07/who-global-strategy-on-pcihs-main-document_final.pdf)

Health system functionality in the African Region was assessed from the status of four capacities: access to essential services, quality of care, demand for essential services, and resilience of the health system.<sup>43</sup> Health system functionality ranged from 34.4 to 75.8 on a 0–100 scale across the Region, not fully explained by income level, country size or population. Access to essential services was the lowest scoring capacity for system functionality in most countries of the Region, due to low levels of physical access to services.

## THE IMPACT OF COVID-19 ON DISEASE CONTROL IN THE AFRICAN REGION

The COVID-19 pandemic has threatened decades of progress in health in all regions of the world, including positive trends in decreasing inequality. In 2020, the pandemic disrupted essential health services in 92% of countries globally. As many as 22.7 million children missed basic immunization, the number of malaria and TB cases increased, and global deaths from TB rose for the first time since 2015.<sup>44</sup>

In the African Region, the momentum towards achieving the 2030 SDG disease burden reduction targets [SDG targets 3.3, 3.4 and 3b] has stalled. The 2020 milestones of the WHO roadmap on neglected tropical diseases (2012–2020) and the Global technical strategy for malaria 2016–2030 were not achieved and, by the end of 2020, malaria incidence and mortality had increased to 2010 levels. Africa accounted for over 95% of malaria cases in 2020 and 98% of deaths, mostly among children under 5 years.<sup>45</sup> Malaria cases in the African Region increased from 225 per 1000 population at risk in 2019 to 234 in 2020, mainly because of disruptions to services during the COVID-19 pandemic.<sup>18</sup>

According to UNAIDS, COVID-19 further reduced the limited access of key populations to HIV and TB services. Community HIV organizations noted that key populations had had less access to social protection, including programmes to mitigate the impact of COVID-19. The African Region stood out as experiencing only a modest fall in TB notifications in 2020 (-2.3%) from COVID-19 impacts on TB

surveillance and delivery of essential TB services, with notifications in 2021 exceeding the 2019 level.

At its Seventy-first session in 2021, the Regional Committee for Africa adopted the Framework for an integrated multisectoral response to TB, HIV, STIs and hepatitis in the WHO African Region 2021–2030, to address the persistent high burden of these diseases.

Childhood vaccination coverage stagnated for a decade before COVID-19 and has been declining since 2020. The diversion of resources to roll out COVID-19 vaccination and increased numbers of children living in conflict and fragile settings have resulted in the largest fall in childhood immunization in three decades, according to new WHO and UNICEF data.

In 2021, 78% of age-eligible children in West and Central Africa had received DTP1 and 67% DTP3; 64% had received MCV1 compared to the target of 95% needed to prevent outbreaks; and 31% had received MCV2 [SDG3.b]. There were an estimated 4.4 million zero-dose (DTP1) and 2.4 million under-vaccinated (DTP3) children, with Cameroon, Chad, DRC, Guinea and Nigeria reporting the highest numbers of zero-dose and under-vaccinated children. In 2021, 67% of children in the sub-region had received inactivated polio vaccine first dose (IPV1) and 65% oral polio vaccine dose 3 (OPV3). The corresponding data for Eastern and Southern Africa showed that 79% of age-eligible children had received DTP1, 74% DTP3, 71% MCV1, and 50% MCV2. An estimated 3.6 million zero-dose (DTP1) and 1.0 million under-vaccinated (DTP3) children were reported from the sub-region, with the highest numbers in Angola, Ethiopia, Madagascar, Somalia and Tanzania. In 2021, 73% of children had received IPV1 and 73% OPV3. At least 20 countries in the Region reported a measles outbreak in 2022.

The COVID-19 pandemic has also further exposed the health and human security implications of delayed access to vital medicines, vaccines and health technologies, as well as the lack of adequate investments in PHC and UHC.<sup>46</sup> In April 2023, WHO called for all countries to protect health workers, many of whom are burned out from the COVID-19 pandemic, and to expand and secure the health

<sup>43</sup> Karamagi HC, Tumusiime P, Titi-Ofei R, et al. Towards universal health coverage in the WHO African Region: assessing health system functionality, incorporating lessons from COVID-19. *BMJ Global Health* 2021;6:e004618.

<sup>44</sup> WHO. Global tuberculosis report 2022. 6.1 Universal Health Coverage and TB determinants.

<sup>45</sup> Burki T. WHO antimalarial strategy for Africa. *Lancet Infectious Dis.* 2023. DOI: [https://doi.org/10.1016/S1473-3099\(22\)00822-2](https://doi.org/10.1016/S1473-3099(22)00822-2)

<sup>46</sup> WHO. Access to NCD medicines: emergent issues during the COVID-19 pandemic and key structural factors. 2023.

workforce pipeline to avert a projected shortfall of 10 million health care workers globally by 2030, mainly in developing countries.

One of the positive lessons from COVID-19 towards achieving the 2030 SDG targets is that it is possible to rapidly scale up technologies and tools to fight communicable diseases, with political will and multisectoral collaboration.

While the general overall trend in disease indicators across the region has been positive, we need to be aware that even before COVID-19 affected the continent, these positive trends were slowing. It is important that we keep this in mind as we move out into the post-COVID world and ensure that the region gets back on track towards its goals of eradication, elimination and control of diseases.

## A RAPIDLY CHANGING REGION

Increasing temperatures, sea level rise, changing rainfall patterns and water scarcity, and extreme weather events are rapidly increasing risks to health and human security, food and water security, and socio-economic development in Africa.<sup>47</sup> Nearly 60% of the African society is rural, with hundreds of millions of people highly dependent on the climate system for food production. Crop and livestock losses can quickly push families and communities into poverty. The region's current capacity for adaptation to climate change is also low and the World Bank estimates that climate migration will affect up to 86 million Africans by 2050 if left unchecked.<sup>48</sup>

The 2022 Revision of World Population Prospects estimated a population of 1.14 billion people in sub-Saharan Africa, or approximately 14% of the global population. Several countries (DRC, Ethiopia, Nigeria and Tanzania) are expected to contribute more than half of the 9.7 billion population anticipated through 2050; the region is growing three times faster than the global average.<sup>49</sup> Factors such as rapid population growth, an increasing number of megacities with a population of at least 10 million, and an ageing population, make sustaining and further increasing health coverage more difficult. Others, such as overcrowding, social disadvantage, population

mobility and poor public health infrastructure create the conditions for explosive outbreaks of diseases spread by human-to-human transmission, including waterborne, foodborne and vector-borne diseases, and an increasing burden of NCDs.

Mental health conditions such as depression account for a growing proportion of the overall burden of disease globally. Mental health problems also appear to be increasing in Africa, although data are scarce. In 2015, a total of 17.9 million person-years were lost to disability from mental health problems, approximating the years lost to disability from infectious and parasitic diseases (18.5 million person-years lost). Mental health and psychosocial support services are lagging needs in the African Region for both outpatient facilities and formal treatment services.<sup>50</sup>

Disability<sup>51</sup> is both a medical and social issue, caused by malnutrition and disease, environmental hazards, accidents, and violence. Over 1 billion people globally are estimated to live with some form of disability, with 80 million (almost 10%) in Africa. In all countries, vulnerable groups such as women, older people, children and adults living in poverty have a higher prevalence of disability and are particularly vulnerable because of health, attitudinal, socioeconomic, and environmental barriers, discrimination, and a lack of disability inclusive infrastructure.

African governments are working to overcome poverty and improve standards of living by transforming their societies and economies through greater industrialization. Typically, industries and sectors that have driven economic growth have been high contributors to greenhouse gas emissions and environmental pollution, and often use hazardous chemicals and dangerous goods that may cause acute or chronic poisoning or long-term health conditions (nerve or lung damage and/or cancer), while exposure to chemicals is entirely preventable with proper standards and controls. One third of deaths from stroke, lung cancer and heart disease are due to air pollution. In cities and villages, toxic pollutants in the air exceed the average annual values

<sup>47</sup> United Nations Climate Change. Climate Change Is an Increasing Threat to Africa. 27 October 2020.

<sup>48</sup> The World Bank. Climate change could further impact Africa's recovery, pushing 86 million Africans to migrate within their own countries by 2050. Press release 27 October 2021.

<sup>49</sup> UN Department of Economic and Social Affairs, July 2022. World Population Prospects 2022. Summary of results.

<sup>50</sup> Sankoh O, Sevalie S, Weston M. Mental health in Africa. Lancet Global Health Published: September, 2018 DOI: [https://doi.org/10.1016/S2214-109X\(18\)30303-6](https://doi.org/10.1016/S2214-109X(18)30303-6)

<sup>51</sup> WHO. World report on disability 2011



recommended by the WHO air quality guidelines. Children are highly vulnerable to many of these toxic materials. Preventing and mitigating environmental health risks will require strong governance and intersectoral collaboration, specialized skill sets, surveillance systems, epidemiological investigation, and tools and technologies which may not be readily available in the African Region currently.

Looking forward, African countries, WHO and their development partners in the African Region have in place longer-term plans and investments to prepare for and respond to the epidemiological transition and the diverse ways in which health and disease can evolve. The need for new ways of working is well recognized – tailored country response planning and implementation, implementation of health in all policies, improved information and

knowledge management, and whole-of-government and whole-of-society action for health to reduce the socioeconomic and environmental risks for ill health.<sup>52,53</sup> Within the health sector, there is a need for horizon scanning, greater investment in national strategic health research, monitoring and learning for effective prevention and control strategies for existing priority and emerging public health challenges, and integrated and cross-cutting approaches to reduce the disease burden in countries throughout the human life course. Advocacy, resource mobilization and expanded partnerships will be needed to ensure coordinated delivery of support for strong health systems and primary health care to help achieve the goals of disease and universal health coverage, and ultimately the SDG 3 goal of “healthy lives and promote well-being for all at all ages”.

<sup>52</sup> AFR/RC69/5 Fourth progress report on the implementation of the Transformation Agenda of the World Health Organization Secretariat in the African Region: 2015–2020: report of the Secretariat. 21 August 2019.

<sup>53</sup> AFR/RC70/16 Report of the Seventieth session of the WHO Regional Committee in Africa (Virtual). 25 August and 24 November 2020.



## The role of WHO in the African region

As the specialized agency for health in the UN system, WHO has a mandate to support Member States to achieve SDG 3, Good Health, and Well-being, and particularly health targets 3.3–3.8 and 3a–d.

WHO's Thirteenth General Programme of Work, 2019–2023 (GPW 13) was adopted by Member States in May 2018. It has three interconnected strategic priorities to ensure healthy lives and well-being for all ages, namely achieving universal health coverage, addressing health emergencies, and promoting healthier populations. Most of the GPW 13 Results Framework indicators are derived from the UN SDGs.

In this regard, the Transformation Agenda of the World Health Organization Secretariat in the African Region 2015–2020 is a vision and strategy for change aimed at creating a WHO that is fit for purpose as the lead public health agency in the African Region. Emphasis continues to be placed on enhancing internal accountability, demonstrating value for money and tracking the immediate gains of health interventions. The transformative agenda has four focus areas:

01

Pro-results values

02

Smart technical focus

03

Responsive strategic operations

04

Effective communications and partnerships.

Health priorities for the African Region include identifying and implementing the interventions needed to accelerate the UHC agenda so that all individuals receive essential health services – health promotion, prevention, treatment, rehabilitation and palliative care – without financial hardship throughout their life course. Countries have been supported by WHO to build responsive, resilient health systems, which will contribute to further progress in disease control and burden reduction across the Region.

The WHO Regional Office for Africa has changed its organizational structure to ensure that all five clusters are contributing to the achievement of UHC and the SDGs. It explicitly promotes inter-cluster communication and collaboration towards a coordinated and coherent approach to reducing disease burden, strengthening health systems, and promoting health through the life course.

The WHO AFRO Universal Health Coverage/ Communicable and Noncommunicable diseases cluster (UCN) was established in 2019 to better integrate the AFRO disease prevention and control programmes within a health system strengthening framework through a data-centric, results-focused and integrated cluster management approach. The UCN is responsible for delivering WHO AFRO's strategic agenda for four priorities areas of the SDGs, namely universal health coverage, NCDs and ageing, communicable disease control, and the endgame strategies for neglected tropical diseases.

A new UCN organogram was approved by the Regional Director, Dr Matshidiso Moeti, in November 2021. Work continues to transform the cluster for responsive disease control programming and operations informed by country consultations, several brainstorming sessions, and experiences and best practices in the region and elsewhere.

“More than 33 million children vaccinated against wild poliovirus in southern Africa.”







## Purpose and scope

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WHO in the African Region has committed to adapt and transform to remain responsive, relevant, and credible. Prolonged emergencies such as the COVID-19 pandemic and the Ukraine crisis have led to donor fatigue, changed the donor environment, and led to stagnation or reversal of gains made in reaching SDG programme targets. There is less donor funding available, waste of resources is unacceptable, and the socio-political environment remains challenging. These constraints are compounded by the background of public health and humanitarian emergencies and climate and environmental change in the African Region, resulting in cascading negative impacts on the health and human security of the Region.

While acknowledging the profound successes Member States and development partners have achieved in the African Region, the call for change aims to address stagnation, and in some cases reversal of progress towards achieving the 2020 milestones and 2030 SDG targets for combating priority diseases and reducing their risk factors. The COVID-19 pandemic clearly demonstrated the urgent need to accelerate integrated service delivery across CDs and NCDs in the African Region based on functional in-country capacities to precisely define populations and communities at risk, and deliver targeted and tailored disease control interventions.

The rapidly evolving nature of the challenges faced by countries in the Region demands that the UCN cluster also evolves to be fit for the purpose of delivering technical support effectively, efficiently and coherently, in line with the commitments made to Member States by WHO in the Transformation Agenda of the World Health Organization Secretariat in the African Region 2015-2020.

The purpose of strengthening WHO's disease control programme in the African Region is therefore to articulate a vision for transformative change of the UCN cluster focused on achieving the health SDG and meeting the health challenges of the future through four UCN special initiatives (SI).

It will build on WHO's achievements in universal health coverage and communicable disease control and efforts to build national and regional capacities in noncommunicable disease surveillance, prevention, management and control.

While WHO has the technical expertise in place, the increasing complexity of the operating environment in the region and globally requires an integrated systems approach to health programme planning and implementation, and new ways of thinking and working.



A photograph of a man in a red shirt shouting into a blue and white megaphone. The megaphone has 'SOUND TECH' written on it. The background is a blurred outdoor setting with trees and a brick wall.

## Looking forward – the call for change

### DRIVERS OF CHANGE

Priority issues and common themes impeding progress in achieving the SDG and GPW 13 targets were identified during consultations with countries, a SWOT analysis of each programme within the UCN cluster and a cross-cutting review of the UCN structure, business model, programme planning, implementation and performance monitoring, policy coherence with WHO GPW 13 business objectives and the SDG targets, resources and coordination mechanisms. Many of the barriers to implementation at country level have been articulated in the Secretariat reports to the Regional Committee for Africa.

The COVID-19 pandemic has clearly demonstrated the urgent need to accelerate innovations in the African Region to ensure integrated service delivery across CDs and NCDs, scale up prevention, screening and treatment services, strengthen epidemiological and health system utilization surveillance, monitoring and evaluation, prioritize knowledge and information management and applied research to support decision-making, strengthen and expand partnerships within and beyond the health sector, and contribute to making the Region self-sufficient in medical products and technologies.

“Many of the barriers to implementation at country level have been articulated in the Secretariat reports to the Regional Committee for Africa.”



Improving data quality and completeness in the Region is essential for programme impact monitoring, policy and planning. The SCORE (Survey, Count, Optimise, Review, Enable) Assessment instrument to measure the status of data and health information systems was launched in 2020 and the results of the first global assessment of the health information systems of 133 countries were published by WHO in 2021.<sup>54</sup> Among several key findings of the survey are the fact that there are significant disparities between high- and low-income countries in the coverage of civil registration and vital statistics, and that an estimated 44% of births and 10% of deaths are recorded in the African Region. In 2018, only one of the 47 countries in the Region reported sustainable capacity for public health surveillance, including event-based surveillance. In the IHR (2005) State Party Self-assessment Annual Report (SPAR), 16 countries considered their surveillance systems as well-developed and 22 as moderately developed. Monitoring of age, sex and socioeconomic indicators of inequality is still lacking in many countries, although improving.

The UCN Special Initiatives articulate the cluster's approach and prioritization of the persistent challenges that have affected disease control programmes in the Region, namely:

- Narrowly framed and poorly coordinated responses to reducing Africa's burden of disease, in particular framing health, illness and disease in a medical model rather than a broad social model of health requiring whole-of-government and whole-of-society action;
- Health system vulnerability and low resilience to shocks;
- Inefficient investment models and resource mobilization for public health and clinical services;
- The current limitations of surveillance and monitoring systems and data analytics for decision support;
- Inequalities in access to affordable, quality medicines, equipment, and diagnostics;

- Suboptimal tools and health technologies and limited domestic investment in research and development (R&D);
- Disempowerment of affected persons and communities in disease prevention and control efforts due to a lack of inclusive and equitable engagement in public health decision-making;
- The need for greater advocacy for health in all policies and strengthened engagement within and beyond the health sector to address the health issues requiring whole-of-government and whole-of-society action.



WHO concerned about the impact of COVID-19 on women and girls in Africa.

<sup>54</sup> WHO. SCORE for health data technical package: global report on health data systems and capacity, 2020. Geneva: 2021. Licence: CC BY-NC-SA 3.0 IGO.

## THE CAPACITY TRIANGLE – CONTEXTUALIZED LESSONS FROM COVID-19

As COVID-19 related operations wind down, the UCN cluster has reimagined its role and strategy for disease control in the African Region. The Capacity Triangle (Figure 1) brings together the core success factors of the COVID-19 response.

Four core success factors of the COVID-19 pandemic response in the African Region have also informed the UCN Special Initiatives.

- **Governance and system capacity** - Countries with COVID-19 taskforces convened at the highest level of government implemented whole-of-government responses, strengthening governance, social protection and mainstreaming multisectoral responses.
- **Institutional capacity** - Countries with strong pre-pandemic public health institutional capacities had a high degree of technical self-sufficiency, deploying their own specialized human resources to implement global

and regional response recommendations, requiring no or limited external technical support. Countries with strong pre-pandemic health system capacities, especially laboratory, surveillance and health information systems and procurement and supply chain logistics, were able to deploy these capacities quickly and effectively, demonstrating the importance of health system resilience in epidemic and pandemic preparedness and response.

- **Data science capacity** - Countries with strong pre-pandemic data capacities used epidemiological stratification and predictive modelling of the pandemic to tailor and target their COVID-19 response, mounting evidence-informed and cost-effective actions and reducing the negative societal impact of ineffective containment and mitigation measures.
- **Research and innovation capacity** - Countries with strong pre-pandemic R&D and innovation capacities were able to test available COVID-19 therapeutics, diagnostics and vaccines, which helped to strengthen African innovation and manufacturing capability and provide lifesaving interventions to their populations as quickly as possible.

Figure 2: The Capacity Triangle for Disease Control





## A new way of working

### UCN VISION AND MISSION

The vision of the UCN cluster is an African Region with affordable and equitable access to quality prevention, treatment and care services to free it of the burden of communicable and noncommunicable diseases.

UCN's mission is to deploy analytics and policy to drive delivery of relevant and tailored public health interventions to prioritized populations / communities through setting evidence-informed disease control agendas and guiding investments.

The UCN cluster has adopted the new business model to improve and streamline its strategic alignment with the disease prevention and control priorities of Member States and the evolving operating environment in the African Region and globally. UCN's mandate includes:

- Leadership on coordination, partnerships and resource mobilization for disease control;
- Generation of strategic information and knowledge products to guide disease control, elimination and eradication agendas and investments;
- Development of WHO technical products, services and tools for disease control;
- Country support facilitation through technical assistance and institutional capacity strengthening for improved programme governance and interventions coverage and quality.

“The vision of the UCN cluster is an African Region with affordable and equitable access to quality prevention, treatment and care services to free it of the burden of communicable and noncommunicable diseases.”



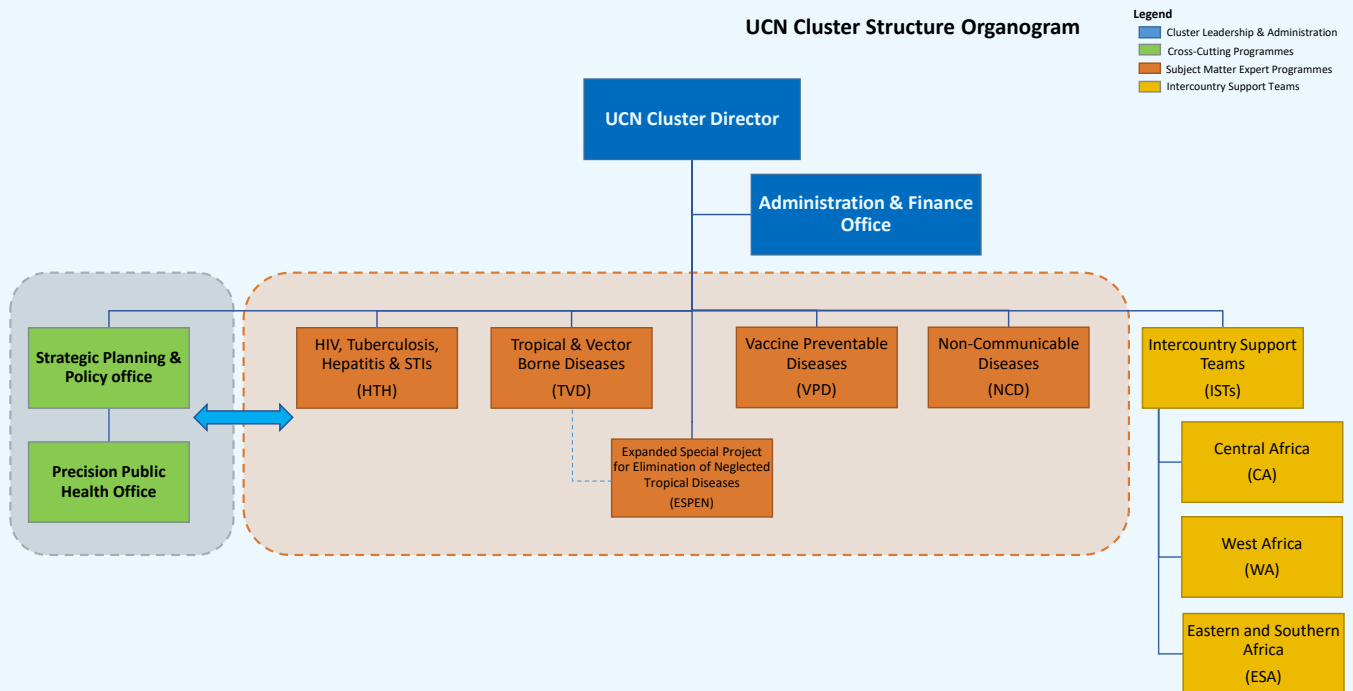
UCN’s mission will be achieved by working to: fill critical gaps in the information needed for decision support; strengthen disease control systems; expand partnerships and advocacy for health; support innovation and research; and improve monitoring and evaluation. The UCN skill set has been reviewed, with capacity strengthening where needed to ensure that the cluster is fit for purpose.

### UCN STRUCTURE

The cluster is comprised of four subject matter teams (SMTs), namely HIV, Tuberculosis, Hepatitis and STIs (HTH), Tropical and Vector-borne Diseases (TVD) which includes ESPEN, Vaccine Preventable Diseases (VPD), and Noncommunicable Diseases (NCD), with two cross-cutting units – the Strategic Planning and Policy Office, and the Precision Public Health Office (PPH) – established to support the SMTs to meet all WHO strategic and technical objectives on time and on budget. SPP will support programme management, strategic communications, resource mobilization, partner coordination, and monitoring and evaluation. PPH will support data, information and knowledge management, health informatics, and training and capacity building.



Figure 3: UCN structure



## OPERATIONAL AND STRATEGIC SHIFTS

Focusing on 11 priority CDs and NCDs, the implementation of the UCN strategic agenda 2023–2030 aims to close gaps in disease prevention and control by working with governments and development partners to better direct and coordinate their services and funding towards equitable and sustainable solutions to long-standing problems.

- ▶ UCN will implement a triple response to disease control: (1) a technical response by implementing disease-specific normative guidance, promoting intervention mixes and deploying medical commodities; (2) a health systems response by building capacities of district service delivery systems in disease mapping and stratification, interventions tailoring and sector/subsector planning; and (3) a multisectoral response by addressing socioeconomic and environmental determinants of health and disease through mobilizing non-health sectors, communities and stakeholders.
- ▶ UCN will use data-driven precision public health to respond to the stalling momentum towards achieving the 2030 SDG health targets within the African Region and to align with the SDG agenda goal of leaving no one behind. Precision public health focuses on data integration, advanced analytics and geospatial tools and technologies for epidemiology and risk mapping, and information and knowledge synthesis and sharing for health equity, access, participation, and better public health outcomes.
- ▶ Technical support models will be designed in collaboration with countries from the bottom up to ensure that they are tailored to national strategic health priorities and needs and the national context, and to optimize WHO's comparative advantage. This will include expanded opportunities for localized technical cooperation within the African Region.
- ▶ In accordance with the Declaration of Astana, UCN will facilitate people-centred and country-owned integrated disease prevention and control programming, guidance, services and interventions through capacity strengthening of PHC and district health service delivery systems as the cornerstone of UHC.
- ▶ UCN programming, resource allocation and operations will be mindful of the specific attributes of the organized social context (OSC) dimensions of countries and communities when delivering technical support and global public health goods, including the OSC dimensions of gender, equity, and human rights.
- ▶ In recognition of the complex interrelationships between CDs and NCDs including common biological, social and environmental determinants of health and disease, a systems approach will underpin the normative and operational functions of the UCN cluster overall and within each programme area. A stronger focus on systems strengthening and common mission-strategic approaches to in-country support have been adopted by the SMTs, supported by the cross-cutting teams and leadership.
- ▶ Partnerships will be actively strengthened and expanded to enable representation of academic and training institutions, civil society and community-based organisations, and beyond the health sector, in addition to traditional development partners, the private sector and other key stakeholders.
- ▶ UCN programming will ensure investment efficiency and flexible and dynamic operational support to countries to maximize public health impact within existing resources for accountability and sustainability, while adapting to changing needs and emerging challenges.





# The UCN special Initiatives (UCN SI)

## OVERVIEW

UCN will operationalize four special initiatives from 2023 to 2030 with a focus on strengthening country capacities in disease prevention and control. The UCN-SIs are based on the Capacity Triangle areas of action towards achieving CD and NCD burden reduction, UHC and the SDG 2030 targets [SDG targets 3.3, 3.4 and 3.b] in the African Region.

SI 1 Strengthening systems and governance (SYGO) will strengthen national disease prevention and control programmes through evidence-informed leadership, policies, workflows and procedures, programme management, resource allocation and service delivery models.

SI 2 Strengthening institutional capacity (SICA) will expand the pool of technical partners and advisory bodies equipped to support national disease prevention and control programmes, with a focus on localizing technical support from institutions in the African Region. Areas of support may include policy analysis and development, disease surveillance, surge capacity, operational research, training and mentoring, and monitoring and evaluation.

SI 3 Precision public health for the African Region (PPH4Africa) will invest in data science capacity strengthening through advanced regional and national data analysis, data visualization and predictive modelling for decision support and purposive disease control action. Activities will include delivering training, coaching and mentoring, and the establishment of communities of practice within the African Region. Improved data and information management is fundamental to the successful implementation of the other three SIs.

“UCN will operationalize four special initiatives from 2023 to 2030 with a focus on strengthening country capacities in disease prevention and control.”



SI 4 Research and innovation for public health impact (RIPHI) will focus on strengthening in-country capacities for applied research and research translation for public health action. This includes operational research, implementation research, research networking, regulation and deployment of new tools, such as novel pharmaceuticals and therapies, diagnostics and vaccines.

## SI 1. STRENGTHENING SYSTEMS AND GOVERNANCE (SYGO)

The health sector is concerned with both outcomes (improved health) and values (equity in health outcomes, appropriateness of services and care). This requires adaptable, knowledgeable and collaborative leadership. Participatory leadership<sup>55</sup> exercised at multiple levels and across sectors is needed to achieve the 2030 SDG health targets where multidisciplinary and multisectoral action is crucial.

As the specialized UN agency responsible for global public health, WHO provides strategic and technical leadership on critical health issues through convening expert dialogue; developing ethical norms, standards and evidence-informed policies and interventions; by shaping the research agenda, translating and disseminating important knowledge and information; and by monitoring implementation of public health recommendations and evaluating their impact on health outcomes. For complex issues that require whole-of-government and whole-of-society approaches, WHO actively promotes health in all policies and working across sectors and disciplines.

Political leadership, advocacy and partnerships, resource mobilization, tailored country response planning and implementation, responsive and intensified technical assistance, and monitoring and learning are needed to counter the adverse effects of the COVID-19 pandemic on disease control programmes. SI 1 is designed to support achievement of these levers to successful programme implementation.

### Problem statement

Experience in implementing the Millennium Development Goals and SDGs has demonstrated the limitations of “sectoral and silo-based planning and implementation approaches to complex global and national sustainable development challenges with interdependencies and interlinkages that transcend individual sectors and national borders”.<sup>56</sup>



Children receiving vaccines under a tree in the hard-to-reach Nadiangere village in South Sudan.

Changes to UCN’s model and focus of technical assistance aim to address the emerging health challenges that shape Africa’s future while continuing to act on reducing the burden of disease, bringing SDG targets back on track and leaving no one behind.

Implementation of the Capacity Triangle recognizes that countries in the African Region have expanded their national capacities and capabilities in disease control and require customized and flexible technical assistance from WHO and development partners. Support can range from policy dialogue and strategic support to WHO’s traditional ways of working, including in-country support from WHO country offices and deployment of WHO’s sub-regional, regional and global assets as needed. Understanding the existing system is the first step towards informing system changes and measuring programme outcome and impact in terms of system changes.

<sup>55</sup> WHO. Open mindsets: participatory leadership for health, 2016.

<sup>56</sup> UN Department of Economic and Social Affairs. Report of the capacity building workshop and expert group meeting on integrated approaches to sustainable development planning and implementation. 27-29 May 2015, New York.

WHO recommends that countries conduct comprehensive national programme reviews regularly to help them identify system-wide barriers or gaps and monitor performance against set targets. UCN SMTs are already working with countries to conduct reviews of national malaria, immunization, TB and other disease control programmes. The purpose of these field reviews is to document successes, operating environment challenges and shortfalls of national disease control programmes and support the development of an improvement plan to strengthen national strategies and activities. Enhancing this expertise by critically reviewing the existing approaches and tools and standardizing the methodology for cross-cutting (multi-disease) reviews of country programmes, is a strategic focus of the UCN cluster. WHO's technical expertise and networks can source multidisciplinary teams of subject matter experts to work collaboratively with countries on a baseline assessment of their disease control programmes, particularly those off track to achieve the 2030 SDG health targets. A baseline assessment of disease control programmes will enable countries to understand their programme gaps and weaknesses so they can focus efforts to improve these areas.

Continuing system bottlenecks in delivering disease control programmes constrain public health impact. Bottlenecks can include poor leadership and governance, missing operating procedures or failure to use them properly, inefficient workflows, limited funds and resources, unreliable supply chains, lack of appropriate technologies and tools, and/or physical, social or economic barriers to quality health care access, among others. UCN's technical assistance has generally been issue-specific rather than the entry point to strengthening a country's disease control programme. Under SI 1, UCN will work with countries and partners to ensure that disease control programmes are fit for purpose and resilient against shocks such as COVID-19.

## Objectives

- Strengthen country ownership and self-sufficiency of disease prevention and control programmes through strengthening leadership, governance, resource mobilization and strategic partnerships, health service delivery, and surveillance and information systems.

## Components

- Technical assessments of the function, role and scope of disease control, elimination or eradication programmes in the African Region to identify opportunities to improve the service model in the context of the COVID-19 success factors. The assessments will be conducted as joint voluntary, collaborative processes between UCN and national counterparts to identify critical gaps in disease prevention and control. This component will include developing tools and guidance for mapping existing programme infrastructure; reviewing the current service model and scope; governance and coordination mechanisms and structures; workload, function and skill set composition; policies and operating procedures; and business enablers (project management, finance, technology, procurement). By gaining a better understanding of these systems and the coordination mechanisms within African ministries of health and other sectors, WHO will be better placed to tailor and prioritize technical assistance, resource mobilization and advocacy towards improving the effective functioning and delivery of operations and sustainable results in disease control across the Region.
- Periodic programme reviews for strategic and operational planning of disease control programmes and development / revision of business cases, including bottleneck analysis and troubleshooting focused on identifying drivers of stalled progress in disease burden reduction.
- Systems strengthening for policy and technical advisory bodies that play a key role in driving the operationalization and implementation of country plans. These include technical working groups, the Regional Immunization Technical Advisory Group (RITAG), the Immunization Interagency Coordination Committee (ICC) and national immunization technical advisory groups (NITAGs), in disease surveillance, health information systems, logistics and supply chain management, optimizing a systems approach to disease control programme objectives, capacities, resources, planning and operations.
- In collaboration with regional technical institutions, training is provided to national programme managers and/or national staff responsible for project management and M&E.



- Advocacy and support for participatory leadership in disease control, where many groups representing diverse interests and affiliations come together to effect lasting change. Examples include smallpox eradication, combating polio, the Global Fund for AIDS, Tuberculosis and Malaria, and the Access to COVID-19 Tools (ACT) Accelerator.
- Accelerated progress towards achieving the Immunization Agenda 2030 (IA2030) for Africa and other disease-specific targets by preventing disease, promoting equity, and building strong, integrated disease control programmes.

## Outputs

- National disease control programme and coordination mechanisms mapped with recommendations for improvements or changes to model, structure, resourcing and operations, and sustainability considerations (for example, operating procedures, building a skilled workforce and potential programme improvements that work across sub-systems<sup>57</sup>).
- Current and emerging African health leaders receive specialized training in project management and M&E.
- WHO Secretariat progress reports to the WHO Regional Committee.

## Outcomes

- Coordinated and coherent technical assistance for CDs and NCDs provided using a systems approach to improve cost-effectiveness and health impact and reduce the opportunity costs to national counterparts from poorly coordinated support.
- Methodology, tools and schedule for joint disease control programme assessments are in place.
- By 2026, at least 60% of countries have completed joint reviews of disease control programmes off track for achieving the 2030 SDG health targets, and resourced improvement plans are in place.
- Continuous quality improvement of regional and national technical expertise, including advisory groups such as RITAG and NITAGs, through organizational review, learning and informed decision-making, thereby creating value and improving performance and sustainability.

- Strengthened project management, M&E and technical and financial reporting in countries to ensure accountability.

## Impact

1. UCN operational and financial results – programmes delivered on time and on budget, achieving all strategic and technical objectives.
2. By 2026, 60% of Member States have strengthened the disease control programmes off track for achieving the 2030 SDG health targets through implementation of an improvement plan.
3. Programme-specific (e.g., IA2030) and SDG 3 milestones and targets back on track.

## Partner agencies

Several regional and global disease control structures will be consulted during the technical assessments, including:

### Within WHO

- RITAG and the Strategic Advisory Group of Experts on Immunization (SAGE)
- The Regional Programme Review Group (RPRG) on NTDs
- The Malaria Policy Advisory Group (MPAG) at the global level
- The AFRO/Programme Management Group (NCD)
- The ESPEN Steering Committee

At country level – Corresponding national disease control coordination structures and intercountry coordination mechanisms such as NITAGs.

In addition to partner agencies, UCN will coordinate closely with regional and global health (see SI 2), development, coordinating and economic bodies, including UNICEF, Gavi, the Global Fund, the regional working groups on immunization for Eastern and Southern Africa and West and Central Africa, the African Union (AU), the African Development Bank (AfDB), Regional Economic Communities, in particular the East African Community (EAC), the Economic Community of Central African States (ECCAS), the Economic Community of West African States (ECOWAS) and the Southern African Development Community (SADC); US CDC and the

<sup>57</sup> WHO 2009. Systems thinking for health systems strengthening. Accessed 9 February 2023.

World Bank (WB). Other key partners are the US bilateral programmes, including the President's Emergency Plan for AIDS Relief (PEPFAR), the President's Malaria Initiative (PMI) and the US Agency for International Development's (USAID) TB programme, set up to work toward ending the epidemics of AIDS, TB and malaria.

## SI 2. STRENGTHENING INSTITUTIONAL CAPACITY (SICA)

WHO has global networks of specialized expertise providing North-South, South-South and triangular technical cooperation in addition to the support provided directly by WHO. WHO has a long history of using national institutions for national and international purposes, beginning with the designation of selected national laboratories as reference centres for the standardization of biological products. The value of localizing technical cooperation within the African Region was evident during the border closures and travel restrictions imposed in response to the COVID-19 pandemic, which resulted in shifting roles for local, national and international health and humanitarian actors.

As mentioned previously, countries with strong pre-pandemic public health institutional capacities had a high degree of technical self-sufficiency. New working modalities such as remote support and the use of digital technologies, where strong relationships and trust were in place, increased the reach of technical cooperation with appropriate resourcing.

Using and expanding the networks of technical institutions within the African Region to support disease control programmes is a key strategy of the UCN institutional capacity strengthening SI. Localization of technical cooperation elevates local actors and provides opportunities for leadership and decision-making roles, facilitates sustainability through their long-term presence and local knowledge, and creates a supportive environment for locally led collective action.

### Problem statement

There is a depth of disease prevention and control expertise in national and supranational technical institutions in the African Region within the 22 active WHO collaborating centres (WHO CCs) in

10 countries<sup>58</sup> (for example, the Africa Centres for Disease Control and Prevention (Africa CDC), African field epidemiology and laboratory training programmes and the African Field Epidemiology Network (AFENET), the Africa Health Organisation, the West African Health Organization (WAHO), and US CDC field offices in Africa). WHO collaborating centres, TDR, the Special Programme for Research and Training in Tropical Diseases and members of WHO technical networks are cost-effective international cooperation mechanisms, but their diverse functions have been underutilized in supporting disease control efforts in the African Region. In 2022, 8 of the 18 members of TDR's Scientific and Technical Advisory Committee (STAC) were from Africa, with expertise in tropical diseases, health research, laboratory sciences, health systems, clinical pharmacology, clinical trials, global public health and ethics.

Successful networks share a common, well-defined purpose, a clear process, the right people, and useful products. Models for technical cooperation include the Global Outbreak Alert and Response Network (GOARN), the International Association of National Public Health Institutes (IANPHI), the Technical Support Facilities (TSFs) deployed by UNAIDS, the WHO CCs network, Global Emerging Pathogens Treatment Consortium (GET) Africa, the Africa Infodemic Response Alliance (AIRA) and the African Vaccine Regulatory Forum (AVAREF).

These networks and facilities have helped to meet the demand for technical and surge support and bridge critical gaps in local capacity. GOARN was established in 2000 to respond to acute public health events with the deployment of staff and resources to countries. IANPHI was launched in 2006 to address emerging health threats and challenges and links and strengthens government agencies responsible for public health. Starting in 2005, the TSFs were set up to strengthen national capacity to fund, plan, manage and coordinate effective larger-scale HIV programmes, and to meet requests for technical assistance. WHO CCs form part of an international network that was set up to support WHO programmes at the country, intercountry, regional, interregional and global levels.

<sup>58</sup> Benin, Burkina Faso, DRC, Ethiopia, Gabon, Madagascar, Malawi, Nigeria, South Africa, and Tanzania.



GET Africa is a non-profit, African-led consortium of African and international health security experts established in 2014 in response to the 2014–2016 Ebola virus disease outbreak in West Africa, including outbreaks of Lassa fever, meningitis, multidrug resistance enteric fevers and yellow fever. GET's objectives include strengthening disease surveillance and assessing infrastructure and human capital capacities needed to respond with speed to disease emergence and outbreaks.

AFRO is coordinating infodemic management efforts in the African Region through hosting the AIRA network that tracks and responds to health misinformation using locally tailored communications. AIRA comprises WHO, UNICEF, Africa CDC, the International Federation of the Red Cross and Red Crescent Societies (IFRC), the United Nations Verified initiative, the United Nations Educational, Scientific and Cultural Organization (UNESCO) and United Nations Global Pulse; and participating bodies including Africa Check, Agence France-Presse Fact Check, PesaCheck, Dubawa and Meedan.

Since 2006, AVAREF, a network of national regulatory authorities, ethics committees and sponsors, has worked to achieve consensus on ethical and regulatory questions surrounding R&D of medical products in Africa; improve access to medical products by reducing review and approval times for clinical trial application; and strengthen regulatory processes across the African Region.

The coordination of TSFs epitomizes participatory leadership – managed by Health and Development Africa, a development and HIV/AIDS consultancy group (TSF Southern Africa); the African Medical and Research Foundation and later the Centre for African Family Studies in Kenya (TSF Eastern Africa); a consortium comprising the Bureau d'Appui en Santé Publique<sup>96</sup>, a private consultancy firm, the Consultancy Group of the Centre for International Cooperation in Health and Development, and the Futures Group, which specializes in designing and implementing public health and social programmes for low- and middle-income countries (TSF West and Central Africa).

The aim is to expand and better localize the pool of technical expertise rapidly available to national disease control programmes through stronger engagement with African technical institutions rather than competing with, or duplicating, the work of existing technical networks such as GET Africa, GOARN and IANPHI.

Disease control functions that have been supported by technical networks and rosters of experts include providing guidance and quick remote support; field deployments; collection, collation, and dissemination of high-quality information; development of methods and procedures for diagnostics, therapeutics and vaccines, and provision of reference substances and services; development and application of appropriate technologies; participation and/or coordination of collaborative research; and training, including research training. Linking to the objectives of SI 4, research mentorship would be discussed as a role of participating institutions as part of ongoing organizational support.

The operational model for this SI is informed by lessons identified from the implementation of the UNAIDS TSFs. Potential deployment modalities include: (1) support delivered by national technical institutions that are network or TSF partners (preferred mechanism in the long term); (2) remote support; (3) consultancies; and (4) through intercountry or multi-country TSF assignment teams comprising local and regional expertise, depending on the nature of the request for assistance, in addition to UCN's traditional ways of working with national authorities.

## Objectives

- Deliver integrated WHO country support for improved disease control programme service coverage and quality and strengthened institutional capacity in countries.
- Leverage funding and upskill national institutions to provide long-term localized technical support to their national health authorities, including designing and delivering face-to-face and remote training courses in disease prevention and control, and coaching and mentoring.<sup>59</sup>

<sup>59</sup> WHO on behalf of the UNICEF/ UNDP/World Bank/WHO Special Programme for Research and Training in Tropical Diseases (TDR). Health research mentorship in low- and middle-income countries (HERMES): a TDR Global practical guide to spur mentorship institutionalization, 2022.

- Increase the pool of technical expertise available to national disease control programmes through flexible models of support, complementing existing technical networks and partnerships.

## Components

- Country consultations to define their technical support and institutional strengthening priorities, preferred modalities of technical assistance and potential network members among their technical institutions.
- Stakeholder consultations to identify potential network partners from among African academia, national and regional technical institutions and experts in capacity strengthening of national programmes through exchanges of knowledge, skills, resources and technical know-how, to foster South-South and triangular cooperation. This will include defining common expectations of the partnership, including purpose, scope of technical assistance, governance arrangements, process and products.
- Convene and maintain an informal network of national technical institutions, networks and professional associations able to support disease control programmes, including national public health institutes, national research institutes, national regulatory authorities, WHO CCs, TDR, and universities, building on the experience of GOARN and IANPHI. UCN will facilitate the day-to-day running of the network and coordinate communications and requests for assistance. A representative body of partner institutions will work with WHO to oversee the planning, implementation and evaluation of network activities and impact.
- Convene and maintain a roster of TSFs building on the experience of UNAIDS. These facilities may be existing institutions able to take on the coordination and management of subregional TSFs.
- Existing WHO quality assurance processes will be used to ensure the quality of the technical support provided.
- Monitoring and evaluation frameworks and key metrics will be developed, including site visits, process evaluation and monitoring, focusing on how and how well this initiative is implemented.

- To facilitate management, cooperation and networking, a dashboard for network members and national authorities will be developed for information, communication and transparency.

## Outputs

- Completed country and technical consultations on technical cooperation needs and models.
- Expanded multidisciplinary and multisectoral network of networks comprising national, regional and international technical institutions and facilities in place.
- Process and outcome evaluation reports, including Secretariat reports to the WHO Regional Committee.

## Outcomes

- National and supranational institutions in the African Region empowered and resourced to provide more targeted and sustained technical assistance to disease control programmes.
- Improved coordination and tailoring of technical support to disease control programmes for greater cost-effectiveness.
- Strengthened and expanded partnerships to support disease control programmes across the African Region.

## Impact

- Sustainable technical self-sufficiency strengthened across the African Region.
- Impact of strengthening institutional capacity on achieving SDG 3 milestones and targets.

## Partner agencies

Many of the partner agencies have been listed in the problem statement. New partners will be identified through the country and stakeholder consultations.

UCN will work closely with existing WHO network coordination focal points at regional and headquarters levels, including TDR, the GOARN Operations Support Team, and the secretariat of the WHO CCs.

### SI 3. PRECISION PUBLIC HEALTH FOR THE AFRICAN REGION (PPH4AFRICA)

UCN will use data science analytics as a transformative tool towards achieving the SDG targets for CDs and NCDs at country and African regional levels. The WHO Regional Office for Africa, through the UCN cluster, is strategically investing in data, infrastructure and human resource capacity at regional and country level. Strengthening information and knowledge management underpins all UCN's special initiatives.

Precision public health is defined as the use of data-driven approaches to optimize disease control programming and investments. Communicable and noncommunicable disease burden reduction targets are unlikely to be achieved without innovative resource allocation, investment, and targeted public health interventions.

#### Problem statement

Data and information for decision-making are key for strategic planning, responsive support to countries, resource allocation, communication and advocacy for health, and to inform strategic shifts in programming. High quality data also support risk-based targeting of health programmes and their adjustment to meet evolving needs; improvement of quality and equity of health care; resource mobilization; and accountability with respect to the effectiveness of health care programmes and the health care system overall in achieving UHC and the SDG health goals and targets.

Disease surveillance remains weak in the African Region. Investment into strengthening surveillance of immunization coverage, HIV, TB, and malaria over the last two decades has improved data capture and analysis in these areas, but the surveillance of other priority diseases under UCN's area of responsibility, their risk factors, and the routine capture of age, sex and socioeconomic indicators of inequality are still lacking in some countries. In 2018, only one of the 47 countries in the Region reported sustainable capacity for public health surveillance in the IHR (2005) State Party Self-assessment Annual Report (SPAR); 16 countries considered their surveillance systems as well-developed, and 22 as moderately developed. Of the 14 countries that reported only limited or nascent public health surveillance systems, eight were in the African Region.<sup>60</sup> Limited early warning

systems for public health events leaves the African Region vulnerable to the delayed recognition of outbreaks of local, national or international concern.

There is fragmentation of the surveillance and information management systems used by disease control programmes to generate the data and information needed for decision-making. In 2021, UCN conducted an internal landscaping audit of the data management systems, data elements and data flows in use, and the analyses conducted. The audit found that various surveillance, data management and operating systems in use are reflecting global reporting requirements and/or locally developed legacy databases, limiting interoperability. There is no centralized data repository for NCD data; ESPEN and TVD programmes use centralized data platforms or portals; VPD is developing a centralized system based on DHIS2; and HTH uses a global data platform.

Hundreds of data elements, many in common across programmes, are collected separately by each programme area; data quality assurance for completeness and accuracy varies, and the indicators used by HTH have evolved over time with new indicators and data fields introduced and others discontinued. Most of the analysis conducted is descriptive, with basic visualization using charts and maps. Some programmes also collect administrative data such as the ESPEN Joint Request for Selected Medicines form and the VPD stock monitoring tool. Both case-based and aggregated data are collected, and reporting periods vary (weekly, monthly, annually).

The audit identified the following components of an improvement plan:

- Harmonize and standardize coding systems for all data elements across disease control programmes to facilitate interoperability and data warehouse construction.
- Identify missing data across all indicators/data fields and strengthen data quality assurance.
- Harmonize denominator population data used for epidemiological analysis and modelling at national and subnational levels towards comparability of generated metrics.
- Provide training and user-friendly tools for advanced analytics, data visualization and GIS to go beyond simple descriptive statistics and surveillance mapping.

<sup>60</sup> WHO. SCORE for health data technical package: global report on health data systems and capacity, 2020. Geneva 2021. Licence: CC BY-NC-SA 3.0 IGO.

Capacities for advanced biostatistical, mathematical, geospatial and genomic modelling analysis of health data are limited. Most data analyses are observational and descriptive, with little cross-cutting multidimensional analysis incorporating the common and cross-cutting biomedical, social, behavioural, environmental and health system risks for CD and NCD incidence, quality of management and outcomes. Risk stratification and measuring uncertainty around disease estimates are lacking or limited in many African countries. For example, quantification of the adverse impacts on public health, animal health and the economy and implementation of the One Health approach to antimicrobial resistance is unavailable in most African countries because of a lack of consistent and timely surveillance data on the biomedical, behavioural and agro-economic risk factors for AMR.

Globally, there is a rapid increase in the application of advanced data analytics on health data. Advanced multisource surveillance and multivariable data analysis adds value to sparse data and allows for consistent approaches to spatial and temporal analysis, and enables hypothesis generation of epidemiological trends for further investigation.

Geographic information systems (GIS) can strengthen surveillance at the local level for early detection and response to outbreaks; complement existing national and international health monitoring systems; integrate demographic, epidemiological and environmental data with information on the distribution of health infrastructure and providers, community interventions, control interventions, partner intervention areas, and resources; and be accessible at different levels for risk stratification. WHO has previously developed a GIS to: monitor the Roll Back Malaria partnership; map disease temporally and spatially to better tailor malaria interventions (the Malaria Atlas Project); and to precisely identify the target population for polio vaccination, among other activities. Overall, the power of GIS is underutilized in the African Region. Improving and expanding national geospatial information management, including geo-registration, is a key component of SDG monitoring.

WHO has released guidance on digital health interventions to support national efforts towards UHC and disease prevention and control programmes, including the Global strategy on digital health 2020–2025, Digital Health Atlas, Digital Health for the End TB Strategy, Be He@lthy, Be Mobile (BHBM), scale up targeted client communication messaging services for NCDs and their risk factors, Digital documentation of COVID-19 certificates: vaccination status, and Digital document of COVID-19 certificates: test results. UCN has been working with Africa CDC on the development of health data platforms such as Trusted Vaccines, system interoperability and national-level capacity development for implementation, and with the AU Secretariat on engagement at national levels and with regional governing bodies on digital technologies, data sharing privacy and confidentiality and sharing health data between countries for continuity of care.

AFRO's partners and stakeholders have expressed strong interest in WHO's work to improve data and information management and digital architectures for safely sharing sensitive health data as part of national digital infrastructures.

## Objectives

- Strengthen the capacity of WHO regional and country office staff in the African Region in strategic and operational analysis.
- Advocate and provide support to countries for the systematic collection and use of local multi-indicator data and information for subnational tailoring of interventions, effective implementation, and evaluation of public health impact.
- Strengthen analytical capacity at programme level in countries, including basic GIS and biostatistics with long-term UCN support for sustainability in countries.
- Track biological, social/behavioural and environmental threats to disease control efforts.
- Provide guidance and technical support to implement the Global strategy on digital health 2020–2025 across the African Region.

## Components

The 2030 Agenda for Sustainable Development cannot be achieved without data for monitoring and impact evaluation. Monitoring UHC underpins the SDG 3 pledge by all countries to “ensure healthy lives and promote well-being for all at all ages”. The vision of the WHO Global strategy on digital health 2020–2025 is to accelerate “development and adoption of appropriate, accessible, affordable, scalable and sustainable person-centric digital health solutions, ... developing infrastructure and applications that enable countries to use health data to promote health and well-being, and to achieve the health-related SDGs and the triple billion targets of WHO’s GPW13, 2019–2023.”

The UCN cluster has adopted precision public health (PPH) as its new business model – that is, deploying enhanced and integrated data capture, synthesis and analysis including geospatial science, to optimize

prioritization of technical support and investments across the African Region. Using PPH will help to answer operational research questions<sup>61</sup> and support health equity by identifying the populations with the highest burden of disease and lower health care access and quality, which services are needed where, and the causes behind such disparity with greater precision and depth of analysis. Figure 3 presents UCN’s model of PPH.

In the short term, the UCN PPH unit is establishing an integrated data warehouse that will serve as a central data repository for regional data analytics. This will allow countries in the African Region access to common sources of data. The unit will support advanced disease-specific and overarching data analysis to promote the data-for-action approach at regional and country level; this will enable countries to develop evidence-informed subnational disease control plans.

Figure 4: Components of Precision Public Health, UCN cluster



<sup>61</sup> Remme JHF, Adam T, Becerra-Posada F, et al. (2010) Defining Research to Improve Health Systems. PLOS Medicine 7(11): e1001000. <https://doi.org/10.1371/journal.pmed.1001000>.



## Outputs

WHO will provide skills and technology transfer to Member States and support advocacy and financial resource mobilization for data management and advanced analytics. UCN will work with disease control programmes and partners to ensure that national programme staff are familiar with defined data structure flows, indicators and expected analytics, and that country needs are addressed for improved data quality and use for decision-making.

- ▶ A one-stop shop for multidimensional, cross-disease analytics established within the UCN PPH unit. Data analytics and GIS technologies will be used to identify communities endemic and epidemic for priority diseases. Competencies in strategic and operationally relevant data analysis and visualization will be further developed within AFRO and WHO country offices in the African Region. UCN will develop an integrated (cross-programme) and interoperable database using a standardized coding system and linked to a regional data warehouse and data analysis tools.
- ▶ Comprehensive stakeholder analysis of agencies and institutions conducting surveillance of CDs and NCDs in the African Region, such as the NTD modelling consortium, completed to define the scope of work, areas of interest, available data, processes, and information products. This work changes with countries' commitment to complete and upload their digital health inventory of systems into the WHO Digital Health Atlas.<sup>62</sup>
- ▶ A common data platform with standardized geo-registries, metadata, data elements and indicators, for analytics and data visualization.
- ▶ Geo-registration (also known as georeferencing), metadata, data elements, indicators and data visualization will be standardized with the development of a common data platform for CDs and NCDs in accordance with the implementation framework of the Global strategy on digital health 2020–2025 in the African Region.<sup>62</sup> UCN will work with countries to establish geo-registries that link to subnational, national and regional-level data collection systems. UCN and national counterparts will be trained in the use of GIS.
- ▶ A user-friendly front-end platform (dashboard) for advanced analysis, data visualization and dissemination.
- ▶ Skills and technology transfer to ministries of health, selected national institutions and partners to strengthen SDG monitoring, including training, coaching and mentoring in multi-indicator analysis of their data to tailor interventions, strengthen implementation, and for the evaluation of public health impact. Training materials and training package developed for national capacity strengthening.
- ▶ Annual and ad hoc disease outlook reports on CDs and NCDs produced by the UCN PPH unit in collaboration with the African Health Observatory and WHO HQ.
- ▶ A virtual community of practice / network of national epidemiologists and analysts convened for synergies across countries and joint learning.
- ▶ Annual network discussions on products, challenges and future collaboration, including support to capacity strengthening.
- ▶ Documentation of best practices and lessons identified from COVID-19 on implementation of digital documentation.
- ▶ Protocol resulting from a review and documentation of health data guidance related to ethics, data sharing and continuity of care between countries.

## Outcomes

1. Appropriate digital health systems and services for CDs and NCDs that have demonstrated wider application and evidence of efficacy and results in place at the regional level, and in 60% of national health systems.
2. Common CD and NCD data standards and data platform in place in 60% of countries, including monitoring of common risk factors for CDs and NCDs.
3. Data-to-action strengthened for timely disease control.
4. Regional and national strategic research agenda developed for CDs and NCDs based on improved disease burden data and CD and NCD epidemiology.

## Impact

1. By 2026, 60% of Member States have strengthened decision support through data standards, advanced data analytics, data platform and interoperability frameworks for CDs and NCDs.
2. Impact of precision public health on achieving SDG 3 milestones and targets.

## Partner agencies

Within WHO, the UCN cluster will work as part of a multidisciplinary technical team with the following entities to implement precision public health: the AFRO Health Systems and Services cluster, AFRO Family and Reproductive Health and the AFRO Health Emergencies Programme, WHO country offices and intercountry support teams, and counterparts at WHO HQ.

External partners will include African ministries of health, Africa CDC, WHO CCs, other UN agencies (particularly those supporting the health, water and sanitation, education, poverty alleviation and environment SDGs), and national and international technical institutions supporting disease surveillance, burden of disease studies and digital health, including the Rockefeller Foundation.

## SI 4. RESEARCH AND INNOVATION FOR PUBLIC HEALTH IMPACT (RIPHI)

Strengthening policy, practice and academic partnerships underpins strengthening research and innovation in the African Region. This UCN SI is closely linked to strengthening institutional capacity, focusing on innovation, research and development, including knowledge translation and dissemination, operational research, and implementation research to identify and ensure successful adoption and/or adaptation of evidence-based interventions within clinical and public health settings in the African Region.

## Problem statement

A country's ability to create, acquire, translate and use science and technology is a major determinant of socioeconomic and industrial development.<sup>63</sup> Many of Africa's current and future health challenges can only be addressed through research on population-level measures for effective disease prevention and control, and translated into policy and practice. Despite Africa's disproportionate burden of disease, the region produced 0.7% of global research in 2000, 1.3% in 2014,<sup>64</sup> and an estimated 2% more recently.<sup>65</sup>

Since 2006, the African Vaccine Regulatory Forum (AVAREF) has successfully promoted the development of the current vaccines against meningitis, malaria, rotavirus, pneumococcal pneumonia, and Ebola, and medicines against neglected diseases such as human African trypanosomiasis and leishmaniasis have also been developed.

The 2013 Abuja Special Summit on HIV/AIDS, Tuberculosis, and Malaria highlighted the need for African science, research and innovation in the areas of new diagnostics, medicines, vaccines and traditional medicines for priority diseases, vector management and environmental health, taking into account the sociocultural context and local ecology. Disease prevention and control is one of the six priority areas of the Science, Technology and Innovation Strategy for Africa (STISA-2024).<sup>66</sup>

In 2015, AFRO presented Research for health: a strategy for the African Region, 2016–2025 to the Sixty-fifth session of the Regional Committee, aimed at improving national health research systems through creating an enabling environment, sustainable financing, developing and empowering African researchers, translating knowledge, and effective collaborations. The objectives of the regional strategy are aligned to STISA-2024, namely, establishing research on priority diseases, health governance, systems and financing; and strengthening science, research and innovation, and human and institutional capacities (see SI 1 and SI 2).

<sup>63</sup> Abayomi A, Makinde D. (2019). How and Why the Global Emerging Pathogens Treatment Consortium Was Created. In: Tangwa G, Abayomi A, Ujewe S, Munung N. (eds) Socio-cultural Dimensions of Emerging Infectious Diseases in Africa. Springer, Cham. [https://doi.org/10.1007/978-3-030-17474-3\\_2](https://doi.org/10.1007/978-3-030-17474-3_2).

<sup>64</sup> Uthman OA, Wiysonge CS, Ota MO, et al. Increasing the value of health research in the WHO African Region beyond 2015—reflecting on the past, celebrating the present and building the future: a bibliometric analysis. *BMJ Open*. 2015 Mar 13;5(3):e006340. doi: 10.1136/bmjopen-2014-006340

<sup>65</sup> Kasproicz VO, Chopera D, Waddilove KD et al. African-led health research and capacity building: is it working? *BMC Public Health* 2020;20, 1104. <https://doi.org/10.1186/s12889-020-08875-3>

<sup>66</sup> Africa Union Commission 2014. Science, Technology, and Innovation Strategy for Africa (STISA-2024)

In 2015, the Wellcome Trust launched the Developing Excellence in Leadership, Training, and Science in Africa (DELTAS Africa) initiative, in collaboration with the UK Department for International Development (DFID) and the Bill & Melinda Gates Foundation, to support African-led biomedical research. DELTAS Africa II is now coordinated by Science for Africa Foundation (SFA Foundation) with 14 consortia in 75 institutions globally (57 African institutions and 18 northern partners) in 36 countries (29 in Africa).

Since 2015, The Sub-Saharan African Network for TB/HIV Research Excellence (SANTHE) has worked to shape and drive locally relevant basic, clinical and translational research in Africa, under the leadership of the Africa Health Research Institute (AHRI)/ University of KwaZulu-Natal (UKZN) and 11 international collaborating institutions with multidisciplinary expertise (community outreach, microbiology, immunology, epidemiology, and clinical trials), SANTHE comprises 12 African research and training sites with multidisciplinary expertise in community outreach, microbiology, immunology, epidemiology, and clinical trials, and 11 international collaborating partner sites.

In 2016, the Academy of Medical Sciences in the UK<sup>67</sup> recommended “greater emphasis on research to narrow health inequalities; translating research findings into policy or practice; and developing interventions that may act at group, community or population-level, rather than at individual level.” The rapid development, validation and roll out of GeneXpert and PCR capability for COVID-19 diagnosis through the WHO AFRO network of polio laboratories or HIV and TB GeneXpert PCR diagnostic capacity clearly demonstrated how quickly new skills and technologies can be shared and adopted during emergencies. Similar approaches are needed to accelerate efforts towards meeting the SDG health targets and for public health preparedness against emerging health threats in Africa.

WHO’s global R&D Blueprint for action to prevent epidemics (2017 update) is a global strategy and preparedness plan for rapid activation of science, research and innovation during outbreaks. It has

been applied to Ebola virus disease, Zika virus, Middle East respiratory syndrome (MERS), COVID-19 and most recently mpox (monkeypox). R&D for preparedness and response shares the STISA-24 objectives, aiming to accelerate the development and deployment of existing and new therapies, diagnostics, vaccines, vector control tools and delivery systems needed to control emerging health threats, and improve risk communication and community engagement with affected communities. The 2014–2015 West Africa Ebola outbreak clearly demonstrated the importance of research on the social pathways<sup>68</sup> of disease transmission, barriers to care and perspectives of affected populations.

The Coalition for Epidemic Preparedness Innovations (CEPI) is creating a new network of vaccine manufacturers in global South countries to increase vaccine production capacity and capability against emerging outbreaks and pandemic threats. In January 2023, CEPI and Institut Pasteur de Dakar (IPD) announced a partnership to contribute to the African Union’s goal of increasing African manufacturers’ share of vaccine supply to the region to 60% by 2040. CEPI has a US\$ 3.5 billion equitable access focussed R&D plan towards creating safe and effective vaccines against emerging infectious diseases in 100 days.

GET Africa is working with international collaborators to provide strategic advice and establish infrastructure and research capacity to respond to emerging, epidemic and pandemic diseases such as Ebola virus disease and COVID-19.

Research translation, also known as knowledge translation, bridges knowledge from research and its application in policy and practice. WHO defines research translation<sup>69</sup> as “the synthesis, exchange, and application of knowledge by relevant stakeholders to accelerate the benefits of global and local innovation in strengthening health systems and improving people’s health”. Research translation typically focuses on implementation outcomes such as adaptation, adoption, affordability, fidelity, and sustainability. In the African context, research translation should account for local African

<sup>67</sup> Academy of Medical Sciences 2016. UK Research landscape for population health research and public health practice. Accessed 09 February 2023.

<sup>68</sup> Stellmach D, Beshar I, Bedford J, et al. Anthropology in public health emergencies: what is anthropology good for? *BMJ Global Health* 2018;3:e000534.

<sup>69</sup> WHO. Knowledge translation. Accessed 9 March 2020: <https://www.who.int/ageing/health-systems/knowledge-translation/en/>

<sup>70</sup> Ujewe, S.J. Just health care in Nigeria – The foundation for an African ethical framework. Thesis, University of Central Lancashire, United Kingdom, January 2016.

<sup>71</sup> Akande OW, Disu Y, Kaduru C, et al. Risk communication during health emergencies in Nigeria: What are the challenges? *Journal of Public Health in Africa* 2023;14:1943 doi:10.4081/jphia.2023.1943. Epub 2023 Feb 01

<sup>72</sup> Dickson-Gomez, J., Glasman, L.A., Bodnar, G. et al. A social systems analysis of implementation of El Salvador’s national HIV combination prevention: a research agenda for evaluating Global Health Initiatives. *BMC Health Serv Res* 2018;18, 848. <https://doi.org/10.1186/s12913-018-3667-8>

perspectives and approaches, and the effects of the social, cultural, political, environmental and health system context, on an intervention's impact, support efforts to narrow health inequalities and address health needs fairly.<sup>70,71</sup>

Health policy and systems research aims to better understand how collective health goals are reached using economics, sociology, anthropology, political science, public health and epidemiology. Implementation evaluations<sup>72</sup> are increasingly applying a complex systems lens on public health evaluation to improve the strength of evidence regarding factors which reinforce or decrease intervention effectiveness, and measure outcomes and impact in terms of system changes.<sup>73</sup> Africa is uniquely placed to carry out operational, implementation and health systems research in infectious disease prevention, diagnostics, treatment and care including for HIV/AIDS, TB, malaria, NTDs and haemorrhagic fevers and childhood diseases. The 'One Health' approach will be essential to prevent new outbreaks occurring from animal-to-human spillover events. As examples, HIV, Marburg, Ebola, avian influenza, mpox, MERS and the SARS epidemic in 2003 were all as a result of animal-to-human transmission.

WHO's global reach and convening powers are being used to scan the research horizon across new health products, technologies and tools for clinical and public health use. WHO systematically tracks the new vaccine pipeline, maintains the "prequalification pipeline" of finished pharmaceutical products and active pharmaceutical molecules for WHO for prequalification, and yearly essential diagnostics list (EDL) of recommended in vitro diagnostics that should be available at point-of-care and in laboratories in all countries to increase timely and life-saving diagnoses, diagnostics that should be available at primary care or community level. Post-introduction real world effectiveness of medicines and vaccines are needed against multiple clinical outcomes. As a result of AVAREF's efforts, vaccines against meningitis, malaria, rotavirus, pneumococcal pneumonia and Ebola have been developed, and medicines against neglected diseases such as human African trypanosomiasis and leishmaniasis are currently being developed.

Some examples of research translation and implementation science towards achieving the health SDG targets are described below.

**Malaria vaccine:** A malaria vaccine programme was piloted in Ghana, Kenya and Malawi. Based on the results from these three countries, on 6 October 2021, WHO recommended widespread use of the RTS,S/AS01 (RTS,S) malaria vaccine in children living in sub-Saharan Africa and other regions with moderate to high *P. falciparum* malaria transmission. Their experience shows that the malaria vaccine can be effectively delivered through the routine child immunization programme. Research questions for other countries with moderate to high malaria transmission include the feasibility of administering the recommended 4 doses of the vaccine, the timing of doses, vaccine effectiveness and cost-effectiveness and adverse events following immunization in their local context. At least 28 countries in Africa plan to apply for Gavi funding support to roll out the malaria vaccine as part of their national malaria control strategies, with 13 countries having applied for Gavi funding in the January 2023 application round.

Examples of other vaccine trials that have been completed or are in progress in the WHO African Region include: against HIV (Botswana, Burkina Faso, Côte D'Ivoire, Kenya, Malawi, Rwanda, South Africa, Tanzania, Uganda, and Zambia), TB (Gabon, Gambia, Kenya, Senegal, South Africa, Tanzania, Uganda), invasive pneumococcal disease (Burkina Faso, Gambia, Kenya, Malawi, Mali, Nigeria and South Africa), respiratory syncytial virus (RSV, South Africa), Ebola (Burkina Faso, Cameroon, Côte D'Ivoire, DRC, Gabon, Liberia, Mali, Rwanda, Senegal, and Sierra Leone), Ebola and Marburg (Uganda), Lassa virus infection (Liberia), yellow fever (Gabon, Gambia, Ghana, Kenya, Mali, Tanzania, and Uganda), MERS-CoV (Kenya), HPV (Cameroon, Gambia, Ghana, Kenya, Rwanda, South Africa, Tanzania, Uganda), enterotoxigenic *E. coli* (ETEC, Zambia), meningitis (Mali), invasive Group B Streptococcal infection (Uganda), cholera shigella (Kenya and Zambia), typhoid (Burkina Faso, DRC, Ghana, and Malawi). The US National Library of Medicine's web-based ClinicalTrials.gov resource includes 150 trials on various aspects of COVID-19 from countries of the WHO African Region, of which 41 are vaccine trials.

<sup>73</sup> McGill E, Er V, Penney T et al. Evaluation of public health interventions from a complex systems perspective: A research methods review. Soc Sci Med. 2021 Mar;272:113697. doi:10.1016/j.socscimed.2021.113697. Epub 2021 Jan 11. PMID: 33508655



**TB diagnosis and treatment:** Post-mortem studies from Africa have shown a large burden of undiagnosed TB, often associated with co-morbidities.<sup>74</sup> Implementation research on new diagnostics for subclinical TB and MDR/XDR-TB and new and repurposed drugs for their treatment is another important area of inquiry.

**Soil transmitted helminths (STHs):** The control of soil transmitted helminths without vaccines remains a challenge despite the greatly reduced burden of infection achieved through mass drug administration (MDA).<sup>75</sup> An estimated 880 million children need treatment for these parasites in the African Region. Populations at risk in the WHO African Region are estimated at 350 million. A trial of live attenuated human hookworm vaccine showed that it was partially effective in protecting against infection but did reduce transmissible larvae in faeces. If larger studies confirm these findings, vaccination against hookworm could augment MDA.<sup>76</sup>

**Human and animal rabies:** Rabies is estimated to cause over 21 000 human deaths globally each year, from dog-mediated transmission. The burden of disease is disproportionately borne by rural poor populations and children under 15 years. Determining the social, economic, health system and animal health barriers to post-exposure prophylaxis could save a significant number of lives.

**Disease control programme reviews:** Population screening for infectious (HIV and TB) and non-communicable diseases (elevated blood glucose and blood pressure) in a rural South African population found that HIV was well treated relative to all other diseases. TB, elevated blood glucose, and elevated blood pressure were poorly diagnosed and treated. The study supports the need for integrated, multi-disease testing and clinical care which may be relevant to other sub-Saharan countries and would benefit from local implementation research.<sup>77</sup>

## Objectives

- Provide technical support to countries to implement the Research for Health Strategy 2016–2025 agenda, including to identify disease prevention and control priorities, research gaps and needs, and research opportunities to inform

national strategic research agendas and plans (link to SI 3 Precision public health).

- Support information capture and knowledge integration to synthesize the results of basic, clinical and public health research to identify precision public health interventions addressing health priorities in Africa.
- In collaboration with regional and international partners, support countries to develop research protocols and conduct research and innovation on health priorities, with a focus on narrowing health inequalities and promoting achievement of the SDG health goal.

## Components

In close collaboration with partner agencies:

- Ensure African health authorities and research institutions are aware of the therapies, diagnostics, vaccines and technologies in use and in the pipeline relevant to addressing the burden of disease in Africa, including those undergoing WHO's prequalification and emergency use listing procedures.
- Support the development of national, regional and international partnerships tasked with designing and leading research agendas.
- Use WHO's convening and coordination functions to bring together national, regional and international research expertise on research policy and guidance; provide technical assistance and institutional capacity strengthening in research (see SI 2); provide support for supplies and consumables; and deliver support for M&E and collective learning through sharing examples of good practice. WHO's support to supplies focuses on medicines, test kits and laboratory reagents, and with UNICEF on vaccines.
- In collaboration with the UN Food and Agriculture Organization (FAO), the UN Environment Programme (UNEP) and the World Organisation for Animal Health (WOAH), prioritize the One Health approach to strengthen policies, strategies, plans, evidence, investment and the workforce needed to properly address the threats posed by viruses spilling over from animals to humans.

<sup>74</sup> Bates M, Mudenda V, Shibemba A et al. Tuberculosis at post-mortem in inpatient adults at a tertiary referral centre in sub-Saharan Africa – A prospective descriptive autopsy study. *International Journal of Mycobacteriology* 2015;4:75-76. <http://dx.doi.org/10.1016/j.ijmyco.2014.10.054>

<sup>75</sup> Anderson RM. An urgent need: vaccines for neglected tropical diseases. *Lancet Infectious Diseases* 2021;12:1621-1623. DOI: [HTTPS://DOI.ORG/10.1016/S1473-3099\(21\)00260-7](https://doi.org/10.1016/S1473-3099(21)00260-7)

<sup>76</sup> Chapman PR, Webster R, Giacomini P, et al. Vaccination of human participants with attenuated *Necator americanus* hookworm larvae and human challenge in Australia: a dose-finding study and randomised, placebo-controlled, phase 1 trial. *Lancet Infect Dis*. 2021; [https://doi.org/10.1016/S1473-3099\(21\)00153-5](https://doi.org/10.1016/S1473-3099(21)00153-5). Epub 19 August 2021.

<sup>77</sup> Wong EB, Olivier S, Gunda R et al. Convergence of infectious and non-communicable disease epidemics in rural South Africa: a cross-sectional, population-based multimorbidity study. *Lancet Global Health* 2021;9: e967-76, [https://doi.org/10.1016/S2214-109X\(21\)00176-5](https://doi.org/10.1016/S2214-109X(21)00176-5)

- ▶ In collaboration with Africa CDC, GET Africa, CEPI and US CDC, support the development of regional viral surveillance networks for emerging epidemic threats and facilitate the rapid sharing of genetic and disease information to trigger development or repurposing of medicines, diagnostics and vaccines.
- ▶ Use AVAREF's expertise to ensure collaboration between health professionals, technical institutions, donors and regional economic communities in supporting vaccine research and promoting joint reviews of vaccines and the sharing of work and expertise.
- ▶ In collaboration with the Africa Infodemic Response Alliance (AIRA), Gavi and others, facilitate research into the social/behavioural, cultural, economic, policy, programmatic and environmental factors associated with wellness and disease and engage communities in prevention activities to reduce inequity, for example, identifying new approaches to reach zero-dose children.
- ▶ Support countries to monitor the "real-world" adoption, effectiveness, affordability and sustainability of newly introduced health technologies and tools for disease prevention and control.

## Outputs

- ▶ Regular updates of existing and planned research on public health priorities in the African Region, and outputs of that research as it applies to countries through collaboration with WHO headquarters, research network partners and contracted services where needed.
- ▶ Annual research network meetings convened to share research updates and good practices.
- ▶ Knowledge translation platform developed and maintained for CDs and NCDs.

## Outcomes

- ▶ Greater awareness of research planned or underway relevant to the African context.
- ▶ 100% of countries in the African Region have strategic research plans for disease prevention and control priorities by 2026.
- ▶ Research coordination strengthened.
- ▶ Social capital developed and institutional capacities strengthened, and broad networks for sustainable, African-led research in place.
- ▶ Research translation for decision support strengthened in the African Region.

## Impact

- ▶ Disease burden reduced by evidence-informed preventive, curative and public health services in the African Region.

## Partner agencies

In addition to the partners referred to in the text, the strategic objectives of the African Academy of Sciences, the African Centre of Excellence for Genomics of Infectious Diseases (ACEGID) and the African Union Development Agency- New Partnership for Africa's Development (AUDA-NEPAD) include science, research and innovation.

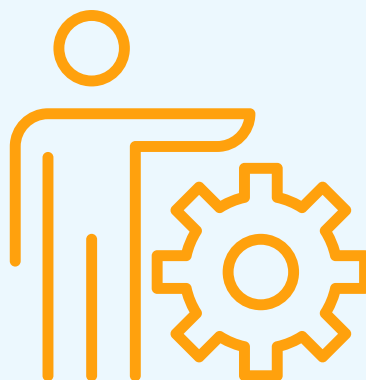


## Implementation

WHO has a long history of working collaboratively with governments, governing bodies, international and local development partners, technical institutions, and communities, and has established long-term partnerships for capacity development and strengthening. WHO will use its convening powers to bring together national health authorities, technical institutions, networks and representatives of regional bodies for consensus building, technical collaboration, implementation and M&E.

The Seventy-first Regional Committee for Africa praised the extensive consultative process used by UCN during the development of the framework and the integrated approach to TB, HIV, STIs and hepatitis programmes, noting that such an approach would increase the potential for accelerated results, considering the devastating impact of these diseases in the African Region. UCN will consult and work closely with ministries of health to ensure that the technical assessments of disease control programme capacity and improvement plans are useful to their efforts to achieve the 2030 SDG health targets. UCN has received several requests for assistance to strengthen national advisory groups such as NITAGs.

“UCN has received several requests for assistance to strengthen national advisory groups such as NITAGs.”



UCN will use internal expertise, local technical institutions (see SI 2, SI 4) and contractual services as needed for capacity strengthening of disease control programmes and processes, which will include methods for continuous learning for sustainability such as coaching and mentoring.

Capacitating local technical institutions to support disease control programmes is further described below and adds to the social value of SI 2, namely, to create results of value to Member States.

UCN will also work with other agencies to provide coordinated and coherent United Nations system-wide capacity strengthening in collaboration with regional governance bodies and intergovernmental organizations to recognize their interlinkages. Wherever possible, implementation and M&E will adopt a systems approach, given common risk factors, population, and health system vulnerabilities.

As SI 3 is introducing several new methods, technologies and partnerships, UCN will adopt a stepwise and phased approach with implementation partners, based on a change management process to ensure country ownership and trust and to meet strategic and technical objectives. A clear system rollout plan will be shared with end users.

- 01** Planning and rapid assessment, including mapping existing data and information systems and digital technologies in use by disease control programmes to determine the stage of maturity of data systems and analytics capacities, as well as detailed stakeholder analyses (in progress).
- 02** Building internal capacity at WHO to support implementation in countries.
- 03** Conducting technical and political consultations to assess the climate and feasibility of introducing advanced analytics and new digital technologies and generate sponsorship. Technical discussions will consider whether a phase-out process for the existing information system will be needed. Discussions with stakeholders will identify likely early adopters of PPH methods and tools for the first phase of rollout, and partners sharing UCN's strategic objectives.
- 04** Baselining country capacity through joint disease control system assessments and bottleneck assessments (see SI 1).
- 05** Developing country readiness to adopt the new technologies and tools through development of guidance, policies, operating procedures, tools and through training.
- 06** Developing communication packages for technical exchanges and advocacy.
- 07** Developing and implementing a reinforcement plan for ongoing technical support, coaching and mentoring, and immediate troubleshooting (see SI 2 for models of support)
- 08** Establishing a community of practice / network for collective learning, peer-to-peer support, and sustainability.
- 09** Monitoring, process and outcome evaluation and reporting, and regular follow-up with countries to ensure system performance.





UCN will work at the health leadership and technical levels, and with regional partners to conduct national-level engagements on the use of digital health technologies and tools for disease prevention and control. Building trust in the safe deployment of digital tools is a first step in promoting uptake, data sharing and mutual recognition of health-related documents. UCN will adopt a phased approach to rolling out this initiative, beginning with countries that have mature information systems and are ready to adopt PPH methods and tools. Lessons identified from this phase will be used to improve implementation in countries with less mature systems and/or needing more time to adjust to the proposed changes. UCN will work with countries which have experienced the immediate benefits of PPH to showcase those benefits as advocates of change.

WHO is documenting best practices in implementing digital health initiatives, including from health emergencies such as the COVID-19 pandemic and will review regional and national health policies to address ethical, confidentiality and data privacy concerns; mutual recognition protocols, formats;

issuance and validation; and continuity of care across borders. International COVID-19 vaccination and test certificates required joint protocols between health, immigration, aviation and customs, laying the foundation for other vaccinations and health documentation. Engagement with African Heads of State will be through the AU Secretariat.

UCN will use internal expertise and contractual services to develop the interoperable digital health architecture needed for PPH implementation, and to support the deployment of any additional health information repositories and health data exchanges in support of national and regional priorities for public health and digitizing services.

WHO will develop a risk management plan towards successful implementation of the SIs, given the short time remaining to achieve the 2030 SDG targets, the ongoing risks from the COVID-19 and mpox public health emergencies of international concern, and other acute and prolonged emergencies in the region. The risk level of hazard-based risks and social, political, economic and technological trends will be assessed and monitored against UCN's strategic objectives and proposed strategies.

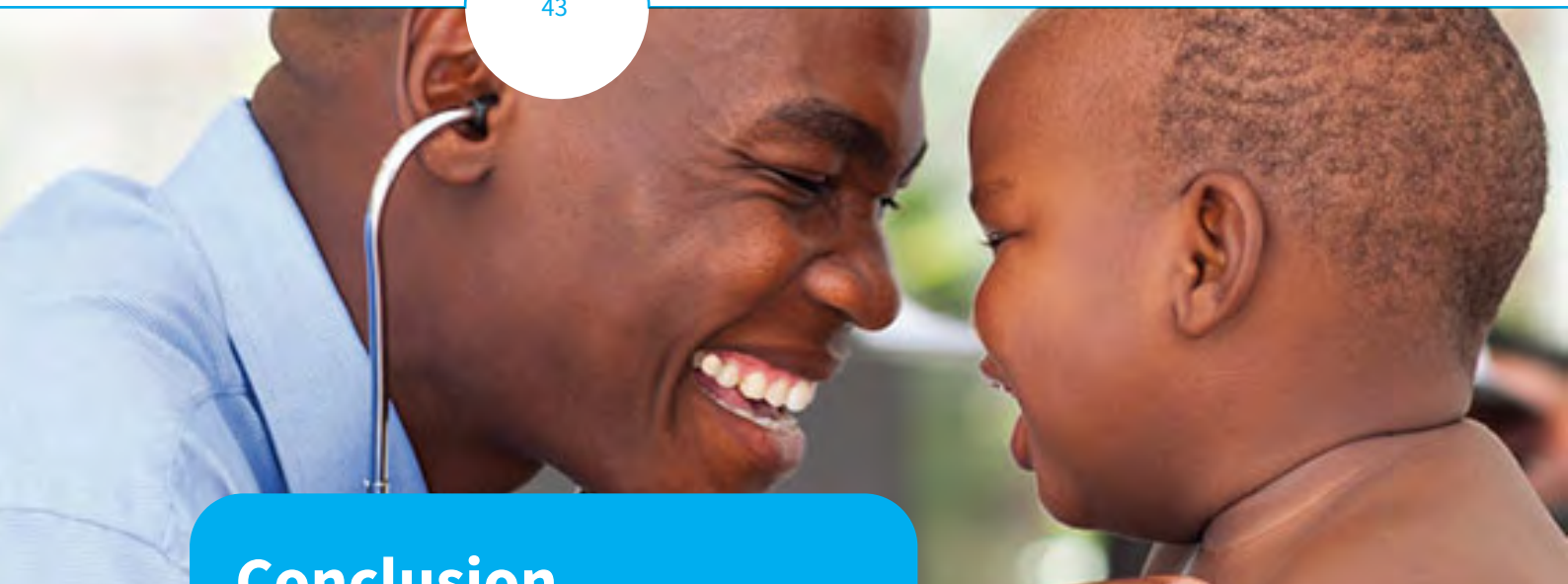
## Monitoring and evaluation

WHO will work with ministries of health and other key stakeholders to elaborate the logic model of these interrelated special initiatives, develop an M&E framework with clear goals, measurable objectives, targets and a small number of high-performing outcome and process indicators. WHO will convene a technical advisory group (TAG) to: provide independent technical advice to countries and WHO on implementation of the SIs; advise on emerging evidence and good practices; review the impact of interventions; and make recommendations on further research, country support and international collaboration needed to achieve objectives.

An M&E expert will be included in the TAG to support the preparation of the M&E plan and templates, ensure accurate, realistic and measurable baselines, indicators and targets for each SI, identify opportunities for joint evaluation and monitoring of SI components, and guide documentation of best practices and lessons identified through implementation of SI interventions.

“WHO will work with ministries of health and other key stakeholders to elaborate the logic model of these interrelated special initiatives.”





## Conclusion

There has been very real progress in addressing the burden of disease in the African region since 2015. Lessons have been learned, first through the significant and costly outbreak of Ebola virus disease in West Africa from 2014-2016, and more recently, from the region-wide response to the COVID-19 pandemic. These two major outbreaks took place in a region where outbreaks of infectious disease are common, occurring in the context of humanitarian and security crises, in areas with fragile health systems and little universal health coverage. At the same time, the incidence of non-communicable diseases is rising. We now need to use these lessons to address the burden of disease in its entirety. We know that leadership, partnership and collaboration are key on a macro level. The UCN Cluster, recognizing the challenges in this diverse and rapidly changing region, is committed to continuing to respond strategically and operationally, informed by an evidence-based approach to decision making.

“We know that leadership, partnership and collaboration are key on a macro level.”



