World Health Organization
Western Pacific Region

Regional Action Framework for Noncommunicable Disease Prevention and Control in the Western Pacific

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ISBN 978 92 9062 004 4

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Cataloguing-in-Publication (CIP) data. 1. Chronic disease – prevention and control. 2. Noncommunicable diseases. 3. Regional health planning. I. World Health Organization Regional Office for the Western Pacific. (NLM Classification WT500).

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ABBREVIATIONS

C4H	Communication for Health
COVID-19	coronavirus disease
GDP	gross domestic product
IoMT	Internet of Medical Things
LMIC	lower-middle-income country
NCDs	noncommunicable diseases
PEN	WHO Package of Essential Noncommunicable Disease Interventions for Primary Health Care
PHC	primary health care
PLWNCDs	people living with NCDs
SDGs	Sustainable Development Goals
SDH	social determinants of health
TB	tuberculosis
UHC	universal health coverage
WHO	World Health Organization

FOREWORD

The Western Pacific Region is in the grips of a deadly epidemic. Each year, the vast majority of deaths in the Region are due to noncommunicable diseases (NCDs) — primarily cardiovascular and chronic respiratory diseases, cancers and diabetes — despite the fact that these diseases are largely preventable.

WHO and Member States must scale up actions to curb the NCD epidemic and reduce the huge losses of life, well-being and productivity that NCDs cause. Global efforts to combat NCDs include the Sustainable Development Goal (SDG) target 3.4, the WHO *Global Action Plan for the Prevention and Control of Noncommunicable Diseases 2013–2020*, and the Fourth High-level Meeting of the United Nations General Assembly on the Prevention and Control of on NCDs (2025).

Over the past decade, Member States in the Western Pacific Region have made progress, but NCD rates still continue to climb. In response, Member States and WHO collaborated to create the *Regional Action Framework for Noncommunicable Disease Prevention and Control in the Western Pacific*, which was endorsed by the Regional Committee in October 2022. The Framework will help guide Member States to scale up actions against NCDs to reverse the tide of sickness and death these diseases cause throughout the Region.

NCDs are the result of life-long interactions between genetics, behaviour and the environment. The health sector alone cannot address NCDs. For this reason, the Framework advocates transforming "sick systems" — in which unhealthy environments add to the NCD burden and the health sector is reactive and treatment focused — into "health systems" in which societies invest in health-enabling environments and the health sector supports individual health and wellness throughout the life course.

Actions to prevent and control NCDs rely on society-wide changes, reflecting the interconnected nature of communities. Multisectoral national NCD plans, for example, must take the systems approach to address underlying social, cultural, behavioural and environmental factors that influence NCDs.

Tackling NCDs will require concerted efforts at the national, subnational and community levels. Member States in the Region have already begun this transformation through plans, policies and actions to address the root causes of NCDs, strengthen multisectoral partnerships, engage communities and innovate for NCD prevention and control. Member States have strong traditional, religious, cultural and other community networks that should be linked with health systems to support the health and well-being of everyone in the community.

The Region's countries and areas are at the centre of WHO's work. In line with the *For the Future* vision, WHO works to help empower communities and enable solutions based on the unique context of each Member State.

WHO remains committed to supporting Member States, alongside the other United Nations agencies and partners, to accelerate action against NCDs towards fulfilment of the SDGs. Now is the time to come together to fight these diseases to ensure a healthier future for all, with no one left behind.

Dr Zsuzsanna Jakab

Acting Regional Director for the Western Pacific

EXECUTIVE SUMMARY

The World Health Organization (WHO) Western Pacific Region is undergoing profound and radical changes, and the rate of change is accelerating. These changes, including a demographic shift and new perspectives on disease and technological innovation, have powerful consequences on the epidemiology of and approaches to noncommunicable diseases (NCDs). Combating the NCD epidemic is one of the cornerstones of *For the Future: Towards the Healthiest and Safest Region*, a shared vision for WHO work with Member States and partners in the Western Pacific.

The Region bears a disproportionate burden from NCDs, primarily cardiovascular and chronic respiratory diseases, cancers and diabetes. Although largely preventable, these diseases accounted for 12 million deaths in 2019, or 87% of all deaths in the Region that year. In most countries and areas in the Region, NCDs pose the most significant health burden, comprising nine out of the top 10 causes of death. An increasing NCD burden threatens sustainable development by increasing health-care and welfare costs and reducing labour productivity.

Progress in reducing premature NCD mortality in the Region between 2000 and 2010 was encouraging. However, the speed of progress since has slowed considerably. In some countries and areas, reversals in progress were noted between 2010 and 2019. This is, in large part, due to little progress made in risk factor reduction targets. For example, tobacco use is declining across the Region, but the decline is not sufficient to meet the 30% reduction target by 2025, while the prevalence of elevated fasting blood sugar and obesity continues to rise, with some of the world's highest rates reported in the Pacific.

The coronavirus disease (COVID-19) pandemic made it clear that health is the foundation of social and economic activities. Unless we create health-enabling environments, promote healthy behaviour, and improve early prevention, detection and treatment of NCDs, countries in our Region will experience significant numbers of people with illness and an unsustainable society. On the other hand, if governments invest in NCD prevention and control now, we can turn a "sick system" into "health system".

In this context, this *Regional Action Framework for Noncommunicable Disease Prevention and Control in the Western Pacific* delineates the regional vision, guiding principles, objectives and recommended actions to counter and reverse the growing burden of NCDs. This Regional Action Framework is aligned with the WHO *Global Action Plan for the Prevention and Control of Noncommunicable Diseases 2013–2030* and regional action frameworks that can work together to create a united vision for health in the Western Pacific Region.

Recommended actions in this Regional Action Framework are categorized under five objectives:

Objective 1. Strengthen the mechanism to collect and use data and information for planning, monitoring progress, and evaluating policies and programmes

A good surveillance system will elucidate risk factors and disease prevalence, identify those at greatest risk, pinpoint national priorities and guide the selection of appropriate interventions. It is also critical for designing and revising interventions and for assessing the impact of policies and programmes. These data can compel and facilitate cross-sectoral collaboration by providing solid evidence of the critical importance of investing in NCD prevention and control.

Objective 2. Develop policies that go beyond the health sector to enable health-promoting environments and address social determinants of health at national and subnational levels

Addressing the social determinants of health appropriately is fundamental for improving health and reducing long-standing inequities in health. This requires action by all sectors and civil society. Long-term progress on NCD prevention and control requires a whole-of-system approach that tackles "the causes of the causes of NCDs" and takes a life-course approach to tackling social inequalities, while creating health-promoting environments.

Objective 3. Screen the population for major NCDs

Early detection and intervention offer a cost-effective opportunity for the health-care system to identify disease at a stage when treatment is more effective and long-term complications can be delayed or avoided.

Objective 4. Strengthen primary health care to provide people-centred NCD management

Primary health care is key to providing continuity of care for NCDs — from health promotion and prevention to screening and early detection and clinical management. By integrating NCDs into primary care and making appropriately resourced care accessible to the people, primary health care acts as the gatekeeper to the health system to help decongest higher levels of care and streamline referrals to secondary and tertiary care facilities, as appropriate.

Objective 5. Empower patients for self-management and adherence, through health promotion, prevention and individualized data

Patient empowerment, a fundamental element of people-centred care, starts with health literacy. When people possess the knowledge, motivation and competence to understand and apply health information in making decisions about their health, multiple benefits accrue to health systems and individuals, including: empowered citizens, patients, family (caregivers) and communities; improved compliance with follow-up appointments, medication and instructions for at-home care; increased patient satisfaction; and lower health-care spending.

These objectives should be supported by the following drivers:

- cross-sectoral coordination mechanism
- sustainable financing mechanisms
- advisory function for evidence-based policy and implementation
- effective community engagement, including with vulnerable populations.

Aligned with the priorities and operational approaches in *For the Future*, countries are encouraged to take a try, learn, and improve approach for implementation towards their long-term goals, based on their own contexts and existing assets, such as current partnerships, programmes, political commitments and policies.

The WHO Regional Office for the Western Pacific will continue supporting countries and areas to operationalize this Regional Action Framework, develop technical guidance, help tailor and implement solutions to the national context, and facilitate knowledge exchange.

1. BACKGROUND

1.1 Why we must act now

The prevention and control of noncommunicable diseases (NCDs) are a cornerstone of the effort to make World Health Organization (WHO) Western Pacific Region the world's healthiest and safest region.

In 2019, at the 70th session of the WHO Regional Committee for the Western Pacific, Member States endorsed *For the Future: Towards the Healthiest and Safest Region*. This shared vision for WHO work with Member States and partners in the Western Pacific Region operationalizes a global set of strategic priorities and goals embodied in WHO's Thirteenth General Programme of Work 2019–2023 — including the "Triple Billion" targets for universal health coverage (UHC), health emergencies and healthier populations, as well as the health dimension of the 2030 Agenda for Sustainable Development — by focusing on keeping the world safe, promoting health and serving the vulnerable.

NCDs, as the major cause of death and chronic illness in the Region, are one of four thematic priorities of *For the Future* where action is needed most urgently.

1.2 NCDs still impose a major health burden in the Region

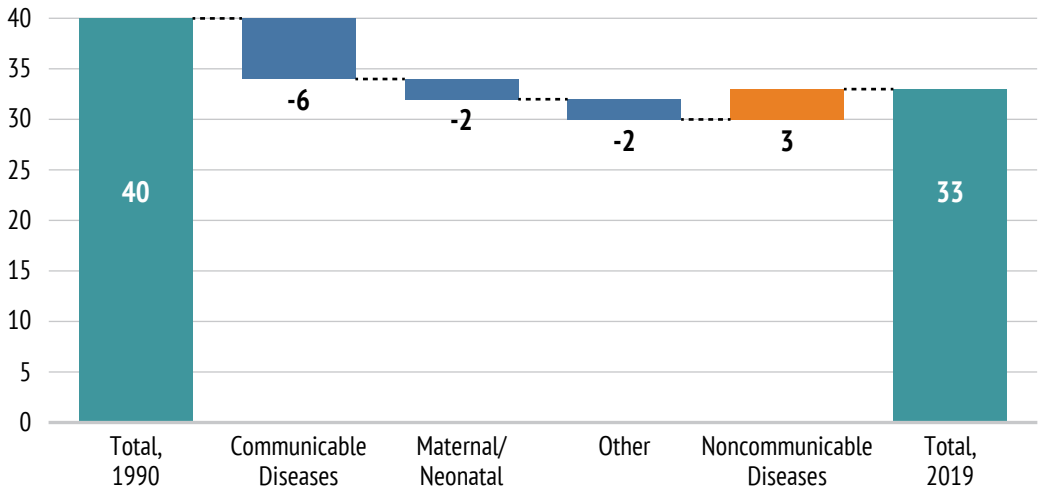
The Western Pacific Region, the most populous of the six WHO regions, comprises 37 countries and areas. Home to more than one quarter of the world's population (nearly 1.9 billion people), the Region is marked by great diversity in geography, ethnicity, language, culture and socioeconomic development. This diversity is reflected in the health systems and health status within the various countries and areas of the Region.

Major achievements in health have led to an increase in life expectancy and improvements in fundamental health indices, worldwide and in the Western Pacific Region. Most of these gains have been in infectious diseases and maternal and child health (Fig. 1). For example, new HIV infections have been reduced by 40% since their peak in 1998, and the malaria mortality rate has been more than halved since 2000. In contrast, gains in NCDs are comparatively smaller. Consequently, the global share of NCD deaths among all deaths increased from 60.8% in 2000 to 73.6% in 2019. Today, seven of the top 10 causes of death are NCDs, up from four out of 10 in 2000. *(1)* And because of population growth and ageing, as well as changing lifestyles, the numbers of people living with NCDs are rising.

The Western Pacific Region bears a disproportionate burden from NCDs. One quarter of global NCD deaths occurs in this Region, and the proportion of deaths due to NCDs is projected to increase further in the future (Fig. 2). NCDs are, in fact, the leading causes of death and disability in the Region. The four main NCDs — cardiovascular and chronic respiratory diseases, cancers, and diabetes — account for nearly 87% of all deaths in the Region. *(2)*

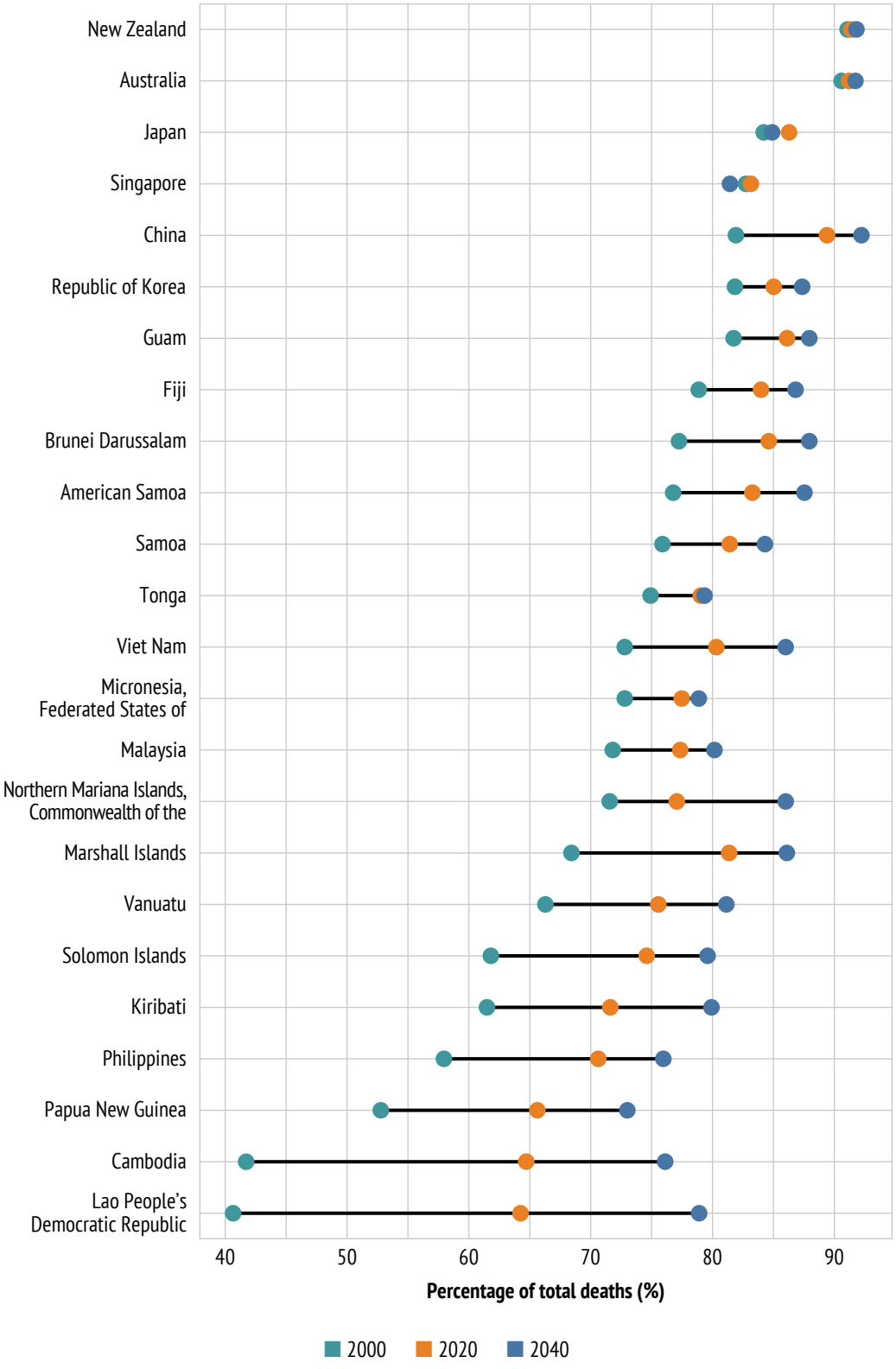
A significant portion of NCD deaths occurs prematurely, among working age people. An estimated 15 million people worldwide died of NCDs between the ages of 30 and 70 years in 2019. *(2)* In the Western Pacific Region, the likelihood of dying prematurely from any of the four major NCDs ranges from 7% in the Republic of Korea to nearly 51% in Kiribati (Fig. 3). Moreover, premature mortality from NCDs across the Region is higher among lower-middle-income countries (LMICs), and within countries, premature mortality from NCDs also is higher for socioeconomically disadvantaged groups. *(3,4)* This has serious implications on socioeconomic development and health equity.

Fig. 1 Changes in disability-adjusted life years (DALYs) by disease category, 1990 and 2019



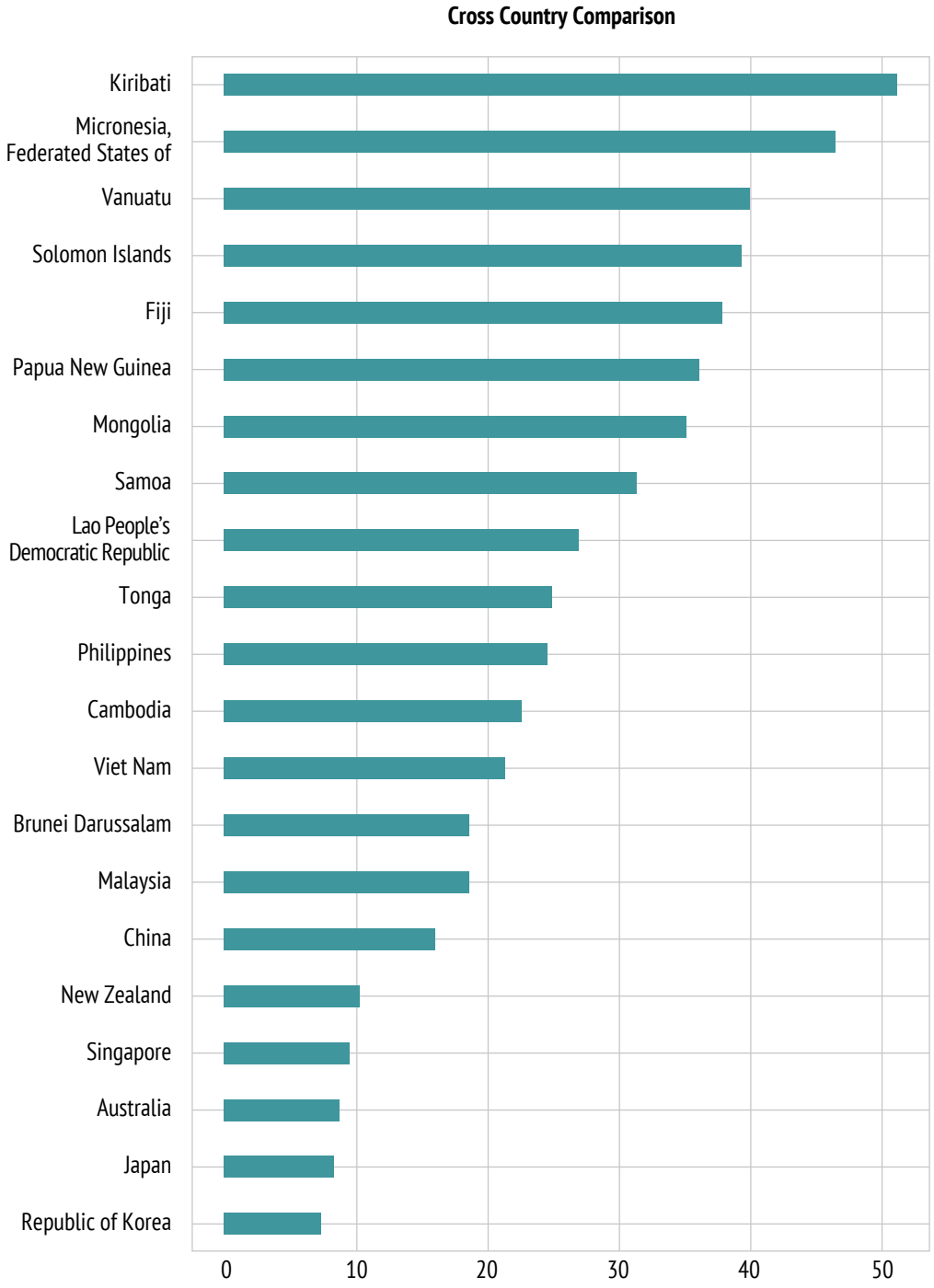
Source: Global Burden of Disease Collaborative Network. Global Burden of Disease Study 2019 (GBD 2019) Results (http://ghdx.healthdata.org/gbd-results-tool, accessed 6 July 2022).

Fig. 2 Percentage of NCD deaths across different time frames, Western Pacific countries and areas



Source: Global Burden of Disease Collaborative Network. Global Burden of Disease Study 2019 (GBD 2019) Results (http://ghdx.healthdata.org/gbd-results-tool, accessed 6 July 2022).

Fig. 3 Probability (%) of dying between age 30 to 70 years from any of the four major NCDs, Western Pacific countries and areas, 2019



Source: Global Health Observatory. Indicators: Probability of dying between age 30 and exact age 70 from any of cardiovascular disease, cancer, diabetes, or chronic respiratory disease.

1.3 While the Region is making headway towards the NCD global voluntary targets, the rate of progress is not fast enough

The world recognizes the gravity of the NCD epidemic. In 2011, the United Nations General Assembly adopted the first *Political Declaration on the Prevention and Control of Non-communicable Diseases*. The Declaration acknowledged that NCDs constitute a major challenge for development in the 21st century. When world leaders adopted the Sustainable Development Goals (SDGs) in September 2015, they ensured the inclusion of SDG target 3.4 to reduce premature NCD mortality by one third by 2030.

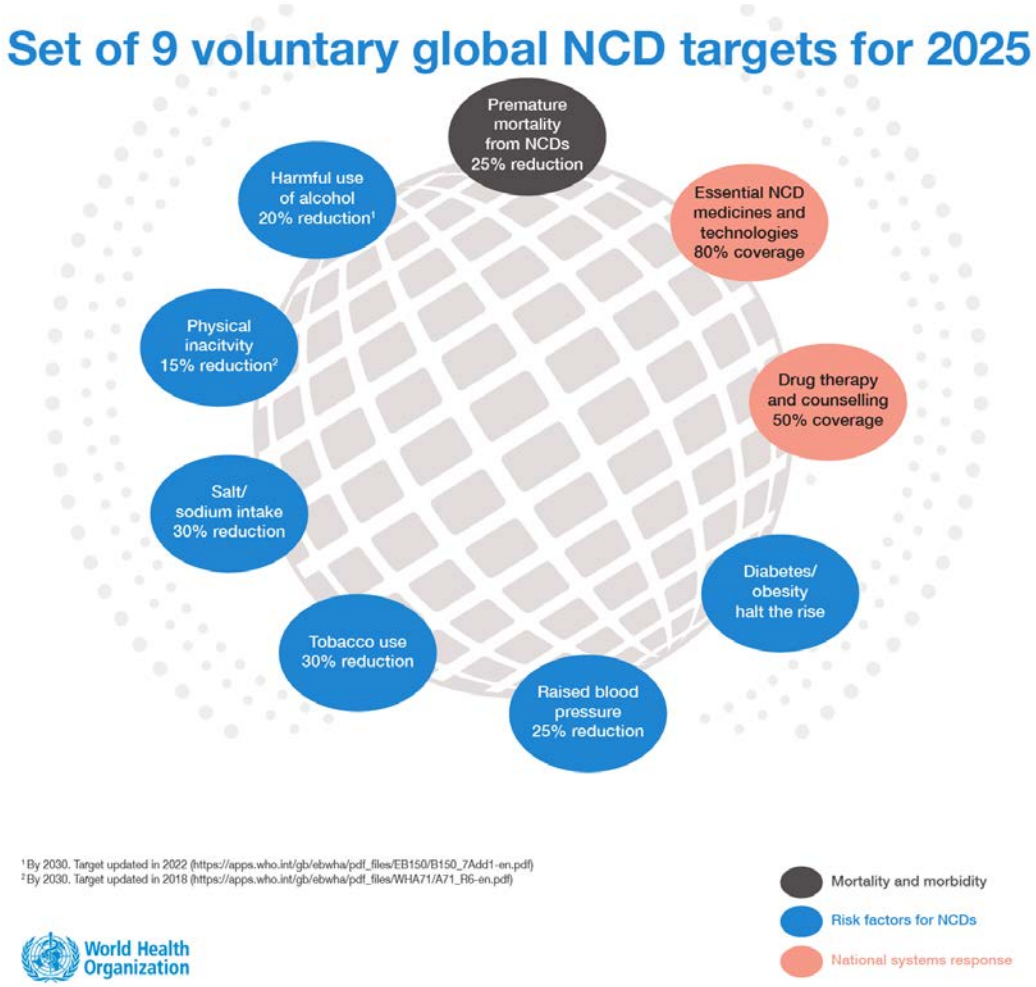
In 2013, the World Health Assembly endorsed the WHO *Global Action Plan for the Prevention and Control of Noncommunicable Diseases 2013–2030*, comprising a set of actions for countries to counter the growing public health burden imposed by NCDs. To measure progress, a set of nine voluntary targets for 2025 was created (Fig. 4) to accompany the Global Action Plan. In 2019, the Health Assembly extended the time frame of the Global Action Plan to 2030.

Regional progress in reducing premature NCD mortality between 2000 and 2010 was encouraging. However, variations within the speed of progress have slowed considerably, and in some countries, reversals in progress were noted between 2010 and 2016. *(5,6)* Currently, only New Zealand, the Republic of Korea and Singapore (Fig. 5) are likely to meet the 2030 objective. *(7)*

In part, this is due to variability in achieving risk-factor targets. For example, while tobacco use prevalence is declining across the Region, obesity and the prevalence of elevated fasting blood sugar (Fig. 6) continue to rise, with some of the most alarming rates of obesity reported in the Pacific. *(8)* In addition, worsening disease outcomes are a contributory cause. For example, in high-income countries, even though the premature death rate for diabetes decreased from 2000 to 2010, it increased from 2010 to 2016. Among LMICs, the premature death rate due to diabetes increased across both time periods. Persistent health system challenges and gaps in health workforce capacity also play a role. *(9)*

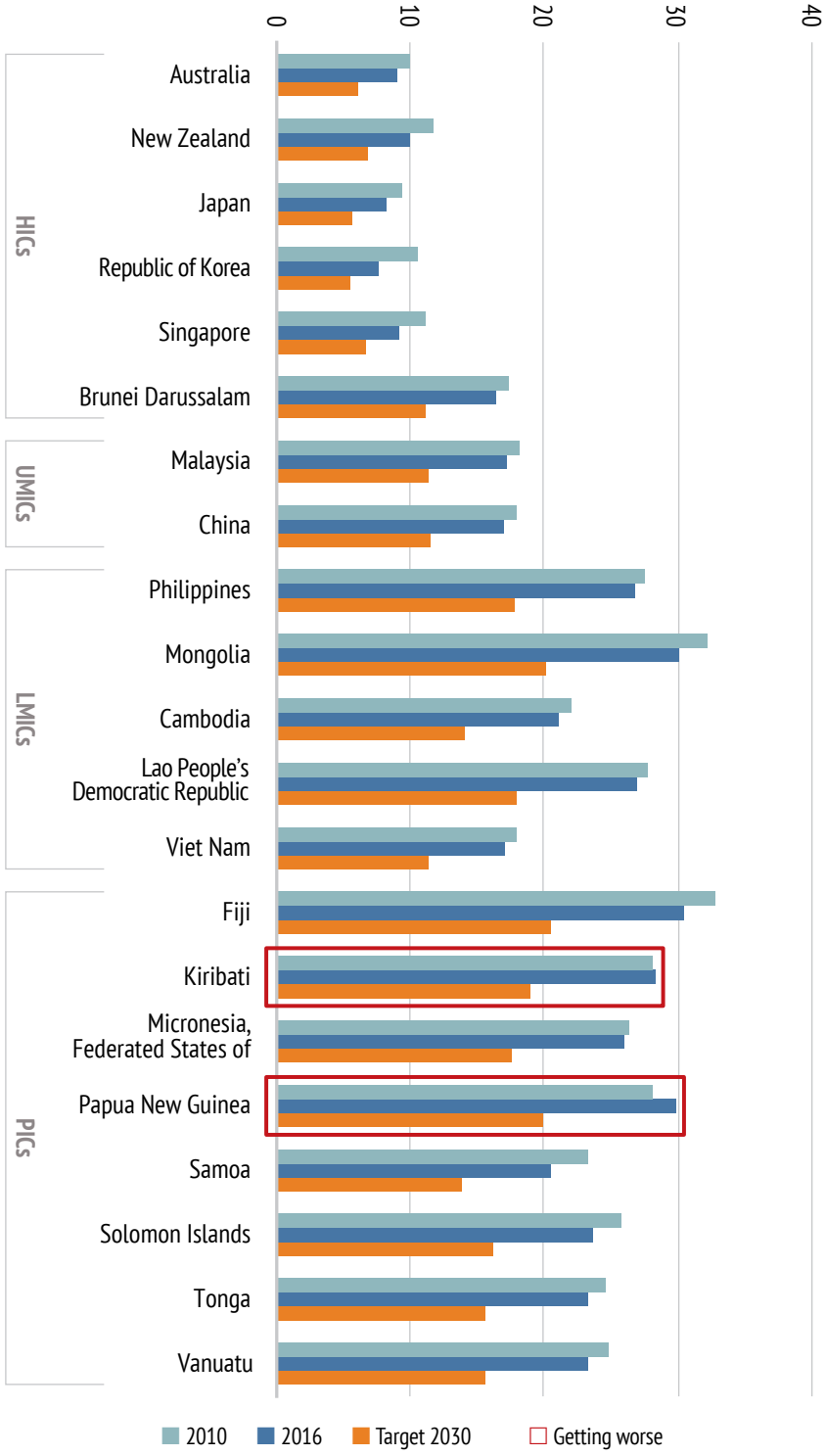
Clearly, the Western Pacific Region needs an intensified and better response to speed up progress towards the global NCD targets. Business-as-usual approaches are no longer sufficient if we are to achieve the *For the Future* vision of making the Western Pacific the world's healthiest and safest region.

Fig. 4 Global voluntary NCD targets for 2025



Source: 9 global targets for noncommunicable diseases for 2025. World Health Organization (https://www.who.int/images/default-source/departments/ncd-surveillance/global-monitoring-framework/gmf1-large.png?sfvrsn=d469f207_3, accessed 18 November 2022).

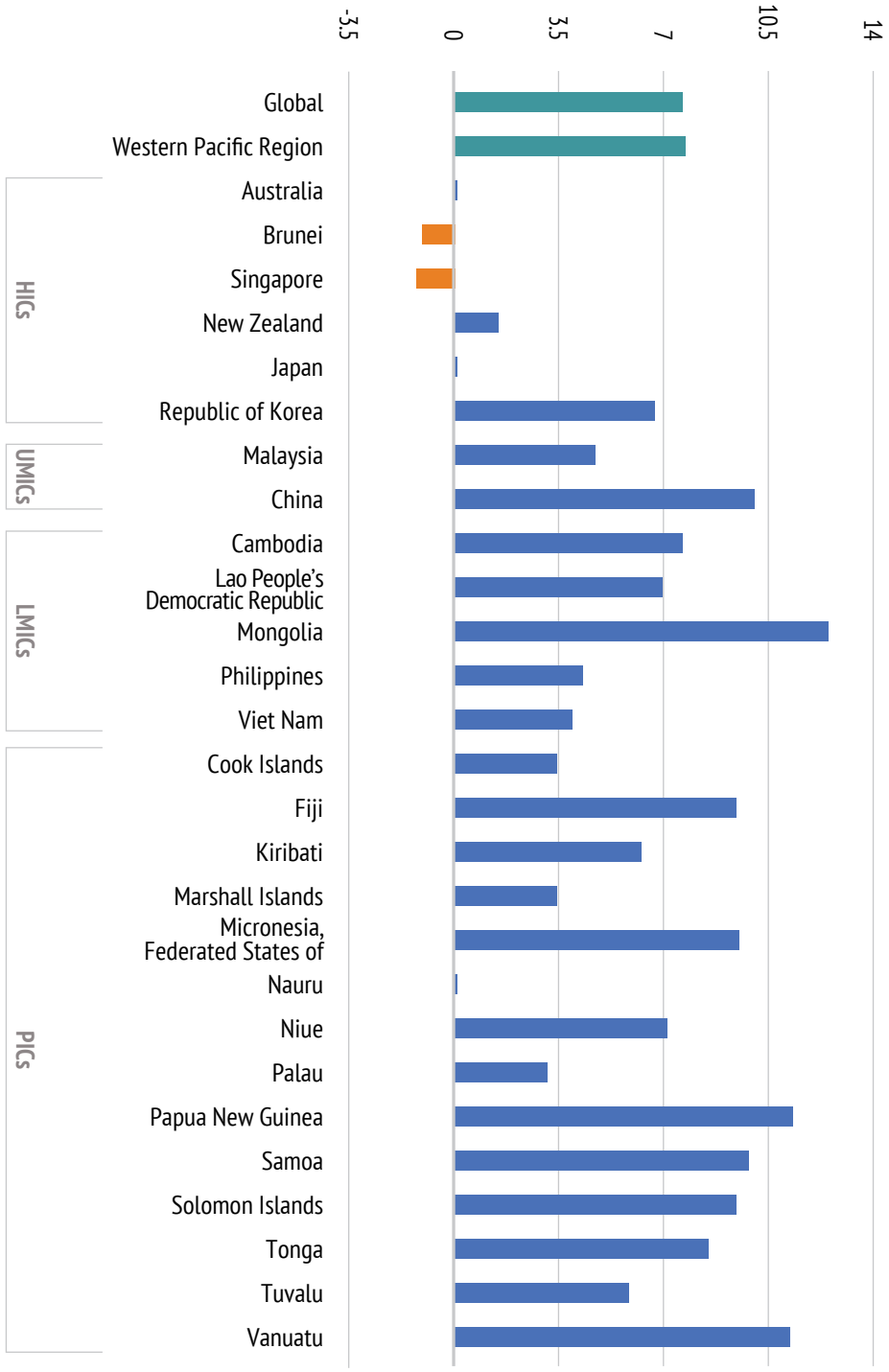
Fig. 5 Probability of dying between ages 30 and 70 in the Western Pacific Region from any of the four main NCDs: progress over time



HICs: high-income countries; UMICs: upper-middle-income countries; LMICs: lower-middle-income countries; PICs: Pacific island countries and areas.

Source: Global Health Observatory. Indicators: Probability of dying between age 30 and exact age 70 from any of cardiovascular disease, cancer, diabetes, or chronic respiratory disease.

Fig. 6 Percentage change in prevalence of raised fasting blood sugar in 2014 compared to 2010



HICs: high-income countries; UMICs: upper-middle-income countries; LMICs: lower-middle-income countries; PICs: Pacific island countries and areas.

Source: Global Health Observatory.

1.4 The COVID-19 pandemic underscores the pivotal role of NCD prevention and control in health preparedness

The coronavirus disease (COVID-19) pandemic highlights the urgent need for accelerated action for the prevention and control of NCDs. The pandemic also calls attention to the complex and interrelated dynamics of NCDs and communicable diseases. Global data demonstrate that people with NCDs are at a higher risk of becoming severely ill or dying with COVID-19. Tobacco, electronic cigarette and alcohol use rose during the pandemic, especially during lockdowns. *(10)* Long-term clinical impacts are beginning to emerge: COVID-19 infection may be implicated in the future development of diabetes, *(11)* and so-called "long COVID" is associated with cardiovascular *(12)* and neurologic sequelae. *(13)*

COVID-19 also exacerbates countries' NCD burden indirectly, impacting the health of people living with NCDs by disrupting health and socioeconomic services and activities. Essential NCD health services were hindered by widespread shortages of medicines, staff, diagnostics and public transport services, as well as community hesitancy to seek medical treatment due to fear of infection. Furthermore, the pandemic adversely affected mental health, and resulted in remarkable social and economic impacts beyond the health sphere, including economic recession, unemployment, school closing and social isolation, all of which have affected the health and well-being of people in important, indirect ways.

The pandemic poses critical challenges to NCD prevention and control, especially within health systems in low-resource settings. It brings to light the limitations of a "siloed" approach to health programmes and calls for a better way to address the interplay and interrelationship of communicable diseases and NCDs in a holistic, comprehensive and integrated manner for better health preparedness. Recognizing that public health actions provide practical ways for individuals to control their health risks are important steps in creating healthy environments for our populations. *(14)*

1.5 Addressing NCDs is an important investment for sustainable development

NCDs threaten the progress towards the 2030 Agenda for Sustainable Development and the associated SDGs.

The global NCD epidemic is widely acknowledged as a major development challenge; in the Western Pacific, which bears a disproportionate burden of NCDs; NCDs are a significant threat to achieving development goals. NCDs are the leading causes of premature death; if they do not kill, they impose years of disability on those affected and their families. Health-care costs for NCDs quickly drain household resources, especially for impoverished families.

NCDs hamper economic growth at the global and national levels by diminishing the workers' pool through premature mortality, adversely affecting workers' productivity and employment status through chronic ill health, and diverting resources from productive purposes to treating disease. NCDs are estimated to cause cumulative global economic losses of US$ 47 trillion by 2030, or about 75% of the 2010 global gross domestic product (GDP). *(15)*

Disabilities arising from NCDs can compound economic losses through the cost of informal care. Particularly in societies where the long-term care system is not well developed, family members have to bear the considerable burden of caregiving by reducing their work hours or ultimately quitting their jobs altogether. This generates additional economic losses through foregone wages of the caregivers, and may exacerbate gender inequality, since the caregiving burden is largely borne by women. *(16)*

Poverty is closely linked with NCDs; the burden of NCDs disproportionately affects vulnerable populations, threatening sustainable development. Socioeconomically disadvantaged people are at greater risk of being exposed to NCD risk factors such as harmful products like tobacco or alcohol, or unhealthy dietary practices. Their vulnerability is compounded by limited access to health services, particularly in the absence of UHC and strong primary health-care systems. Thus, they are more likely to develop NCDs, and less likely to utilize preventive, screening, diagnostic and therapeutic services. Consequently, once they develop an NCD, their illness is less well controlled, putting them at elevated risk for end-organ damage and premature death. Reciprocally, NCDs accelerate poverty. Once NCDs develop, their treatment, which can be lengthy and costly, combined with loss of income, forces millions of people into deeper poverty, catalysing a downward economic spiral. Financial difficulties due to catastrophic health spending are particularly evident among households with older adults, who are likely to suffer from long-standing chronic conditions. *(17)*

Conversely, addressing the NCD disease burden through effective interventions produces economic benefits. For instance, allocating an additional US$ 140 billion on the most efficient package of NCD interventions from 2023 to 2030 could generate US$ 2.7 trillion in economic gains by averting 39 million deaths in LMICs. *(18)*

Health is an important element of human capital; thus, reducing the burden of NCDs by investing in prevention and care benefits, countries by enhancing and sustaining their economies, strengthening their health capacities and supporting viable societies.

2. OVERVIEW OF THE REGIONAL ACTION FRAMEWORK

The *Regional Action Framework for Noncommunicable Disease Prevention and Control in the Western Pacific* is guided by the *For the Future* vision of creating the healthiest and safest region. Its aspirations align with the 2030 Agenda for Sustainable Development, the WHO *Global Action Plan for the Prevention and Control of Noncommunicable Diseases 2013–2030*, the Triple Billion targets contained in the *Thirteenth General Programme of Work 2019–2023* and relevant regional frameworks, such as those on healthy ageing, UHC, health equity and reaching the unreached (Annex 1). Based on an understanding of the future trends in public health, it proposes that Member States turn a "sick system" (which focuses on treating diseases) into a "health system" in which countries invest in healthy environments, behaviour change, and NCD prevention and early detection, in addition to treating diseases. With investment, countries can achieve both healthy populations and sustainable development (Fig. 7).

2.1 Future trends

The Western Pacific Region is undergoing profound and radical changes, and the rate of change is accelerating. These changes, such as an ongoing demographic shift, new perspectives on disease, technological innovation and economic growth, have consequences on the epidemiology of and approaches to NCDs. Yet these challenges also offer opportunities for fresh and creative strategies to address the prevention and control of NCDs.

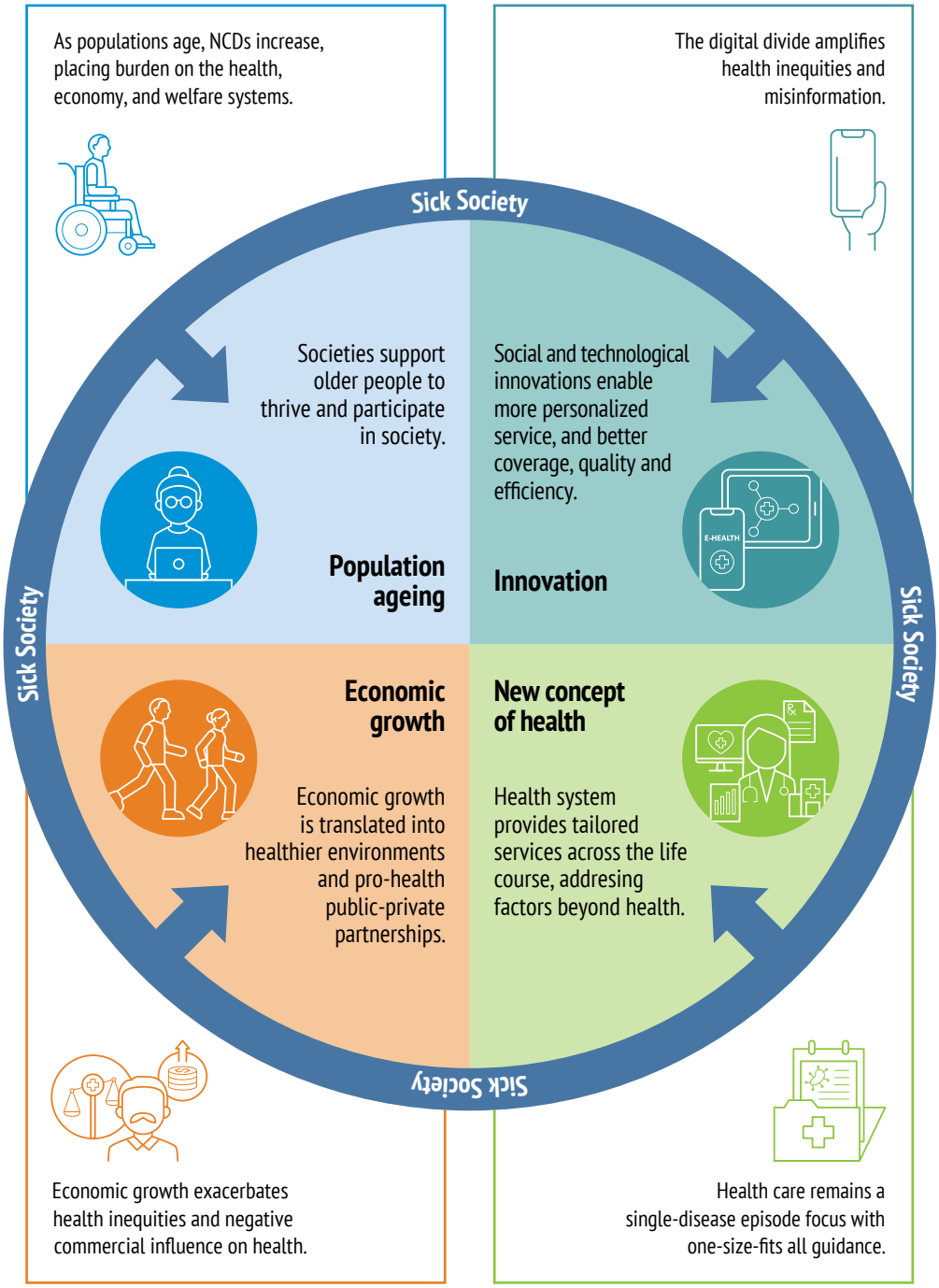
2.1.1 The Western Pacific Region population is ageing

People in the Western Pacific Region are getting older. Over one third of the world's older adults reside in the Region. The number of people 65 years and older in the Region is expected to double and that of people 75 years and older will triple by 2050. *(19)* The pace of demographic change is also accelerating. The shift from an ageing to an aged society occurred over approximately 60 years in Australia and New Zealand, but took only 24 years in Japan. However, other countries in the Region are projected to make this transition in 20 years or less (Fig. 8). *(20)*

The *Regional Action Plan on Healthy Ageing in the Western Pacific* states that "preparing for population ageing requires a long-term, whole-of-society change. It will necessitate a shift in mindset at the individual and societal levels, as well as investment, commitment and coordination across all sectors of society". *(21)* The anticipated rise in NCD burden among older people will require a health system transformation and increased investments in health and prevention. These efforts must recognize the complexity of population ageing, from gender differences among the aged to the increased burden of caregiving for younger generations. *(22)*

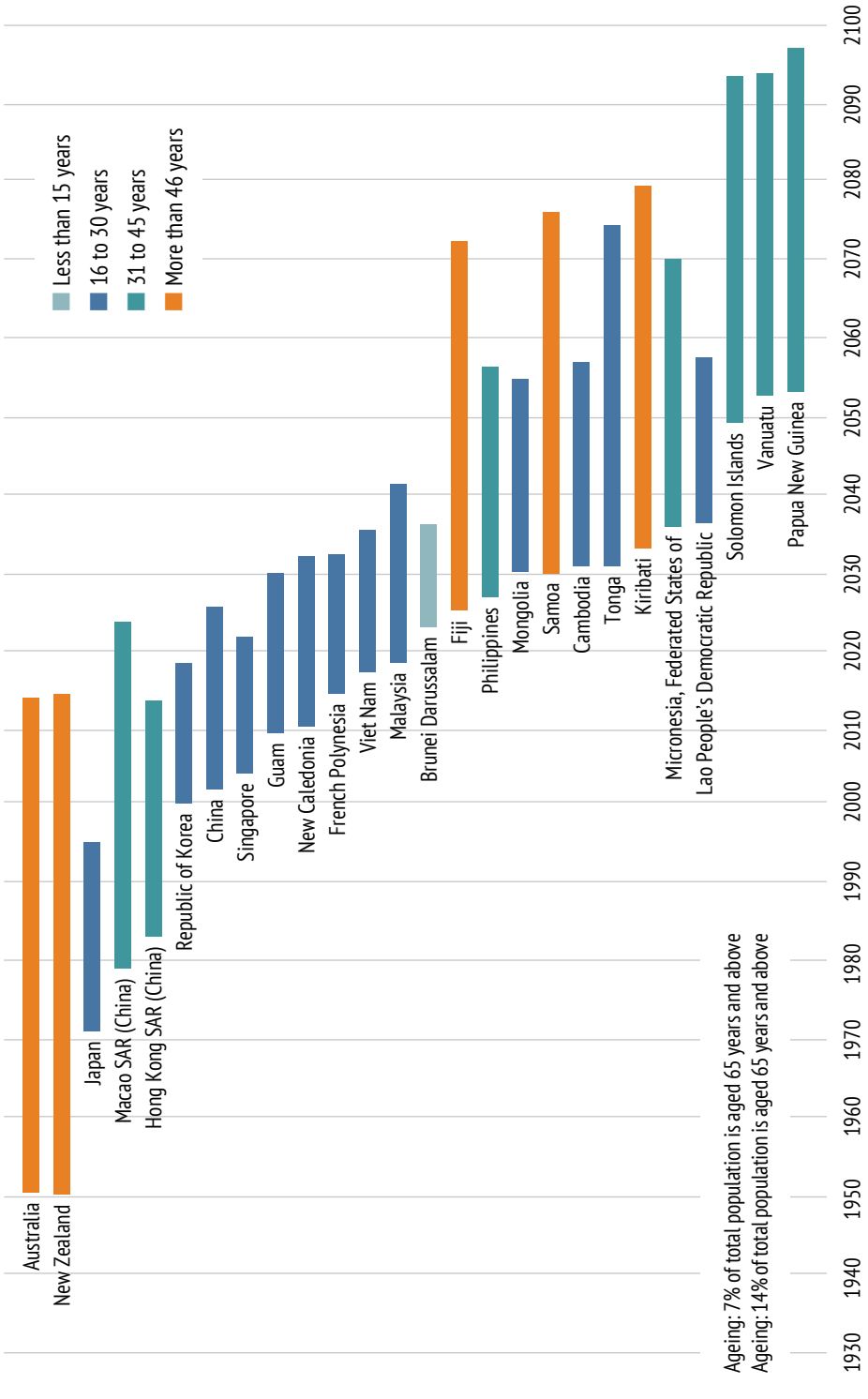
Given the rapidity of the population ageing phenomenon, collaboration across the whole of society needs to occur now in order to mitigate increases in the NCD burden that will impact sustainable development by increasing demands on the health, welfare and social systems and reducing labour productivity and tax revenues. On the other hand, countries that successfully maintain people's health over their lifetime accrue societal benefits from older people who are healthy, experienced and fully functional. Thus, part of the response to the NCD epidemic must involve supporting healthy ageing.

Fig. 7 Transforming a "sick system" to a "health system"



Source: World Health Organization – Western Pacific Region

Fig. 8 Countries across the Western Pacific Region are transitioning from ageing to aged societies at different rates



Note: A population is "ageing" when more than 7% of people are 65 years or older and "aged" when more than 14% of people are 65 years or older.

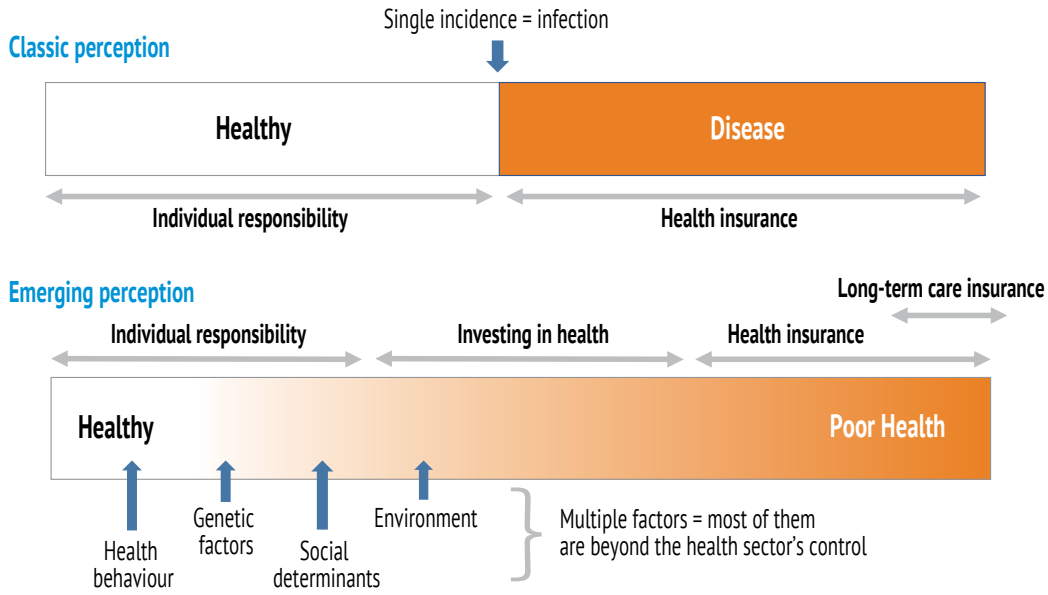
Source: United Nations Department of Economic and Social Affairs, Population Division.

2.1.2 A new concept of health is emerging

Traditionally, health was defined as the absence of disease. Today, however, a large body of evidence indicates that health is the cumulative result of a complex relationship between one's genetic predisposition, behaviour, the built environment and socioeconomic determinants. Also, as people live longer, it is increasingly common to have multiple chronic conditions simultaneously (Fig. 9).

This requires a transformation of the health system, originally designed to address acute, single episodes of illness through disease-specific programmes based in hospitals and clinics, towards a system of care that situates people at the centre, accompanying them throughout their lives with interventions that are grounded in the community. This new perspective on health utilizing a comprehensive, life-course approach considers the cumulative multifactorial and multisectoral contributions, such as socioeconomic risk factors, including gender and equity issues, and environmental influences, to an individual's health outcome throughout their lives. This holistic approach, paired with innovations in personalized health-care monitoring, provides an opportunity for more targeted prevention and management of health based on individual data.

Fig. 9 Changes in the concept of health with population ageing



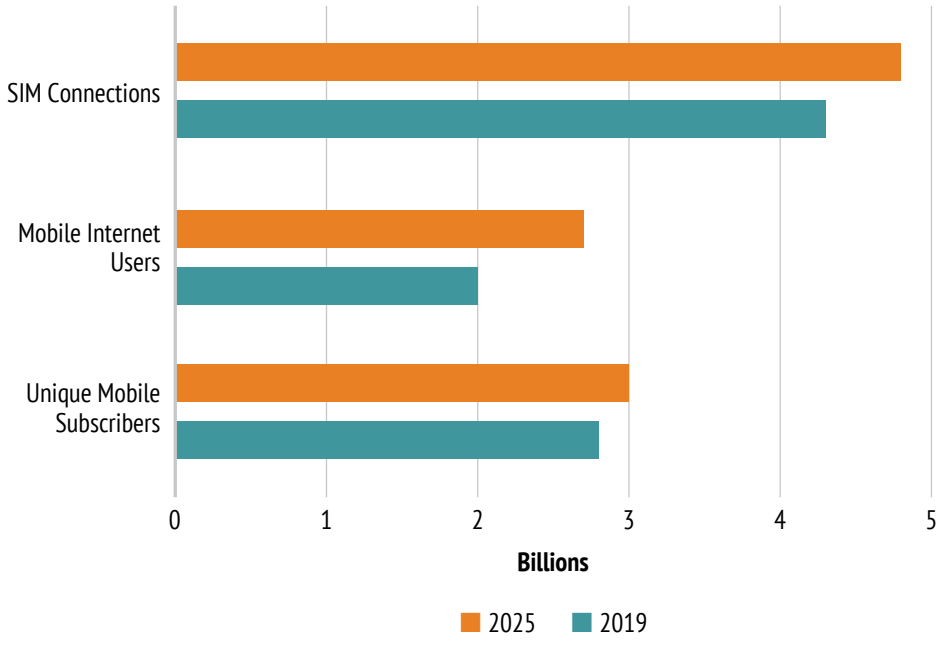
Source: Adapted from Nakatani H. Globalization of public health: challenges and opportunities for globalization. The Journal of Public Health Practice. 2020;84:356–62, as published in Regional action plan on healthy ageing in the Western Pacific. Manila: World Health Organization Regional Office for the Western Pacific; 2020.

2.1.3 More technological and social innovations are now available

Today, we live in a time of rapid innovation and technology. Across the entire spectrum of health care, from health promotion and prevention to tertiary-level clinical services, technological advances are reshaping the delivery of health-care services and the organization of health data. Moreover, the global experience with COVID-19 demonstrates the speed with which technological and social innovation can be harnessed to address incipient health issues, and that diffusion of innovation can occur quickly.

Mobile internet technology is increasingly available in the Western Pacific Region; 5G technology is expected to surpass 2G and 3G by 2025 (Fig. 10). This diffusion of faster mobile internet technology is paired with rising numbers of unique mobile subscribers, which are expected to reach 70% of the Region by 2025. *(23)* Better access to reliable, affordable internet technologies enables a wider range of individuals to access health services and information, especially among vulnerable and unreached populations. This phenomenon is bolstered by unprecedented expansion of telehealth (defined here as virtual visits with clinicians) and health-related information on the internet due to the COVID-19 pandemic.

Fig. 10 Mobile technology adoption rates in Asia Pacific by types of connections in 2019 vs 2025 projections



Source: The mobile economy Asia Pacific 2020. London: GSMA.

Health information and services are increasingly delivered via digital means. The use of telehealth has grown 38 times from pre-pandemic levels, and patient demand continues to grow. *(24)* Alongside digital care, people are turning to the internet for more generalized health information as well. A Chinese study in the initial phase of the pandemic found that 93.5% of participants used the internet to find health information about COVID-19. Similar reliance on the internet for health information has been echoed in studies across the globe. *(25)*

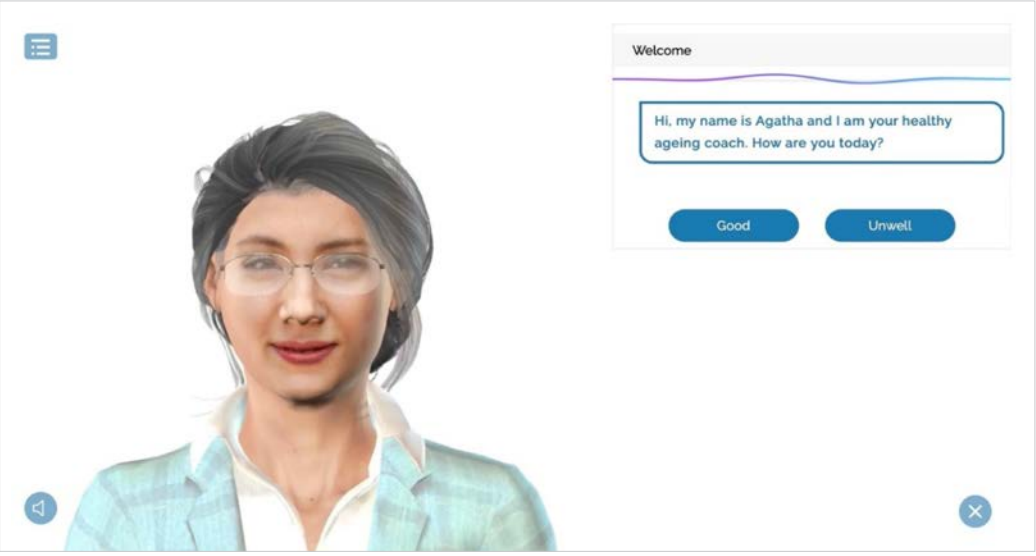
Wearable devices are enabling individuals to monitor their physical activity, dietary consumption, heart rate, blood pressure and other vital signs. This instant biofeedback has been shown to reinforce healthy behaviours. When linked to a physician's electronic medical records through the Internet of Medical Things (IoMT), remote patient monitoring is made possible. Coupling these to telemedicine and virtual patient visits can improve patient outcomes by permitting continuous care despite the challenges of physical distance, transportation access or government-mandated lockdowns. *(26)* Wearable medical devices also can enhance quality of life for people living with NCDs and provide a medical safety net. For example, continuous glucose monitors remove the need for intermittent glucose testing and instead keep track of one's blood sugar levels in real time. This allows users to see the immediate impact of food and exercise and shape their behaviours accordingly. It can also catch cases of hyperglycaemia immediately. *(27)*

Precision medicine that is tailored to an individual's specific genetic and physiologic make-up is now possible. RNA-based therapeutics "interfere" with genetic data at the RNA level and intercept a genetic abnormality before it gets translated into functioning (or non-functioning) proteins. Personalized RNA therapy (for example, antisense nucleotides and RNA interference) is looking to combat rare genetic conditions such as Huntington's disease, neurologic disorders and forms of cancer. *(28)* Pharmacogenomics examines an individual's potential responses to drugs and dosage regimens, permitting customization of drug therapy and prevention of adverse drug effects. *(29)* The cost of genomic sequencing has plummeted from US$ 350 000 in 2007 to US$ 300 in 2022, becoming more affordable. This service is also rapidly diffusing and is now offered direct to consumers in many markets. *(30)*

Artificial intelligence and machine learning, coupled with big data, can potentially help extend the health-care workforce by giving decision support in non-absolute diagnoses and treatment options. For example, WHO is currently field testing "Agatha", a digital health worker equipped to promote health among older adults in an engaging and accessible manner (Fig. 11). *(31)* For end-stage NCDs, devices such as the hybrid closed-loop insulin delivery system for diabetics *(32)* and compact dialysis machines for home dialysis *(33)* improve quality of life and potentially extend the lifespan. In the future, bioprinting of organ replacements for those with late-stage NCDs may be possible.

In addition, various social innovations have become available. For example, countries have begun repurposing community health workers to reach populations in rural, isolated or

Fig. 11 Agatha – WHO's healthy ageing coach for older people in the Western Pacific Region



Source: WHO. https://ageing.caict.ac.cn

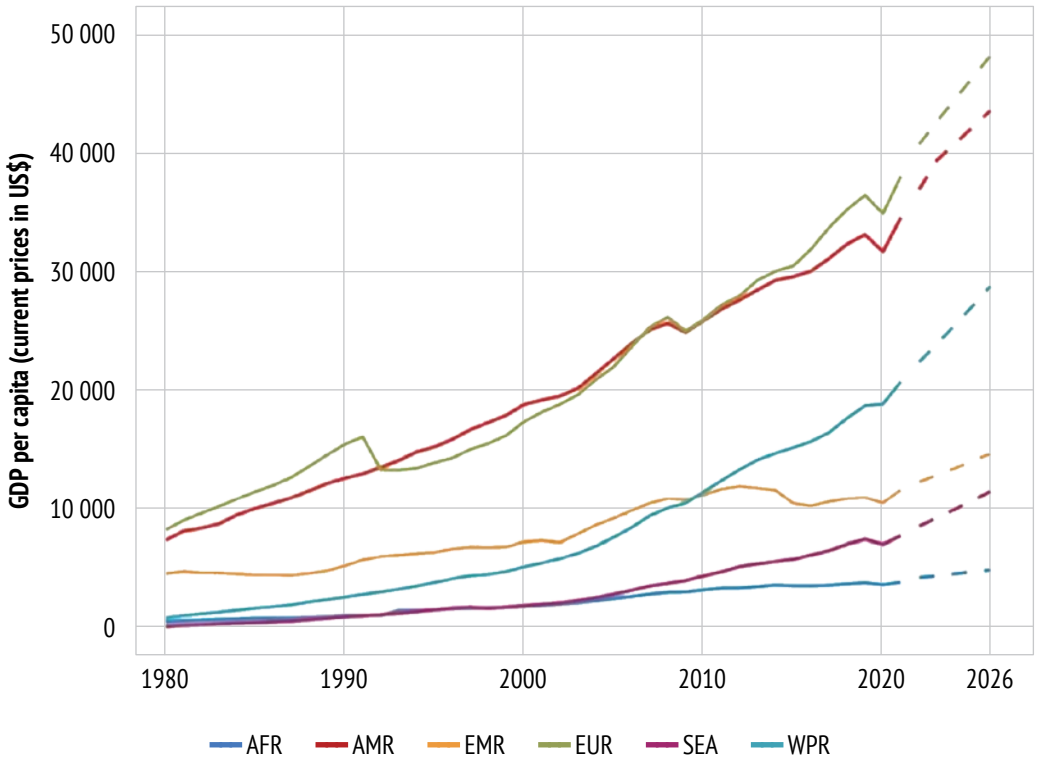
low-resource settings where medical centres are sparse and access to specialists is rare. During the COVID-19 pandemic, these workers began a door-to-door COVID-19 screening programme and later used this same infrastructure for vaccination. *(34)* In addition, behaviour changes such as the use of personal protective equipment, personal infection monitoring and physical distancing have become acceptable and commonplace public health and social measures. *(35)*

When countries begin adopting technological and social innovations to counter NCDs, several key issues must be addressed. First, measures are needed to provide equitable access to new technology, especially among vulnerable groups. As investments are made in technological infrastructure, the "digital divide" risks significant widening, and special care should be taken to ensure that these innovations do not exacerbate existing inequalities. Second, misinformation needs to be curtailed and countered. Misinformation spread through social media has become a risk factor for poor health. Strengthening health literacy and creating systems that can detect and combat misinformation are needed. Finally, technological innovation can be harnessed to create new health threats, and countries should prepare to guide and regulate new technology, to ensure these innovations are utilized to promote health, rather than harming health. For example, in recent years, newer and emerging nicotine and tobacco products, like electronic nicotine delivery systems, often known as e-cigarettes, have proliferated in many markets. There is growing evidence of the harmful effects of electronic nicotine delivery systems. Due to aggressive marketing and lack of regulation, e-cigarettes are increasingly popular, particularly among young adults and adolescents, posing significant challenges to public health that could undermine some of the hard-won progress in tobacco control.

2.1.4 Economic advances have transformed lifestyles and expanded the role of commercial determinants of health

The current century has ushered in economic prosperity for the Western Pacific Region. The Region is experiencing rapid economic growth. GDP per capita has increased roughly 14.8 times from US$ 1435 in 1980 to US$ 21 242 in 2021 (Fig. 12), a significantly higher rate than all other WHO regions. The Western Pacific Region is also experiencing rapid urbanization, with the proportion of the population living in urban settings across the Region increasing 2.3 times between 1975 and 2020. *(36)*

Fig. 12 GDP per capita by WHO region, 1980–2026



AFR: African Region; AMR: Region of the Americas; EMR: Eastern Mediterranean Region; EUR: European Region; SEA: South-East Asia Region; WPR: Western Pacific Region

Sources: GDP, current prices per capita were calculated using two datasets: (1) GDP current price sourced from IMF: https://www.imf.org/external/datamapper/NGDPD@WEO/OEMDC/ADVEC/WEOWORLD and (2) Population data sourced from the UN Population Prospects 2019: https://population.un.org/wpp/Download/Standard/Population/ Historical data were used for 1980–2021 and projected data for 2022–2026.

In general, economic growth is correlated with better health. Economic growth offers opportunities for social mobility, increased resources and enhanced personal purchasing power for individuals throughout the Western Pacific Region. It also offers the opportunity to invest in clean technologies to build climate-friendly infrastructure. These changes in lifestyle will be reflected through increased urbanization and more individual autonomy. If Member States can utilize increasing resources in society, such as tax revenues, individual income and private sector investment, to improve the health system and environments that influence health, as well as address the social determinants of health (SDH), new economic opportunities can be leveraged to build healthy, equitable environments throughout our Region.

However, economic growth and urbanization may come with costs: widening income disparities and lifestyles that have become increasingly unhealthy. They have also increased the prominence of commercial determinants of health and the role of the private sector as people's lifestyles change. The private sector has a significant influence on people's living conditions. Companies can promote the health of their employees, help create health-promoting environments (for example, housing, transportation and educational opportunities) and contribute to the health system through health services, communication, access and workforce training. Conversely, the profit motive in the private sector can lead to conflicts of interest and conflicts with prevention and control efforts. *(37)*

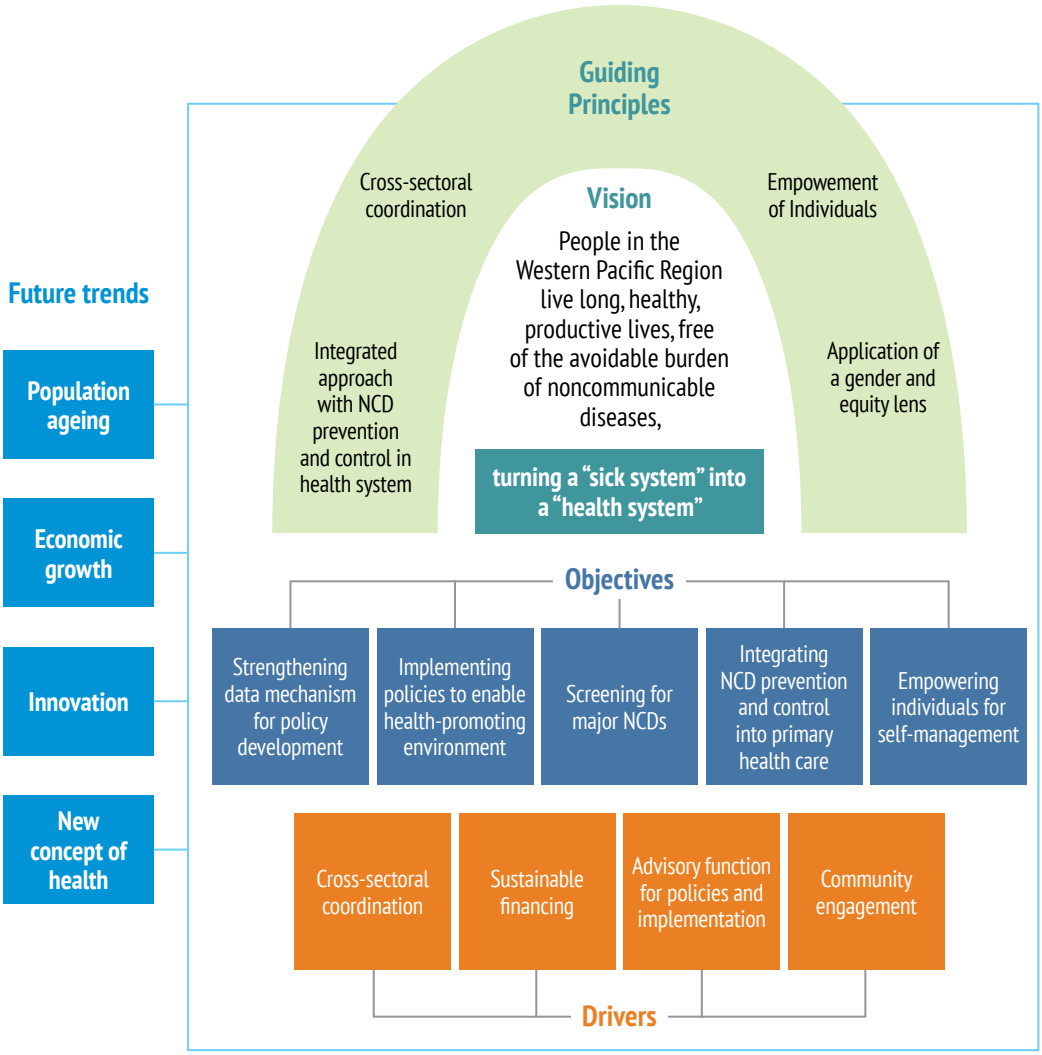
WHO recently started work on elucidating the nature of economic and commercial determinants of health and creating tools and strategies to support governments and civil society in addressing the challenges and containing the risks of working with the private sector for health programmes. For instance, the Global NCD Platform through its Global Coordination Mechanism on the Prevention and Control of NCDs is developing a tool to support Member States in decision-making on engaging with private sector entities. *(38)* NCD prevention and control, in particular, because of the strong linkage of the risk factors — tobacco, alcohol and food — to commercial drivers of industry, will need to thoughtfully and cautiously navigate the complex area of private sector engagement to counter the NCD epidemic.

Increased economic activity among countries can also lead to rising energy demand and emissions. Emissions-driven technologies lead to increased levels of carbon, methane and greenhouse gas emissions that are directly linked to respiratory and nervous system diseases. In addition, these factors are important contributors to climate change. *(39)* Data clearly demonstrate the direct and indirect health effects of climate change, and we know that vulnerable communities suffer disproportionately from its detrimental impacts. Accordingly, we must continue to address climate change as a key priority as we protect our Region from climate stressors to food security, socioeconomic distress, extreme weather events and in utero exposures. *(40)*

2.2 Purpose

This *Regional Action Framework for Noncommunicable Disease Prevention and Control in the Western Pacific* delineates the regional vision, guiding principles, objectives and recommended actions to counter and reverse the growing burden of NCDs. Recognizing that Member States are in different stages of the NCD epidemic, and reflect diverse capacities and health systems readiness, the Regional Action Framework offers a flexible blueprint that countries can adopt and adapt based on their current situation and resources. The Regional Action Framework serves both as an inspirational document and as a practical road map that outlines key strategies and drivers for action to ensure a coordinated regional response to the NCD epidemic (Fig. 13).

Fig. 13 Overview of the Regional Action Framework for NCD prevention and control



Source: World Health Organization – Western Pacific Region

2.3 Vision

People in the Western Pacific Region live long, healthy, productive lives, free of the avoidable burden of noncommunicable diseases (turning a "sick system" into a "health system").

2.4 Guiding principles

These four guiding principles need to underpin all our efforts to implement this Regional Action Framework:

1. Using an integrated approach that seamlessly links prevention, disease management and health systems strengthening

Experience has demonstrated that vertical, siloed approaches to the NCD epidemic are neither effective nor efficient. Yet, in many countries, NCD prevention programmes and service delivery (disease management) often operate separately, with little or no coordination in data collection, information sharing, programme planning and implementation. Moreover, NCDs are often overlooked or underemphasized in health systems agendas, despite the reality that NCDs comprise the largest health burden in most countries.

Effective NCD prevention and control requires a coordinated approach that encompasses the entire spectrum of NCD care: from prevention and health promotion, screening and diagnosis, disease management, rehabilitation and health systems strengthening. Embedding NCD prevention and control as a key element in health systems agendas will be vital to actualizing this integration. To accelerate progress within the Western Pacific Region in achieving the global NCD targets, promoting this integrated approach will be of paramount importance.

2. Promoting cross-sectoral action to create health-promoting environments and address SDH

The social, political and economic pathways that determine exposure to NCD risk factors lie primarily outside the direct purview of the health sector. In a recent analysis, about 90% of health inequities across countries were attributed to conditions outside health. *(41)*

Thus, the health sector by itself cannot address all the factors that determine NCD risk. Cross-sectoral partnerships and networking are necessary to create health-promoting environments and address SDH that determine NCD risk. Ministries of health are encouraged to engage with and work together with other government sectors to create a coordinated national approach to NCD prevention and control. In turn, these ministries need to engage with partners — including other government agencies, statutory bodies,

civil society, academia, international organizations, appropriate private sector partners and others — for cross-sectoral coordination of resources, technical support, and alignment with established policies, practices and standards. Effective collaboration is also necessary at the local level.

Health ministries must be adept at advocating for, convening, nurturing and sustaining good leadership and collaboration across the diverse sectors that must be engaged in reversing the NCD epidemic. This requires skill in demonstrating the co-benefits to other sectors — by compellingly making the case that investments in NCD prevention and control are a "win–win" scenario for all sectors involved.

3. More tailored approach for health promotion and service delivery

Evidence suggests that individual variations can account for significant health differences across a population. Thus, population-based public health approaches need to be augmented with individualized approaches that boost health literacy and empower people to manage their own health.

Three components play an essential role in tailoring public health interventions to optimize health outcomes:

a) **Data inputs.** Patient data have evolved towards increasing granularity. Widespread adoption of electronic health records with large-volume treatment and outcome data enables individual behaviour monitoring and treatment effect estimation. *(42)* Innovation in "omics" technologies — such as genomics, transcriptomics, proteomics, epigenomics and metabolomics — have begun to enable personalized medicine *(43)* and public health advice. Individually, these technologies have contributed medical advances that have begun to enter clinical practice, offering the potential for combining diverse types of data for a customized approach to NCD prevention and management.

b) **Decision frameworks.** Today, risk prediction and treatment selection models allow for the incorporation of individualized risk and clinical effectiveness information to identify patients for whom therapy is most appropriate and cost-effective. Using these individualized decision frameworks has the potential to identify inefficient (or harmful) care in subgroups at different risks, even when the overall population results appear favourable.

c) **Tools.** Technological innovations in handling health data are making it possible to deliver tailored health advice with greater precision. Employing machine learning methods/artificial intelligence to integrate data generated in randomized clinical trials and electronic health records and to estimate individualized patient responses for complex treatment scenarios can

facilitate the customization of clinical decision-making. *(22,44)* In addition, tailored messages targeting certain groups of populations through online service delivery platforms would help nudge the audience towards the desired behaviour such as adopting a healthier diet.

4. Applying a gender and equity lens to close gaps in health equity

NCD prevention and control is powerfully affected by health inequity. The evidence clearly demonstrates that poverty and gender affect our health, creating a large variation in health outcomes. For example, among older adults in Japan, diabetes prevalence was correlated to income levels among women, despite universal access to health care. *(45)* Other recent studies highlight the key role that gender plays in behavioural and biological risk factor exposure, disease manifestation and burden, and likelihood to access care. *(46)* Even NCD data collection and analysis, as well as clinical guidelines development, can be affected by biases that overlook the influence of gender and other social constructs that give rise to health inequity.

Careful attention to gender and equity can improve health and reduce health inequities arising from NCDs. Incorporating a perspective that considers gender, ethnicity, and other socioeconomic and commercial determinants of health is critical if Member States are to resolve the fundamental causes of poor health and elevated risks, especially among the most vulnerable. This Regional Action Framework will propose that Member States systematically address social inequities that directly or indirectly influence NCD data collection and analysis, the development of prevention and treatment guidelines, and access, affordability and acceptability of prevention and clinical care services.

3. OBJECTIVES AND RECOMMENDED ACTIONS

Objective 1. Strengthen the mechanism to collect and use data and information for planning, monitoring progress, and evaluating policies and programmes

Rationale

Good surveillance is needed to elucidate risk factor and disease prevalence, identify those at greatest risk, pinpoint national priorities and guide the selection of appropriate interventions. Measuring disease and risk factor trends and visualizing changes over time are critical for designing and revising interventions and for assessing the impact of policies and programmes. These data can compel and facilitate cross-sectoral collaboration by providing solid evidence of the critical importance of investing in NCD prevention and control.

For data to be useful, they need to be collected, analysed and disseminated in a coordinated and systematic manner. However, in many countries, data collection, analysis, storage and utilization currently are fragmented, with separate components housed in isolation within programmes. Data access is limited, which hinders the utility of the data for diverse stakeholders. Also, when available, data may not be presented in user-friendly formats, further limiting their usefulness. These create barriers to the effective use of data for overall progress in NCD prevention and control.

In expanding the data infrastructure, it is important to ensure inclusive and equitable collection of appropriate information, such as statistical and research data, among marginalized groups, including indigenous peoples and people with disabilities. Measures to protect confidentiality and respect for privacy should be incorporated. Strategies to address data collection challenges in light of COVID-19 and other potential future pandemics (with lockdowns, participant illness, the need for physical distancing and isolation, and workforce shortages) need to be carefully elucidated.

BOX 1. Data.gov.sg – Singapore's one-stop data portal

The data.gov.sg website is an initiative by the Ministry of Finance and is managed by the Government Technology Agency of Singapore. It aims to make government data accessible, relevant and understandable to the public, through the active use of charts and articles. It also seeks to create value by catalysing the development of data applications, or apps, and facilitating research and analysis.

The following data-sharing principles aim to guide the government agencies' open data efforts.

- Data shall be made easily accessible.
- Data shall be made available for co-creation.
- Data shall be released in a timely manner.
- Data shall be shared in machine-readable format.
- Data shall be as raw as possible.

To date, more than 100 apps have been created using the Government's open data initiative.

Source: Government of Singapore. Data.gov.sg. Available at: https://data.gov.sg/group/health

Recommendations for Member States

- At the national level, collate and utilize available data from multiple sources to assess the country's situation, guide the development and selection of interventions, and evaluate their impact.

  Globally, the WHO Impact Framework is pioneering the use of data to calculate progress towards the SDGs and the Triple Billion targets across the world and within countries using visual data dashboards. In the Pacific, 21 Pacific island countries and areas working with WHO, the Pacific Community and the Pacific Island Health Officers Association developed the online Monitoring Alliance for NCD Action Dashboard to monitor the implementation of the Pacific NCD Roadmap. *(47)*

- Improve data collection and analysis capacity, specifically:

  1. Identify country-specific data needs (for example, risk factor profile, disease prevalence and burden, assessment of health-promoting environment, implementation monitoring, policy evaluation, etc.) and plan how best to collect data, ideally as part of the existing health data system/surveillance system. Address concerns for confidentiality and data privacy upfront and develop protocols and policies to safeguard data.
  2. Consolidate available data across programmes and make data from multiple sources available to stakeholders for decision-making. For example, Singapore launched an open data platform online as a one-stop portal to its publicly available datasets from 70 public agencies (see Box 1). *(48)*

- At the subnational level, identify and utilize available data (for example, public health, health systems and non-health data) to take tailored actions for policy. For instance, the Urban Health Equity Assessment and Response Tool project, known as Urban HEART, undertaken by the WHO Centre for Health Development (Kobe, Japan), demonstrated that compiling local data can help pinpoint equity gaps within local jurisdictions and engage stakeholders to adopt appropriate local actions to promote health equity. *(49)* Specifically, countries can consider the following actions:

  1. Understand the local NCD epidemiology and environment, and develop appropriate local actions with stakeholders.
  2. Understand local-level needs and capacities for resource planning and workforce development.
  3. Leverage community networks to collect and analyse data.

- Explore the use of "lean data" — quick data collection with small sample sizes — to supplement traditional surveys. Lean data refers to the use of methods and technologies for data collection that favour efficiency and speed while maintaining rigour. *(50)* It is a pragmatic approach that takes advantage of quicker data collection with smaller sample sizes through available technology such as the use of SMS text messages or automated calls with interactive voice response. *(51)* Lean data approaches can be valuable in settings where resources may not allow for larger, more cost- and effort-intensive surveillance systems. Lean data can also be used to augment traditional data collection by providing quick feedback from the communities being served. Some considerations in utilizing lean data include the maintenance of methodologic rigour to ensure data reliability despite smaller sample sizes, incorporation of protocols to avoid exacerbating social inequities and stigmatization of small cohorts within communities, and protective measures to prevent the misuse of technologies for scams, identity theft and disinformation. Countries should consider quick data collection in addition to large-scale surveys where data gaps exist.

Objective 2. Develop policies that go beyond the health sector to enable health-promoting environments and address social determinants of health at national and subnational levels

Rationale

WHO recommends policies to create health-promoting environments that foster healthy behaviour and address the social determinants of health (SDH). Specific to NCDs, the "best buys" — a package of 16 interventions that focus on key NCD risk factors and diseases — offer the most affordable, cost-effective and evidence-based interventions to prevent and control NCDs. For an additional investment of up to US$ 1.27 per person per year between now and 2030, substantial progress towards SDG target 3.4 (reduce premature NCD mortality by one third by 2030) can be achieved, millions of lives saved, and a considerable return of investment of approximately US$ 7 per US$ 1 invested would be realized. *(52)* The best buys include key strategies in the *WHO Framework Convention on Tobacco Control*, the WHO *Global strategy to reduce the harmful use of alcohol*, and other related global and regional strategies, frameworks and action plans that address priority NCD risk factors and conditions (see Annex 1).

However, the implementation of these recommended policies remains slow, holding back progress in attaining the global NCD targets. These policy interventions require action across multiple sectors, which can be challenging in the absence of strong leadership and a cross-sectoral coordinating and collaboration. The health sector should play a proactive role in advocating for actions beyond the health sector and using evidence

to effectively address concerns and counter the arguments from industries that lobby against policy and regulation. Additionally, building public awareness of and support for the policy interventions is important to ensure effective implementation of the policies. Populations that are affected by the policy interventions should be consulted as part of the policy-making process.

Health is influenced by the complex interaction of lifestyles, the environment and social determinants. Many of the drivers of health go beyond the health system, implying the need for cross-sectoral action to achieve a healthier and safer region. This is particularly true of NCDs — global evidence is accruing that suggests that SDH account for a major part of the distribution of disability and mortality from NCDs. *(53)* Access to health care alone is insufficient to guarantee good health, as demonstrated in Japan, where social determinants were found to correlate with diabetes prevalence despite UHC access. *(45)*

Research shows that the social determinants can be at least as important as health-care access or lifestyle choices in influencing health. Estimates show that the contribution of sectors outside health to population health outcomes exceeds the contribution from the health sector. *(54)* These influences are crucial across an individual's life course, and early investments in young people's health are especially important given the increasing lifespans in our Region.

NCDs, poverty and national economies are intricately enmeshed. Countering the NCD epidemic to facilitate sustainable development requires governments to address inequities and the social determinants that hold people and societies in poverty and ill health. Tools such as the *WHO Urban Health Equity Assessment and Response Tool* can help cities identify and reduce health inequities. *(55)*

The private sector also comprises an important component of an individual's social, physical and cultural environments. The commercial determinants of health have the potential to contribute positively or negatively to the health ecosystem. Also, the private sector plays an increasingly large role in public health policy, regulations and outcomes. Aside from business actions, corporations can influence public health, including influencing the political environment, the knowledge environment and preference shaping. These contributions can be beneficial or detrimental.

Addressing SDH appropriately is fundamental for improving health and reducing long-standing inequities in health. This requires action by all sectors and civil society. Long-term progress on NCD prevention and control requires a whole-of-system approach that tackles "the causes of the causes of NCDs" and takes a life-course approach to tackling social inequalities while creating health-promoting environments.

Recommendations for Member States

- Prioritization: Identify the highest-priority policies based on feasibility and impact and make the investment case as appropriate at the national and local levels.

  Research and evidence for the NCD "Best Buys" (such as increasing excise tax and price on tobacco products and alcoholic beverages) and SDH policies are robust at the global level. Given that the political, social, cultural and economic contexts vary significantly across countries, countries need to review these "best practices" within their own national contexts and prioritize those policy actions that are both feasible and have the potential for the greatest impact. More broadly, policies to address the root causes of NCDs and health inequity may include: 1) improving early child development; 2) improving access to fair employment and decent work; 3) improving social protection through social cash transfers; and 4) improving the living environment. Effective intersectoral or whole-of-government strategies using equity-focused approaches to implement policy actions across these themes offer an effective road map to redress health inequities, and ultimately, reduce the NCD burden. *(56)*

  Once the highest-priority policies have been identified, efforts to develop the local investment case, if appropriate, should be pursued to make a compelling case to cross-sectoral partners and policy leaders.

- Coalition building: Form a coalition across sectors to promote these policy priorities and help overcome the barriers to their establishment and implementation.

  Partnerships with other sectors, with civil society and with people living with NCDs (PLWNCDs) are a critical element to ensure successful passage of policy priorities. The health sector can amplify its voice by reaching out to non-health sectors and demonstrating the co-benefits of the policy priorities. Coalitions have a potentially powerful voice to influence the policy development process and are vital to ensure successful implementation at the community level. Effective coalitions are structured with clear goals and objectives, measurable targets, and well-defined roles and responsibilities. Real-life examples of successful coalitions exist in several of the Western Pacific Region countries and areas, and coalition building can be scaled up to encompass the entire Region (see Box 2).

- Engaging the public: Promote healthy lifestyles, increase the public's health literacy and engage affected populations.

  An engaged and committed population, armed with health literacy skills, can ensure the effective implementation and sustainability of NCD best buys.

Likewise, participation of civil society and affected communities in the design and implementation of policies to address SDH is essential to success. *(57)* Empowering social participation in designing health-promoting environments and healthy lifestyle interventions, and in the policy consultation process, increases the likelihood for a "grounds-up"* commitment to NCD prevention and control.

- Strengthen governance: Develop and enforce policies that foster healthy environments.

  Integrating the prevention and management of NCDs into health policy is essential for an effective national response to this epidemic. This includes building human resource capacities and enhancing multistakeholder engagement (including individuals, communities, faith-based organizations, civil society and intergovernmental organizations) for an integrated and accountable policy environment. Resources to monitor and coordinate NCD action plans should be strengthened while taking national resources and priorities into account. *(58)*

- Safeguard policy: Address role of commercial determinants of health in governance.

  The private sector plays an increasingly large role in public health policy, regulations and outcomes. Aside from business actions, corporations can influence public health by engaging in the political environment, incentivizing politicians and funding research with commercial interests. These contributions can be beneficial or detrimental. Countries can address commercial influence on public health policy by strengthening the evidence base, developing tools and capacity to address the commercial determinants, convening partnerships and dialogue, and raising awareness and advocacy through the Advisory Group on the Governance of the Private Sector for Universal Health Coverage, as well as programmatic and treaty approaches such as *WHO Framework Convention on Tobacco Control*. *(59)*

* *For the Future* advocated upgrading the traditional bottom-up approach to a grounds-up approach in which policy is planned and implemented via systematic and continuous interaction and feedback from the ground.

BOX 2. The Guam NCD Consortium

The Guam NCD consortium was established in 2011 as an umbrella organization comprising various public and private agencies and community members to collectively address NCD risk factors and disease burden in Guam. At that time, NCDs were the top cause of mortality and morbidity, with tobacco being the single largest contributor to the health burden. Working strategically over two decades, the NCD Consortium spearheaded the successful passage of several laws that raised the minimum age of tobacco use to 21 years, expanded the law on smoke-free public places, twice raised tobacco taxes with tax revenues earmarked in part for cancer prevention and care, and incorporated e-cigarettes and other alternative tobacco products into Guam's Tobacco Control Act. Because of the NCD Consortium's advocacy, the Guam Cancer Registry has sustainable local funding from tobacco tax revenues. Smoking prevalence has decreased significantly for all age groups, and for the first time in over a decade, lung cancer incidence decreased. The NCD Consortium has also promoted alcohol-control legislation, expanded breastfeeding initiatives, constructed exercise structures, established the Government of Guam's Worksite Wellness Program, and created more than 100 community gardens around the island. During the COVID 19 pandemic, the NCD Consortium utilized local data to highlight the integral role of NCDs in elevating risk and vulnerability during health emergencies and epidemics. In 2022, in part because of the NCD Consortium's advocacy, the Guam Department of Public Health and Social Services created a separate Bureau of NCD Prevention and Control to intensify Guam's comprehensive and integrated response to the NCD epidemic.

Sources:

1. Guam DPHSS website. Available at: https://dphss.guamdev.com/dph/communityhealthservices/non-communicable-disease-control-program/

2. David AM, Haddock RL, Bordallo R, Dirige JT, Mery L. The use of tobacco tax revenues to fund the Guam Cancer Registry: A double win for cancer control. Journal of Cancer Policy, 06/2017;12:34–35. Available online at DOI: http://dx.doi.org/10.1016/j.jcpo.2017.03.006

Objective 3. Screen the population for major NCDs

Rationale

Population screening for NCDs has a valuable role in reducing the NCD burden (Box 3). Early detection and intervention offer a cost-effective opportunity for the health-care system to identify disease at a stage when treatment is more effective and long-term complications can be delayed or avoided. Ideally, it should be integrated into primary care. Cost-effectiveness is an important consideration; the health system's capacity and available financial resources need to be factored in beside efficacy and impact data. *(60)* Screening interventions can start out with basic elements such as blood pressure checks, body mass index assessments, point-of-care blood sugar checks and the general physical exam. As capacities and resources grow, the screening panel can be expanded to include other types of examinations, for example, electrocardiograms, Pap smears, blood cholesterol determination, etc.

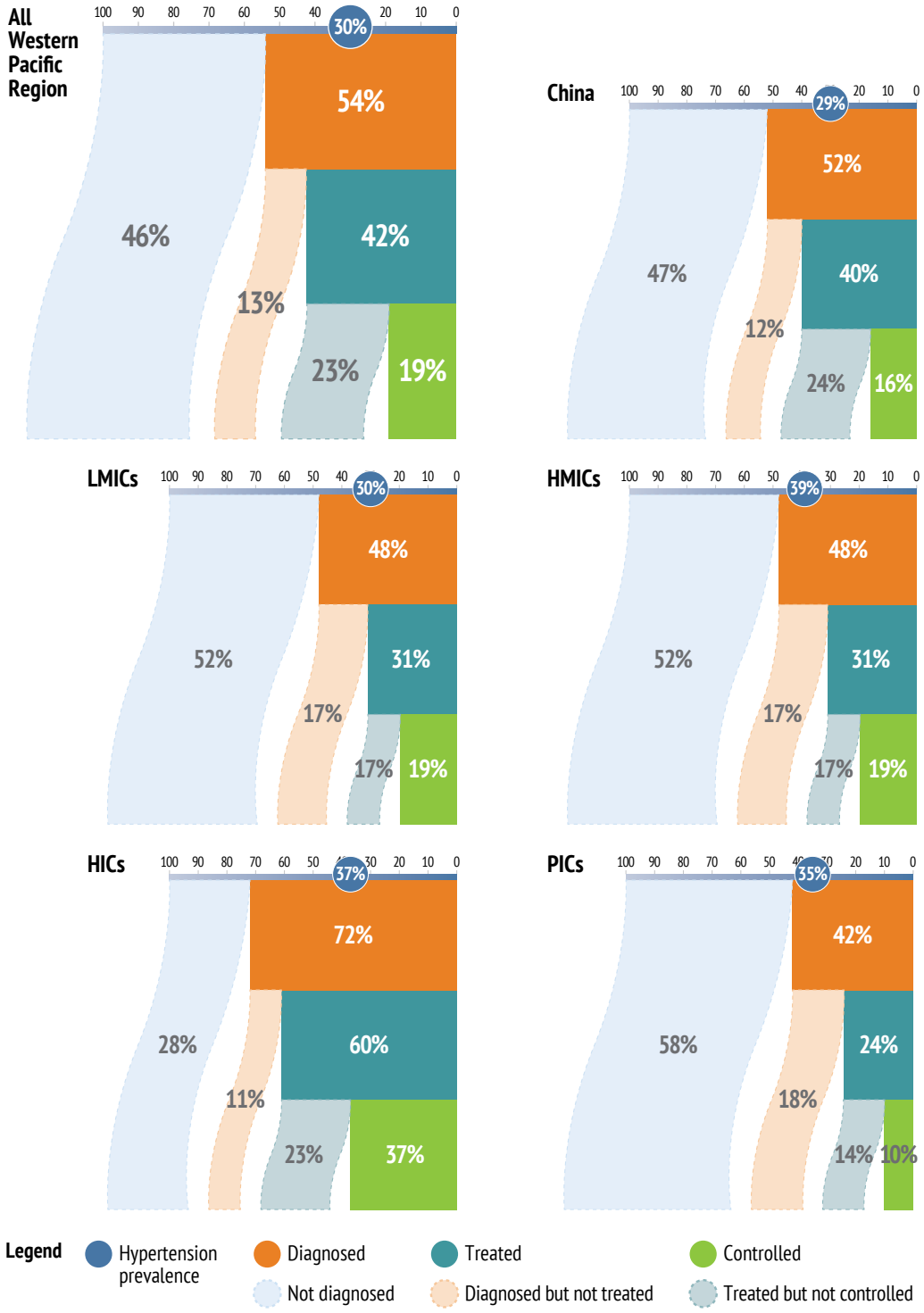
However, the research suggests that most NCD patients are not aware of their conditions early on, when NCDs tend to be asymptomatic. This poses a barrier to NCD management because individuals do not seek care when the condition is subclinical. For example, a recent global study documented that in LMICs and areas, more than one quarter of hypertensives had never had their blood pressure tested (Fig. 14). *(61)* Thus, a key health challenge for NCD prevention and control is how best to identify and reach high-risk groups before long-term and potentially irreversible health consequences have developed.

Recommendations for Member States

- Identify the at-risk population: Develop strategies to identify and stratify risk and intervene with individuals or groups of patients who require screening, follow-up and other interventions.

  Several tools exist to assist health-care providers at the primary care level quickly assess NCD risk, such as the WHO/International Society of Hypertension risk prediction charts to estimate the total risk for cardiovascular disease over a 10-year period. *(62)* Countries should take advantage of these tools within the primary care system and use them strategically to pinpoint those at-risk groups who would benefit from screening and early intervention.

Fig. 14 Many NCD patients are not aware of their health status nor receiving adequate treatment



HICs: high-income countries; HMICs: high-middle-income countries; LMICs: lower-middle-income countries; PICs: Pacific Island Countries and Areas.

Source: WHO. NCD risk factors: Blood pressure, Global Health Observatory (https://www.who.int/data/gho/data/themes/topics/noncommunicable-diseases-risk-factors, accessed 22 June 2022).

- Reach out: The primary care system should advocate for and support screening at the community level by employing creative strategies to reach out to at-risk populations. Specifically, countries can consider the following actions:

    1. Collaborate with other health programmes (for example, HIV/AIDS, tuberculosis (TB), malaria, occupational health, etc.) to facilitate and expand NCD screening. NCD screening can be integrated or "bundled" opportunistically during other clinic visits or done as part of employment physicals in occupational health clinics for both public and private workers. Point-of-care technologies and mHealth can be strategically used to facilitate screening. *(63)*

    2. Partner with diverse stakeholder networks and programmes to help broaden the reach of NCD screening initiatives. Screening can be embedded in community activities. For example, blood pressure measurement stations can be set up during street fairs or village fiestas. Community leaders, such as the heads of faith-based groups, can serve as NCD health champions. *(64)* While seemingly simple, these actions can help draw more at-risk individuals into care system, so that NCD risks can be mitigated early, and more permanent health consequences can be averted.

- Incentivize screening in health systems: Consider providing appropriate incentives to enable the health system to take a greater role in screening, based on cost-effectiveness analysis.

    Research into the field of behavioural economics documents the effectiveness of incentives when used judiciously to influence behaviour. *(65)* Offering health insurance premium discounts and removing patient co-pay requirements for screening are examples of incentives directed towards individuals. Incentives to target provider behaviour (such as pay for performance) may also be considered to improve quality of care and promotion of screening within primary care. *(66)* At the level of health-care systems, performance-based budget allocations that use screening implementation rates as one benchmark to determine funding for new initiatives may further drive greater screening coverage. *(67)* Guided by local cost-effectiveness analysis, health ministries may want to explore the benefits of using these and other appropriate incentives to increase NCD screening rates.

BOX 3. Population-wide NCD and communicable disease screening in Mongolia

Mongolia has a widely dispersed population of 3.3 million people, one third of whom live in rural areas. Reaching such a sparse population is a complicated task, which the country has accomplished by decentralizing health services and unveiling a national screening programme for communicable diseases and NCDs to support early detection and effective treatment of common illnesses. The early screening programme aims to improve disease diagnosis and management, supporting the population in increasing positive health outcomes and quality of life. The entire population, including remote and nomadic groups, is eligible for one screening per year within the programme, which is fully funded by the Health Insurance Fund of Mongolia.

Screenings and prevention measures emphasize the most common NCDs, including cardiovascular disease, diabetes, tuberculosis and mental health, while general physical exams focus on infectious diseases and cancers. Packages of screening services are tailored to specific age groups depending on predetermined risk factors and include assessing primary and intermediate risk factors, general clinical examinations, instrumental and laboratory tests, clinical opinions, advice and information, and referrals to tertiary (specialist) health levels if a diagnosis occurs. Services are delivered at all levels of the public health system, from village health centres to health promotion centres to specialized hospitals, and include mobile units for difficult-to-reach populations. In the case of an abnormal result or diagnosis, tertiary providers work with referring health facilities for case management and advice. Results of the screenings are recorded by health centres in the electronic register, which will be analyzed every two years, and a cost–benefit analysis of the programme will be performed every five years.

The Government anticipates tangible results to be seen within five to 10 years of the initial programme deployment. This expansive programme involves all levels of the health system and includes capacity- building in health education and behaviour change, community advocacy, and training for health-care providers. Mongolia's significant investment into NCD screening aligns with the *For the Future* vision and supports WHO's encouragement of increased primary health-care services for communicable disease and NCD control throughout the life course.

Source: Order of the Minister of Health of Mongolia. Number A/139. Ulaanbaatar City. 15 March 2022.

Objective 4. Strengthen primary health care to provide people-centred NCD management

Rationale

Primary health care (PHC) is key to providing continuity of care for NCDs — from health promotion/prevention, screening/early detection, and clinical management. Primary care needs strengthening so it can act as the gatekeeper for the health system. This will help to facilitate the timely detection and management of disease, improve accessibility, decongest higher levels of care, and streamline referrals to secondary and tertiary care facilities, as appropriate (Box 4).

The COVID-19 pandemic demonstrates the pervasive impact of NCDs on population health during an infectious disease outbreak. In reality, NCDs comprise the largest share of the health burden worldwide. We need to transition NCD management to a people-centred approach, and "accompany" them through the life course, protecting their mental, physical and reproductive health — including through support for management of chronic illnesses such as diabetes and hypertension, as well as rehabilitation and palliative care when needed. Public health services (for example, prevention and screening) to prevent and control NCDs should be guided by the principles of people-centred care, universal access and health equity. *(68)*

Despite widespread recognition of the burden of NCDs, and the concomitant need for seamless continuity of care, health systems are still predominantly tailored for episodic treatment of acute NCD crises. Clinical management of NCDs remains disease specific and vertical. And social participation — engaging patients and communities in health care — is often undervalued and underutilized.

Recommendations for Member States

- Integrate NCDs in PHC: Develop strategies to integrate NCDs into PHC, supported with the required workforce capacity and resources. Specifically, countries can consider the following actions:

    1. Identify various entry points for embedding NCD services into existing primary care services. This requires knowing the status of NCDs, existing policies and programmes within the primary health-care system, available NCD services/medicines/technologies, workforce capacities, and resources. Many communicable diseases, such as TB and HIV, are chronic conditions, similar to NCDs. Through creative leveraging of synergies within these chronic disease programmes, opportunities to improve efficiency and health outcomes of communicable and NCDs can be identified. PHC provides a common platform where both types of diseases can be effectively addressed through integrated preventive and curative interventions. *(68)*

2. Utilize existing guidance, such as the *WHO Package of Essential Noncommunicable (PEN) Disease Interventions for Primary Health Care (69)* and various assessment and treatment protocols. Appropriate clinical and care guidelines should be incorporated into primary care encounters, contextualized to countries' situation and resources.

- Build local capacity: Ensure that the PHC system is equipped to provide good quality care. Specifically, countries can consider the following actions:

  1. Determine the service delivery packages (interventions, medications and patient care pathways) for priority NCDs, drawing from the WHO PEN framework and other appropriate national guidelines.
  2. Strengthen the local primary care system to enable necessary service delivery, including governance (for example, policies, guidelines, operation manual and referrals) and systems inputs (for example, workforce training, funding, infrastructure, supplies and data).

- Ensure accessibility: Establish and strengthen the mechanism to make quality NCD care, including medications and procedures, accessible to the public, especially among vulnerable people.

  Access to quality care and cost-effective treatments based on sound scientific evidence and local needs must be assured for the most vulnerable in the population, so that health inequities are reduced.

BOX 4. Australia's cardiovascular disease risk guidelines incorporated into PHC

Cardiovascular disease accounted for over one third of deaths in Australia in 2008, and 64% of Australians have three or more modifiable risk factors. The Australian Government is currently updating the 2012 *Cardiovascular Disease Risk Guidelines*, which are intended to support primary care and other health professionals in predicting risk of cardiovascular disease and preventing "first-ever" cardiovascular disease events, using an absolute risk approach. The Guidelines are being updated to reflect the latest evidence in the prediction and management of vascular disease, including diabetes and chronic kidney disease, using tools validated to the Australian context. Revision of these guidelines will ensure health professionals at the frontline of PHC have up-to-date guidelines to better detect cardiovascular disease risk and help patients manage identified modifiable risk factors of the condition.

Source: National Vascular Disease Prevention Alliance. Guidelines for the management of absolute cardiovascular disease risk. 2012.

Objective 5. Empower patients for self-management and adherence, through health promotion, prevention and individualized data

Rationale

Today, patients have greater awareness and access to health information, especially in the context of COVID-19 and information available on the internet, but they must be equipped to use this information appropriately. Patient empowerment, a fundamental element of people-centred care, starts with health literacy. When people possess the knowledge, motivation and competence to understand and apply health information in making decisions about their health, multiple benefits accrue to health systems and individuals, such as:

- empowered citizens, patients, family (caregivers) and communities
- improved compliance with follow-up appointments, medication and instructions for at-home care
- increased patient satisfaction
- lower health-care spending.

In addition, the new model of health suggests that conditions influencing one's health status (for example, genetics, behaviour and the environment) are highly variable among individuals even within the same communities. Therefore, it is important that we provide tailored advice based on an individual's specific situation, in addition to standard, generic messages. Recent technological innovations are enabling more precise and real-time data collection (for example, vital signs and other health data such as electrocardiogram, blood glucose and blood oxygen saturation) and real-time and individualized advice (for example, specific diet and exercise advice based on one's physiological characteristics and current blood glucose level).

However, many countries in the Region have significantly low adherence to NCD treatment, in part because health services remain focused primarily on clinical care, rather than patient education and empowerment. Because compliance is influenced by patients' environments, including accessibility to care and the prevailing social norms and culture, we need to tailor messages to patients that address underlying environmental and social determinants of health. One-size-fits-all health promotion approaches and generic advice for self-care undermine the power of tailored messages to change behaviour towards a healthier standard. COVID-19 underscored the challenges of misinformation on the internet, calling attention to the urgent need to enhance health literacy.

Recommendations for Member States

Countries should work on the empowerment of individuals, leveraging increased health awareness and available technology.

- Health literacy: Three key components to health literacy include: 1) competence; 2) knowledge; and 3) motivation. Examples of interventions to augment these components include: *(70)*
    - diabetes education and self-management programmes
    - psychological counselling to adhere to lifestyle changes in patients with hypertension
    - patient-led peer support groups for patients with stroke
    - use of online decision tools for patients with cancer
    - patient courses on effective communication with doctors
    - "nudges" to influence people's behaviour and improve self-management *(71)*
    - media literacy training to recognize and counter health misinformation *(72)*

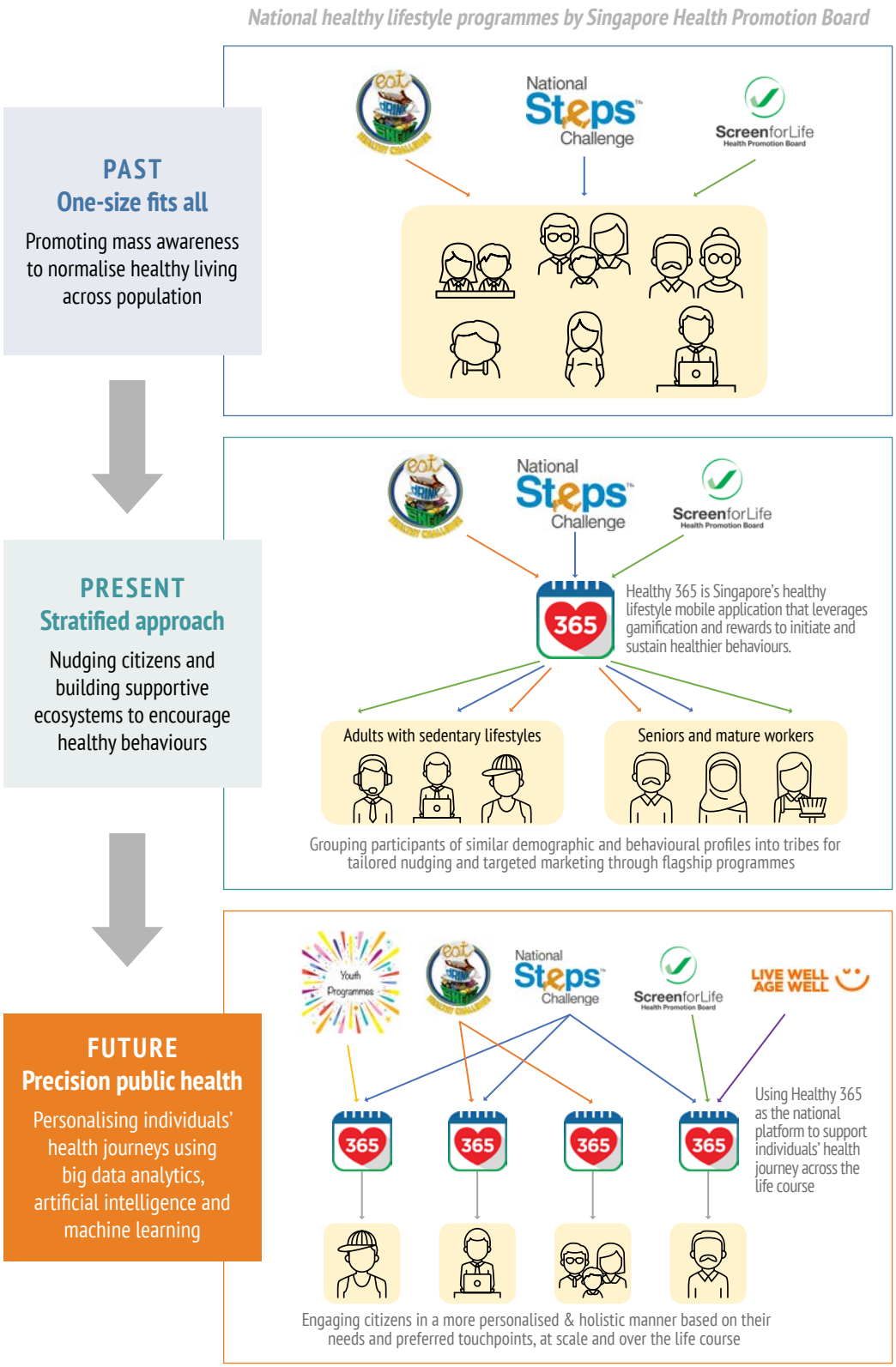
Specifically, countries can consider the following actions:

1. Support patient health literacy initiatives, using feasible platforms based on the national context.
2. Consider partnering with civil society, faith-based groups and other community organizations for health literacy training.
3. Explore the feasibility of online patient training tools to enhance health literacy.

- Precision public health: Start moving towards greater precision in public health (Fig. 15) to provide more specific interventions to the right population. Specifically, countries can consider the following actions:
- Use more targeted approaches for health promotion and patient education, such as through the implementation of the WHO Communication for Health (C4H) initiative (see Box 5).
- Encourage personalized data collection and advice, such as through wearable devices linked to electronic health records.
- Individualized advice: Equip health workers, especially at the primary care level, to provide individualized health advice and partner with existing community networks to develop tailored advice that is culturally appropriate.
- Utilize behavioural insight: Explore the use of various interventions that draw on the science of behavioural insight to influence or nudge people's behaviour towards health and lifestyle choices that reduce NCD risk and improve self-management.

Behavioural science research shows that people often make decisions intuitively, effortlessly and with little conscious awareness, underpinned by psychological (cognitive) biases. Knowledge of these biases can help design environments and interventions that circumvent or use the biases and achieve positive health outcomes. "Nudging" individuals towards healthier behaviours and greater treatment adherence augments the effect of population-based policy levers that shape behaviour. Some examples of these interventions include the creative provision of incentives and disincentives, the use of patient reminder systems and the use of mobile technology to provide feedback. *(73)*

Fig. 15 Moving towards precision public health in Singapore



Source: Health Promotion Board, Singapore.

BOX 5. Communication for health: A tool for patient empowerment

Empowering people living with NCDs (PLWNCDs) to meaningfully participate in decision-making, implementation and evaluation of NCD policies and interventions is essential. Traditional and social media, as well as traditional culture and art, will remain important channels of communication to educate the public, reduce cultural stigma associated with NCD diagnoses and support PLWNCDs to manage their own health. These information channels are increasingly precise and important resources, with sophisticated targeting of audiences for health information through social and digital media.

The Communication for Health (C4H) initiative can play a crucial role in assisting PLWNCDs to achieve better health literacy and increase access to the health-care system, ultimately leading to better health outcomes.

Effective health communication is audience specific. C4H, a programme of the WHO Regional Office for the Western Pacific, is a priority initiative to help attain the *For the Future* vision of a safer and healthier region, through the use of strategic communication to promote better health outcomes. Harnessing insights from social, behavioural and communication sciences, C4H works to increase knowledge, change attitudes and shift behaviours for improved health outcomes at the individual, community and societal levels, using audience-specific messaging and advocacy.

Source: WHO. Communication or health in the Western Pacific Region. Available at: https://www.who.int/publications/i/item/WPR-RD0-2021-003

4. DRIVERS FOR ACTION

The following "drivers" are important mechanisms that countries should strive to build because they can enable, facilitate or accelerate the implementation of the actions recommended above.

4.1 Cross-sectoral coordination mechanism

The determinants — social, environmental and commercial — that influence NCD risk and impact people's health mostly lie outside the health sector. Therefore, to effectively counter the NCD epidemic, countries by necessity must engage sectors beyond health and adopt a whole-of-government and whole-of-society approach (see Box 6).

Multistakeholder engagement and cross-sectoral collaboration to prevent and control NCDs require a coordination mechanism to engage, convene and connect diverse stakeholders including nongovernmental organizations, academia, religious and traditional organizations, and other sectors, for example, education, welfare, environment and finance.

Given that the integrity of public policy is protected and industry interference is effectively prevented, the private sector can also be a partner contributing to health. For example, businesses impact the health of their employees through their labour practices. Private sector can also impact the health of their clients and customers through the products and services that the businesses provide. In addition, businesses impact the health of the communities in which they operate, including through their environmental standards, tax contributions and advocacy. *(74)*

In addition, countries will benefit from the global movement for sustainable capital markets, such as environmental, social and governance investment criteria, that will impact investments by incorporating a health component to existing investment criteria and monitoring mechanisms. *(75)*

Countries should consider the following actions:

- Establish or reactivate the national cross-sectoral coordination mechanism and action for NCD prevention and control, and identify the priority areas for action, for example, developing and enforcing the disclosure guidelines for the private sector and hosting a dialogue on private sector's role in health.
- Develop practical guidelines for the private sector to contribute towards and invest in health-promoting environments, behaviours and health systems and to reduce health inequities, including building capacities to develop and enforce policies.
- Address the commercial determinants of health by partnering with civil society, adopting best-buy strategies and conflict-of-interest policies, and supporting safe spaces for discussions with industry.

BOX 6. Social prescribing: addressing NCDs among older people in Shangrao, China

Social prescribing is an innovative type of intervention aimed at addressing the social determinants affecting health. It is a means for health-care workers to connect people to a range of non-clinical services in the community to improve health and well-being. It can help address the underlying causes of a patient's health as opposed to simply treating the symptoms. It can take various forms, but all involve connecting patients to resources in their communities based on individual needs, often relying on link workers as intermediaries.

Various initiatives on social prescribing have been implemented by the WHO Regional Office for the Western Pacific to support health and address NCDs in later life. For instance, the WHO Healthy Ageing Unit and the Peking University Institute of Mental Health piloted a social prescribing scheme in Shangrao, China, from January to August 2021. The objective of the initiative was to support older people's physical and mental health by connecting them with relevant community resources. It relied on training mental health-care workers in the community to organize social prescribing activities with older people. These activities included dance and art classes, social gatherings and physical activity groups to improve older people's mental health by addressing anxiety, loneliness

and depression. Following this initiative, Peking University's team started piloting social prescribing in other Chinese cities and expected to cover 20 cities by the end of 2022.

Overall, social prescribing proposes a "grounds-up" approach to addressing NCDs, as promoted by the WHO *For the Future* vision. It relies on community assets to improve people's health. It also emphasizes the important role that communities play in supporting well-being, and the necessity to consider the impact of social determinants when addressing NCDs.

Source: World Health Organization (2022). A toolkit on how to implement social prescribing. https://apps.who.int/iris/handle/10665/354456

4.2 Sustainable financing mechanisms

Research demonstrates that investing in NCD prevention and control yields significant returns in health and society, including among LMICs. However, the links between an individual's NCD and the broader implications and costs it imposes on the general public are often overlooked. Sustainable financing mechanisms are crucial for the success of NCD interventions, but in several countries NCD programmes struggle to obtain significant financing.

To attain the NCD-related SDG targets by 2030, countries need a shift in perspective so that NCD prevention and control are framed as a worthwhile investment that yields substantial health and socioeconomic gains, rather than as a cost and drain on a country's budget. Investing in NCD management needs to be supported by sustainable financial and human resources. Some funding mechanisms used by various countries in the Region include:

- the creation of health promotion foundations financed through tax revenues, such as what was achieved in Mongolia, Singapore and Australia;
- allocating a larger portion from the government's budget to NCD prevention and control;
- new revenue generation for NCDs through taxes, loans or grants, for example, bilateral and multilateral developmental assistance, as well private sector philanthropies and partnerships;
- national health insurance systems; and
- leveraging shared resources from other programmes that overlap with NCDs or have co-benefits.

In addition, it is equally important that wealthy nations provide more and higher-quality resources to the neediest countries to complement domestic resources for NCDs. *(76)*

Countries should consider the following actions:

- develop a strong investment case for NCD prevention and control (see Box 7) and use this to advocate for increased funding for NCD programmes;
- advocate for a larger portion of domestic funding allocation for NCDs;
- pursue win–win health financing mechanisms such as pro-health excise taxes, with a portion of tax revenues allocated for NCD programmes; and
- explore innovative financing options such as through appropriate public–private partnerships and innovative economic tools supported by evidence.

BOX 7. The NCD investment case for the Philippines

The Philippines conducted three analyses of the impact of NCDs on economic output and relative returns on investment in NCD prevention and control. An economic burden analysis shows that economic losses from NCDs (direct and indirect costs) comprise 756.5 billion Philippine pesos, which is equivalent to 4.8% of GDP in 2017. An intervention costing analysis estimated that some 29 billion Philippine pesos would be required to implement a set of policy interventions for prevention and clinical interventions over a 15-year period. A cost–benefit analysis demonstrated these implementation costs would result in a return of investment of approximately 378 billion Philippine pesos over 15 years (13 times greater than the cost), with estimated health gains and productivity losses. The report concluded that actions to prevent NCDs in the Philippines are relatively cheap and cost-effective.

The findings from this analysis generated the rationale for increasing taxes on tobacco and alcohol and were instrumental to the passage of key legislation in the Philippines.

Source: WHO. Prevention and control of Noncommunicable Diseases in the Philippines. The Case for Investment, Philippines, 2019. Geneva: World Health Organization; 2019 (WHO/UHC/CDS-NCD/19.90). License: CC BY-NC-SA 3.0 IGO.

4.3 Advisory function for evidence-based policy and implementation

National and local institutions within ministries of health, national institutes and academic bodies can play a critical role in facilitating the "grounds-up" process for NCD prevention and control by serving as "technical support hubs". Serving a technical advisory function, these hubs build the knowledge base and evidence for NCD prevention control and can help close the gap between evidence and action by:

- serving as a repository of relevant data, evidence, case studies, and global and regional guidance to form the basis of national and subnational NCD prevention and control policies and strategies;
- supporting the research agenda for NCDs and disseminating the knowledge within and beyond the country;
- developing policy analysis, publications and briefs on relevant and timely issues to support advocacy, policy and implementation at national and subnational levels; and
- undertaking evaluation and assessment of the effectiveness, cost-effectiveness, and impacts of NCD interventions and policies — and updating the national guidance based on the feedback.

Countries should consider the following actions:

- Identify local experts and engage in the planning, implementation and monitoring of these "technical support hubs".
- Develop an in-country plan for "grounds-up" adoption of sound NCD prevention and control policies and programmes.
- Explore the feasibility and utility of creating NCD councils at the national and local levels.

4.4 Effective community engagement, including with vulnerable populations

A community is an essential component of individual healthy decision-making. Community engagement for NCD prevention and control aims to establish a collaborative relationship towards reducing the NCD burden, where the community and individuals gain a sense of shared ownership and participation in the NCD programme and assume joint accountability for its implementation and outcomes. *(77)* This process is especially crucial or vulnerable populations, particularly PLWNCDs, because research shows that when people are engaged in shared decision-making for health, health outcomes are improved.

In the 2018 *Political declaration of the third high-level meeting of the General Assembly on the prevention and control of non-communicable diseases*, governments committed to "promote meaningful civil society engagement and amplify the voices of and raise awareness about people living with and affected by NCDs". Furthermore, SDG target 16.7 aims to "ensure responsive, inclusive, participatory and representative decision-making at all levels". Communities derive social capital from existing social networks; these networks can play an important role in accelerating progress on NCDs if given the community groups opportunity to take part in selecting priorities, planning and implementing interventions, and assessing impact. The health sector would benefit from working with these groups and networks at both the national level (for example, national faith-based organizations, traditional leaders, civil society groups, etc.) and local level (for example, parents' groups, youth groups, women's associations, veterans' associations, etc.), and tapping into their inherent social capital to support NCD prevention and control (see Box 8).

Countries should consider the following actions:

- Identify opportunities for sustainable and meaningful engagement and establish a collaborative relationship with prospective partners, including vulnerable groups and PLWNCDs.
- Establish inclusive NCD governance mechanisms, acknowledging the role of PLWNCDs and civil society partners in health decision-making, from policy-making to implementation. *(78)*
- Train health-care workers at the primary care level or community volunteers to practise social prescribing in order to identify and form partnerships with community assets that have the potential to connect PLWNCDs with social non-medical needs to a range of services in the community to improve health and well-being. *(79)*
- Explore the feasibility of tapping into online communities to link PLWNCDs with health information and local resources, as well as organizing support groups.

BOX 8. Saku Hospital, Japan: "Teach me, Doctor"

Saku Central Hospital was established in 1944 in Nagano, a mountainous rural region in Japan. The hospital aims to support health promotion efforts through meaningful community engagement approaches, including using hospital festivals, community theatre and, most recently, a mobile application called "Teach me, Doctor."

The Teach me, Doctor app was developed to address the problem of overutilization of emergency room services for non-emergency child health concerns. The app facilitates key paediatric triage and self-care to support parents and protect the hospital emergency room from overcrowding. It does this by providing reliable information on child-related health concerns and injury prevention, while offering parents resources for ambulance, fire and other social services. Through this approach, the Teach me, Doctor app also addresses the secondary problem of the high prevalence of unreliable online medical information, especially for parents. High internet connectivity and the widespread use of social networking services in the community meant the Teach me, Doctor app was a context-specific intervention that successfully contributed to reduced overutilization of emergency services for non-emergency-related child health issues.

This online platform helped Saku Hospital understand the community's needs and questions better. It supplemented hospital's other community-based activities such as participatory hospital festivals, lectures on health promotion for parents and nursery school visits. These strategies also incorporated play as a key element in capturing the interest of the community, especially children, in learning more about healthy behaviours.

Source: Oshiete Doctor Project. https://oshiete-dr.net/

5. APPROACH FOR IMPLEMENTATION

5.1 Aligned with *For the Future*

For the Future: Towards the Healthiest and Safest Region, which is the shared regional vision for WHO work with Member States and partners, articulates the need to act today to address the challenges of tomorrow. This Regional Action Framework aligns with the implementation approach outlined in *For the Future*, by: 1) setting a long-term goal and agenda; 2) planning how best to achieve the goal; and 3) using a try, learn, and improve approach to close the gap between the current situation and the long-term goal (Fig. 16).

To address the problems of the future, countries are encouraged to consider the following concepts:

- **Use a hypothesis-driven approach**

  With myriad possible solutions to the NCD epidemic, a pragmatic and streamlined approach is needed. The hypothesis-driven approach is a practical framework to address Member States' complex and diverse challenges through efficient problem-solving. Instead of attempting to find answers by scouring through large datasets and publications, the highest-priority problems and questions are first identified. Once the defined problem is well understood, targeted hypotheses are developed, then data are collected and analysed to validate, modify or reject those hypotheses. Findings are communicated in a compelling, concise and logical way to drive further action.

The hypothesis-driven approach will enable the processing of large quantities of data and quick identification of tailored solutions, building capacity to address long-term issues, which may be complex, invisible and unique, while solving today's problems, which may be more obvious and straightforward. *(80)*

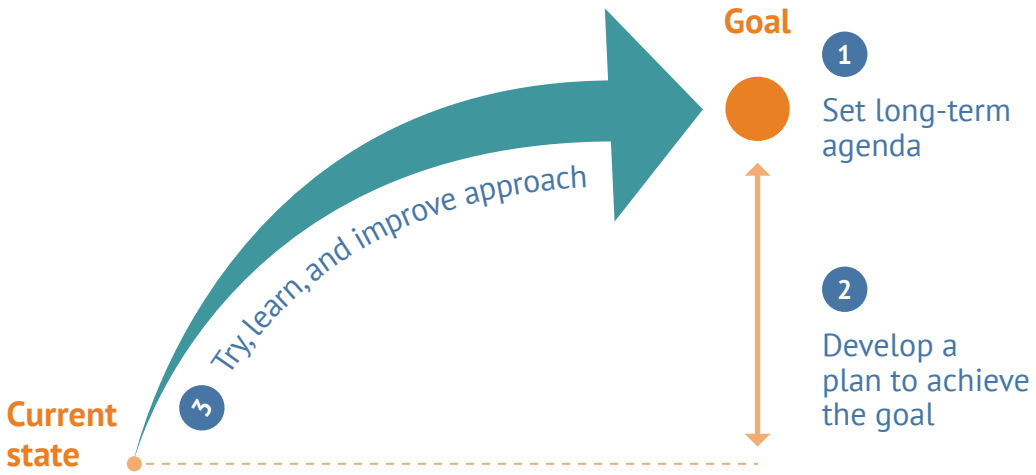
- **Try, learn and improve**

  The hypothesis-driven approach is complemented by an iterative and incremental process of trying out interventions, learning about their feasibility and acceptability based on community and stakeholder feedback, and improving interventions as the process unfolds. This experimental methodology replicates the "lean start-up" approach in commercial ventures for product development. *(81)* Applied to NCD prevention and control, once an NCD priority is selected, "quick- win" interventions are quickly tested and adjusted based on feedback.

- **Prioritize and leverage existing assets**

  Since resources available for the NCD prevention and control may be limited, countries are encouraged to prioritize the most effective and feasible actions and implement these using available resources, for example, existing programmes, networks, data systems, care provision infrastructure, etc., rather than attempting to develop the supporting infrastructure from scratch.

Fig. 16 Approach in *For the Future*



Source: Adapted from *For the future: towards the healthiest and safest region*: a vision for WHO work with Member States and partners in the Western Pacific. Manila: World Health Organization Regional Office for the Western Pacific; 2020.

- **Innovate and leapfrog**

  The COVID-19 pandemic created opportunities for unprecedented momentum for health, where innovations — new products and technologies — were developed at accelerated speeds. Telemedicine, the utilization of smart devices for symptom monitoring, data collection, automated contact tracing, and expedited development and deployment of COVID-19 vaccines are examples of rapid deployment of innovation for health care. The expanded use of mHealth has also created new opportunities for rapid, real-time personalized health monitoring. Evidence demonstrates that simple, regular reminders from mHealth technologies can improve NCD patients' adherence to treatments and support tobacco cessation. Countries can expand these innovations used during the COVID-19 pandemic and adapt them to accelerate progress in NCDs.

5.2 Recommended steps for implementation

Keeping these concepts in *For the Future* in mind, countries may consider the following steps for successful implementation of the Regional Action Framework (Fig. 17).

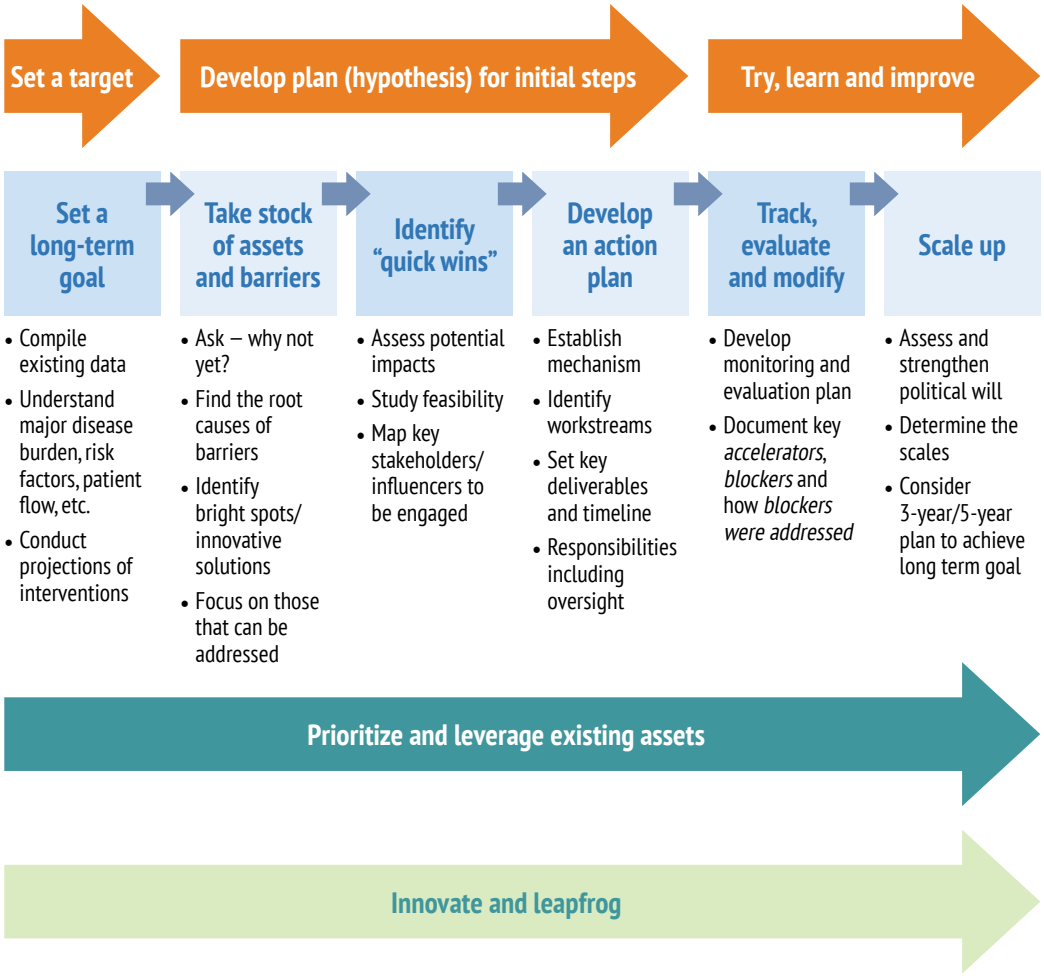
- **Set a long-term goal**

  Instead of focusing on immediate issues, a long-term vision is needed to make sure what we are doing today is moving towards the desired goal. The burden of NCDs will keep growing unless we take serious action today. The Seventy-second World Health Assembly adopted the decision to extend the period of the original WHO *Global Action Plan for the Prevention and Control of Noncommunicable Diseases* to 2030 to ensure alignment with the 2030 Agenda for Sustainable Development. Member States can set their long-term goal in line with this global target based on their unique contexts.

  Member States may consider the following:

  - analyse major disease burden and risk factors contributing to the major NCDs;
  - consider the national health and development targets, including economic and social development, and align the long-term NCD goals with these development targets; and
  - conduct projections of interventions and work backwards to map actions needed today; meanwhile, a long-term plan can be drafted with periodic milestones identified to achieve the goal.

Fig. 17 Recommended steps for implementation



Source: World Health Organization – Western Pacific Region

- **Take stock of assets and barriers**

  Member States have built their own systems and accumulated experiences and assets from past or existing programmes. This may include effective partnerships or education programmes for community health workers, existing political commitments or policies such as NCD best buys and WHO Framework Convention on Tobacco Control. There are also innovative solutions that are rooted in the communities. It is important to learn from these experiences and build on the successes or assets. It is equally important to understand the barriers that have been blocking meaningful progress in NCD prevention and control. Finding effective strategies to tackle these barriers requires looking beyond the barriers themselves to their root causes, and generating creative and innovative strategies to overcome the actionable root causes.

Member States may consider the following:

- Identify the bright spots and successes in NCD prevention and control, or even in broader context, and determine what has worked.
- Ask "why not yet" to understand the root causes of barriers.
- Identify innovative solutions to tackle the most important actionable root causes of barriers for progress and change, for example, make the investment case to address economic concerns.

- **Identify "quick wins"**

  Traditionally, public health programmes develop a comprehensive multi-year plan, raise funds and begin building the necessary components. Under the lean start-up approach, countries are encouraged to test the full concept on a small scale and revise and discard hypotheses, rapidly iterating this approach. This strategy reduces the chances of success while saving time and resources and enables forward momentum.

  First, countries should identify quick wins based on: 1) the existing assets and resources; 2) the long-term goal and actions needed today; and 3) the appraisal of assets and barriers. These quick wins are not ad hoc, partial components of the NCD strategy, rather they should be relevant (linked to a long-term goal and address the country's unique context), feasible (utilizing existing assets) and scalable (no significant investment required). Examples of these quick wins include an evidence-based policy intervention that can effectively address a top risk factor for NCDs, the integration of screening for a major NCD, for example, hypertension, in the primary health system at the subnational level, or a community engagement initiative that empowers patients to adhere to drug therapy through an established community network. Validate the quick wins by seeking consensus within the community and with potential partners within and beyond the health sector.

  Member States may consider the following:

  - Organize a stakeholders meeting and review the outcome of stocktaking, for example, assets, barriers, and opportunities, and come up with potential ideas of quick wins.
  - Prioritize these ideas based on impact, feasibility, and scalability.
  - Agree on the evaluation and scale-up plans.

- **Develop an action plan**

  Once the quick wins are identified, Member States can create a mechanism to ensure the quick wins are proactively pursued and attained. This may involve establishing a working committee that is composed of members of key stakeholders across sectors, supported by an advisory group that can provide expertise, data and evidence to guide the working committee. The working committee can then draw up an action plan, mapping the necessary work streams, assigning responsibilities and setting a clear timeline. The development of the action plan is also a process for consensus building at a deeper level.

  Member States may consider the following:

  - Establish a mechanism that may include a working committee (group) and an advisory group to the working committee.
  - Identify necessary work streams and key actions by each work stream.
  - Set key deliverables and a timeline.
  - Assign roles and responsibilities.
  - Agree on the oversight and management of the working committee.

- **Track, evaluate and modify**

  Once carrying out the workplan, it is critical to monitor and track progress, which would allow timely identification of challenges. A different strategy or path may be needed to obtain the quick wins, and modification to the workplan may be needed. Evaluation of the outcomes should be conducted to ensure that this adaptive process provides valuable lessons for future efforts.

  Member States may consider the following:

  - Monitor and evaluate outcomes and impact.
  - Use the evaluation data to further refine and improve the workplan.
  - Document key "accelerators" and obstacles, and how obstacles were removed or overcome.

- **Scale-up**

  Revisit and revise the long-term plan based on experiences and lessons learnt from efforts in obtaining the quick wins. The long-term plan can include the expansion of the quick-win interventions in similar communities or among a broader population, adapting the interventions based on demographics, culture, local context and other variables. Mobilize and plan sustainable resources (financial and human) for the implementation of the long-term plan.

Member States may consider the following:

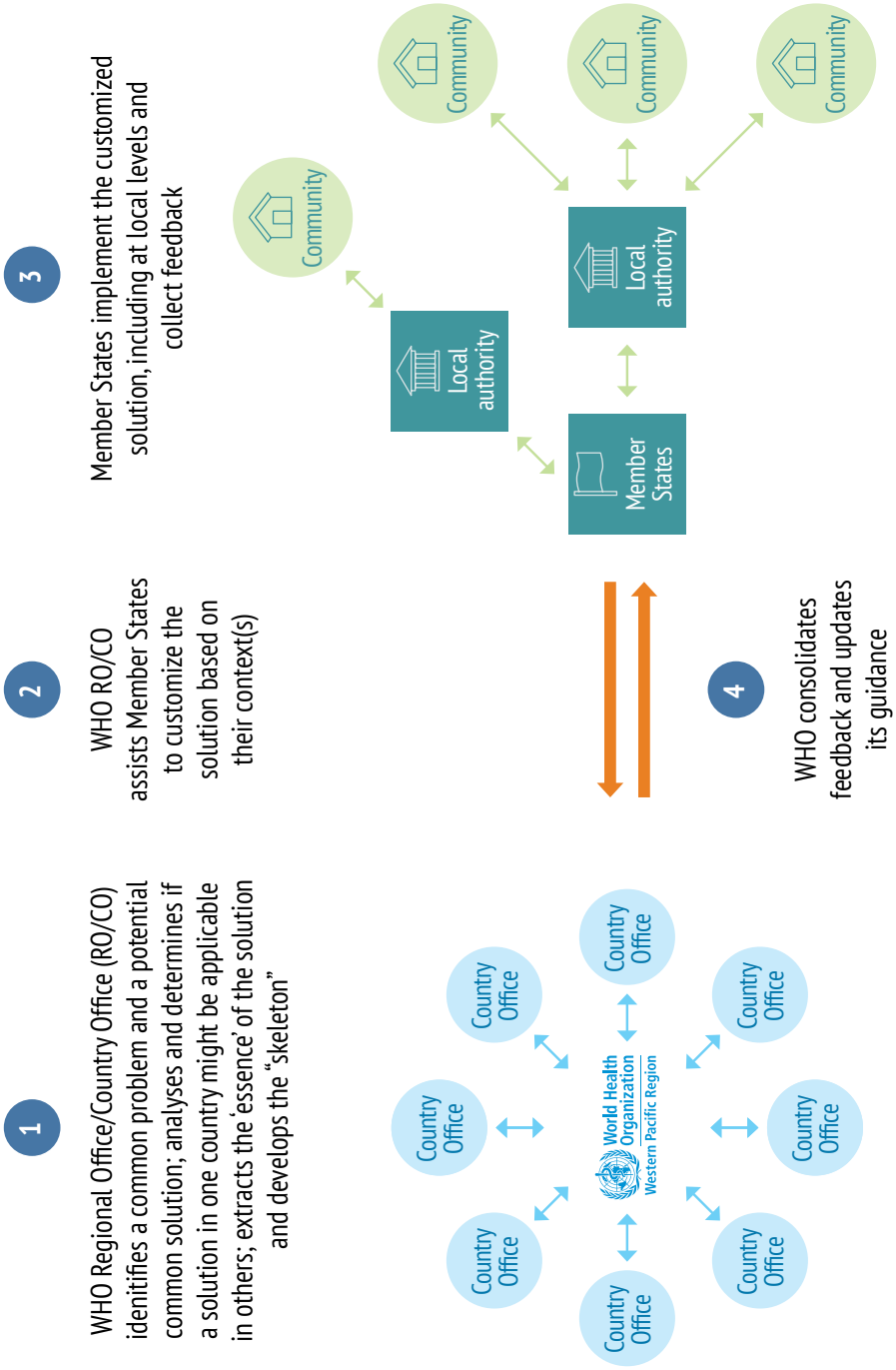
- Assess and strengthen political will.
- Determine the magnitude of the scale-up.
- Develop and implement an evaluation plan with key indicators, both process and outcome indicators, and use the monitoring data to revise and further improve the workplan so that the long-term goals are achieved.

6. WHO ACTIONS

WHO in the Western Pacific Region will support Member States in implementing this Regional Action Framework. Such action will: 1) compile relevant data, evidence and experience to provide technical guidance for common problems with potentially common solutions; 2) assist Member States customize technical guidance including this Regional Action Framework based on its cultural, political and economic context; 3) assist Member States implement the customized solutions both at the national and subnational levels; and 4) consolidate feedback, update guidance, facilitate exchange information and learn from one another (Fig. 18).

- **Technical guidance**
  - Compile the evidence and data, including case studies, to inform policy development in Member States.
  - Convene the Technical Advisory Group on NCDs periodically to seek expert advice and update our guidance.
  - Advocate for and lead Region-wide efforts on common priorities, such as implementation of health-promoting policies.
  - Collect feedback on implementation from different countries and use these to periodically update our regional guidance.

Fig. 18 Role of WHO in the Western Pacific to support the implementation of NCD policies



Source: World Health Organization – Western Pacific Region

- **Technical support for Member States to tailor solutions**
  - Support Member States to develop an investment case for NCDs and advocate for the greater actions on NCD prevention and control (such as the development of policies and health system transformation), including actions to address health inequity and social determinants of health.
  - Help Member States develop tailored national strategies and implementation approaches based on their national context.
  - Work with Member States to design the try, learn and improve process, and implement it within countries.
  - Work with Member States to identify the opportunity for the private sector to contribute to health-promoting environments, products and services, as well as practical guidelines. Monitor the progress of NCD prevention and control in line with the Global Monitoring Framework (Annex 3).

- **Technical support for Member States to implement solutions**
  - Member States' participation in national and subnational capacity-building initiatives for effective NCD prevention and control, especially capacity at the local level.
  - Work with Member States to support national policy at subnational level and incorporate feedback from the subnational level into the national policy.

- **Knowledge exchange**
  - Support ongoing knowledge exchange to enable cross-regional learning on NCD prevention and control.

ANNEXES

Annex 1. List of Western Pacific regional action frameworks

Framework	Description
Action Framework for Safe and Affordable Surgery in the Western Pacific Region (2021–2030)	This Action Framework was adopted by Member States in recognition that "there can be no universal health coverage without access to safe and affordable surgery".
Communication for Health in the WHO Western Pacific Region (C4H)	C4H is part of the vision contained in *For the Future: Towards the Healthiest and Safest Region*, which recognizes the power of strategic communication as a tool for contributing to better health outcomes and highlights the need for further investment in this area.
Framework for Accelerating Action to Fight Antimicrobial Resistance in the Western Pacific Region	This Framework guides countries to avert the impact of antimicrobial resistance and secure the health, social development and future of the people in the Western Pacific Region.
Draft Framework on Reaching the Unreached in the Western Pacific Region	Reaching the unreached is a major thematic priority of *For the Future*, and critical to achieving universal health coverage (UHC) while leaving no one behind.
Draft Regional Framework for the Future of Mental Health in the Western Pacific 2023–2030	*For the Future* highlights mental health as a vital issue for the future health and security of the Western Pacific Region. Its endorsement by Member States represents a strategic opportunity to extend the *For the Future* vision to the mental health agenda and co-create an ambitious new vision for the future of mental health.
Regional Action Framework on Protecting Children from the Harmful Impact of Food Marketing in the Western Pacific	This Regional Action Framework aims to support Member States in their efforts to protect children from the harmful impact of food marketing. The Framework is comprised of four pillars for action — a policy framework, multisectoral and multistakeholder collaboration, advocacy and communication, and monitoring and evaluation — and 10 recommended actions.

Framework	Description
Universal Health Coverage: Moving Towards Better Health	*Universal Health Coverage: Moving Towards Better Health* is an action framework that has been developed to support countries in realizing the vision of better health through UHC. It outlines shared principles of UHC and reflects the values of the WHO Constitution, the health-for-all agenda set by the *Alma-Ata Declaration* in 1978 and multiple World Health Assembly resolutions.
Western Pacific Regional Framework to End TB (2021–2030)	The aim of the 2030 Regional Framework is to provide the basis (reasoning) and concepts for multisectoral actions that countries can adapt to their context and implement with all stakeholders to achieve the targets of the global *End TB Strategy* by 2030.
Regional Action Plan on Healthy Ageing in the Western Pacific	This Regional Action Plan was developed to support Member States in taking early action to prepare for population ageing. It outlines five objectives for promoting healthier older adults who are thriving and contributing in society.
Draft Regional Framework on the Future of Primary Health Care in the Western Pacific	This framework aims to reimagine PHC as people-centred, comprehensive across the life course, facilitating community participation, equitable, and continuously adaptable.
Draft Strategic Framework for the Comprehensive Prevention and Control of Cervical Cancer in the Western Pacific Region	The goal of this Strategic Framework is to provide an integrated, resilient and comprehensive approach to the prevention and control of cervical cancer, aligned to the global strategic documents on elimination of cervical cancer as a public health problem and tailored to the *For the Future* vision.
Regional Action Plan for Tobacco Control in the Western Pacific (2020–2030)	This Regional Action Plan represents an updated and robust road map for countries and areas in the Region to take definitive strategic action to achieve global tobacco control goals and counteract a shared threat to health, longevity and prosperity across the Western Pacific Region.

Framework	Description
Regional Framework for Harnessing Traditional and Complementary Medicine for Achieving Health and Well-being in the Western Pacific	This Regional Framework will help promote traditional and complementary medicine for health and well-being in national policies, strengthen mechanisms to ensure safety, quality and effectiveness of these services, improve their coverage, and support their documentation, research, and innovation.
Western Pacific Regional Framework for Action on Health and Environment on a Changing Planet	The Regional Framework for Action intends to relaunch the WHO Health and the Environment programme and fulfil its mandate in the area of environmental health.
Regional Framework on Nurturing Resilient and Healthy Future Generations in the Western Pacific	This Regional Framework will help countries achieve the goals of entrenching healthy behaviours that stick, enabling schools to positively influence communities, and investing in schools today to build a healthier tomorrow.

Annex 2. NCD best buys

The 16 NCD best buy interventions	
Tobacco 	1. Increase excise taxes and prices on tobacco products 2. Implement plain/standardized packaging and/or large graphic health warnings on all tobacco packages 3. Enact and enforce comprehensive bans on tobacco advertising, promotion and sponsorship 4. Eliminate exposure to second-hand tobacco smoke in all indoor workplaces, public places and public transport 5. Implement effective mass-media campaigns that educate the public about the harms of smoking/tobacco use and second-hand smoke
Alcohol 	6. Increase excise taxes on alcoholic beverages 7. Enact and enforce bans or comprehensive restrictions on exposure to alcohol advertising (across multiple types of media) 8. Enact and enforce restrictions on the physical availability of alcohol in sales outlets (via reduced hours of sale)
Healthy diets 	9. Reduce salt intake through the reformulation of food products to contain less salt, and the setting of maximum permitted levels for the amount of salt in food 10. Reduce salt intake through establishing a supportive environment in public institutions such as hospitals, schools, workplaces and nursing homes, to enable low-salt options to be provided 11. Reduce salt intake through behaviour change communication and mass-media campaigns 12. Reduce salt intake through the implementation of front-of-pack labelling
Physical activity 	13. Implement community-wide public education and awareness campaigns for physical activity, including mass-media campaigns combined with other community-based education, motivational and environmental programmes aimed at supporting behavioural change around physical-activity levels

The 16 NCD best buy interventions	
Manage cardiovascular disease and diabetes 	**14.** Provide drug therapy (including glycaemic control for diabetes mellitus and control of hypertension using a total-risk approach) and counselling for individuals who have had a heart attack or stroke and for persons with high risk (≥ 30%) of a fatal or non-fatal cardiovascular event in the next 10 years
HPV vaccination & cervical cancer screening 	**15.** Vaccination against human papillomavirus (two doses) of girls aged 9 to 13 years **16.** Prevention of cervical cancer by screening women aged 30 to 49 years, either through visual inspection with acetic acid linked with timely treatment of precancerous lesions; pap smear (cervical cytology) every 3 to 5 years, linked with timely treatment of precancerous lesions; human papillomavirus tests every 5 years, linked with timely treatment of precancerous lesions

Source: World Health Organization. (2017). Tackling NCDs: 'best buys' and other recommended interventions for the prevention and control of noncommunicable diseases. World Health Organization. https://apps.who.int/iris/handle/10665/259232. License: CC BY-NC-SA 3.0 IGO

Annex 3. Comprehensive global monitoring framework

Framework element	Target	Indicator
MORTALITY & MORBIDITY		
Premature mortality from noncommunicable diseases	**1.** A 25% relative reduction in the overall mortality from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases	**1.** Unconditional probability of dying between ages of 30 and 70 from cardiovascular diseases, cancer, diabetes or chronic respiratory diseases
Additional indicator		**2.** Cancer incidence, by type of cancer, per 100 000 population

Framework element	Target	Indicator
BEHAVIOURAL RISK FACTORS		
Harmful use of alcohol[1] 	**2.** At least 10% relative reduction in the harmful use of alcohol[2], as appropriate, within the national context	**3.** Total (recorded and unrecorded) alcohol per capita (aged 15+ years old) consumption within a calendar year in litres of pure alcohol, as appropriate, within the national context **4.** Age-standardized prevalence of heavy episodic drinking among adolescents and adults, as appropriate, within the national context **5.** Alcohol-related morbidity and mortality among adolecesnts and adults, as appropriate, within the national context
Physical inactivity 	**3.** A 10% relative reduction in prevalence of insufficient physical activity	**6.** Prevalence of insufficiently physically active adolescents, defined as less than 60 minutes of moderate to vigorous intensity activity daily **7.** Age-standardized prevalence of insufficiently physically active persons aged 18+ years (defined as less than 150 minutes of moderate-intensity activity per week, or equivalent)

Framework element	Target	Indicator
BEHAVIOURAL RISK FACTORS		
Salt/sodium intake 	**4.** A 30% relative reduction in mean population intake of salt/sodium[3]	**8.** Age-standardized mean population intake of salt (sodiur chloride) per day in grams in persons aged 18+ years
Tobacco use 	**5.** A 30% relative reduction in prevalence of current tobacco use in persons aged 15+ years	**9.** Prevalence of current tobacco use among adolescents **10.** Age-standardized prevalence of current tobacco use among persons aged 18+ years
BIOLOGICAL RISK FACTORS		
Raised blood pressure 	**6.** A 25% relative reduction in the prevalence of raised blood pressure or contain the prevalence of raised blood pressure, according to national circumstances	**11.** Age-standardized prevalence of raised blood pressure among persons aged 18+ years (defined as systolic blood pressure 2140 mmHg and/or diastolic blood pressure ≥90 mmHg) and mean systolic blood pressure
Diabetes and obesity[4] 	**7.** Halt the rise in diabetes & obesity	**12.** Age-standardized prevalence of raised blood glucose/ diabetes among persons aged 18+ years (defined as fasting plasma glucose concentration z 7.0 mmol/L (126 mg/dl) or on medication for raised blood glucose) **13.** Prevalence of overweight and obesity in adolescents (defined according to the WHO growth reference for school-aged children and adolescents, overweight — one standard deviation body mass index for age and sex, and obese — two standard deviations body mass index for age and sex) **14.** Age-standardized prevalence of overweight and obesity in persons aged 18+ years (defined as body mass index ≥ 25 kg/m^2 for overweight and body mass index ≥ 30 kg/m^2 for obesity)

BIOLOGICAL RISK FACTORS	
Additional indicators	**15.** Age-standardized mean proportion of total energy intake from saturated fatty acids in persons aged 18+ years[5] **16.** Age-standardized prevalence of persons (aged 18+ years) consuming less than five total servings (400 grams) of fruit and vegetables per day **17.** Age-standardized prevalence of raised total cholesterol among persons aged 18+ years (defined as total cholesterol 25.0 mmol/l or 190 mg/dl); and mean total cholesterol concentration

Framework element	Target	Indicator
NATIONAL SYSTEMS RESPONSE		
Drug therapy to prevent heart attacks and strokes 	**8.** At least 50% of eligible people receive drug therapy and counselling (including glycaemic control) to prevent heart attacks and strokes	**18.** Proportion of eligible persons (defined as aged 40 years and older with a 10-year cardiovascular risk 230%, including those with existing cardiovascular disease) receiving drug therapy and counselling (including glycaemic control) to prevent heart attacks and strokes
Essential noncommunicable disease medicines and basic technologies to treat major noncommunicable diseases 	**9.** An 80% availability of the affordable basic technologies and essential medicines, including generics, required to treat major noncommunicable diseases in both public and private facilities	**19.** Availability and affordability of quality, safe and efficacious essential noncommunicable disease medicines, including generics, and basic technologies in both public and private facilities

NATIONAL SYSTEMS RESPONSE	
Additional indicators	**20.** Access to palliative care assessed by morphine-equivalent consumption of strong opioid analgesics (excluding methadone) per death from cancer **21.** Adoption of national policies that limit saturated fatty acids and virtually eliminate partially hydrogenated vegetable oils in the food supply, as appropriate, within the national context and national programmes **22.** Availability, as appropriate, if cost-effective and affordable, of vaccines against human papillomavirus, according to national programmes and policies **23.** Policies to reduce the impact on children of marketing of foods and non-alcoholic beverages high in saturated fats, trans fatty acids, free sugars, or salt **24.** Vaccination coverage against hepatitis B virus monitored by number of third doses of Hep-B vaccine (HepB3) administered to infants **25.** Proportion of women between the ages of 30-49 screened for cervical cancer at least once, or more often, and for lower or higher age groups according to national programmes or policies

[1] Countries will select indicator[s) of harmful use as appropriate to national context and in line with WHO's global strategy to reduce the harmful use of alcohol and that may include prevalence of heavy episodic drinking, total alcohol per capita consumption, and alcohol-related morbidity and mortality, among others.

[2] In WHO's global strategy to reduce the harmful use of alcohol the concept of the harmful use of alcohol encompasses the drinking that causes detrimental health and social consequences for the drinker, the people around the drinker and society at large, as well as the patterns of drinking that are associated with increased risk of adverse health outcomes.

[3] WHO's recommendation is less than 5 grams of salt or 2 grams of sodium per person per day.

[4] Countries will select indicators) appropriate to national context.

[5] Individual fatty acids within the broad classification of saturated fatty acids have unique biological properties and health effects that can have relevance in developing dietary recommendations.

Source: World Health Organization (2011). NCD Global Monitoring Framework. https://cdn.who.int/media/docs/default-source/ncds/ncd-surveillance/global-ncds-surveillance-monitoring-framework24c84b44-7924-412d-ab83-2dfb88a45169.pdf?sfvrsn=f0d5925_3&download=true

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WHO Western Pacific Region
PUBLICATION

ISBN-13 978 92 9061 974 1