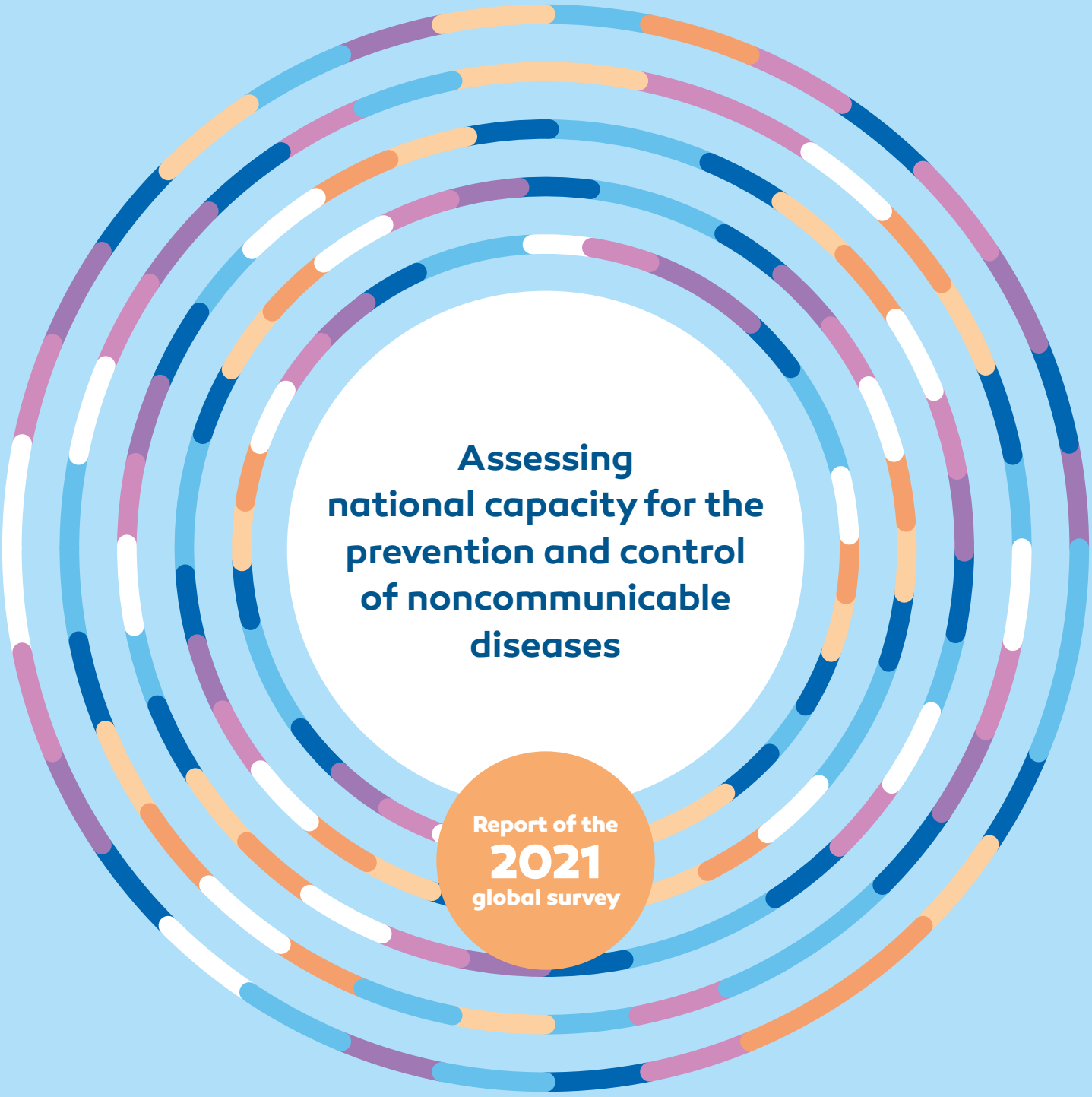


# Assessing national capacity for the prevention and control of noncommunicable diseases

Report of the 2021 global survey

World Health Organization

# Assessing national capacity for the prevention and control of noncommunicable diseases

Report of the 2021 global survey

World Health Organization

Assessing national capacity for the prevention and control of noncommunicable diseases: report of the 2021 global survey

ISBN 978-92-4-007169-8 (electronic version)
ISBN 978-92-4-007170-4 (print version)



**Suggested citation.** Assessing national capacity for the prevention and control of noncommunicable diseases: report of the 2021 global survey. Geneva: World Health Organization; 2023. Licence: CC BY-NC-SA 3.0 IGO.

**Cataloguing-in-Publication (CIP) data.** CIP data are available at http://apps.who.int/iris.



Design and layout: Agence Gardeners

# Contents

# Acknowledgements

This report was prepared by the Surveillance, Monitoring and Reporting Unit within the Department of Noncommunicable Diseases (NCDs), World Health Organization (WHO), Geneva. Leanne Riley coordinated the work on the NCD Country Capacity Survey and the overall implementation of the survey; Melanie Cowan oversaw the web-based data collection and validation of results, performed all data management and statistical analysis needed and led the development of the report.

We wish to thank the NCD focal points in the WHO regional offices for their generous support and assistance in coordinating the NCD Country Capacity Survey during 2021 with their respective Member States, and for undertaking validation and review of completed survey responses: Cheick Diallo for the WHO Regional Office for Africa; Roberta Caixeta and Carolina Chávez Cortés for the WHO Regional Office for the Americas; Natalia Fedkina and Ivo Rakovac for the WHO Regional Office for Europe; Heba Fouad for the WHO Office for the Eastern Mediterranean; Nalika Gunawardena and Manju Rani for the WHO Regional Office for South-East Asia; and Josaia Tiko and Nola Vanualailai for the WHO Regional Office for the Western Pacific. Additional thanks to staff in numerous WHO country offices who provided invaluable support in survey-related communication with Member States.

Colleagues from WHO headquarters also provided helpful input and support in the development of the survey questionnaire and review and validation of the completed questionnaires by countries: Fiona Bull, Shelly Chadha, May Cho, Alarcos Cieza, Alison Commar, Wouter De Groote, Katia De Pinho Campos, Katrin Engelhardt, Kaia Engesveen, Farshad Farzadfar, Alexandra Fleischmann, Hebe Gouda, Bianca Hemmingsen, André Ilbawi, Kaloyan Kamenov, Taskeen Khan, Bente Mikkelsen, Vladimir Poznyak, Arlene Quiambao, Dag Rekve, Gojka Roglic, Sarah Rylance, Slim Slama, Alena Usava, Benoit Varenne, Cherian Varghese, Temo Waqanivalu, Camilla Warren, Juana Willumsen, Hongyi Xu and Rain Yamamoto.

Finally, we thank all Member States, whose participation in the survey enabled the compilation and production of this report.

# Acronyms

| | |
|---|---|
| CVD | cardiovascular diseases |
| CRD | chronic respiratory diseases |
| FCTC | World Health Organization Framework Convention on Tobacco Control |
| GATS | Global Adult Tobacco Survey |
| GINA | WHO Global database on the Implementation of Nutrition Action |
| GSHS | Global School-based Student Health Survey |
| GYTS | Global Youth Tobacco Survey |
| HEARTS | WHO Technical package for cardiovascular disease management in primary health care |
| IARC | International Agency for Research on Cancer |
| NCD | noncommunicable disease |
| NCD CCS | Noncommunicable Disease Country Capacity Survey |
| SDGs | Sustainable Development Goals |
| STEPS | WHO Stepwise approach to surveillance |
| WHO | World Health Organization |
| WHO PEN | WHO package of essential noncommunicable (PEN) disease interventions for primary health care |

# Executive summary

Each year, noncommunicable diseases (NCDs) including cardiovascular diseases, cancer, diabetes and chronic respiratory diseases kill 41 million people globally, and account for around three quarters of all deaths. Low- and middle-income countries bear the majority (77%) of these deaths. In addition to the four main NCDs listed above, other significant conditions represent a notable burden for populations, including oral diseases, rheumatic fever, rheumatic heart disease, as well as overweight and obesity. Modifiable behaviours such as tobacco use, physical inactivity, unhealthy diet, and the harmful use of alcohol all increase the risk of NCDs, alongside socioeconomic factors. In recent years, NCDs have become a greater focus of attention for political leaders and the public health community, who together have committed to reducing the premature mortality these diseases cause through measures to reduce alcohol and tobacco use, and to improve nutrition and levels of physical activity for all.

To assess national-level responses to NCDs, WHO has implemented NCD country capacity surveys periodically since 2001. This report is the latest in that series. Since the first survey round, the NCD Country Capacity Survey (NCD CCS) has been conducted a further seven times, most recently in 2021. In the survey, completed by the NCD focal point within each country's ministry of health or similar agency, countries are asked to report on the following topics relating to NCDs: (i) public health infrastructure, partnerships and multisectoral collaboration; (ii) policies, strategies and action plans; (iii) health information systems and surveillance; (iv) health system capacity for detection, treatment and care; and, added for 2021, (v) the impact of the COVID-19 pandemic on NCD-related resources and activities. The questionnaire is web-based and requires supporting documentation wherever possible. In the 2021 round, data were collected from May onwards, with the last survey responses arriving in September. Validation was carried out by WHO regional offices and WHO headquarters. Country responses to previous rounds of the survey were incorporated into the analysis to assess progress since 2010. Although all 194 Member States responded to the survey, data comparisons were restricted to the 160 countries that had responded to all rounds of the survey since 2010.

The 2021 survey showed that 97% of countries had a unit, branch or department responsible for NCDs within their ministry of health, and 95% had at least one full-time technical or professional staff member working within the unit, branch or department. Dedicated staff for each of the NCDs and the major NCD risk factors were reported by most countries for all NCD-related topics; staff dedicated to chronic respiratory diseases, oral diseases, and two conditions newly added to the survey in 2021 – ear and eye diseases – were the least prevalent worldwide. More than 80% of countries reported funding being available for the following NCD-related areas: health care and treatment (89%); primary prevention (86%); health promotion (85%); early detection and screening (85%); surveillance, monitoring and evaluation (82%); and capacity-building (81%). Funding for palliative care (69%) and NCD-related research and rehabilitation (both at 63%) were somewhat less prevalent. Taxation on alcohol and tobacco were widely implemented (at 97% and 88% of all countries, respectively), while other fiscal incentives, such as taxation on sugar-sweetened beverages (47% of all countries) and foods high in fats, sugar or salt (13% of all countries) remained widely under-utilized.

An operational national multisectoral commission, agency, or mechanism to oversee NCD engagement, policy coherence and accountability of sectors beyond health was present in nearly half of countries globally (46%). And while most countries (86%) included NCDs in the outputs or outcomes of their national health plans, only two thirds (65%) had set NCD targets in line with the nine voluntary global targets from the WHO Global Monitoring Framework for NCDs.[1]

In the 2021 survey, 68% of countries reported having operational, integrated policies, strategies or action plans on NCDs – a drop of 6% on 2019. Over half of countries (55%) reported that their policies were multisectoral, covered all four NCD risk factors and included early detection, treatment and care for the four main NCDs, thereby reaching full achievement of the Progress Monitor indicator on integrated NCD policies. Countries also reported plans for oral health, eye health and ear health (the latter two categories newly added to the survey) which revealed that these policies were less widely available than policies for any of the main NCDs or NCD risk factors. For nutrition-

[1] The framework is comprised of nine global targets and 25 indicators, and was adopted by Member States during the World Health Assembly in May 2013 (see https://www.who.int/teams/ncds/surveillance/monitoring-capacity/gmf).

related areas, the rate of implementation of a number of recommended policies was generally low, with around a third of countries (38%) implementing policies to reduce the impact on children of the marketing of unhealthy foods. A third of countries had policies to reduce the intake of saturated fatty acids (35%) or to eliminate trans fats (34%), and while 53% of countries reported having a salt-reduction policy in place, only 17% fully achieved the Progress Monitor indicator for such policies.

Surveillance of NCDs continued to be the responsibility of one or more departments within the ministry of health by 48% of countries. Almost three quarters of countries (71%) reported having population-based cancer registries (a rise from 64% in 2019), and just under half reported having a diabetes registry. However, less than half of countries (40%) reported having completed a recent, national survey among adults for most of the major risk factors for NCDs – a decline of 10% since 2019, with many countries attributing the curtailment of surveys to the COVID-19 pandemic.

More than half of countries (58%) reported having national guidelines available for all four of the main NCDs (a rise of 10% on 2019), and of these guidelines, those for chronic respiratory diseases were the least prevalent. National screening programmes for breast cancer and cervical cancer were reported by around two thirds of countries (63% and 69% respectively), with roughly two thirds of countries with programmes reporting population-based screening and just over a third reporting reaching the majority of the population. Of the six essential technologies for early detection, diagnosis and monitoring of NCDs (measurement of height; weight; blood glucose; blood pressure; total cholesterol; and urine strips for albumin assay), just over half of countries (55%) reported all were generally available in primary care facilities of the public health sector.

Availability of essential NCD medicines was more uneven. Although half of countries (54%) reported all were generally available, one in five countries (20%) reported only six or fewer of the 11 essential medicines were generally available. While some medicines, like aspirin and metformin, were widely reported as generally available, several important medicines, such as steroid inhalers, oral morphine and a variety of fixed-dose combinations were less so. Significant differences were observed between income groups when it came to availability of many medicines, such as statins and steroid inhalers.

The availability of many NCD procedures remained more or less unchanged since the 2019 survey. The percentage of countries reporting each procedure as generally available ranged from 71% for dialysis to 36% for bone marrow transplantation, with considerable differences across income groups. Cardiovascular risk stratification in health care facilities was reported as available by over three quarters (78%) of countries – a slight rise over 2019, but the proportion of these countries reporting wide availability (>50% of primary health care facilities) remained just over 50%. Slight increases were seen in the global availability across all cancer diagnosis and treatment services covered in the survey. There remained, however, marked differences across income groups, particularly for radiotherapy (generally available in 26% of low-income countries versus 89% of high-income countries) and, to a lesser degree, for cancer centres or departments at the tertiary level (56% of low-income countries versus 93% of high-income countries). Rehabilitative care for each of a number of conditions was reported as generally available by at least two thirds of countries, though the availability of outpatient care consistently lagged behind that of inpatient care. Globally, palliative care in a community- or home-based care setting was reported by 43% of countries, and in a primary health care setting by 42% of countries – a very modest rise over 2019.

The majority (89%) of countries who responded reported some level of disruption to ministry of health staffing in the previous 3 months because of COVID-19. Overall, around 20% of countries across all regions and income levels (though mainly in low- and lower-middle-income countries) had seen at least some NCD funds reallocated to the COVID-19 response in the previous 3 months. Globally, NCD activities most widely postponed because of the pandemic included NCD surveys (42% of countries); NCD screening (35% of countries); and mass-communication campaigns (34% of countries). Well over a third of countries reported pandemic-related government policies restricting outpatient (42%) and inpatient (38%) NCD services. And the majority of countries reported pandemic-related disruptions to a number of NCD-related services in the previous 3 months, including diabetes management (62% of countries), cancer screening (59%), hypertension management (58%), and cancer treatment (53%).

Looking back over the past decade, there has been tremendous progress: many more countries now have national NCD policies in place, have set NCD targets and have developed NCD management guidelines.

However, progress has been uneven across income groups and regions, and the COVID-19 pandemic, in addition to causing restrictions of NCD-related medical services, has also hindered NCD-related surveillance activities, screening programmes and mass-communication campaigns.

# Assessing national capacity for the prevention and control of noncommunicable diseases

# Introduction

This report presents findings from WHO's latest NCD Country Capacity Survey (NCD CCS). The survey, carried out in 2021, is the eighth in a series that now spans two decades. From the baseline provided by the first-ever NCD CCS in 2001 *(1)*, this report reflects the continually growing significance of NCDs to the public health agenda, and outlines progress made towards effective national responses to NCDs worldwide.

The rise in attention for NCDs is urgent and justified, as these diseases – notably cardiovascular diseases (CVD), cancers, diabetes, and chronic respiratory diseases (CRD) – account for the majority (74%) of all deaths globally *(2)*. NCDs also pose one of the major challenges to 21st century development, not least because the NCD burden continues to rise disproportionately in low- and lower-middle-income countries, and among the poorest and most vulnerable people in all countries.

Since the first NCD CCS in 2001, the survey questions have expanded to reflect evolving political commitments to address NCDs *(3–8)*, as well as growing implementation of WHO's NCD "Best Buys" *(9)*. The survey now provides both a means for WHO to assess country action on a wide range of NCDs and NCD risk factors, and as a guide for countries on what actions to take at national level to strengthen their response. In this latest survey we now have the benefit of 10 years comparable data for some of these factors.

The goals set out in the Global Plan of Action on NCDs, and in the Sustainable Development Goals (SDGs) themselves (in particular SDG 3.4.1 to reduce premature mortality from NCDs and the prevalence of risk factors such as alcohol and tobacco use) require dedicated action from countries. To this end, through presenting results of the 2021 round of the NCD CCS, this report spotlights which areas have seen the most improvement and draws conclusions as to which areas require greatest action.

The results of this survey can be used on multiple fronts: to help ensure that adequate government resources are allotted to NCDs, that NCD-related policies and legislation are implemented and enforced, and that surveillance and health care systems are sufficiently resourced so that measures to reduce NCDs and their risk factors are fully implemented.

# Methods

## Data collection, review and validation

As with other recent rounds of the survey, the 2021 NCD CCS was implemented using a web-based questionnaire hosted on the WHO website. In May 2021, NCD focal points, or designated colleagues within the ministry of health or national institute or agency responsible for NCDs in each WHO Member State (194 countries), received their unique details to access the website. The focal points were requested to submit their completed questionnaire through the WHO website by the end of June 2021, although this deadline was extended by several weeks. In order to ensure a more thorough assessment, the instructions specified that a team of people, led by the NCD focal point, should complete the responses, so that topic-specific experts in each country could respond to questions relating to their area of expertise. Countries were asked to submit supporting documentation for a selected number of questions so that WHO could validate and verify responses. For example, questions on the existence of specific policies, strategies or action plans in a country required respondents to upload copies of these documents.

Upon receipt of a completed survey, the WHO Secretariat checked the response for completeness, and validated it against existing data sources and the supporting documentation submitted. Wherever possible, responses to the survey were also compared to responses received in the previous round in order to check for unexpected inconsistencies. A variety of internal sources were also used for validation — for example, information on recent NCD risk factor surveys was checked against the internal survey tracking systems for WHO-supported risk factor surveys. These included WHO STEPS (adult risk factor surveillance);[2] the Global School-based Student Health Survey (GSHS);[3] the Global Youth Tobacco Survey (GYTS);[4] and the Global Adult Tobacco Survey (GATS).[5] Additionally, alcohol and tobacco taxation data available from WHO were used to check country responses to questions on these fiscal measures; and data on cancer registries from the International Agency for Research on Cancer (IARC) were used to validate country responses to the cancer registry questions. Food and nutrition data were checked against the WHO Global database on the Implementation of Nutrition Action (GINA).[6]

Following the initial review, countries were asked to provide clarification and, where necessary, to change their responses if discrepancies were noted between the country response and these other sources. Countries were also asked during this follow-up to provide any missing documentation not submitted with their response and not already on file at WHO. Suggested modifications were usually adopted and the missing data and documents were added to the country's response on the website.

## Questionnaire

The web-based questionnaire comprised of the same four modules as other recent rounds of the survey plus an additional module covering the impact of the COVID-19 pandemic on NCD-related activities and services. Questions were developed through a consultative process with relevant technical departments in WHO headquarters and all WHO regional offices, in order to obtain objective information on each topic, rather than opinions about

[2] The WHO STEPwise approach to NCD risk factor surveillance (STEPS) is a simple, standardized method for collecting, analysing and disseminating data on key NCD risk factors in countries (see: https://www.who.int/teams/noncommunicable-diseases/surveillance/systems-tools/steps).

[3] The Global school-based student health survey (GSHS) is a self-administered, school-based survey of students that measures and assesses the behavioural risk factors and protective factors in 10 key areas among young people aged 13 to 17 years (see: https://www.who.int/teams/noncommunicable-diseases/surveillance/systems-tools/global-school-based-student-health-survey).

[4] The Global Youth Tobacco Survey (GYTS) is a self-administered, school-based survey of students aged 13 to 15 years that enables countries to monitor tobacco use among youth and to guide the implementation and evaluation of tobacco prevention and control programmes (see: https://www.who.int/teams/noncommunicable-diseases/surveillance/systems-tools/global-youth-tobacco-survey).

[5] The Global Adult Tobacco Survey (GATS) is a household-based survey that enables countries to collect data on adult tobacco use and key tobacco-control measures (see: https://www.who.int/teams/noncommunicable-diseases/surveillance/systems-tools/global-adult-tobacco-survey).

[6] The Global database on the Implementation of Nutrition Action (GINA) is an interactive platform for sharing standardized information on nutrition policies and actions (see: https://extranet.who.int/nutrition/gina/en/).

adequacy of capacity. Specific components of the questionnaire were as follows (the full questionnaire can be found in Annex 3):

**I.** The infrastructure module asked questions relating to the presence of a unit or division within the ministry of health dedicated to NCDs; staffing and funding; fiscal interventions including taxation and subsidies and the motivation for the fiscal interventions; and if there was a high-level national multisectoral commission, agency or mechanism to oversee NCD-related work.

**II.** The policies, strategies and plans module asked questions relating to the presence of policies, strategies, or action plans. The questions differentiated between integrated policies, strategies, or action plans addressing several risk factors or diseases; and policies, strategies, or action plans for a specific disease or risk factor. Ministries of health were asked to name the policy and indicate if the plan was currently in operation. Additionally, this component covered cost-effective policies for NCDs, such as policies to reduce population salt consumption.

**III.** The information systems and surveillance module asked questions on the existence of various disease registries, patient information systems and risk-factor surveillance activities.

**IV.** The health system capacity module asked countries to assess the capacity of their health system related to NCD prevention, early detection, and treatment and care within the primary health care sector. Specific questions focused on the existence of clinical guidelines or protocols to treat major NCDs and their main risk factors; the availability of the tests, procedures and equipment related to NCDs within the health system; cancer screening programmes and diagnosis and treatment services; and the availability of rehabilitative and palliative care services for NCDs.

**V.** A new module asked questions about the impact of the COVID-19 pandemic on NCD-related resources, services, activities and staffing within the ministry of health or equivalent. Additionally, countries were asked to report on whether any NCD-related services had been disrupted because of the pandemic and, if so, to identify key underlying causes and mitigation strategies.

The 2021 questionnaire contained new questions on ear and eye health policies; the inclusion of NCDs in national essential health services packages; a variety of specific physical activity policies (e.g. active ageing); patient information systems; the availability of services to detect, treat and manage oral diseases; and the availability of rehabilitative care.

The survey also included a set of detailed instructions on how to complete the questionnaire and a glossary defining the terms used. The questionnaire was translated into Spanish, French, Russian and Portuguese to facilitate completion. Each country followed their own review process before submitting their response to WHO.

## Response rate

All WHO Member States (194 countries) responded to the survey. A complete list of Member States by WHO region is given in Annex 1.

## Analysis

Data were downloaded directly from the web-based platform to an Excel-readable file. Data cleaning was performed by the WHO Secretariat to ensure consistency with responses within a question and its sub-questions. All statistical analyses, including analysis by WHO region and World Bank income groups (for 2021 groupings, see Annex 2), were carried out using STATA 16 software (Stata Corporation, 2019). Data extraction, cleaning and analysis were performed at WHO headquarters.

For all analyses, the denominator used was the total number of responding countries, either overall or within the subgroup of interest. To avoid fluctuating denominators, percentages reported were based on the positive responses from countries to the survey items. Non-positive responses (i.e. "No", "Don't know", and items left unanswered) were treated equally. Trends in national capacity for NCDs were derived from comparing the results of the 2021 survey with those from the capacity surveys conducted in 2019, 2017, 2015, 2013 and 2010. For the comparison of survey responses across these six surveys, analyses were limited to the 160 Member States that completed all six surveys and focused only on those questions that appeared in all six surveys.

Survey results were examined in relation to the objectives and key recommendations made to WHO Member States in the Global NCD Action Plan 2013–2020 (see Box 1), as well as the Progress Monitoring indicators adopted in 2015, later updated in 2017,

and included in the 2014 United Nations Outcome Document on NCDs[7] (see Box 2).

## **Box 1:** Key objectives of the WHO Global NCD Action Plan 2013–2020

**Objective 1:** To raise the priority accorded to the prevention and control of noncommunicable diseases in global, regional and national agendas and internationally agreed development goals, through strengthened international cooperation and advocacy.

**Objective 2:** To strengthen national capacity, leadership, governance, multisectoral action and partnerships to accelerate country response for the prevention and control of noncommunicable diseases.

**Objective 3:** To reduce modifiable risk factors for noncommunicable diseases and underlying social determinants through creation of health-promoting environments.

**Objective 4:** To strengthen and orient health systems to address the prevention and control of noncommunicable diseases and the underlying social determinants through people-centred primary health care and universal health coverage.

**Objective 5:** To promote and support national capacity for high-quality research and development for the prevention and control of noncommunicable diseases.

**Objective 6:** To monitor noncommunicable diseases and their determinants, and evaluate progress at national, regional and global levels.

[7] The full Outcome document of the High-Level Meeting of the General Assembly on the Comprehensive Review and Assessment of the Progress Achieved in the Prevention and Control of Non-Communicable diseases: resolution adopted by the General Assembly is available at: https://digitallibrary.un.org/record/777809.

## **Box 2:** Progress Monitoring indicators

**Indicator 1:** Member State has set time-bound national targets based on WHO guidance.

**Indicator 2:** Member State has a functioning system for generating reliable cause-specific mortality data on a routine basis.

**Indicator 3:** Member State has a STEPS survey[a] or a comprehensive health examination survey every 5 years.

**Indicator 4:** Member State has an operational multisectoral national strategy/action plan that integrates the major NCDs and their shared risk factors.

**Indicator 5:** Member State has implemented the following five demand-reduction measures of the WHO FCTC[b] at the highest level of achievement:

a. Reduce affordability of tobacco products by increasing excise taxes and prices on tobacco products
b. Eliminate exposure to second-hand tobacco smoke in all indoor workplaces, public places and public transport
c. Implement plain/standardized packaging and/or large graphic health warnings on all tobacco packages
d. Enact and enforce comprehensive bans on tobacco advertising, promotion and sponsorship
e. Implement effective mass-media campaigns that educate the public about the harms of smoking/tobacco use and second-hand smoke

**Indicator 6:** Member State has implemented, as appropriate according to national circumstances, the following three measures to reduce the harmful use of alcohol as per the WHO Global Strategy to Reduce the Harmful Use of Alcohol:[c]

a. Enact and enforce restrictions on the physical availability of alcohol (via reduced hours of sale)
b. Enact and enforce bans or comprehensive restrictions on exposure to alcohol advertising (across multiple types of media)
c. Increase excise tax on alcoholic beverages

**Indicator 7:** Member State has implemented the following four measures to reduce unhealthy diets:

a. Adopt national policies to reduce population salt/sodium consumption
b. Adopt national policies that limit saturated fatty acids and virtually eliminate industrially produced trans-fatty acids in the food supply
c. WHO set of recommendations on marketing of foods and non-alcoholic beverages to children
d. Legislation/regulations fully implementing the International Code of Marketing of Breast-milk Substitutes.

**Indicator 8:** Member State has implemented at least one recent national public awareness programme on physical activity, including mass-media campaigns for physical activity behavioural change.

**Indicator 9:** Member State has evidence-based national guidelines/protocols/standards for the management of major NCDs through a primary care approach, recognized/approved by government or competent authorities.

**Indicator 10:** Member State has provision of drug therapy, including glycaemic control, and counselling for eligible persons at high risk, to prevent heart attacks and strokes, with emphasis on the primary care level.

[a] See: https://www.who.int/teams/noncommunicable-diseases/surveillance/systems-tools/steps
[b] See: https://fctc.who.int/
[c] Global strategy to reduce the harmful use of alcohol. World Health Organization, Geneva, 2010 (https://www.who.int/publications/i/item/9789241599931).

# Results

## Aspects of NCD infrastructure

### Unit, branch or department responsible for NCDs

The presence of a unit, branch or department within the ministry of health for NCDs and their risk factors was reported by 97% of countries across all WHO regions, ranging from 96% in high- and middle-income countries to 100% in low-income countries (Table 1). Across all regions, 95% of countries reported having at least one full-time technical or professional staff member working in the unit, branch or department. Of all income groups, the proportion of countries with full-time staff was greatest in low-income countries.

**Table 1**

*Percentage of countries with units, branches or departments within the ministry of health (or equivalent) with responsibility for NCDs and their risk factors, and percentage of countries with at least one full-time technical or professional staff member working in the unit, branch or department*

| | | % of countries with NCD units/ branches/ departments | % of countries with full-time staff |
|---|---|---|---|
| WHO Region | African Region | 100 | 100 |
| | Region of the Americas | 89 | 89 |
| | South-East Asia Region | 100 | 100 |
| | European Region | 98 | 91 |
| | Eastern Mediterranean Region | 95 | 95 |
| | Western Pacific Region | 100 | 100 |
| World Bank income group | Low-income | 100 | 100 |
| | Lower-middle-income | 96 | 96 |
| | Upper-middle-income | 96 | 94 |
| | High-income | 96 | 91 |
| **ALL** | | **97** | **95** |

The percentage of countries with units, branches or departments allocated to NCDs and NCD risk factors within the ministry of health remained the same or rose across all WHO regions between 2010 (88% overall) and 2021 (97% overall) (Table 2). Despite minor fluctuations, the existence of these departments has increased or sustained a high prevalence over the years and across all regions. More than 95% of countries in all regions reported having an existing unit, branch or department responsible for NCDs within their ministry of health, with the exception of the Region of the Americas, where 89% of countries reported such a department.

## Table 2

*Percentage of countries* with units, branches or departments within the ministry of health (or equivalent) with responsibility for NCDs by WHO region, 2010–2021*

| | | 2010 | 2013 | 2015 | 2017 | 2019 | 2021 |
|---|---|---|---|---|---|---|---|
| WHO Region | African Region | 93 | 97 | 100 | 77 | 97 | 100 |
| | Region of the Americas | 93 | 96 | 85 | 81 | 89 | 89 |
| | South-East Asia Region | 100 | 100 | 90 | 80 | 100 | 100 |
| | European Region | 79 | 92 | 94 | 90 | 98 | 98 |
| | Eastern Mediterranean Region | 85 | 90 | 95 | 90 | 90 | 95 |
| | Western Pacific Region | 92 | 96 | 88 | 92 | 96 | 100 |
| **ALL** | | **88** | **94** | **93** | **86** | **95** | **97** |

* Of 160 countries that responded to all six surveys.

In 2021, 95% of countries (across all regions) with a responsible NCD unit, branch or department reported having at least one full-time technical or professional staff member working there, compared to 79% in 2010 (Table 3). This trend has remained positive since 2015, with the most notable gains in the past 2 years occurring in the African Region (an increase from 97% to 100%); the Eastern Mediterranean Region (an increase from 90% to 95%); and the Western Pacific Region (an increase from 96% to 100%). For the first time in the survey's history, the African Region and the Western Pacific Region reported 100% of countries having at least one full-time technical or professional staff member working in the unit, branch or department (joining the South-East Asia Region which reached this level in 2019).

## Table 3

*Percentage of countries* with at least one full-time technical or professional staff member working in the NCD unit, branch or department, by WHO region, 2010, 2013, 2015, 2017, 2019 and 2021*

| | | 2010 | 2013 | 2015 | 2017 | 2019 | 2021 |
|---|---|---|---|---|---|---|---|
| WHO Region | African Region | 83 | 93 | 100 | 77 | 97 | 100 |
| | Region of the Americas | 78 | 78 | 85 | 81 | 89 | 89 |
| | South-East Asia Region | 100 | 90 | 90 | 80 | 100 | 100 |
| | European Region | 69 | 75 | 88 | 83 | 92 | 92 |
| | Eastern Mediterranean Region | 80 | 80 | 95 | 90 | 90 | 95 |
| | Western Pacific Region | 84 | 92 | 88 | 92 | 96 | 100 |
| **ALL** | | **79** | **83** | **91** | **84** | **93** | **95** |

* Of 160 countries that responded to all six surveys.

Countries were asked whether they had staff "dedicating a significant proportion of their time" to each of the four main NCDs and oral diseases, as well as the major risk factors for NCDs. In response, countries reported having such staff dedicating time to diabetes (90%), followed by cancer (88%) and cardiovascular diseases (CVD, 87%) and chronic respiratory diseases (CRD, 74%). Compared directly with the 2019 survey, oral diseases were somewhat more likely to be addressed by dedicated staff (70% of countries in 2021 versus 62% in 2019) but remained less likely to be covered by dedicated staff than the

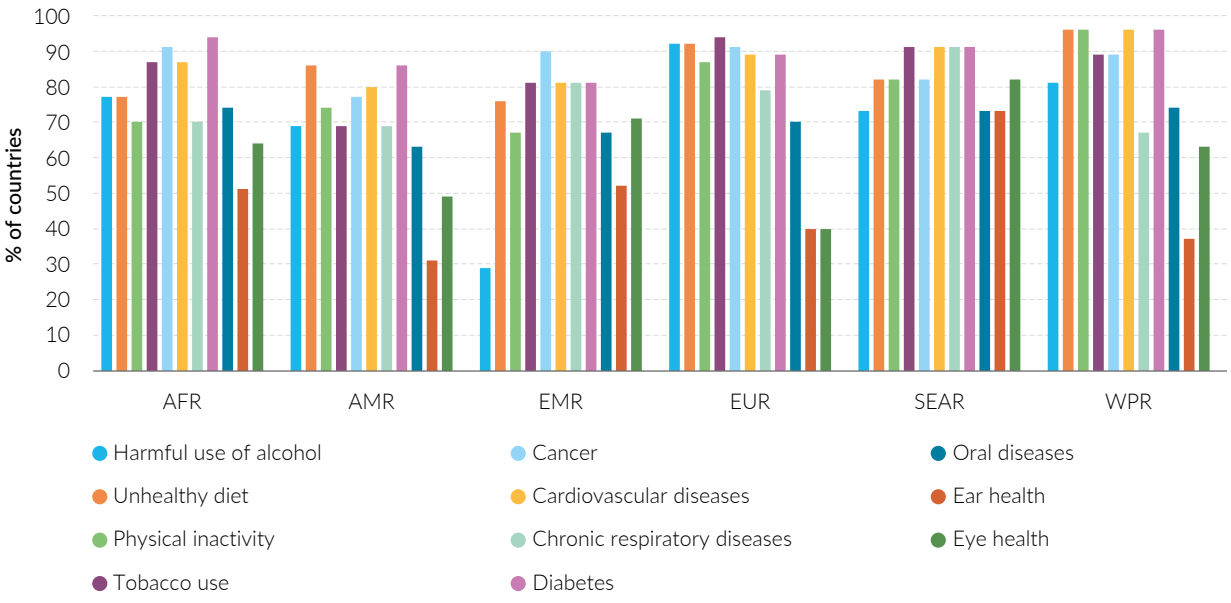
four main NCDs and four major risk factors. And two conditions newly added to the survey in 2021 – ear and eye diseases – both ranked below all other NCDs globally when it came to staff time dedicated to them (44% and 56% respectively). However, the South-East Asia Region countered this trend, with significant staff time being dedicated to ear and eye health by 73% and 82% of countries, respectively. Eye health was also reported as given significant staff time by 71% of countries in the Eastern Mediterranean Region.

All four of the main NCDs – cancer, diabetes, CRD, and CVD – were generally well covered when it came to staff time dedicated in low- and lower-middle-income group countries: 74% or more of countries in these groups saw significant staff time dedicated to these diseases, with the exception of CRD in lower-middle-income countries, coverage for which stood at 61%. Staff time dedicated to NCD risk factors (apart from tobacco use) lagged a little behind that dedicated to NCDs themselves in these same country-income groups – a pattern that held true for countries overall (Fig. 1). And in response to a new question in the 2021 survey, 73% of countries overall reported the presence of units, branches or departments with responsibility for NCDs and their risk factors at subnational, state and regional levels.

## Fig. 1

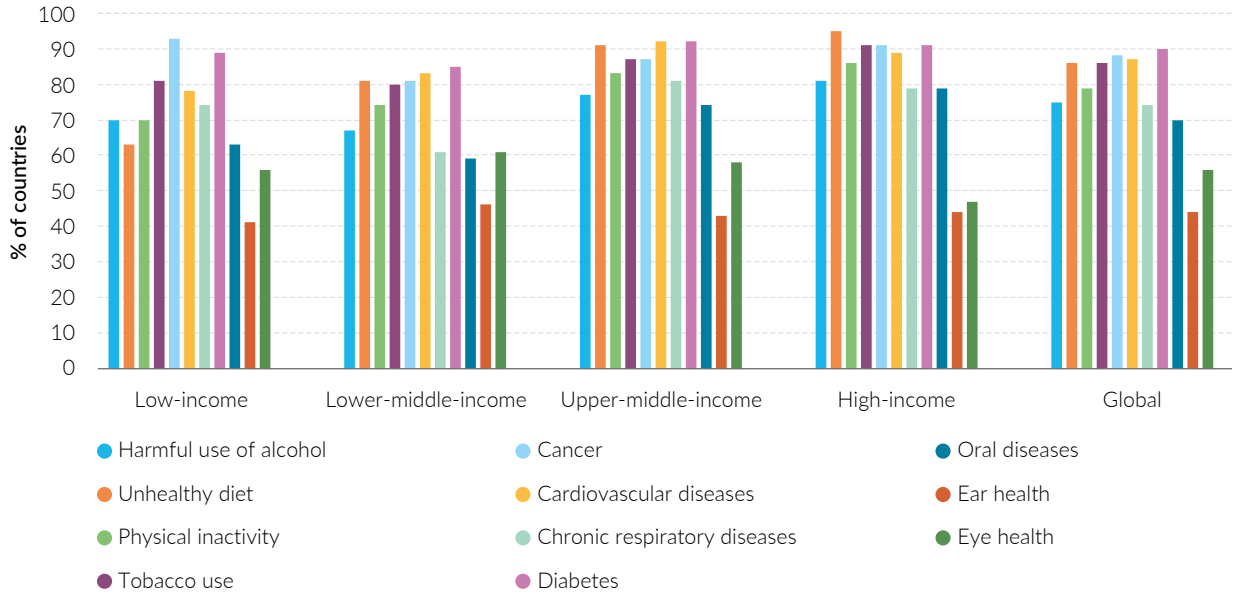
*Percentage of countries with staff in the NCD unit, branch or department dedicating a significant proportion of their time to specific NCDs and their risk factors*

**a) By WHO region**




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

**b) By World Bank income group**

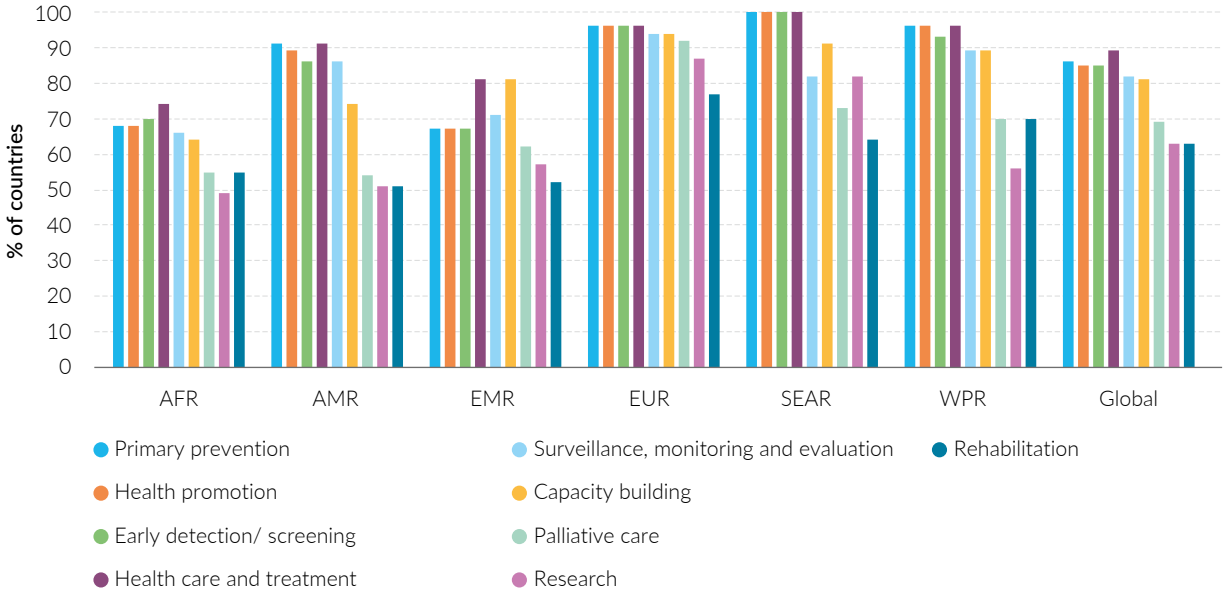



## Funding mechanisms

Countries were asked about government funding for nine key NCD-related activities or functions, ranging from primary prevention to research, and a new category in the survey, rehabilitation (Fig. 2). Health care and treatment received the most funding globally (reported by 89% of countries), followed by activities for primary prevention of NCDs (86%), and health promotion and early detection/screening (both at 85%). Activities least likely to have allocated funding were research and rehabilitation (both at 63%), and palliative care (69%). This year the South-East Asia Region reported for the first time that 100% of the region's countries provided funding for primary prevention, health promotion, early detection/screening, and health care and treatment. In general, high-income and upper-middle-income countries showed higher percentages across the eight activities. For example, 96% of high-income countries and 94% of upper-middle-income countries reported funding allocated for health care and treatment, compared to 91% of lower-middle-income countries and 56% of low-income countries.

## Fig. 2

*Percentage of countries with funding for NCD activities by function, by WHO region*



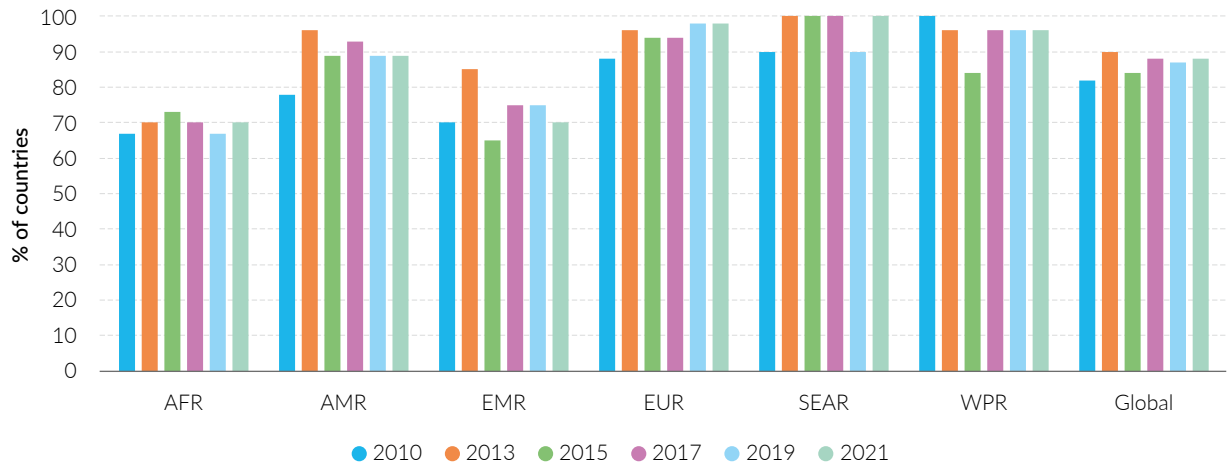

AFR: WHO African Region; AMR: WHO Region of the Americas; EMR: WHO Eastern Mediterranean Region; EUR: WHO European Region; SEAR: WHO South-East Asia Region; WPR: WHO Western Pacific Region.

Trend analysis on the funding of NCD activities was available only for primary prevention and health promotion (combined); and surveillance, monitoring and evaluation. The results of the analysis showed that availability of funding for primary prevention and health promotion increased modestly overall between 2010 (82% of countries) and 2021 (88% of countries – including a rise of 1% on the 2019 survey) (Fig. 3a). The Region of the Americas showed the greatest increase, from 78% of countries (2010) to 89% (2021), while the Western Pacific Region showed a slight decline, from 100% of countries (2010) to 96% (2021); funding for primary prevention and health promotion in the African Region showed no significant improvement since 2010, fluctuating between 67–73% of countries. Funding for surveillance, monitoring and evaluation of NCDs was available in 72% of countries in 2010, rising to 87% in 2017 and dropping a little to 84% in 2021 (Fig. 3b). Progress has been most noticeable among countries in the African Region, the Region of the Americas and the Eastern Mediterranean Region.

## Fig. 3

*Percentage of countries* with funding for NCD-related activities, by WHO region, 2010–2021*

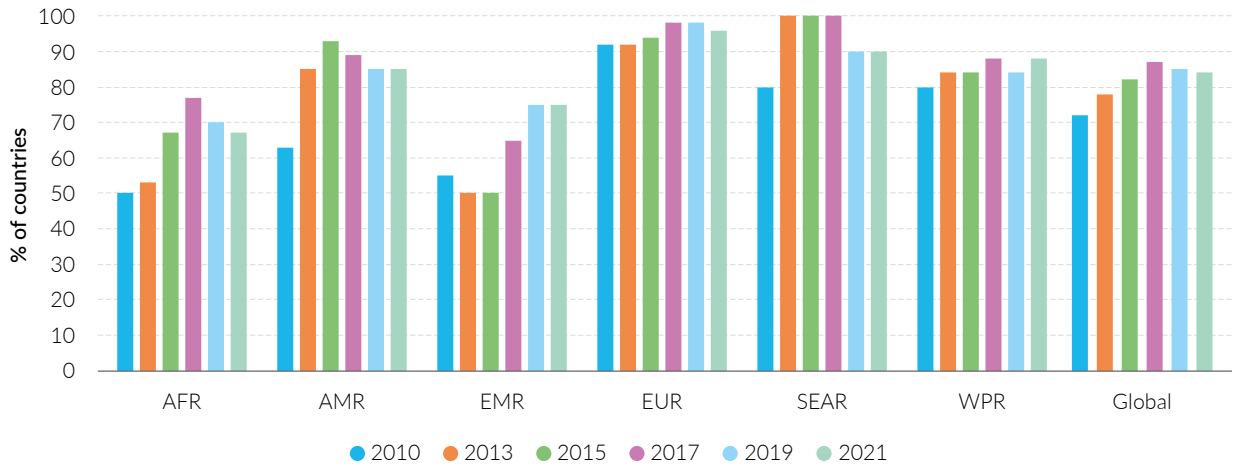
**a) For primary prevention and health promotion**




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

* Of 160 countries that responded to all six surveys.

**b) For surveillance, monitoring and evaluation**




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

* Of 160 countries that responded to all six surveys.

### Fiscal interventions

Nearly all countries (97%) reported levying excise and non-excise taxes on tobacco, though low-income countries were the least likely to deploy this measure (Fig. 4a). Alcohol taxation was also broadly reported across all income groups (88% of countries, a rise of 2% on the 2019 survey). Sugar-sweetened beverage taxes were reported in just under half of all countries globally (47%) and in nearly two thirds of countries in the Region of the Americas (60%). The European Region had the lowest proportion of countries implementing such taxes – just 28%. Taxation of foods high in fat, sugars or salt were reported by only 13% of countries worldwide.

Price subsidies for healthy foods and tax incentives to promote physical activity were relatively uncommon in countries globally (Fig. 4b) and there was little variation in deployment of these measures across WHO regions. As in the 2019 survey, no low-income

or lower-middle-income group countries reported incentives to promote physical activity. High-income and upper-middle-income groups' albeit limited use of incentives to promote physical activity presented a mixed picture, with a fall in the proportion of high-income countries deploying this measure (down from 19% of countries in 2019 to 16%), and a rise in such incentives among upper-middle-income countries (up from 5% in 2019 to 8%).

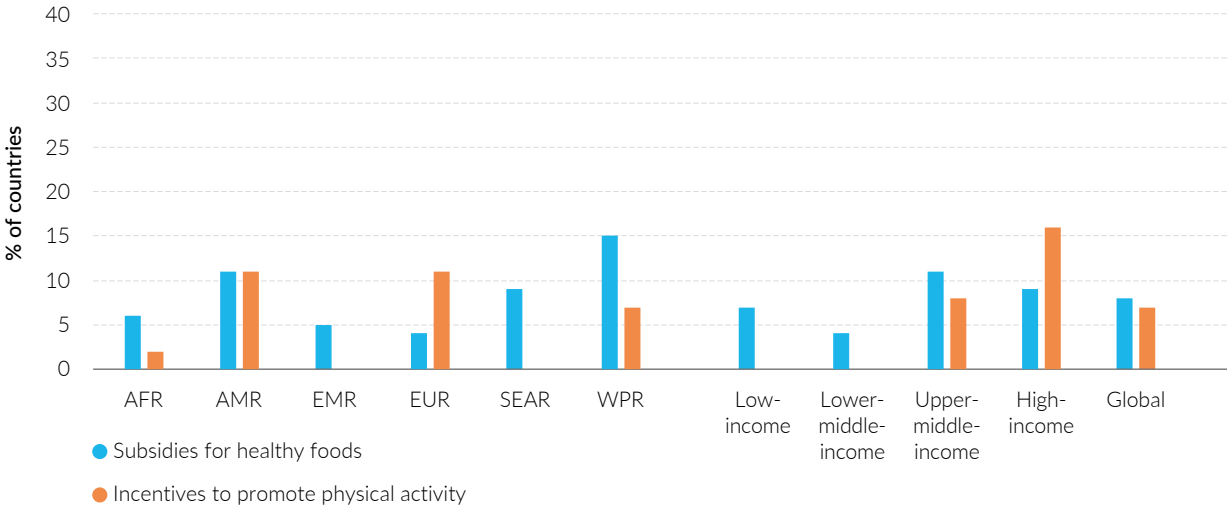
## Fig. 4

*Percentage of countries implementing fiscal interventions by category, by WHO region and World Bank income group*

**a) Taxation on products**


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

**b) Subsidies and incentives, by WHO region and World Bank income group**




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

## Multisectoral commissions, agencies, or mechanisms

The presence of a national multisectoral commission, agency, or mechanism to oversee NCD engagement, policy coherence and the accountability of sectors beyond health was reported by 59% of countries globally (a drop of 1% on the 2019 survey). Forty-six per cent of countries overall (77% of those with multisectoral commissions) confirmed that this entity was operational, including almost three quarters of countries in the South-East Asia Region. More than half of countries in the Eastern Mediterranean Region (57%), the European Region (55%) and the Western Pacific Region (59%) reported the presence of an operational multisectoral commission (Fig. 5).

### Fig. 5

*Percentage of countries with a national multisectoral commission, agency or mechanism to oversee NCD engagement, policy coherence and accountability of sectors beyond health, including the stage of implementation, by WHO region and World Bank income group*


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

## Plans, policies and strategies

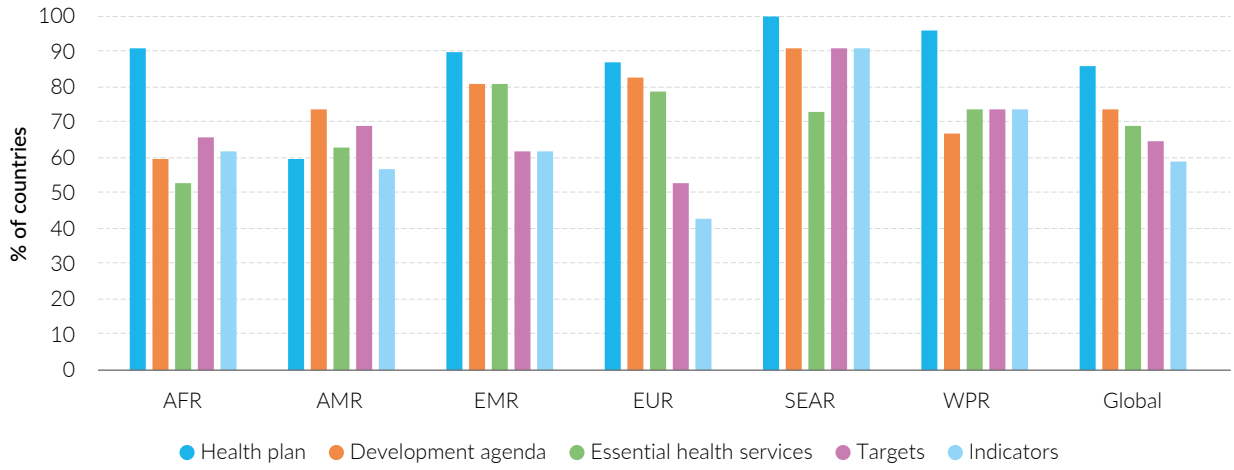
### National health plans, essential health services packages and targets

Globally, 86% of countries reported including NCDs in the outcomes or outputs of their national health plan, including 100% of South-East Asia Region countries and at least 90% of countries in the African Region, the Eastern Mediterranean Region and the Western Pacific Region. In addition, 74% of countries included NCDs in their national development agenda, with the South-East Asia Region taking the lead (91% of countries reporting NCD inclusion) and the African Region falling furthest from the global average (60%) (Fig. 6).

In a new question for 2021, countries were asked if NCD services were included in their national essential package of health services or universal health coverage-priority benefits package. Just over two thirds (69%) of countries reported that NCDs were included, with prevalence ranging regionally from 53% of African Region countries to 81% of Eastern Mediterranean Region countries (Fig. 6). Countries were asked if they had set any time-bound national targets for NCDs based on the nine voluntary global targets of the WHO Global Monitoring Framework, and whether they had indicators for these targets. Across all regions, 65% of countries reported having some targets and 59% (or 91% of countries who had set targets) reported having indicators for those targets.

### Fig. 6

*Percentage of countries with NCDs in their national health plan; NCDs in their national development agenda; NCDs in their national essential package of health services; time-bound national targets; and national NCD indicators for those targets, by WHO region*




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

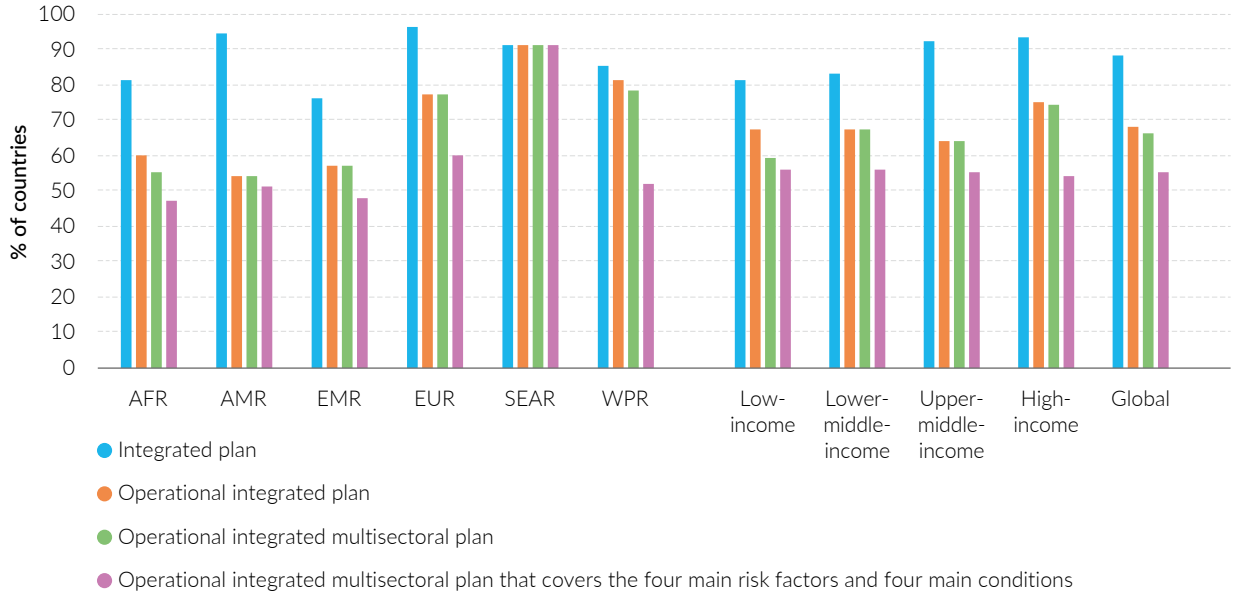
### Policies addressing the major NCDs and their risk factors

Globally, 68% of countries had operational policies, strategies or action plans that integrated several NCDs and their risk factors, and all but three of these 132 plans were multisectoral. All regions had at least a few countries either with integrated policies under development or not yet in effect. One of the NCD Progress Monitor indicators pertains to integrated NCD policies, and for this indicator to be categorized as "fully achieved", a country must have an operational, multisectoral integrated policy, strategy or action plan covering the four main NCDs (CVD, cancer, diabetes, CRD) and the four main associated risk factors (tobacco use, unhealthy diet, physical inactivity, harmful use of alcohol).[8] Globally, over half of countries (55%) fully achieved this indicator, including 91% of countries in the South-East Asia Region and 60% of countries in the European Region. Even in the African Region, where prevalence of operational, integrated NCD policies covering all four NCDs and their main risk factors was the lowest of all regions, almost half of countries (47%) fully achieved the Progress Monitor indicator (Fig. 7).

[8] Exceptions are made for alcohol according to national context.

## Fig. 7

*Percentage of countries with a national NCD policy, strategy or action plan integrating several NCDs and their risk factors, and their level of plan integration, by WHO region and World Bank income group*

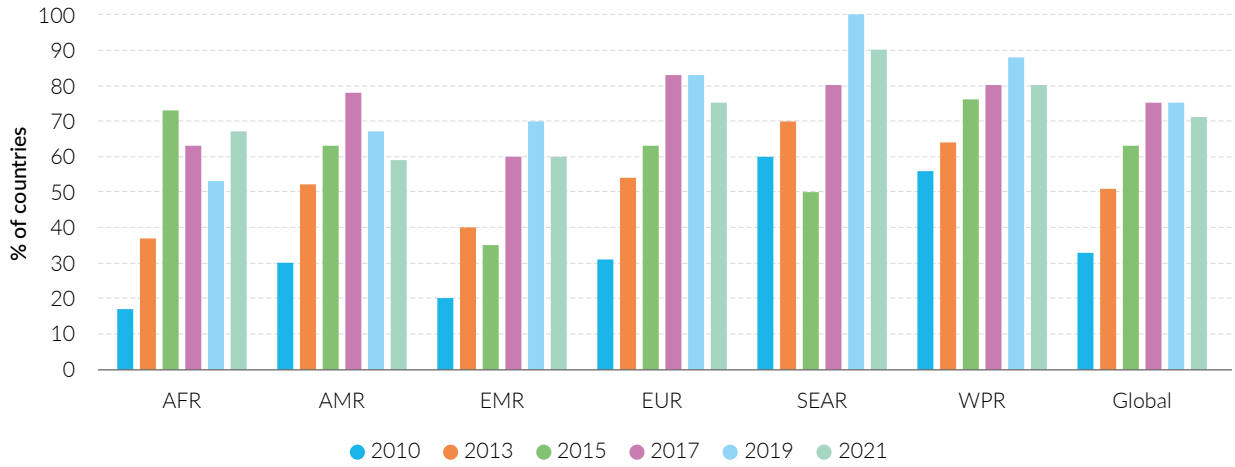



AFR: WHO African Region; AMR: WHO Region of the Americas; EMR: WHO Eastern Mediterranean Region; EUR: WHO European Region; SEAR: WHO South-East Asia Region; WPR: WHO Western Pacific Region.

Looking back at the changing availability of operational, integrated NCD policies since 2010, progress slipped in all regions except the African Region, where 67% of countries reported having such operational, integrated policies or plans – a rise of 12% on 2019 (Fig. 8). The slight decreases in the percentage of countries with such plans in all other regions were all 10% or less.

## Fig. 8

*Percentage of countries* with an operational integrated national NCD policy, strategy or action plan, by WHO region, 2010, 2013, 2015, 2017, 2019 and 2021*




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

* Of 160 countries that responded to all six surveys.

As well as questions on integrated NCD policies, strategies or action plans, countries were asked about their topic-specific plans for each of the main NCDs and NCD risk factors. Table 4 shows the global percentage of countries with either a topic-specific policy or an integrated policy covering each of the main conditions and risk factors.

While nearly three quarters or more of countries addressed cancer, CVD, and diabetes in operational policies (78%, 68% and 69% respectively), just over half covered CRD in an operational policy (58%). Oral, eye and ear health were not broadly covered by operational policies (38%, 24% and 17% respectively). Policies addressing NCD risk factors were broadly present, with the exception of those addressing overweight and obesity, for which only 40% of countries had an operational policy.

## Table 4

*Percentage of countries with a policy, plan or strategy addressing the major NCDs and/or their risk factors*

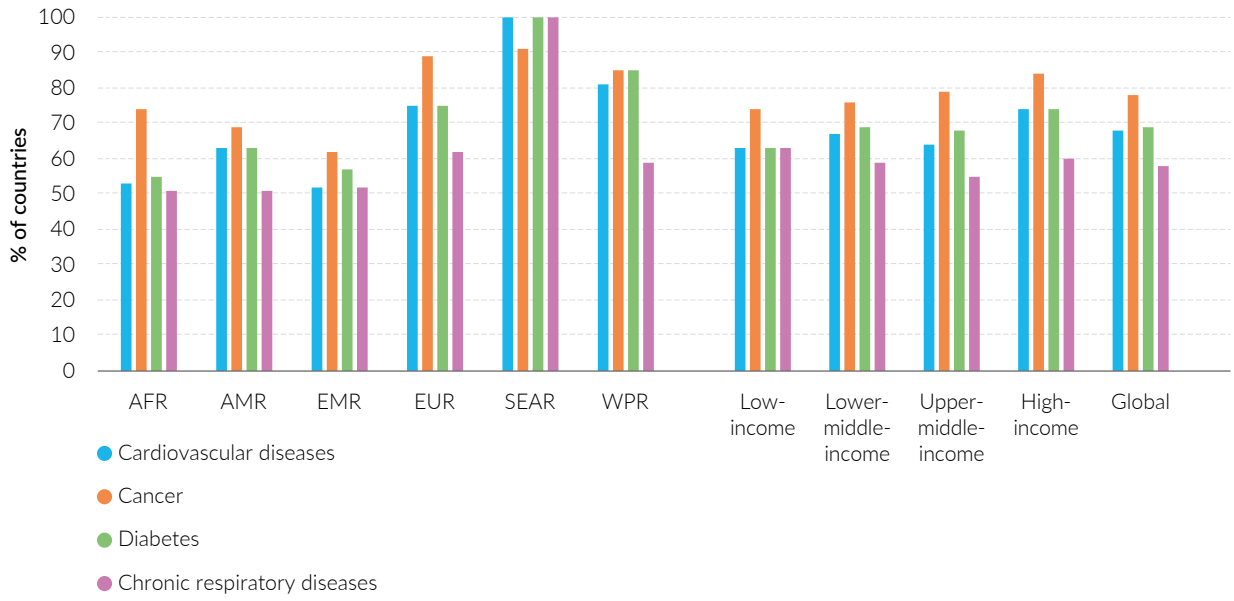
| | % of countries with a policy, strategy or action plan, by NCD and NCD risk factor | % of countries with an OPERATIONAL policy, strategy or action plan, by NCD and NCD risk factor |
|---|---|---|
| **Unhealthy diet** | 93 | 84 |
| **Tobacco use** | 92 | 80 |
| **Cancer or particular cancer types** | 90 | 78 |
| **Physical inactivity** | 89 | 72 |
| **Harmful use of alcohol** | 85 | 69 |
| **Diabetes** | 85 | 69 |
| **Cardiovascular disease** | 84 | 68 |
| **Chronic respiratory disease** | 75 | 58 |
| **Oral health** | 48 | 38 |
| **Overweight and obesity** | 47 | 40 |
| **Eye health** | 31 | 24 |
| **Ear health** | 20 | 17 |

The availability of operational policies (integrated or topic-specific) addressing each of the main NCDs and their risk factors, by region and income group, is shown in Fig. 9a and Fig. 9b. Although a clear positive relationship between policy availability and income group remained, operational policies were nevertheless available in at least 60% of low-income countries for all NCDs and risk factors, except for overweight and obesity – for which coverage dipped below 10% among low-income countries. Policies for CRD were broadly less available than those for other NCDs, and their prevalence among high-income countries fell below that of low-income countries. Over half of all countries in all regions and across all income groups had operational policies for the four leading NCDs and risk factors – and when it came to CRD in particular, low-income countries were most likely (63% of countries) of all income groups to have such a policy or plan.

## Fig. 9

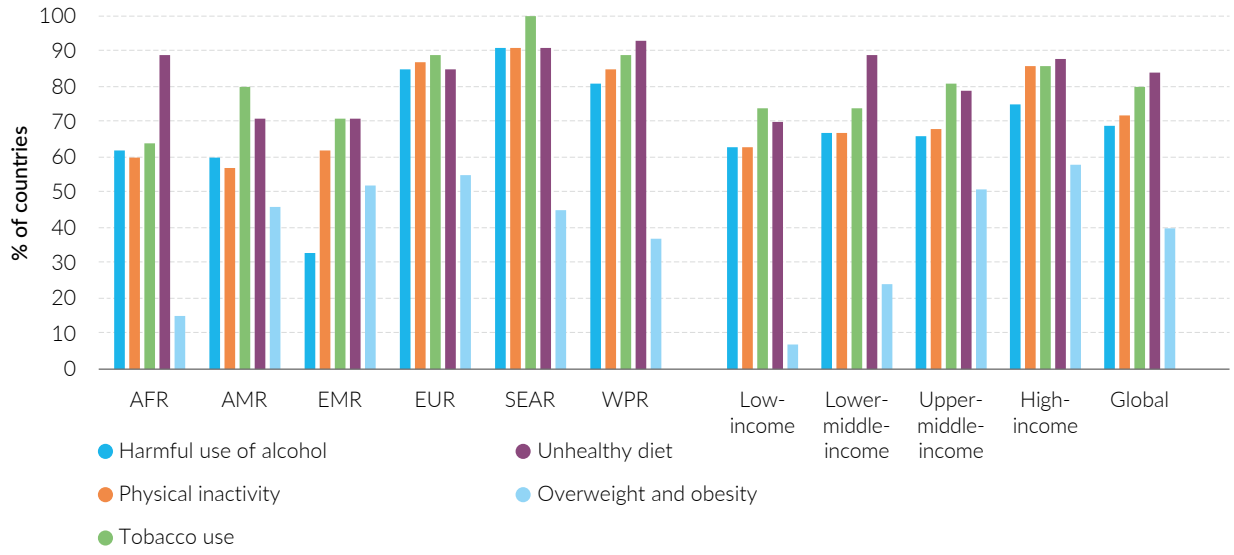
*Percentage of countries with operational plans, strategies or action plans for the leading NCDs and risk factors, by WHO region and World Bank income group*

**a) Operational policies, strategies or action plans for leading NCDs**




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

**b) Operational policies, strategies or action plans for leading NCD risk factors**




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

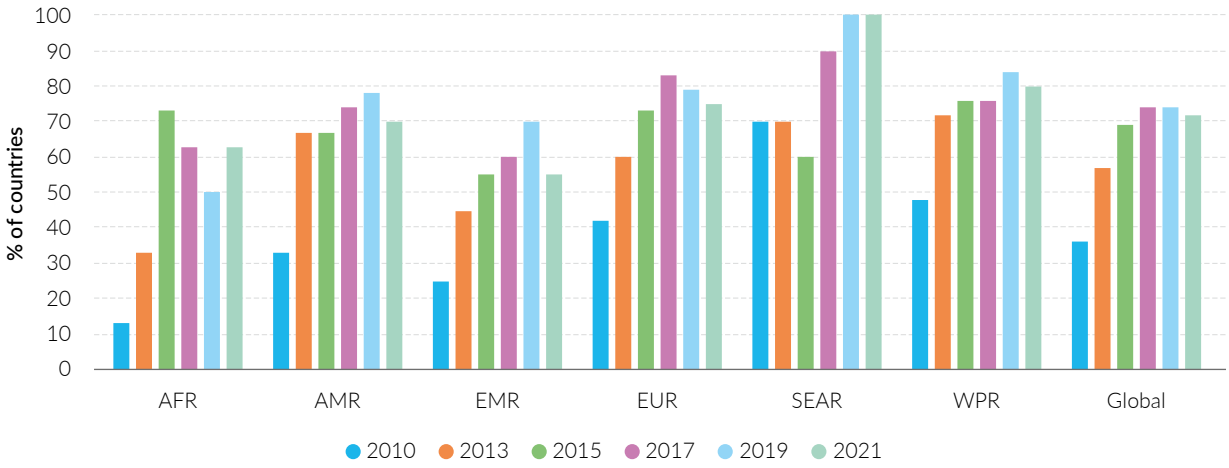
Reviewing the trend over the past decade in the availability of operational policies that address each of the four main NCDs reveals a noticeable increase in such policies. This has been the case in particular for CRD, for which policy coverage globally has more than tripled during this period (Fig. 10). In 2010, only four African Region countries (13% of the total) reported having an operational policy

for CVD, but by 2021 this figure had risen to 63%. As with integrated NCD plans, progress was seen in the early part of the decade, with some decline in prevalence as operational policies expired and were not immediately replaced by newer policies towards the end of the decade.

## Fig. 10

*Percentage of countries* with operational plans, policies or strategies or action plans for the four main NCDs, by WHO region, 2010, 2013, 2015, 2017, 2019 and 2021*

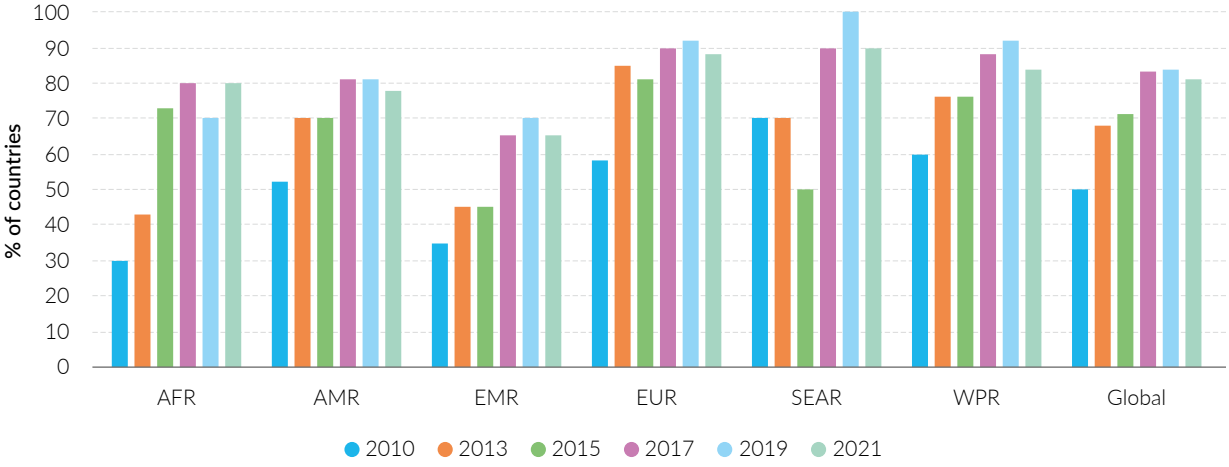
### a) Cardiovascular diseases




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

* Of 160 countries that responded to all six surveys.

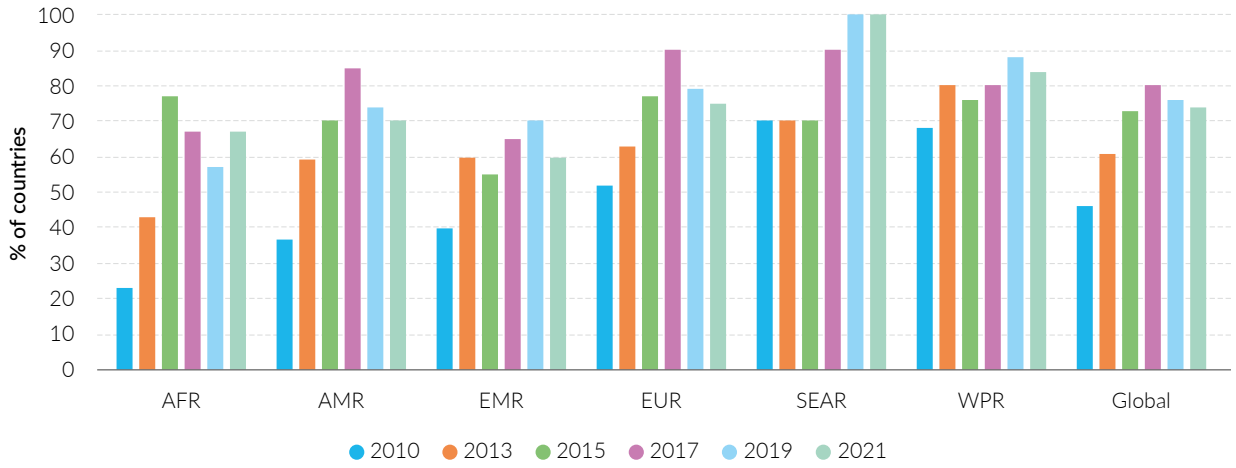
### b) Cancers




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

* Of 160 countries that responded to all six surveys.

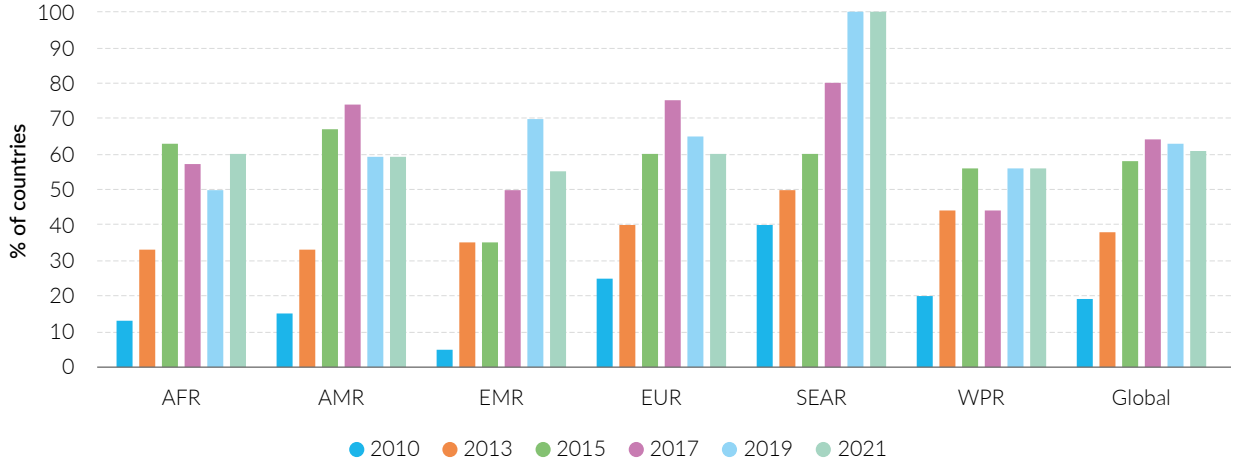
### c) Diabetes




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

* Of 160 countries that responded to all six surveys.

### d) Chronic respiratory diseases




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

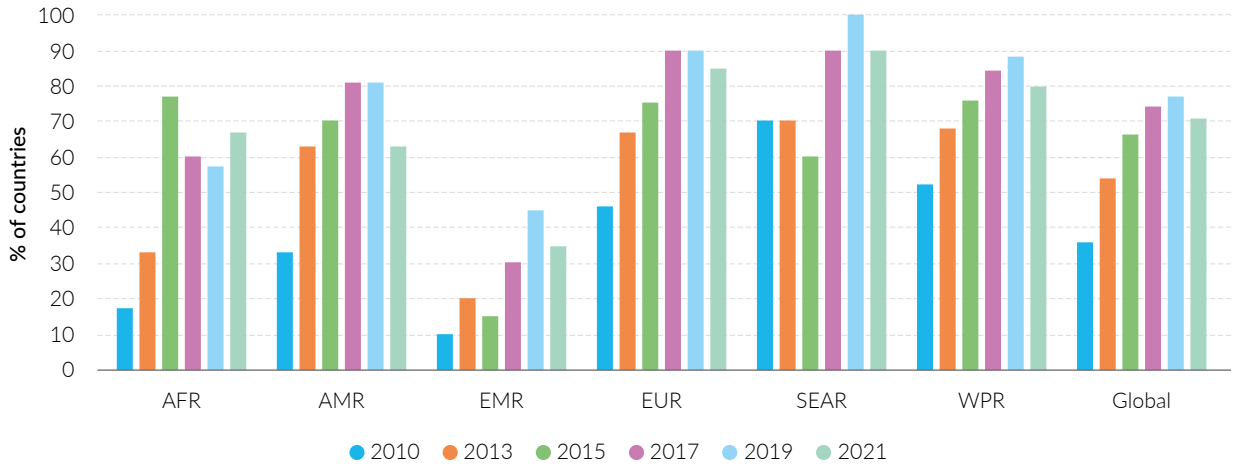
* Of 160 countries that responded to all six surveys.

When reviewing trends in the availability of operational policies addressing the four main NCD risk factors over the past decade, again the overall direction is positive. While policies covering alcohol use and physical activity dropped below 2017 levels, those covering healthy diet and tobacco reduction rose, with these two risk factors remaining the most widely addressed risk factors globally (over 80% of countries). In the African Region in particular, policy coverage for all NCD risk factors grew noticeably, with the region regaining ground on its policy-coverage high-point of 2015 (Fig. 11 a–d).

## Fig. 11

*Percentage of countries* with operational plans, policies or strategies or action plans for the main NCD risk factors, by WHO region, 2010, 2013, 2015, 2017, 2019 and 2021*

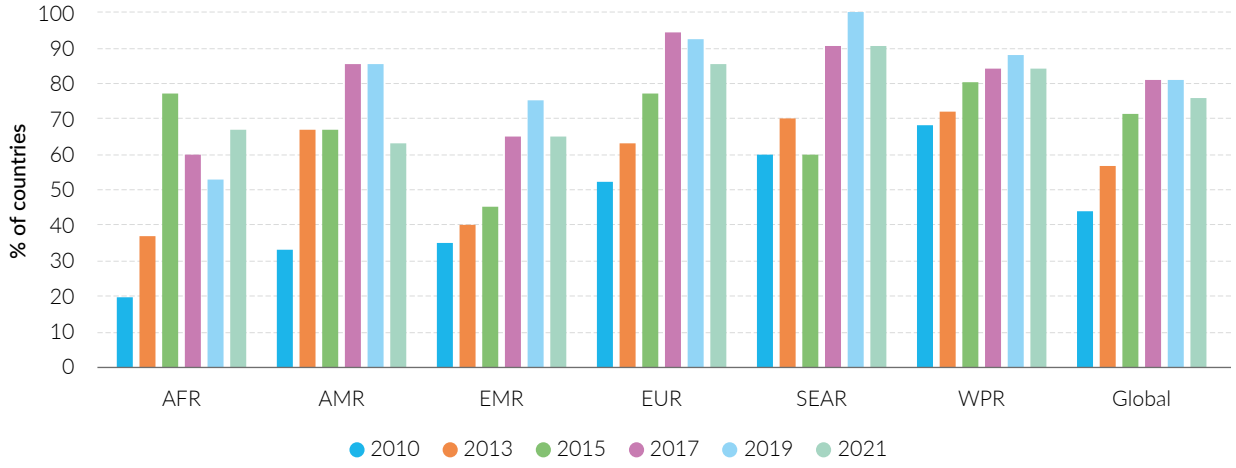
### a) Reducing the harmful use of alcohol




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

* Of 160 countries that responded to all six surveys.

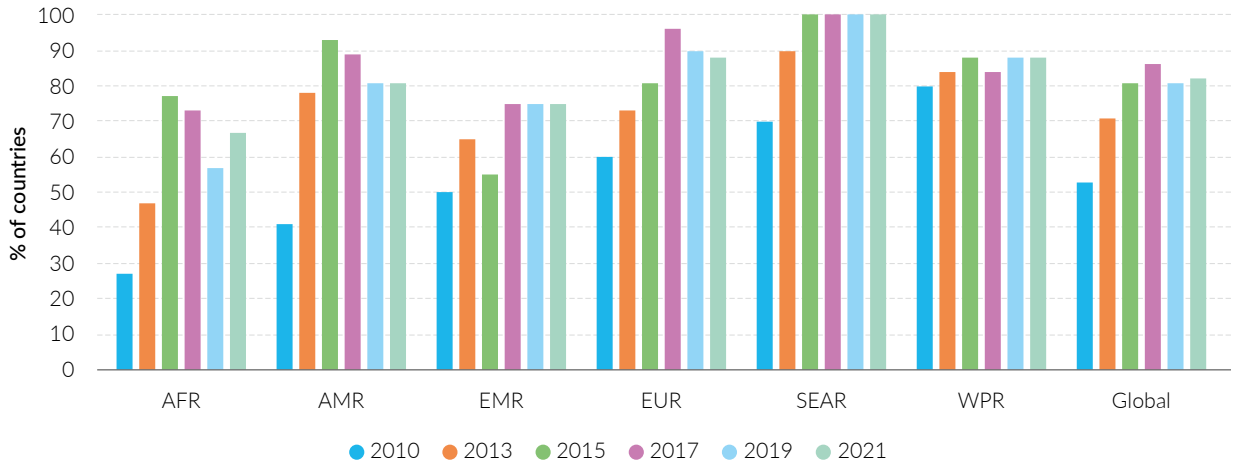
### b) Reducing physical inactivity




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

* Of 160 countries that responded to all six surveys.

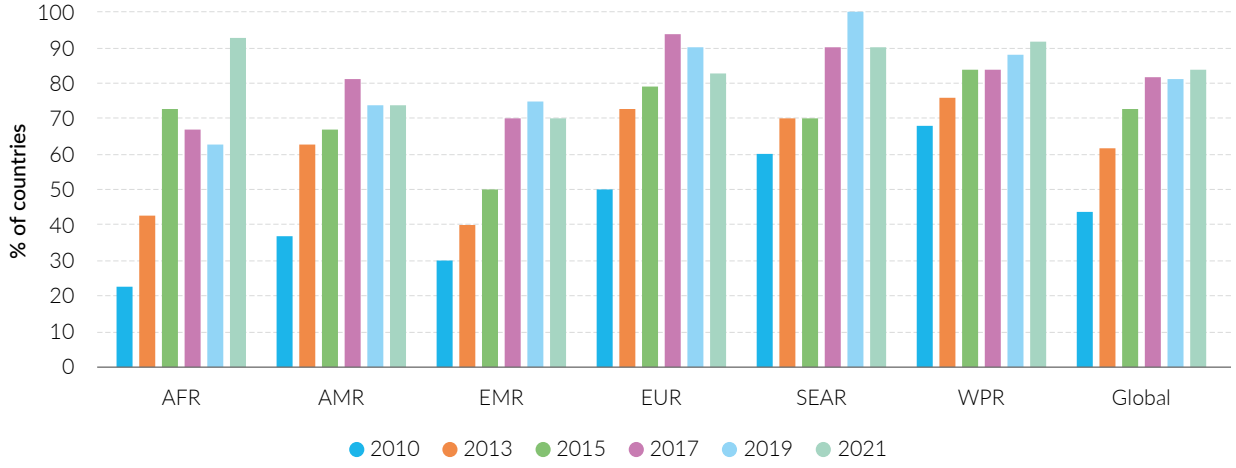
### c) Decreasing tobacco use




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

* Of 160 countries that responded to all six surveys.

### d) Reducing unhealthy diet related to NCD




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

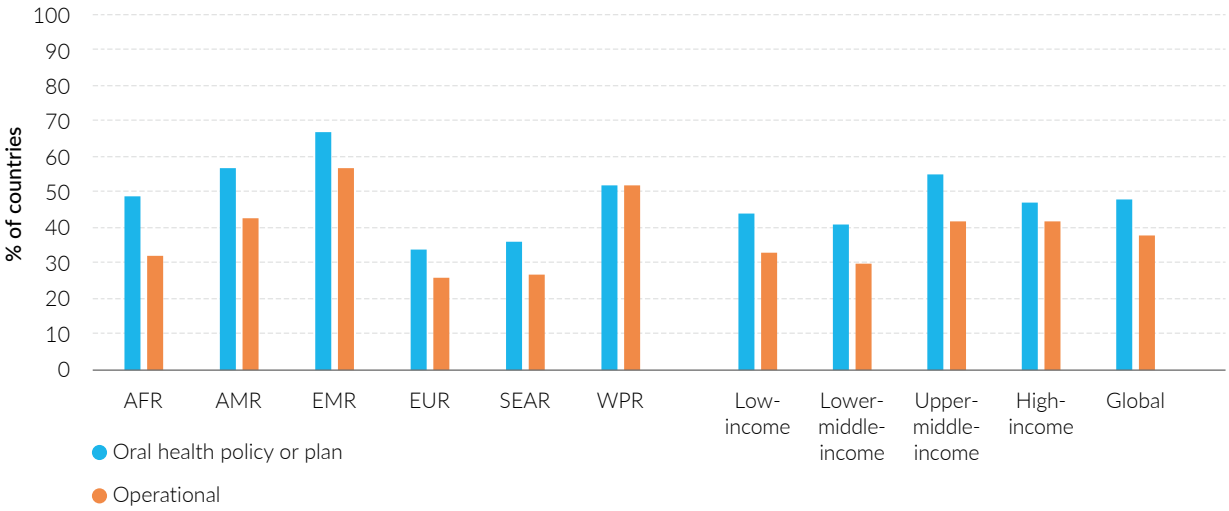
* Of 160 countries that responded to all six surveys.

Countries also reported on policies, strategies or action plans for oral health, eye health and ear health – with the latter two categories newly added to the 2021 questionnaire. These policies were not as widely available as those for any of the main NCDs or NCD risk factors. For example, only 38% of countries had an operational oral health policy in place (with an additional 10% having an oral health policy either under development or not in effect, Fig. 12a); only 24% had an operational eye health policy in place (with an additional 7% having an eye health policy under development or not in effect, Fig. 12b); and only 17% had an operational ear health policy in place (with an additional 3% having an ear health policy under development or not in effect). Of the three topics, policies or plans for ear health represented the most notable discrepancy by income group, with high-income countries almost three times as likely to report the presence of ear health policies than low- or upper-middle-income countries (Fig. 12c). Of all WHO regions, the Eastern Mediterranean Region had the greatest availability of policies or plans addressing these three topics.

## Fig. 12

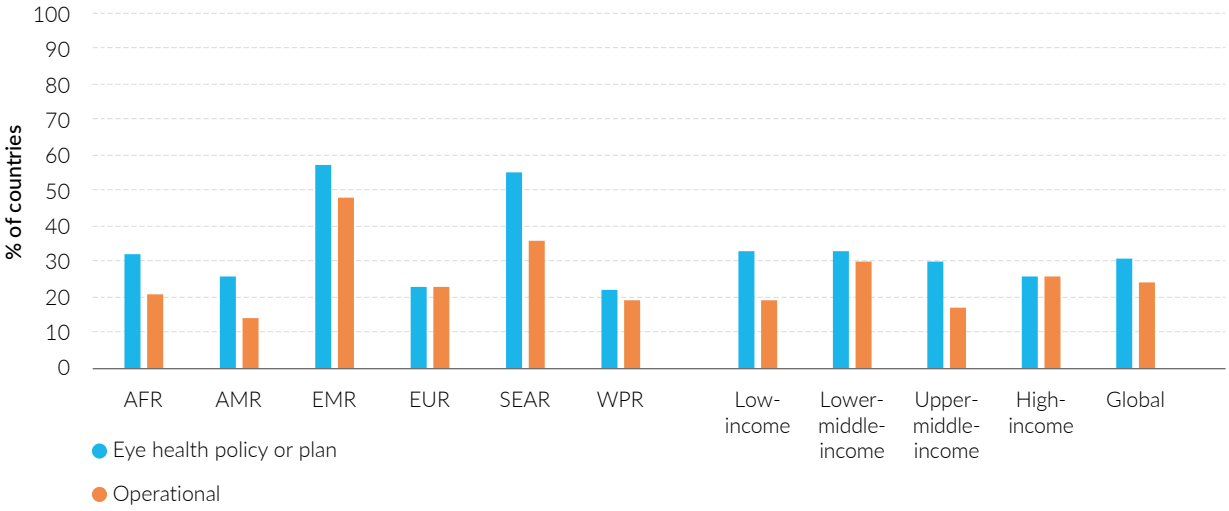
*Percentage of countries with a policy, strategy or action plan for oral health, eye health, and ear health, by WHO region and World Bank income group*

### a) Oral health

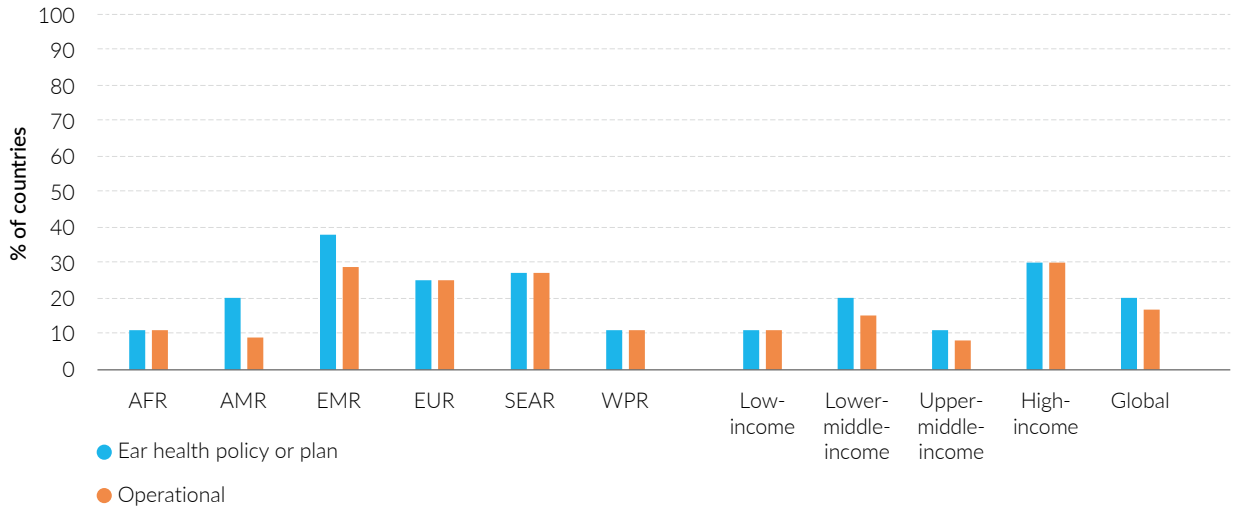



AFR: WHO African Region; AMR: WHO Region of the Americas; EMR: WHO Eastern Mediterranean Region; EUR: WHO European Region; SEAR: WHO South-East Asia Region; WPR: WHO Western Pacific Region.

### b) Eye health



### c) Ear health

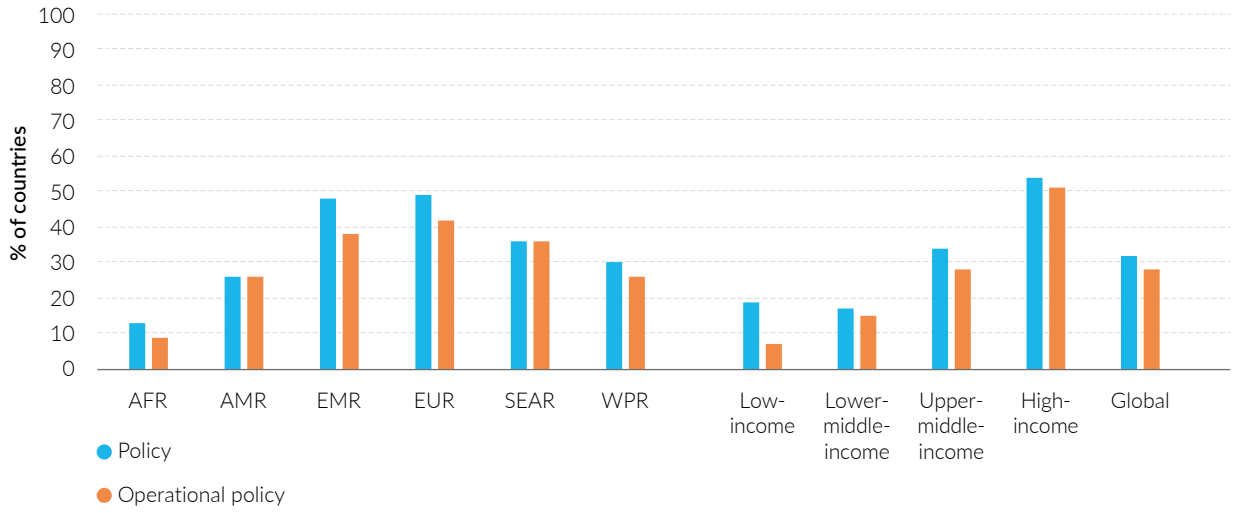



## NCD-related research

The presence of an operational NCD-related research policy or plan that included community-based research and an evaluation of the impact of interventions and policies was reported by just 28% of countries globally, with an additional 4% of countries reporting a policy under development or not in effect (Fig. 13). High-income countries were far more likely to report such policies (51%) than low-income countries (7%). In all regions, less than 50% of countries had operational NCD-related research policies or plans. Only around one in five countries (19%) had a national network for NCD-related research (including community-based research) and evaluation of the impact of interventions and policies in place – two thirds of which were in the Eastern Mediterranean Region and the European Region.

## Fig. 13

*Percentage of countries with an NCD-related research policy, by WHO region and World Bank income group*



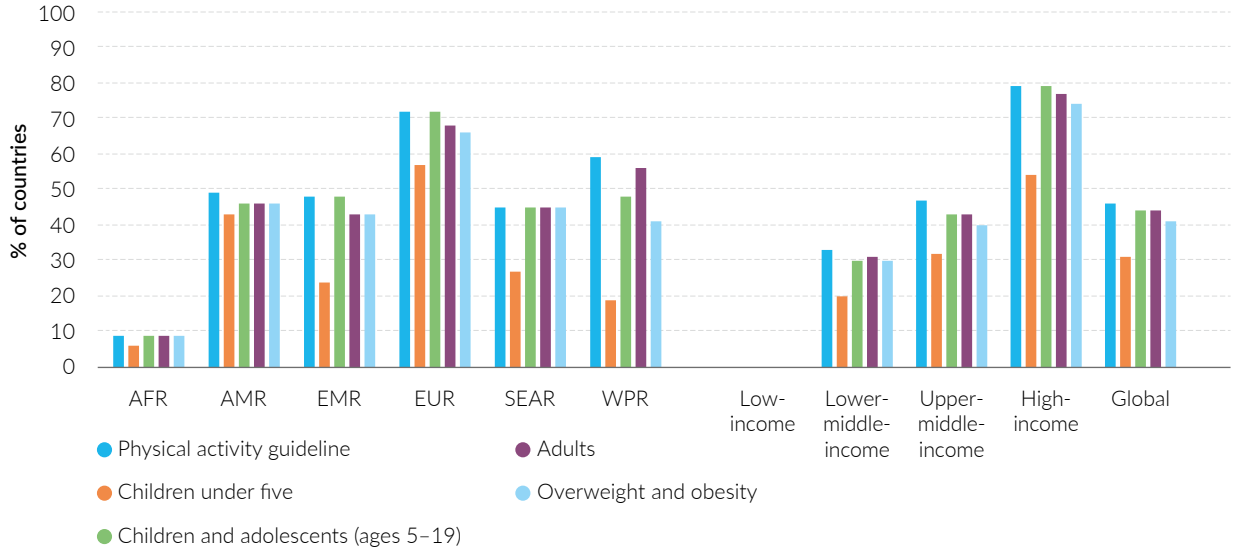

AFR: WHO African Region; AMR: WHO Region of the Americas; EMR: WHO Eastern Mediterranean Region; EUR: WHO European Region; SEAR: WHO South-East Asia Region; WPR: WHO Western Pacific Region.

## Physical activity guidelines

Countries were asked about the availability of national guidelines providing recommended levels of physical activity for the whole population, or a specific segment of it. Globally, 46% of countries reported having guidelines for physical activity (79 high-income countries and 80 middle-income countries, Fig. 14). No low-income country reported having such guidelines. Of those countries with guidelines available, almost all had them specifically for children and adolescents (96%) and for adults (94%). Guidelines for older adults were slightly less common (89% of countries with guidelines) while guidelines for children aged under five years were available in only 31% of countries, or 68% of countries with any physical activity guidelines.

### Fig. 14

*Percentage of countries with national physical activity guidelines, including age groups covered by guidelines, by WHO region and World Bank income group*




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

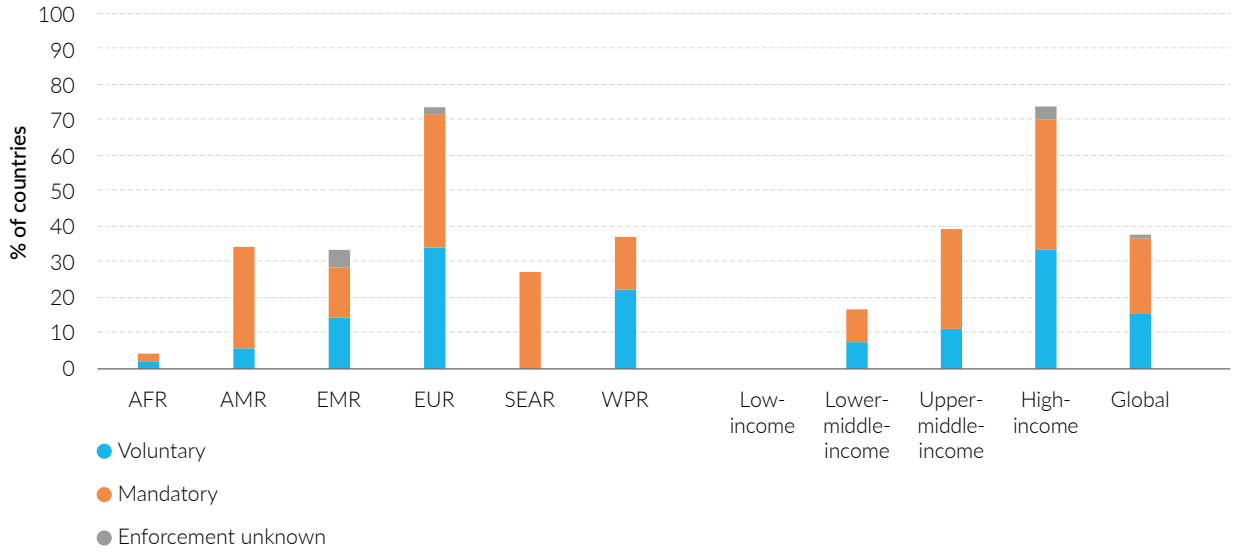
## Marketing to which children are exposed

A measure tracked to inform the NCD Progress Monitor is whether countries implement restrictions on the marketing of unhealthy foods and non-alcoholic beverages to which children are exposed. Seventy-three countries (38%) had implemented marketing restriction policies, more than half of which were in the European Region (Fig. 15). Two countries in the African Region (4% of the region's countries), three in the South-East Asia Region (27% of the region's countries) and approximately a third of countries in the Region of the Americas (34%), the Eastern Mediterranean Region (33%) and the Western Pacific Region (37%) had implemented marketing restriction policies (and in the South-East Asian Region, all existing policies were mandatory).

Where reported, mandatory policies were at least as, if not more, common than voluntary ones across all regions except the Western Pacific Region, where approximately two thirds of policies implemented were voluntary. In the European Region, where reported, policies were slightly more likely to be mandatory (38% of countries) than voluntary (34% of countries). The overall likelihood of having any type of marketing restriction policy was much greater among high-income countries (74% of countries) than other income groups, with no low-income countries reporting such policies at all.

## Fig. 15

*Percentage of countries with a policy to reduce the impact on children of the marketing of foods and non-alcoholic beverages high in saturated fats, trans-fatty acids, free sugars, or salt, and the method of regulation, by WHO region and World Bank income group*




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

### Food regulation and policy

Countries reported on policies to reduce their populations' salt and fat consumption, and on nutrition labelling policies. A third of countries (35%) had policies to reduce the intake of saturated fatty acids, with just under two thirds of these being mandatory (Fig. 16a). While no low-income countries reported having a mandatory policy, 26% of upper-middle-income countries and 44% of high-income countries reported having one. Apart from the European Region and the Eastern Mediterranean Region (at 79% and 48% of countries respectively), much less than a quarter of countries in all other regions had policies in place that addressed the intake of saturated fatty acids.

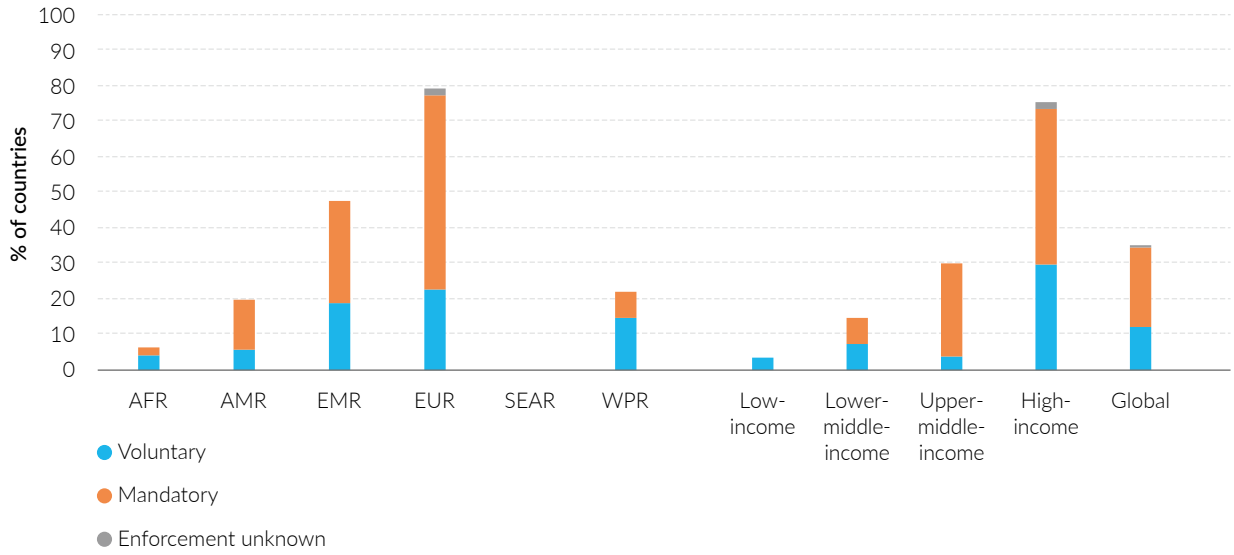
Policies to eliminate trans-fatty acids from the food supply (the focus of WHO's REPLACE package[9] to eliminate industrially produced trans-fatty acids) were not common, with just 34% of countries reporting having such policies in place (Fig. 16b). In countries where such policies were available, 61% reported that they mandated limiting trans-fatty acids, and 17% reported that they mandated bans on trans-fatty acids. Policies mandating limits to trans-fatty acids were far more prevalent in high-income countries (58% of countries) than in other income groups (which ranged between 0% and 11%), and in the European Region, where 62% of countries reported having them (versus 14% of countries or less in all other regions). Only 28% of countries had policies covering both saturated fat and trans fat, thereby fully achieving the related Progress Monitor indicator – more than two thirds of these countries were in the European Region.

[9] The REPLACE technical package provides a strategic approach to eliminating industrially-produced trans fat from national food supplies, with the goal of global elimination by 2023 (see: https://www.who.int/teams/nutrition-and-food-safety/replace-trans-fat).

## Fig. 16

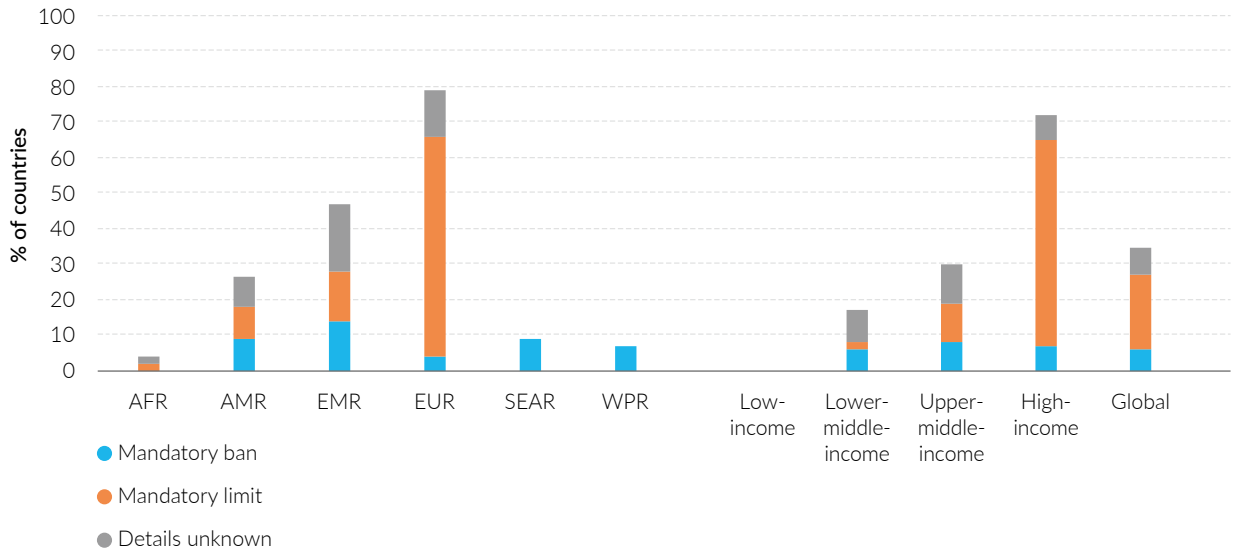
*Percentage of countries with fat-related policies and the method of regulation, by WHO region and World Bank income group*

**a) Policies to reduce population saturated fatty acid intake**




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

**b) Policies to eliminate industrially produced trans-fatty acids in the food supply**



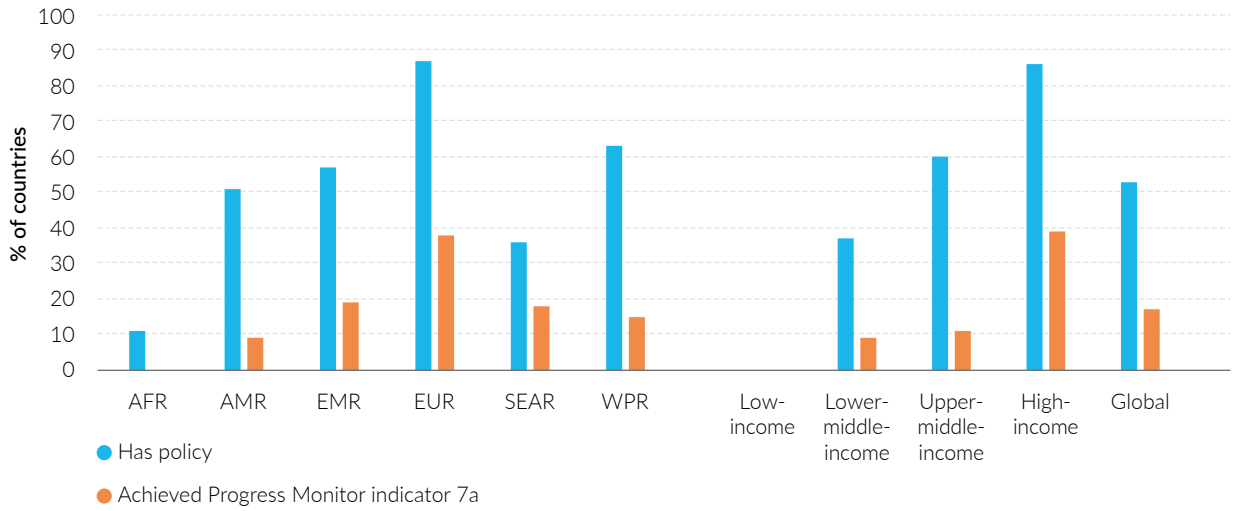

AFR: WHO African Region; AMR: WHO Region of the Americas; EMR: WHO Eastern Mediterranean Region; EUR: WHO European Region; SEAR: WHO South-East Asia Region; WPR: WHO Western Pacific Region.

Several WHO "Best Buys" relate to the reduction of salt consumption in the population. Countries were asked to report not only on the existence of policies to reduce salt consumption, but also more specifically on "Best Buy" interventions – namely product reformulation; regulation of salt content in specific settings, such as schools and hospitals; public awareness programmes; and front-of-pack nutrition labelling. The Progress Monitor indicator pertaining to salt policies captures all of these aspects of salt-reduction efforts in the country. In order to score as "fully achieved" for this indicator, countries must show

that they have implemented product reformulation and/or salt content regulation as well as a public awareness programme and front-of-pack nutrition labelling. While 53% of countries reported having a salt-reduction policy in place, only 17% fully achieved the Progress Monitor indicator for such policies (Fig. 17). Policies were found to be most prevalent in the European Region (87% of countries), Western Pacific Region (63% of countries) and the Eastern Mediterranean Region (57% of countries), while the percentage of countries in all other regions varied significantly – from 11% in the African Region to 36% in the South-East Asia Region, and 51% in the Region of the Americas. Despite this wide variation, a clear pattern of increasing prevalence of salt-reduction policies with rising income group remained evident.

## Fig. 17

*Percentage of countries with any policy to reduce population salt consumption and that achieved Progress Monitor indicator 7a, by WHO region and World Bank income group*

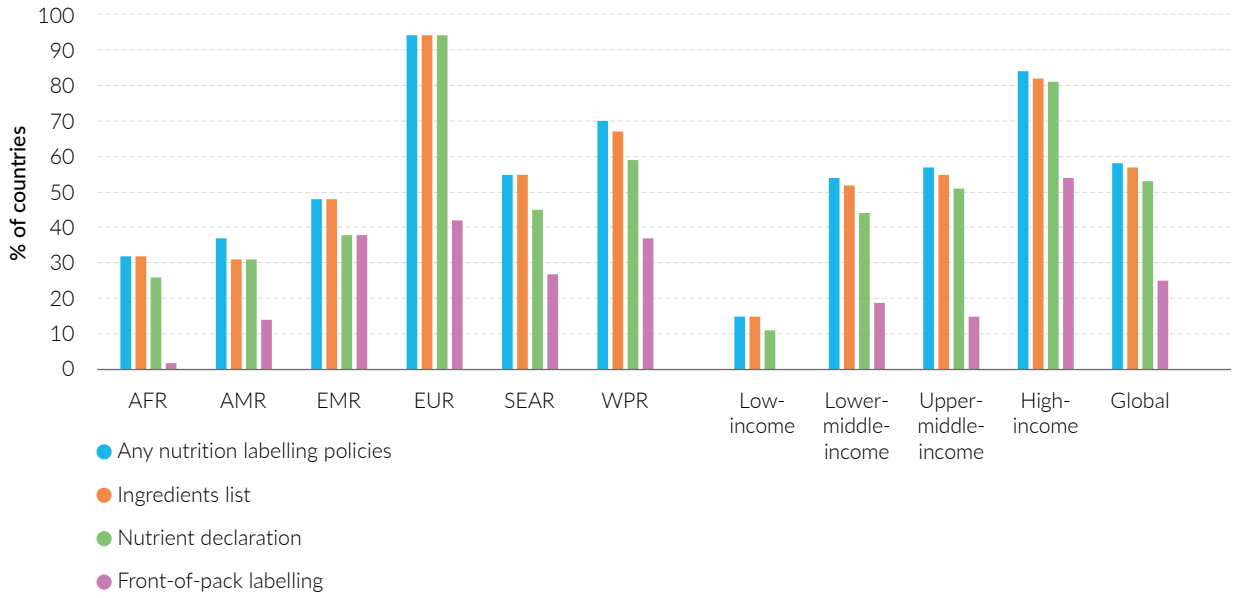



AFR: WHO African Region; AMR: WHO Region of the Americas; EMR: WHO Eastern Mediterranean Region; EUR: WHO European Region; SEAR: WHO South-East Asia Region; WPR: WHO Western Pacific Region.

Countries were asked about the presence of nutrition labelling policies to identify foods high in saturated fatty acids, trans-fatty acids, free sugars, or salt. In response, 58% of countries overall reported implementing such a labelling policy, with around half implementing ingredients lists (57% of countries) and nutrient declarations (53%), and just a quarter of countries (25%) implementing front-of-pack labelling policies (Fig. 18). Labelling policies of any kind were most common among countries in the European Region (94% of countries), whereas the prevalence of these policies in other regions ranged from around a third (32%) of countries in the African Region to well over two thirds (70%) in the Western Pacific Region. With the exception of the African Region (where only one country reported implementing front-of-pack labelling), between 14% and 42% of countries in other regions reported having front-of-pack labelling systems in place.

## Fig. 18

*Percentage of countries implementing nutrition labelling policies, by WHO region and by World Bank income group*



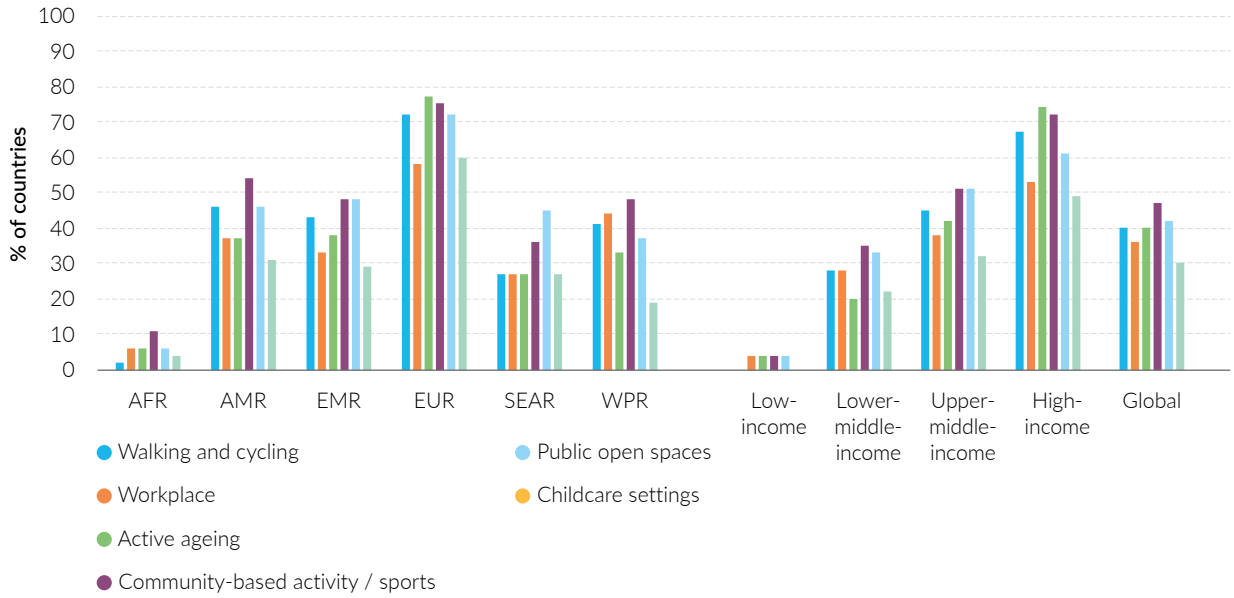

AFR: WHO African Region; AMR: WHO Region of the Americas; EMR: WHO Eastern Mediterranean Region; EUR: WHO European Region; SEAR: WHO South-East Asia Region; WPR: WHO Western Pacific Region.

### Policies to promote physical activity

For the first time in the survey, countries were asked to report on the availability of physical activity policies in relation to six topics – open spaces, the workplace, the community, childcare settings, walking and cycling, and active ageing. Globally, all of these policies were implemented by under half of countries. Community-based activity policies were the most prevalent type of policy implemented (reported by 47% of countries overall) and addressing physical activity in childcare settings the least prevalent policy implemented (reported by 30% of countries overall). Implementation of physical activity policies was closely related to income group, with policy implementation for each reported by no more than a single low-income country, while around half to three quarters of high-income countries had implemented each policy. Implementation of each policy in the European Region far surpassed all other regions (Fig. 19).

## Fig. 19

*Percentage of countries implementing various policies to promote physical activity, by WHO region and by World Bank income group*

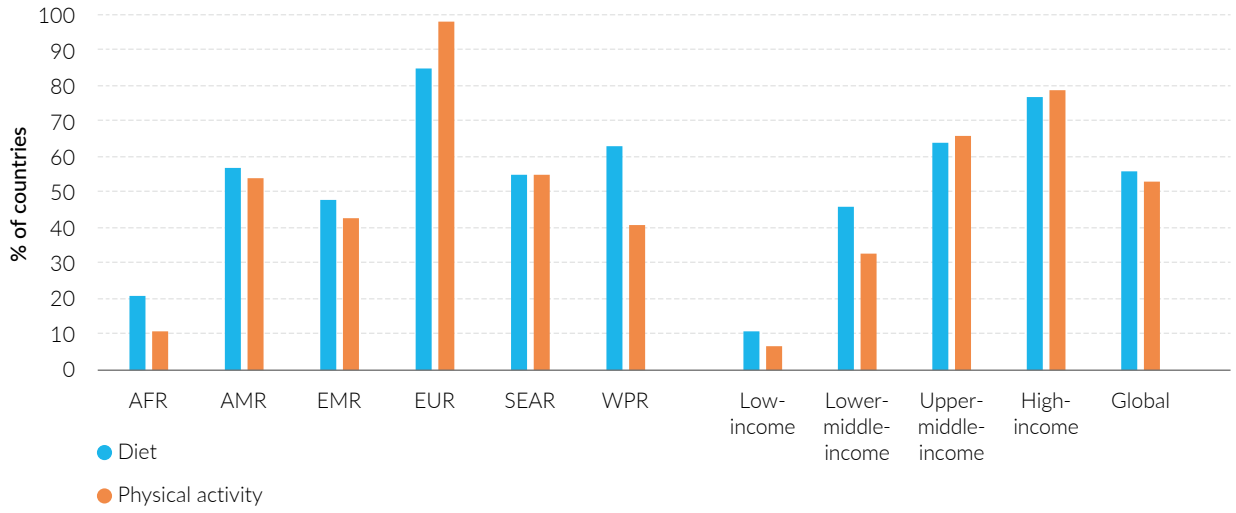



### Public awareness campaigns and mass-participation events

The percentage of countries reporting implementation of campaigns on diet and physical activity (both of which are WHO-recommended interventions) during the past 2 years are shown in Fig. 20. Most regions reported that around (or well over) half of their countries implemented both types of campaign during this time period, with the exception of the African Region, in which 21% of countries reported a campaign on diet, and just 11% reported a campaign on physical activity. A strong correlation was evident between income group and the likelihood of either type of campaign being implemented: among low-income countries, only 11% had implemented a campaign for diet, and only 7% for physical activity. By contrast, among high-income countries, 77% had implemented campaigns for diet, and 79% for physical activity. Campaigns on diet were generally more available – or at least equally available – than those on physical activity, except in the European Region.

## Fig. 20

*Percentage of countries that have implemented a public awareness programme in the past 2 years that addresses diet or physical activity, by WHO region and by World Bank income group*

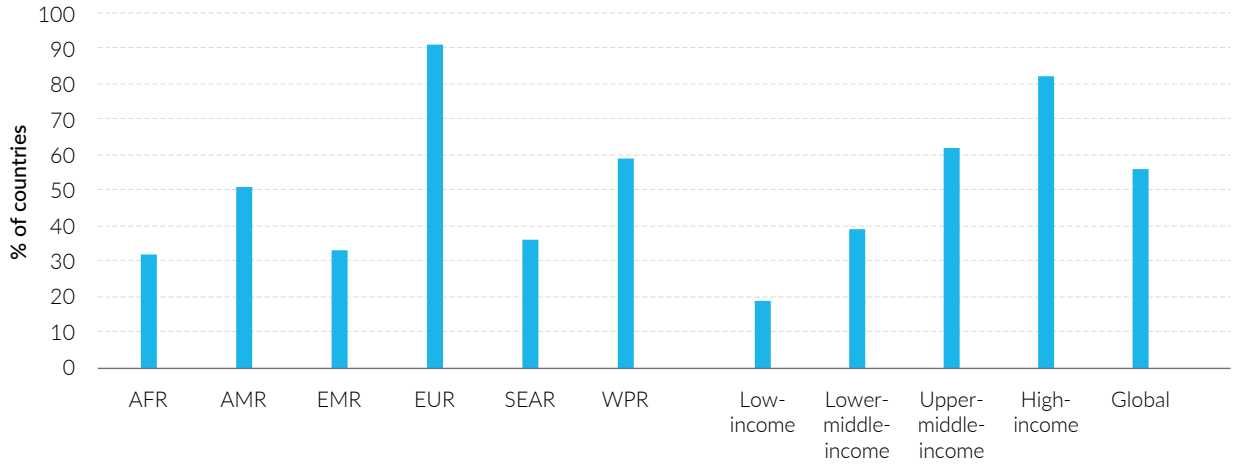



AFR: WHO African Region; AMR: WHO Region of the Americas; EMR: WHO Eastern Mediterranean Region; EUR: WHO European Region; SEAR: WHO South-East Asia Region; WPR: WHO Western Pacific Region.

Countries were also asked to report on whether any national or subnational "mass-participation events" (defined as free events in which participation by the general public was encouraged, such as national sport days or car-free days) had taken place during the past 2 years. Overall, 56% of countries reported implementing at least one mass-participation event during this time period. The overall pattern was similar to that seen in the implementation of physical activity awareness campaigns, with a strong positive correlation between numbers of events and income group: high-income countries (82% of countries) were more than four times as likely to have implemented a mass-participation event than low-income countries (19%) (Fig. 21).

## Fig. 21

*Percentage of countries implementing a mass-participation event in the past 2 years, by WHO region and by World Bank income group*



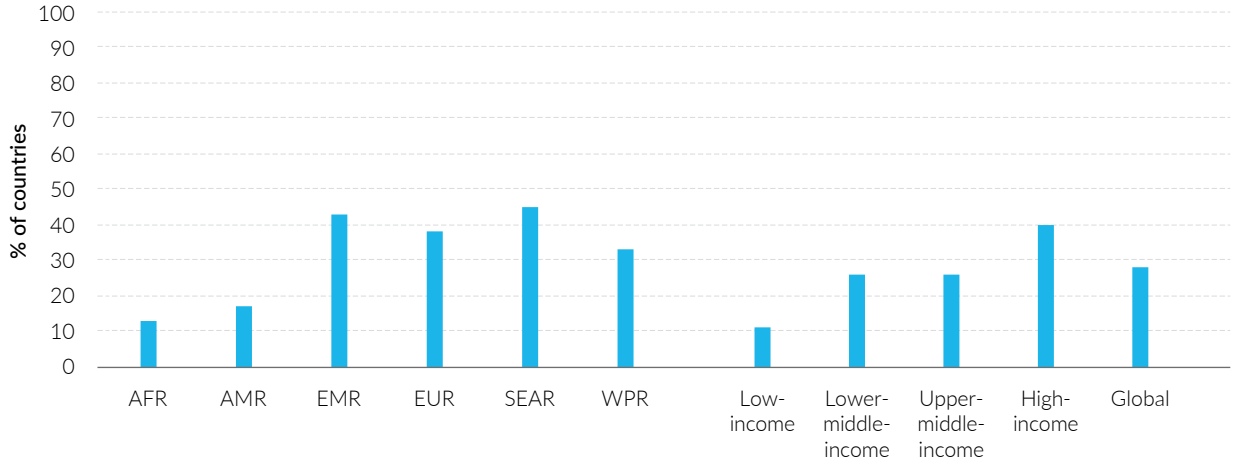

AFR: WHO African Region; AMR: WHO Region of the Americas; EMR: WHO Eastern Mediterranean Region; EUR: WHO European Region; SEAR: WHO South-East Asia Region; WPR: WHO Western Pacific Region.

### mHealth initiatives

Just over a quarter (28%) of all countries reported having implemented an mHealth initiative during the past 2 years that supported the achievement of health objectives, such as for tobacco cessation, hypertension management, or cervical cancer screening awareness. Differences among regions and income groups were less marked than for other interventions in this section. Of the 55 countries reporting an mHealth initiative, over half were low- and middle-income countries, and – with the exception of the African Region and the Region of the Americas (at 13% and 17% respectively) – all other regions had roughly similar reported figures, ranging from 33% in the Western Pacific Region to 45% in the South-East Asia Region (Fig. 22).

## Fig. 22

*Percentage of countries that have implemented a national, NCD-related mHealth initiative, by WHO region and by World Bank income group*




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

# Surveillance

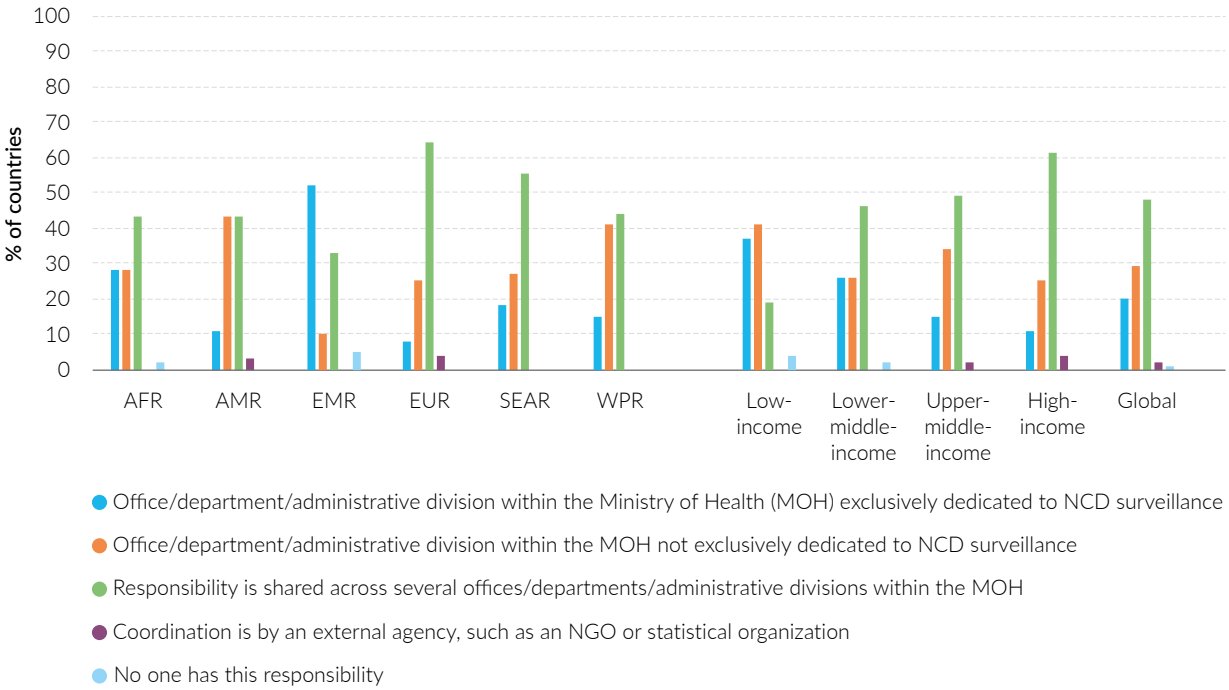
### Surveillance responsibility

Globally, 48% of countries reported that responsibility for NCD and NCD risk factor surveillance was shared across several offices, departments, or administrative divisions within the ministry of health. While this was the most common arrangement overall, Eastern Mediterranean Region countries were more likely to report that responsibility was not shared but managed by a department exclusively dedicated to NCD surveillance; and equal proportions of countries in the Region of the Americas reported that NCD surveillance was either a shared responsibility or covered by a department or division not exclusively dedicated to NCD surveillance (43% of countries each). Across high-, lower- and upper-middle-income countries, responsibility was reported as shared across several offices, while in low-income countries, an exclusive office, department, or administrative division within the ministry of health dedicated to NCD surveillance was most common (37%).

Coordination by an external agency, such as a non-governmental organization (NGO) or statistical organization for the surveillance of NCDs and their risk factors was far less common, and was the case for only three countries in the upper-middle- and high-income groups. Overall, with the exception of two low- and lower-middle-income countries, all countries reported having an institution responsible for the surveillance of NCDs and their risk factors (Fig. 23).

## Fig. 23

*Percentage of countries with an area of responsibility for the surveillance of NCDs and their risk factors, by WHO region and World Bank income group*



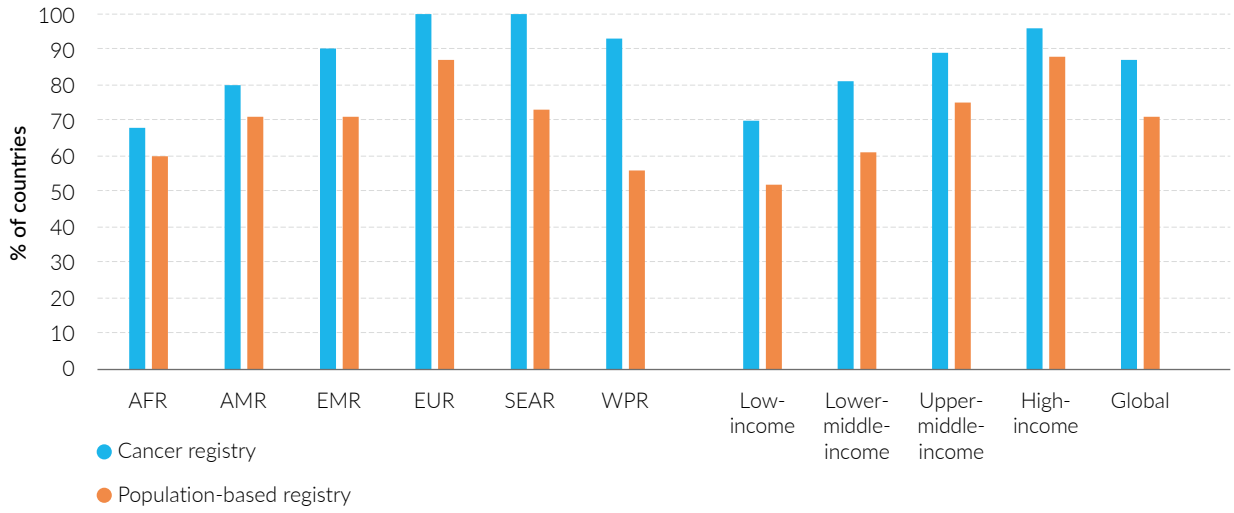

AFR: WHO African Region; AMR: WHO Region of the Americas; EMR: WHO Eastern Mediterranean Region; EUR: WHO European Region; SEAR: WHO South-East Asia Region; WPR: WHO Western Pacific Region.

### Cancer registries

While cancer registries were reported by 87% of countries globally, population-based cancer registries were reported as less widespread (71% of countries). Across income groups, availability of population-based cancer registries ranged from 88% of high-income countries to just 52% of low-income countries. Population-based registries were most commonly reported by countries in the European Region (87%), followed by the South-East Asia Region (73%), and by 71% of countries in the Eastern Mediterranean Region and the Region of the Americas. Such registries were least commonly reported in the African Region (60%) and Western Pacific Region (56%) (Fig. 24). The availability of population-based cancer registries has been tracked in the 160 countries that have responded to the last six rounds of the survey and clear progress has been made: in 2010, only 47% of the 160 countries reported having a population-based cancer registry, but by 2021 this had risen to 74%. The most notable progress was seen in the African Region, where among the 30 countries responding to all rounds of the survey, the number of countries reporting population-based cancer registries has more than doubled, from only eight countries in 2010 to 19 in 2021.

## Fig. 24

*Percentage of countries with cancer registries, and type of registry, by WHO region and World Bank income group*



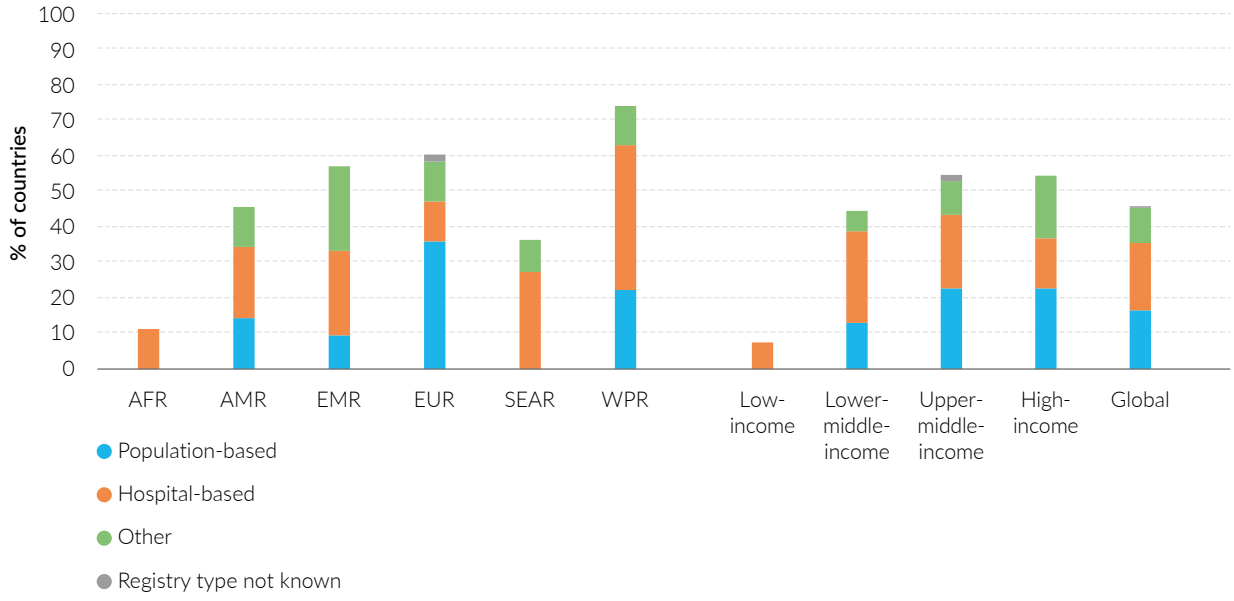

AFR: WHO African Region; AMR: WHO Region of the Americas; EMR: WHO Eastern Mediterranean Region; EUR: WHO European Region; SEAR: WHO South-East Asia Region; WPR: WHO Western Pacific Region.

### Diabetes registries

Just under half of all countries (46%) reported having a diabetes registry – of these countries with registries, 42% reported that their diabetes registries were hospital-based (Fig. 25). Across income groups, diabetes registries were most prevalent in upper-middle-income countries (55%), and least prevalent in low-income countries (7%). And across regions, the Western Pacific Region reported the highest percentage of countries with any kind of diabetes registry (74%) followed by the European Region (60%). Population-based diabetes registries were most prevalent in the European Region (36%), while no countries in either the South-East Asia Region or the African Region reported having population-based diabetes registries.

## Fig. 25

*Percentage of countries with a diabetes registry, and type of registry, by WHO region and World Bank income group*



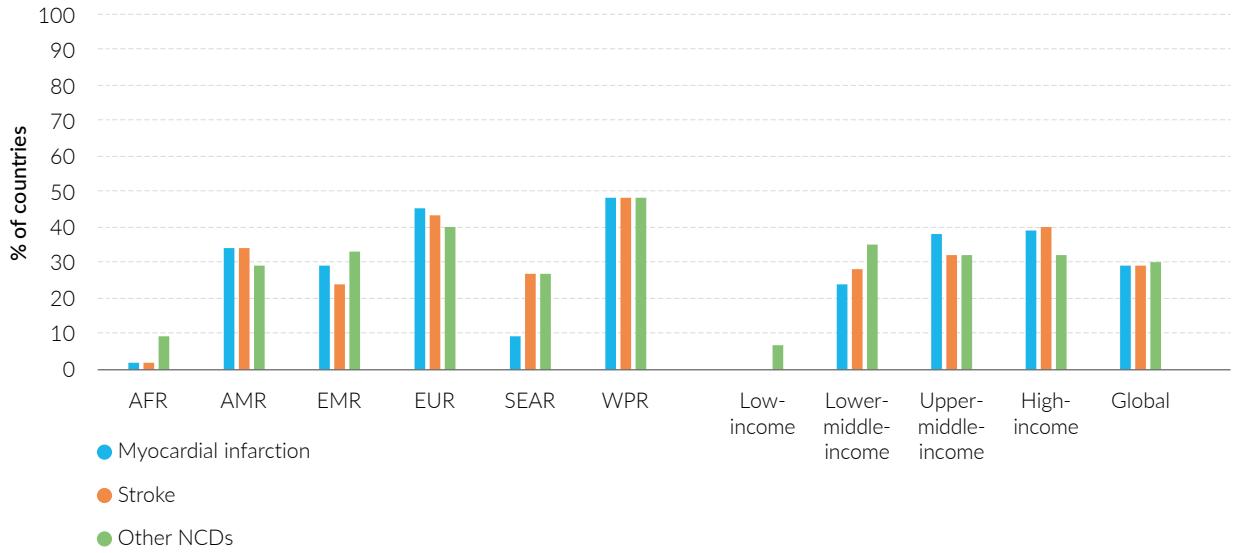

AFR: WHO African Region; AMR: WHO Region of the Americas; EMR: WHO Eastern Mediterranean Region; EUR: WHO European Region; SEAR: WHO South-East Asia Region; WPR: WHO Western Pacific Region.

## Other registries

Countries were asked to report on the availability of any other registries providing information on NCDs, including for myocardial infarction (MI), stroke, and any other NCDs of particular relevance to the given country. The Western Pacific Region had the highest percentage of countries reporting MI and stroke registries (48% for both conditions, though only 7% had population-based registries for either), while only one country in the African Region reported having registries for MI or stroke, and only four of the region's countries reporting registries for other NCDs (Fig. 26). Availability of registries for other NCDs across income groups was fairly similar, with the exception of low-income countries, none of which reported having an MI nor stroke registry and only two of which reported having any other NCD registry. Just over a third of countries overall reported that NCD-related data were collected by other registries.

### Fig. 26

*Percentage of countries with other registries for myocardial infarction, stroke, or other country-relevant NCDs*




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

## Patient information systems

Countries were asked to report on the availability in public facilities (i.e. primary health care centres and hospitals) of a standardized system for recording patient-level data that includes NCD status and risk factors. They were also asked whether the system was paper-based, electronic, or a mix; and the percentage of facilities covered by the system.

Overall, 55% of countries reported that their primary health care (PHC) centres recorded patient information that included NCDs, of which 78% were national-level systems and 22% were subnational systems. The regional variation in the availability of such systems (national or subnational) ranged from 71% of Eastern Mediterranean Region countries to 45% of African Region countries. Across income groups, the prevalence of national systems was fairly similar – from 37% in low-income countries to 46% in high-income countries. However, subnational systems were less prevalent in both low- and high-income countries (4% and 7% respectively) and more common in lower- and upper-middle-countries (19% and 17% respectively).

Of the countries with a PHC centre patient information system that included NCDs, 19% were paper-based, 41% were electronic, and 40% were a mix of the two. Electronic means were more prevalent in high-income countries (46% of countries, or 87% of those with systems in place), and in the European Region (43% countries, or 74% of those with systems in place). They were least common in the African Region (4% of countries, or just 19% of those with systems in place). Interoperability of these systems with private facilities was possible in 31% of countries with such systems (with fairly equal representation across income groups), with the exception of the Eastern

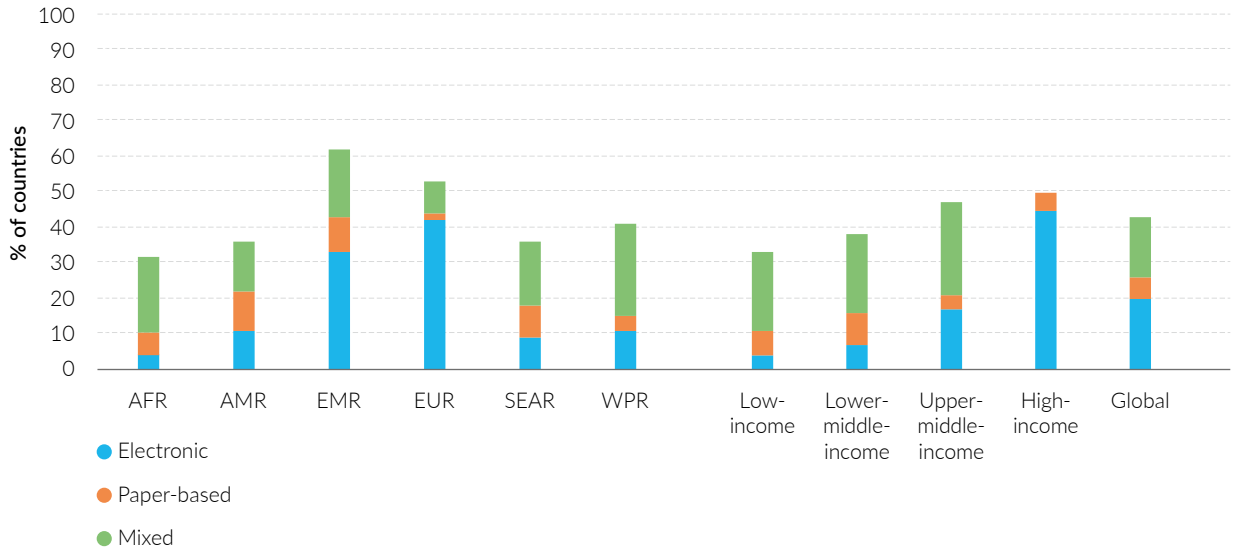
Mediterranean Region or the South-East Asia Region, in which no countries reported interoperability.

Overall, 43% of countries reported having PHC centre patient information systems that were used by more than half of facilities in the country. Availability was linked to country-income level, with only one third (33%) of low-income countries reporting PHC centre patient information systems that were used by more than half of facilities in the country, but almost half (49%) of high-income countries reporting such availability. Fig. 27 shows the reported availability of these systems by their system type (electronic, paper-based or mixed) and reveals that many systems with relatively high coverage are not electronic – instead, systems comprising a mix of paper-based and electronic record-keeping predominate in many regions and most income groups.

The Eastern Mediterranean Region reported the highest percentage of countries (62%) recording patient-level data with over 50% coverage – this was double the African Region's reported figure for countries recording patient-level data with over 50% coverage (32%). All other WHO regions ranged between 36% (Region of the Americas and the South-East Asia Region) and 53% (the European Region).

## Fig. 27

*Primary health care centres recording patient-level data with coverage >50%, reported by type of system*




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

When it came to countries reporting on whether they had systems for recording NCD-related patient information in public hospitals, 55% of countries overall reported the presence of such systems. Of these, 80% were national-level systems, and 19% were subnational systems. The regional variation in the availability of such systems (national or subnational) ranged from 71% of Eastern Mediterranean Region countries to 43% of countries in the Region of the Americas. Across income groups, the percentage of countries reporting the presence of national or subnational systems in public hospitals ranged from 44% in low-income countries to 62% in upper-middle-income countries.

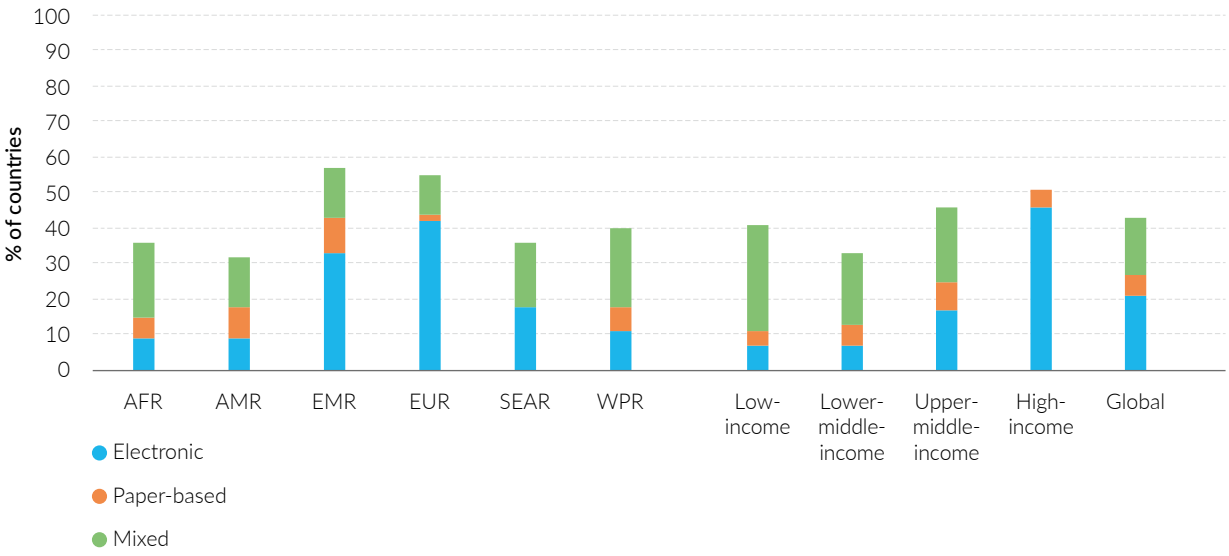
Of the countries with a hospital-based patient information system that included NCDs, 14% were paper-based, 45% were electronic, and 40% used a mix of these means. Overall, electronic systems were more prevalent in high-income countries (46%), and in the European Region (42%). They were least common in the African Region (11%). Interoperability of these systems with private facilities was possible in 35% of countries with such systems (with fairly equal representation across income groups). Of the countries reporting both public hospital and primary health centre-based systems, 53% said the two systems were interoperable.

Overall, 43% of countries reported having hospital patient information systems that were used by

more than half of public hospitals in the country. Fig. 28 shows the reported availability of these systems by their system type (electronic, paper-based or mixed) and reveals a very similar pattern to that of PHC patient information systems with relatively high coverage. While electronic systems predominate among high-income countries and countries in the Eastern Mediterranean Region and European Region, systems based on a mix of paper-based and electronic record-keeping are equally prevalent, or more so, in all other regions and income groups.

## Fig. 28

*Hospitals recording patient-level data with coverage >50%, reported by type of system*




In all regions except the Region of the Americas, between a half and two thirds of countries reporting the presence of both public hospital-based and primary health centre-based patient information systems said that they were interoperable (in the Region of the Americas, only 33% reported such interoperability). Over three quarters of high-income countries reporting both systems said they were interoperable, compared to around 50% or less in low- and upper-middle-income countries.

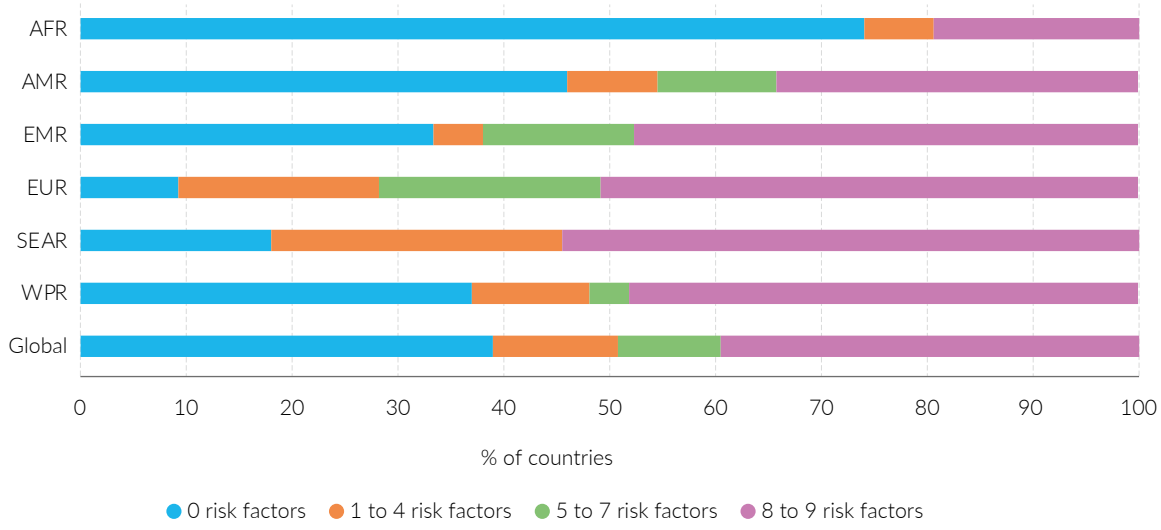
### Risk factor surveys

In a long series of questions, countries were asked to report on any population-based survey covering one or more of the main NCD risk factors. For certain risk factors, countries reported not only on adult surveys but on adolescent or child surveys as well. Forty per cent of countries reported conducting recent, national surveys among adults for at least eight or nine of the NCD risk factors (harmful alcohol use, unhealthy diet, physical inactivity, tobacco use, overweight and obesity, raised blood pressure, raised blood glucose, raised cholesterol, and salt intake). Any survey occurring in the 5 years prior to the NCD CCS (i.e. 2016 or later) was considered recent. While just 19% of countries in the African Region and 34% of countries in the Region of the Americas had covered eight or nine risk factors in recent, national surveys of adults, around half of countries in all other regions had done so (Fig. 29a). In the African Region, 74% of countries had not conducted any recent, national surveys of NCD risk factors among adults, and across income groups, 74% of low-income countries and 52% of lower-middle-income countries had also conducted no such surveys (Fig. 29b).

## Fig. 29

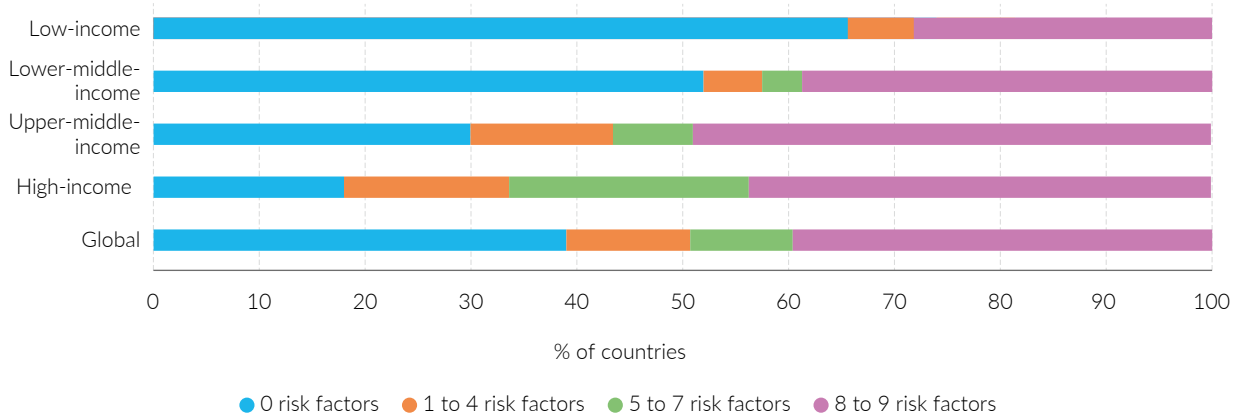
*Percentage of countries covering 0–9 risk factors in recent, national adult NCD risk factor surveys*

### a) By WHO region




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

### b) By World Bank income group

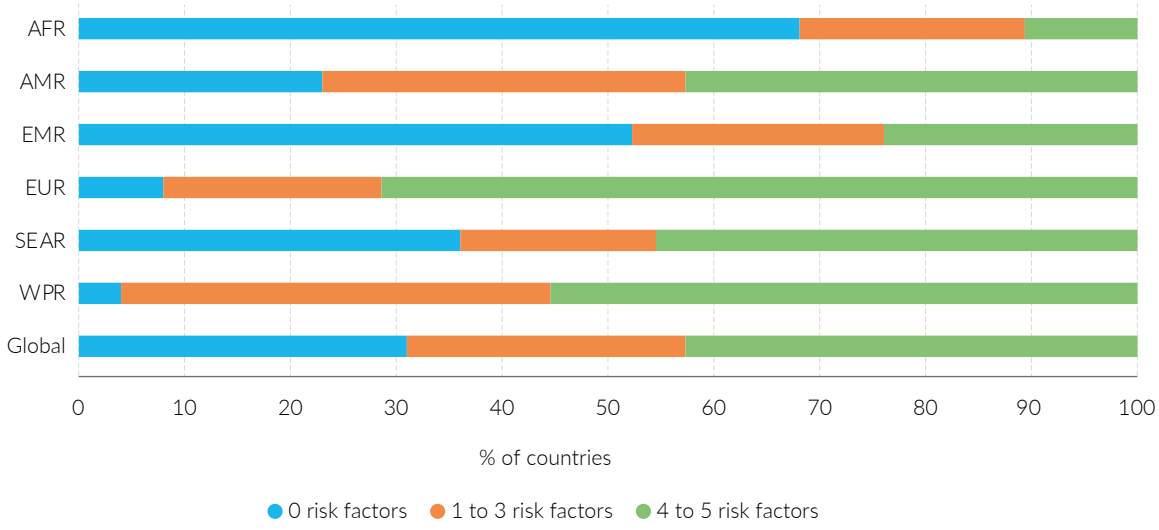



Regarding surveillance of risk factors among adolescents, under half of countries (43%) had conducted a recent, national survey among adolescents covering at least four of these five risk factors (harmful alcohol use, unhealthy diet, physical inactivity, tobacco use, and overweight and obesity) (Fig. 30a). As seen in the surveys of risk factors for adults, the African Region had the highest percentage of countries (68%) that had conducted no recent, national surveys among adolescents. Among other regions the picture was varied, with 72% of European Region countries reporting covering at least four of the five risk factors in surveys of adolescents in recent, national surveys, and between 43% and 56% of countries in all other regions reporting such surveys. The percentage of countries covering four to five risk factors in such surveys related closely to income group – with high-income countries 10 times more likely (70%) to have conducted such surveys than low-income countries (7%) (Fig. 30b).

## Fig. 30

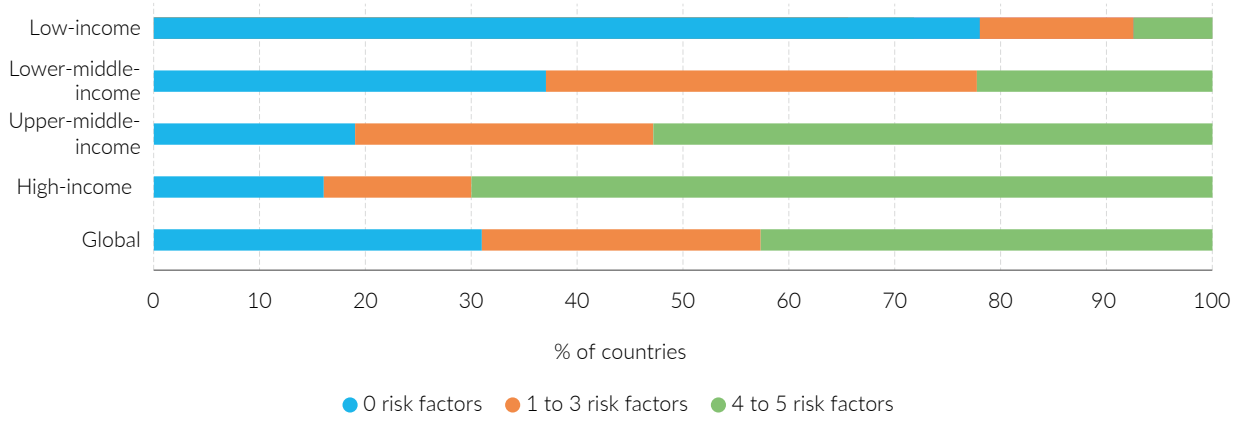
*Percentage of countries covering 0–5 risk factors in recent, national adolescent NCD risk factor surveys*

**a) By WHO region**




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

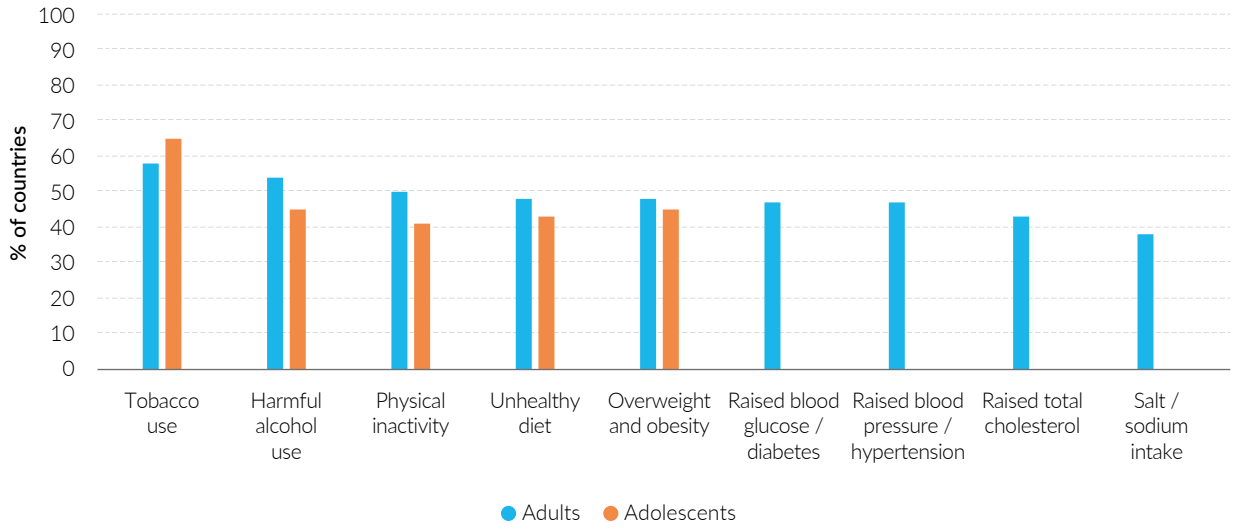
**b) By World Bank income group**




Tobacco use was the most commonly included of all NCD risk factors in both adult and adolescent national surveys, followed by harmful alcohol use (Fig. 31). Differences in the prevalence of surveys covering each of the risk factors were not particularly notable, and ranged from a high of 65% of countries for tobacco use among adolescents, to 38% for salt consumption among adults – the least commonly covered risk factor.

## Fig. 31

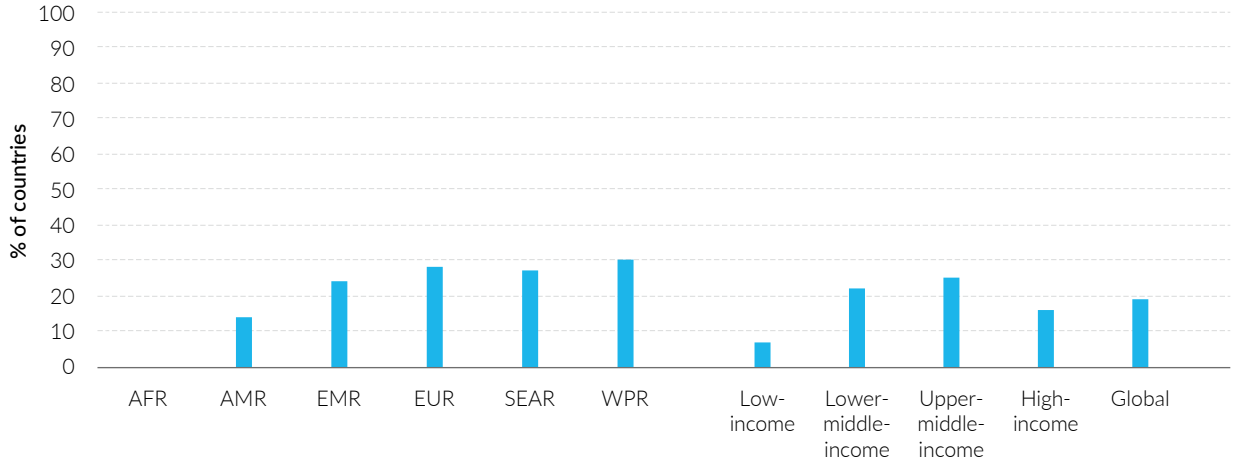
*Percentage of countries that have conducted recent, national adult or adolescent risk factor surveys, by risk factor*




Full achievement of the Progress Monitor indicator on surveillance (see Box 2) meant a country must have surveyed its population within the past 5 years (i.e. in 2016 or later) in relation to harmful alcohol use, physical inactivity, tobacco use, overweight and obesity, raised blood pressure, raised blood glucose and sodium intake, and have indicated that the survey frequency was at least once every 5 years. Fewer than one in five countries (19%) had fully achieved this indicator, the highest prevalence being in countries of the Western Pacific Region (30%) (Fig. 32). No country in the African Region, three countries in the South-East Asia Region and five countries in the Region of the Americas and Eastern Mediterranean Region fully achieved the indicator. The upper-middle-income group had the highest proportion of countries fully achieving this indicator (25%) while the low-income group had the lowest (7%).

## Fig. 32

*Percentage of countries that fully attained Progress Monitor indicator 3, on regular health examination surveys, by WHO region and World Bank income group*

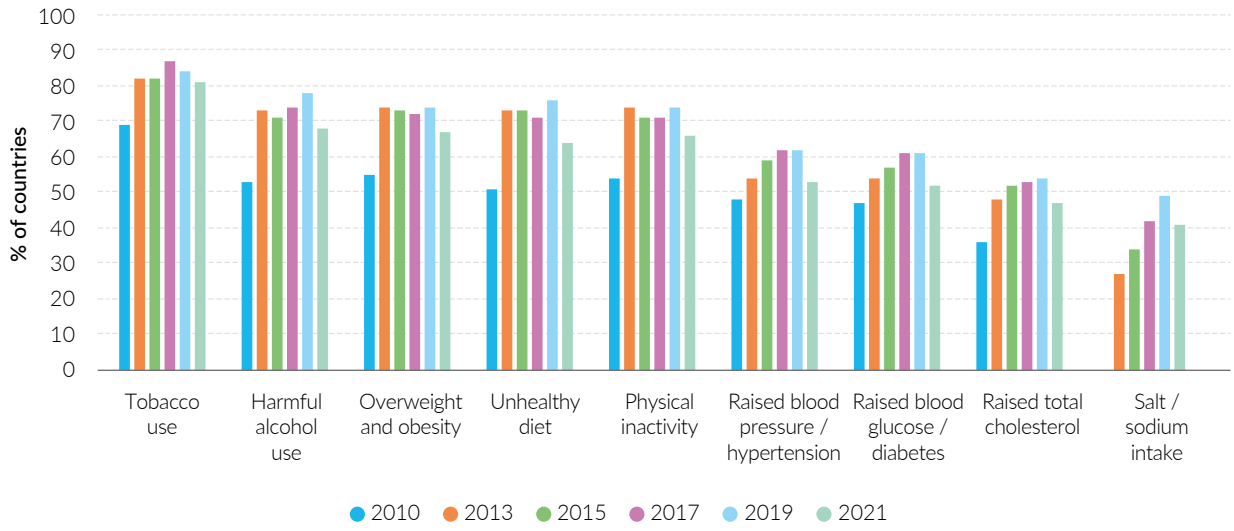



AFR: WHO African Region; AMR: WHO Region of the Americas; EMR: WHO Eastern Mediterranean Region; EUR: WHO European Region; SEAR: WHO South-East Asia Region; WPR: WHO Western Pacific Region.

Trend analysis revealed that the number of countries conducting recent, national surveys on each of the nine major NCD risk factors has increased fairly consistently since 2010, however all have seen a slight decline since the last round of the NCD CCS in 2019, with the biggest decline observed in surveys addressing unhealthy diet. While salt intake remained the least likely risk factor to be covered by a survey in countries, substantial progress had been made in coverage of this risk factor since 2013, when it was first included in the NCD CCS. Tobacco use continued to be the most widely covered NCD risk factor in recent, national surveys, although data on all other behavioural risk factors, as well as overweight and obesity, were nearly as widely collected (Fig. 33).

## Fig. 33

*Percentage of countries* that have conducted recent, national risk factor surveys, 2010, 2013, 2015, 2017, 2019 and 2021*

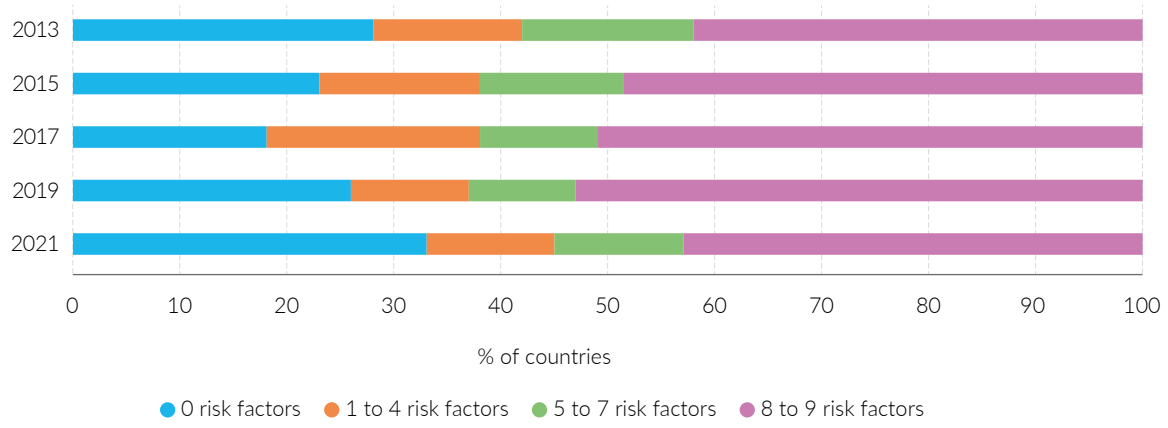



* Of 160 countries that responded to all six surveys

Since 2013, countries have provided information about adult and adolescent risk factor survey activity separately, enabling progress in each of these areas to be separately reviewed (Fig. 34). The small but steady increase between 2013 and 2019 in the number of countries covering eight or nine risk factors in recent, national surveys reversed a little, and there was a rise in the percentage of countries not covering any risk factor in a recent, national survey, from 18% in 2017 to 33% in 2021.

## Fig. 34

*Percentage of countries* that have conducted recent, national adult risk factor surveys, 2013, 2015, 2017, 2019 and 2021*

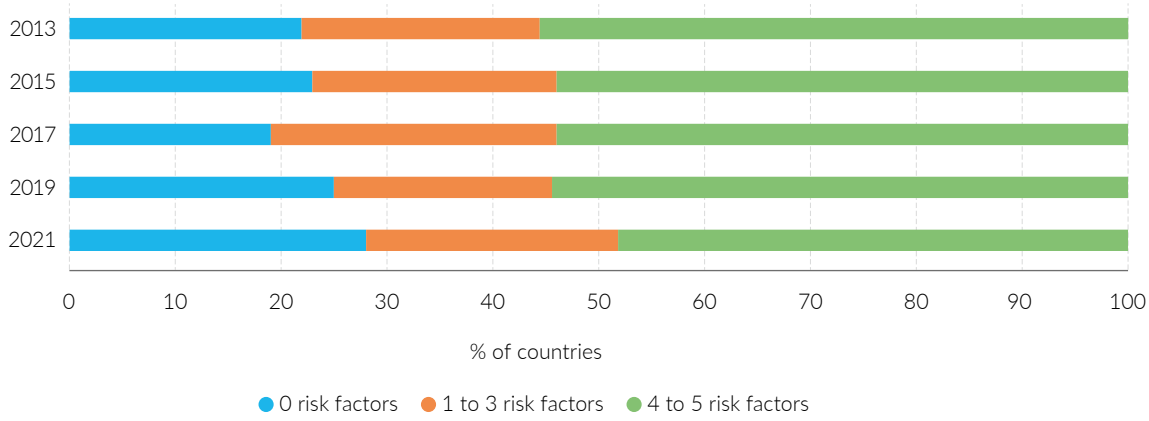



* Of 160 countries that responded to all five surveys.

The trend was far more consistent in risk factor surveys of adolescents, with around half of countries providing steady coverage of four to five of the NCD risk factors since 2013. The proportion of countries having no recent national survey that covered even one of the NCD risk factors fluctuated slightly, from a low of 19% in 2017, to a high of 28% in 2021 (Fig. 35).

## Fig. 35

*Percentage of countries* that have conducted recent, national adolescent risk factor surveys, 2013, 2015, 2017, 2019 and 2021*



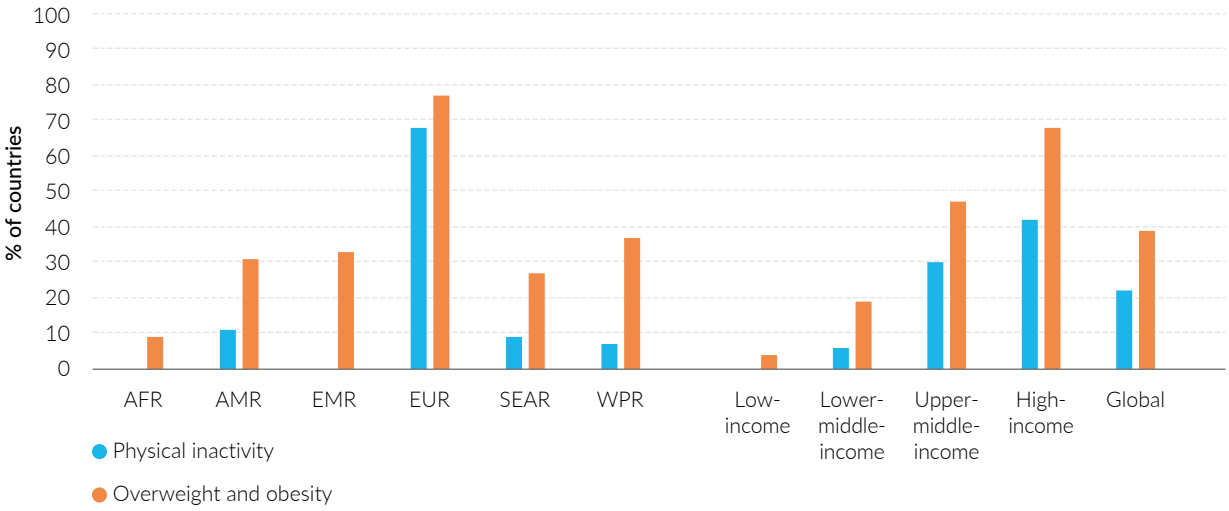

* Of 160 countries that responded to all five surveys.

For the second survey in a row, countries were asked about surveillance activities on physical inactivity, and overweight and obesity among children. Globally, just under a quarter of countries (22%) had conducted national, recent surveys on physical inactivity among children, and just over a third (39% countries) on overweight and obesity (Fig. 36). Apart from the European Region, where more than two thirds of countries had recently collected data on both of these risk factors, only around a third of countries in all other regions had conducted recent, national surveys on either risk factor. There was a marked disparity according to income group: only one low-income country had a recent, national survey on overweight and obesity, and no low-income country had a survey on physical activity. Meanwhile, 68% and 42% of high-income countries respectively had

conducted a recent, national survey on physical activity and overweight/obesity.

## Fig. 36

*Percentage of countries that have conducted recent, national risk factor surveys among children, by WHO region and World Bank income group*




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

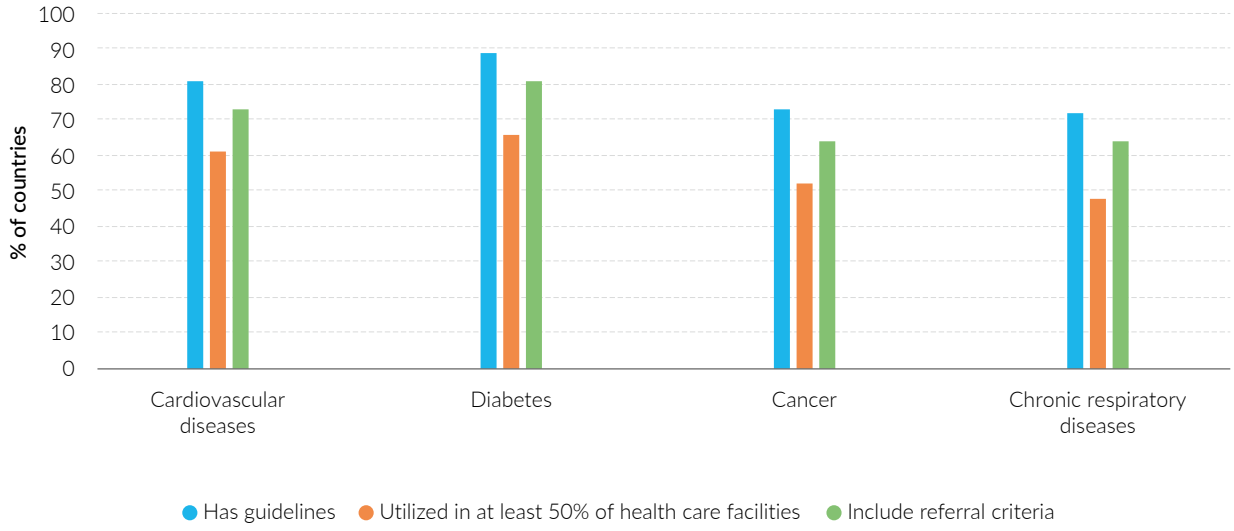
# Health systems capacity

## NCD-related guidelines

Countries were asked about the availability of evidence-based national guidelines, protocols and standards for the management of each of the four main NCDs (CVD, cancer, diabetes, and CRD), and whether they were deployed in at least 50% of health care facilities and included referral criteria. Globally, more than half of all countries reported having guidelines for each of the four main NCDs (Fig. 37). Overall, 89% of countries had guidelines for diabetes, 81% of countries had guidelines for CVD, 73% of countries had guidelines for cancer, and 72% had guidelines for CRD. Guidelines for diabetes, likewise, were most likely to be reported as used in at least 50% of health care facilities (66% of countries, or 75% of those with diabetes guidelines), with upper-middle-income countries having the highest rate of use (83% of countries). Globally, guidelines for CRD were least commonly used (48% of countries), and only 22% of low-income countries reported their use in at least 50% of health care facilities.

## Fig. 37

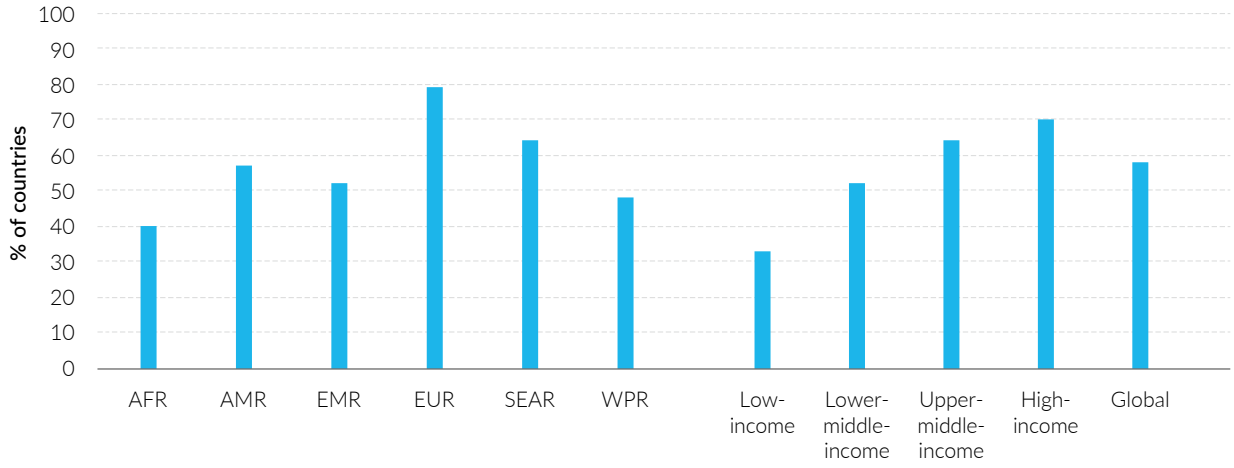
*Percentage of countries that have evidence-based national guidelines/protocols/standards for each of the four main NCDs, and whether these guidelines/protocols/standards are utilized in at least 50% of health care facilities and include referral criteria*




Countries were asked about the availability of NCD guidelines for the four main NCDs, thereby informing the Progress Monitor indicator on NCD management guidelines (see Box 2). In order to fully achieve the indicator, countries needed to have guidelines available for all four NCDs (guidelines solely for the management of hypertension were not accepted as CVD guidelines – this excluded approximately 14% of reported guidelines for CVD). Around 58% of countries fully achieved the indicator, with a clear relationship between indicator progress and country-income group. Across WHO regions, the European Region (79% of countries) and the South-East Asia Region (64% of countries) and had the highest achievement rates, and the African Region (40% of countries) had the lowest (Fig. 38).

## Fig. 38

*Percentage of countries with guidelines for all four main NCDs (Progress Monitor indicator 9), by WHO region and World Bank income group*

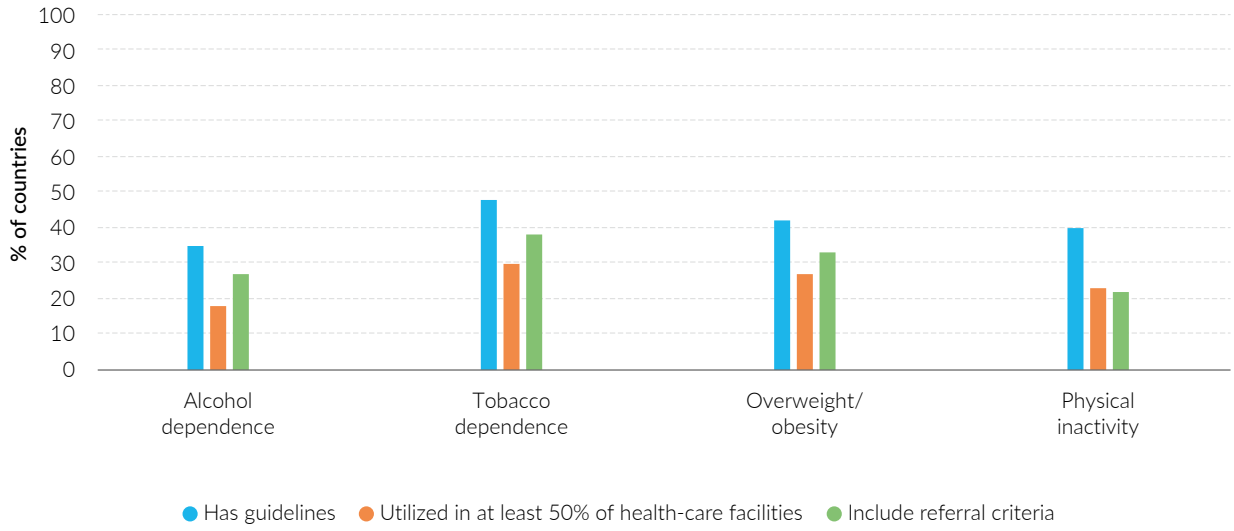



AFR: WHO African Region; AMR: WHO Region of the Americas; EMR: WHO Eastern Mediterranean Region; EUR: WHO European Region; SEAR: WHO South-East Asia Region; WPR: WHO Western Pacific Region.

Countries were also asked about the availability of guidelines for the management of four major NCD risk factors (alcohol dependence, tobacco dependence, overweight/obesity, and physical inactivity). As with questions on NCD management guidelines, countries were asked if their risk factor management guidelines were deployed in at least 50% of health care facilities, and if they included referral criteria. Guidelines for the management of tobacco dependence were most widely reported (48% of countries); those for the management of the other three risk factors ranged from 42% for overweight and obesity management to 35% for alcohol dependence (Fig. 39). Tobacco guidelines were also most likely to be reported as used in at least 50% of health care facilities (30% of countries, or 63% of countries reporting such guidelines), while around one fifth to one quarter of countries reported guidelines that were widely used for the other risk factors.

## Fig. 39

*Percentage of countries that have evidence-based national guidelines/protocols/standards for each of the four major NCD risk factors, and whether these guidelines/protocols/standards are utilized in at least 50% of health care facilities and include referral criteria*




## Cancer screening programmes

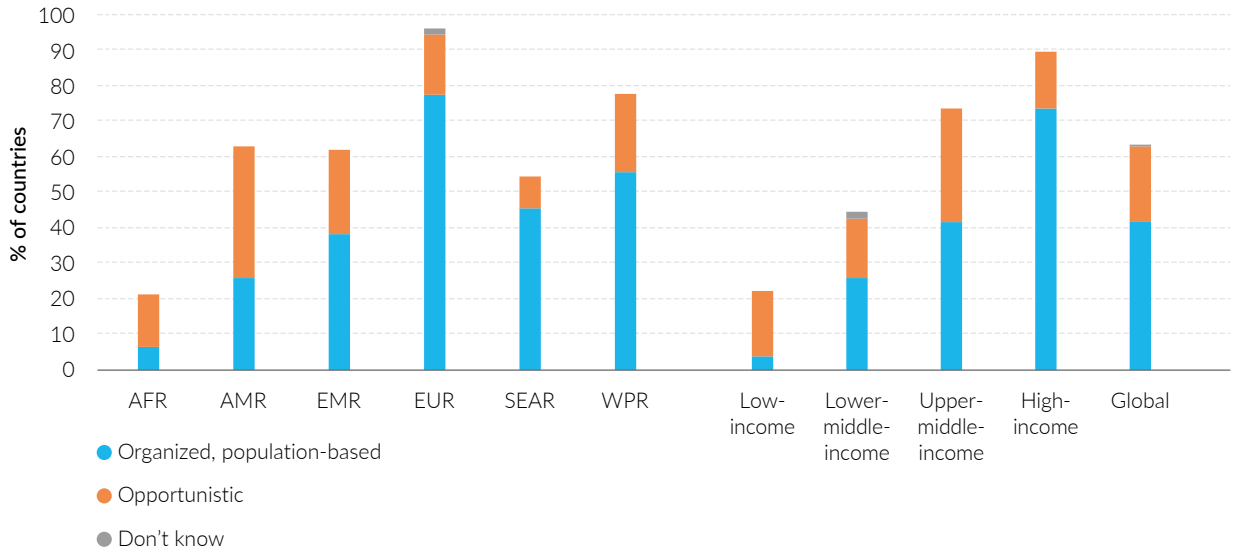
### Breast cancer screening

The existence of a national breast cancer screening programme was reported by 63% of countries globally (Fig. 40). Regionally, such programmes were most widely available in the European Region (96% of countries) followed by the Western Pacific Region (78% of countries). In contrast, only 21% of countries in the African Region reported having such programmes. Across World Bank income groups, breast cancer screening programmes were more prevalent in high-income countries (89%) than in lower-middle-income (44%) and low-income countries (22%). Globally, breast cancer screening programmes were approximately twice as likely to be organized, population-based programmes (42%) than opportunistic programmes (21%). Organized, population-based programmes were far more prevalent among high-income countries and became less prevalent with decreasing income group (Fig. 40a). When asked about screening coverage, countries most commonly reported their programmes were covering just 10–50% of the target population (Fig. 40b); only 11% of countries reached 70% or more of the target population. Similarly, only 12% of countries reached more than 50–70%. Although the programmes of just over a quarter of high-income countries (26%) reached at least 70% of their target population, no low-income countries had programmes with this level of coverage, and only 6% of middle-income countries reached this level of coverage.

## Fig. 40

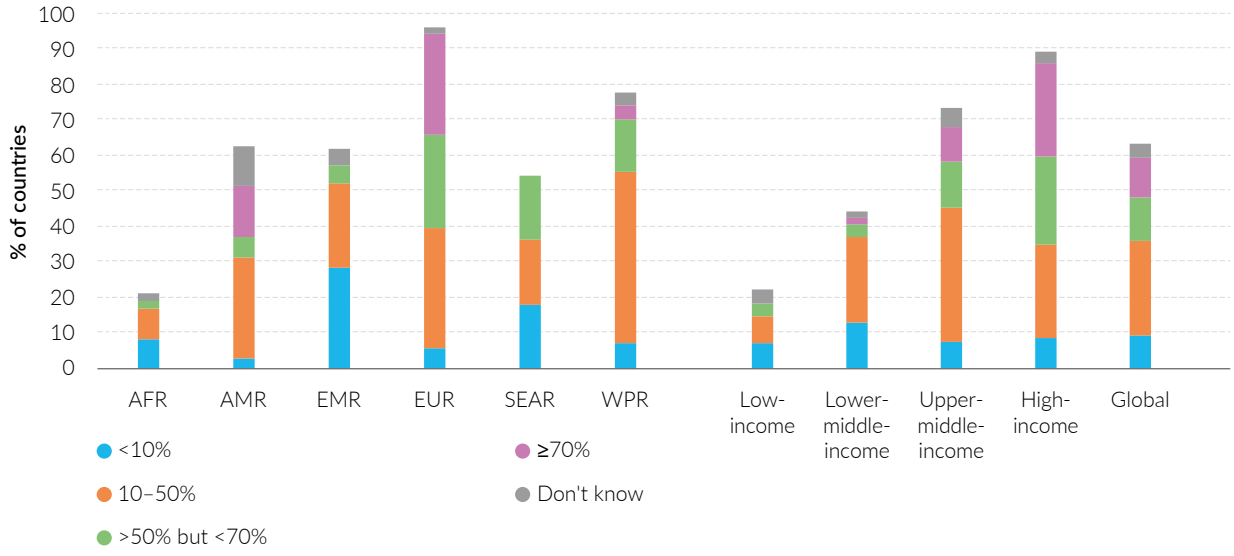
*Percentage of countries with a breast cancer screening programme, type of screening programme, and percentage of screening coverage, by WHO region and World Bank income group*

**a) Breast cancer screening by type of screening**




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

**b) Breast cancer screening by screening coverage**




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

### Cervical cancer screening

Overall, 69% of countries reported having a national cervical cancer screening programme, most of which (42% of countries, or 62% of countries with screening programmes) had organized, population-based programmes. A little more than a third of countries with programmes (37%) reported having opportunistic screening programmes (Fig. 41a). Generally, the presence of a cervical cancer screening programme was more likely with rising income level: organized, population-based programmes were noticeably more prevalent among high- and upper-middle-income countries than among countries in the lower-income groups. Organized, population-

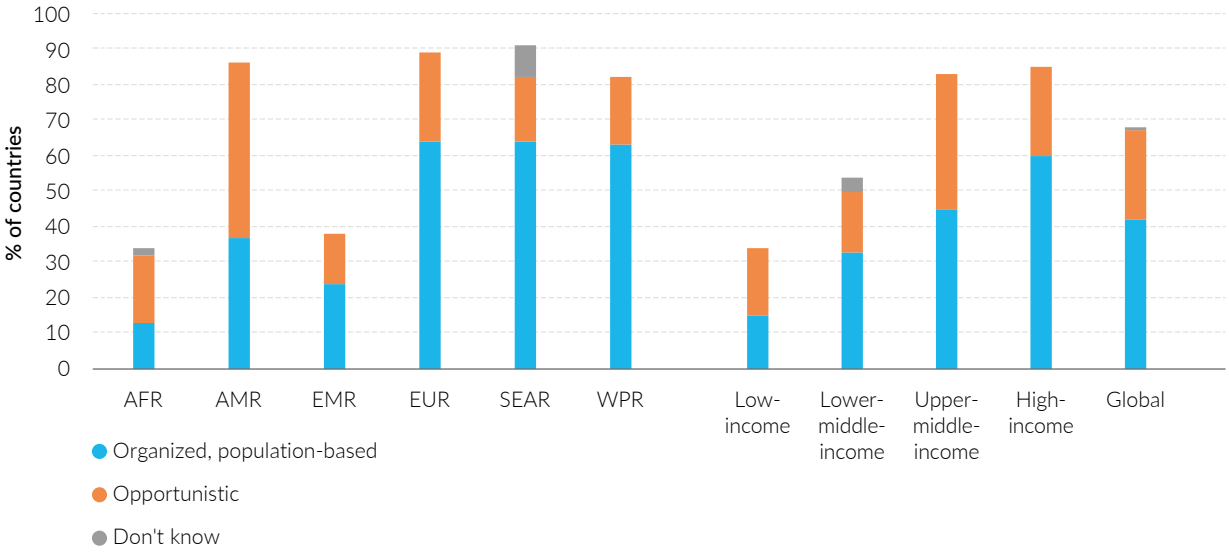
based programmes were also more prevalent than opportunistic programmes in every region except for the African Region and the Region of the Americas.

When it came to screening coverage, 25% of countries, or 36% of countries with screening programmes, reported having cervical cancer screening programmes that reached 10–50% of the target population; most of these were from the Region of the Americas and the Western Pacific Region (Fig. 41b). Approximately a further third of countries (38%) with screening programmes reached at least 50% coverage, while the remaining 26% reached less than 10% of the target population, or did not know the extent of their programme's coverage.

## Fig. 41

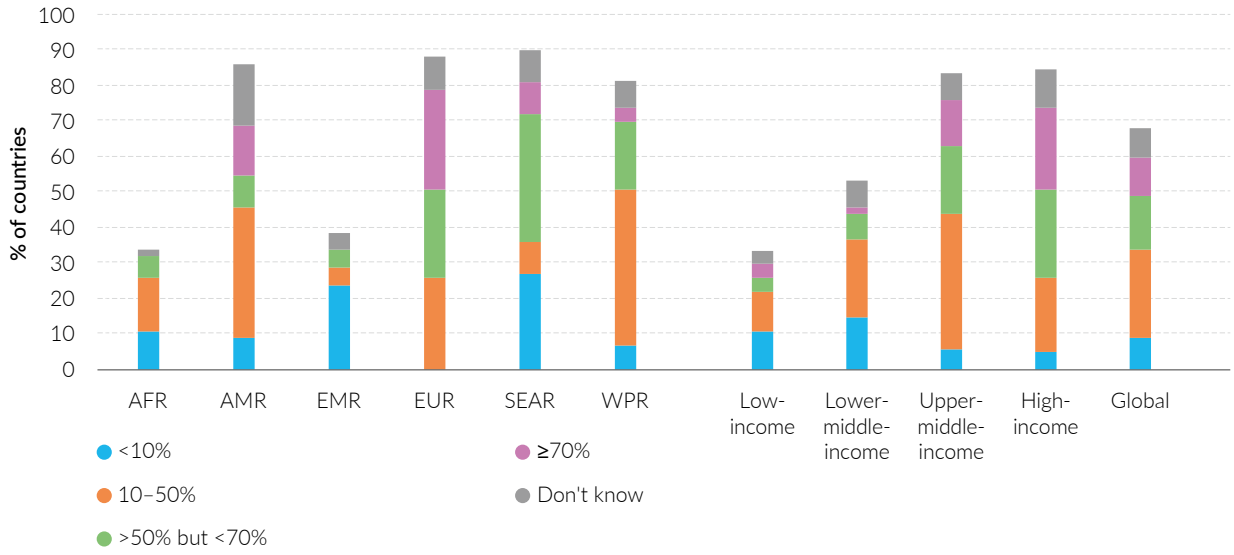
*Percentage of countries with a cervical cancer screening programme, the type of screening programme, and percentage of screening coverage, by WHO region and World Bank income group*

**a) Cervical cancer screening by type of screening**




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

**b) Cervical cancer screening by screening coverage**




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

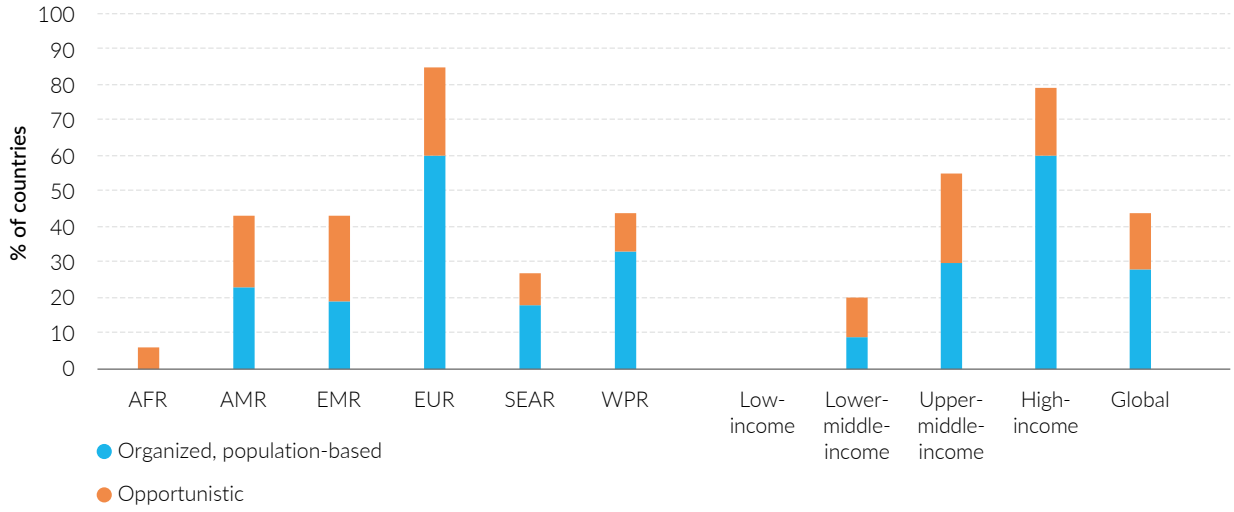
### Colon cancer screening

Globally, 45% of countries reported having a national colon cancer screening programme, all but 11 of which were high- or upper-middle-income countries. Organized, population-based screening programmes were much more common (63% of countries with programmes) than opportunistic programmes (37% of countries with programmes) (Fig. 42a). Most programmes reached between 10–50% of their target population (39% of countries with programmes); 11% of countries with programmes reached 50–70%) of the target population (Fig. 42b). Only eight countries – all in the European Region – reached at least 70% of the target population of their colon cancer screening programmes.

## Fig. 42

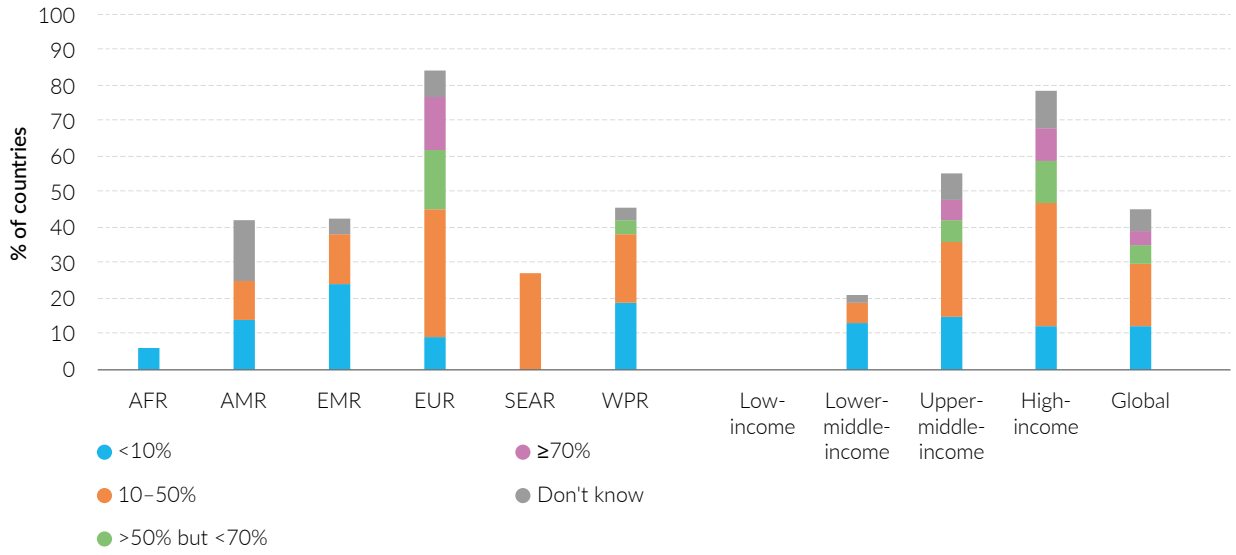
*Percentage of countries with a colon cancer screening programme, the type of screening programme, and percentage of screening coverage, by WHO region and World Bank income group*

**a) Colon cancer screening by type of screening**




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

**b) Colon cancer screening by screening coverage**




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

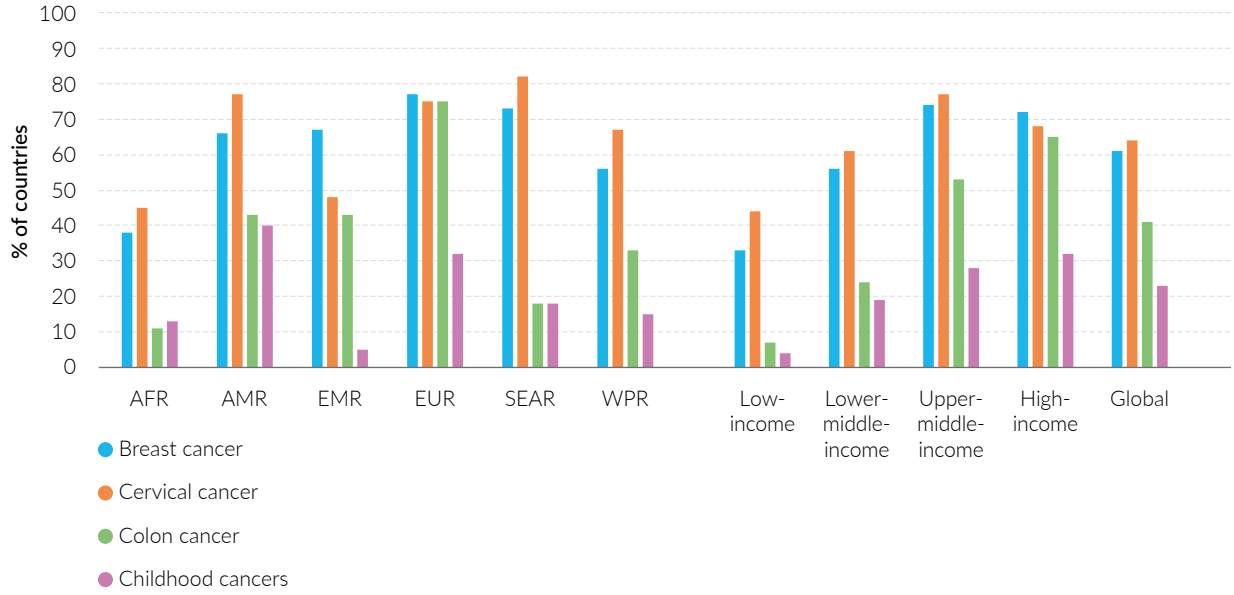
## Early detection of cancers

Globally, the presence of early detection programmes or guidelines to strengthen early diagnosis of cancer symptoms at the primary health care level was reported by 64% of countries for cervical cancer; 61% for breast cancer; 41% for colon cancer; and 23% for childhood cancers (Fig. 43). In general, early detection programmes/guidelines for all cancer types became more available with rising income group level. The South-East Asia Region recorded the highest percentage of countries reporting a cervical cancer programme (82%). Well over 60% of countries in the high- and upper-middle-income groups had early detection programmes or guidelines for cervical and breast cancer, with the upper-middle-income group having the highest percentage of countries with such programmes or guidelines. Well under 50% of low-income countries reported such programmes and guidelines.

A clearly defined referral system from primary care to secondary and tertiary care for suspected cancer cases was somewhat more widely available for each type of cancer than early detection programmes or guidelines: 65% of countries reported referral systems for cervical cancer; 62% for breast cancer; 46% for colon cancer; and 31% for childhood cancers (Fig. 44). Availability of referral systems for cervical cancer ranged from 45% of countries in the African Region to 82% of countries in the South-East Asia Region, while childhood cancer referral systems were reportedly available in fewer than 50% of countries in all regions, including just 9% of countries in the African Region. In general, referral systems for all cancer types were increasingly available with rising income group, although referral systems for breast and cervical cancer were reported by a slightly higher percentage of upper-middle-income countries than by high-income countries.

## Fig. 43

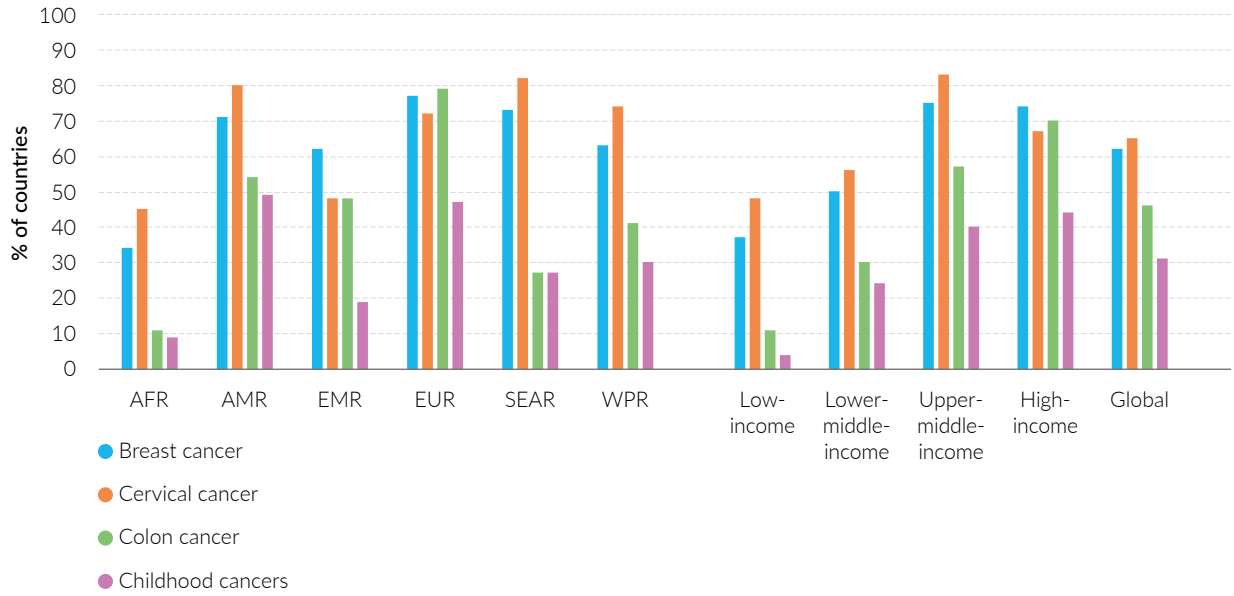
*Percentage of countries with early detection programmes or guidelines to strengthen early diagnosis of cancer symptoms at the primary health care level*




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

## Fig. 44

*Percentage of countries with a clearly defined referral system from primary care to secondary and tertiary care for suspected cancer cases*




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

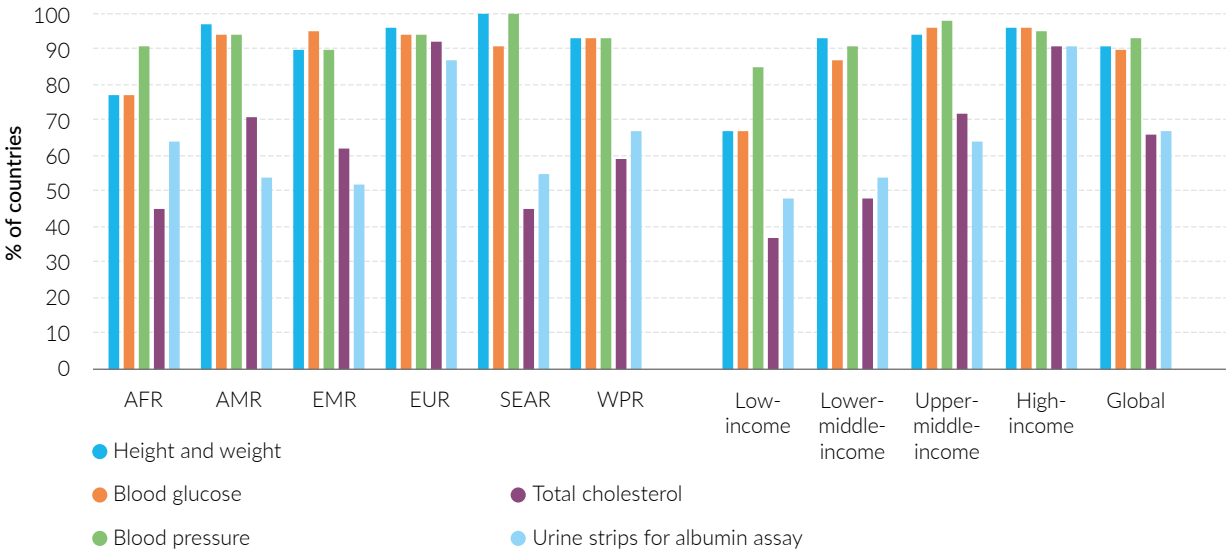
## Availability of tests and procedures for early detection, diagnosis and monitoring of NCDs

The majority of basic tests and procedures for early detection, diagnosis and monitoring of NCDs were reported as generally available in primary care facilities by most countries. Generally available was defined as available in 50% or more health care facilities (public versus private sector availability was asked about separately but only public sector availability is reported here). Blood pressure measurement was reported as generally available by 93% of countries; height and weight measurements by 91% of countries; and blood glucose measurement by 90% of countries (Fig. 45). Urine albumin strips and total cholesterol measurement – also considered essential NCD tests and procedures – were reported as being generally available by markedly fewer countries (67% and 66%, respectively). Total cholesterol measurement availability varied widely across regions and income groups with significantly lower availability (45%) reported in both the African Region and South-East Asia Region, and countries of the low- and lower-middle-income groups (37% and 48% respectively). By contrast, blood pressure measurement was consistently available in 85% or more countries across all regions and income groups. Just over half of countries (55%) reported all six essential tests and procedures (measurement of height, weight, blood pressure, blood glucose, and total cholesterol, as well as urine strips for albumin assay) as being generally available. Marked disparities were evident across the income groups: 89% of high-income countries reported all six tests and procedures were generally available, compared to 26% of low-income countries. Other basic tests and procedures were not as widely available. With the exception of urine strips for glucose and ketone measurement (reported as being generally available in 71% of countries), remaining tests (such as foot vibration perception test and dilated fundus examination) were reported as being generally available in only 48–57% of countries.

Countries also reported on the availability of peak flow meters and spirometers. Overall, peak flow meters were reported as available in 46% of countries, while spirometers were reported as available in 32% of countries. Availability for both was significantly higher in high-income countries than all other income groups, and far more present in the European Region than all other regions.

### Fig. 45

*Percentage of countries reporting general availability of essential technologies for early detection, diagnosis, and monitoring of NCDs in the primary care facilities of the public and private health sector, by WHO region and World Bank income group*




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

## Availability of medicines in the public health sector

The percentage of countries reporting each NCD-related medicine as being generally available (defined as available in 50% or more of pharmacies in primary care facilities of the public health sector) is shown in Table 5. The most widely available medicines were metformin, aspirin, and thiazide diuretics (available in 90%, 89% and 84% of countries, respectively); fixed-dose combinations (see Table 5) were the least generally available medicines, with just a third of countries reporting each as generally available. There were very notable differences in availability across regions for several of the essential medicines. For example, 91% of countries in the European Region (all but five of 53 countries) reported angiotensin II receptor blockers (ARBs) being generally available, but only 45% of countries in the African Region reported such availability. Significant differences were also observed between income groups when it came to availability of statins and steroid inhalers, with the latter being reported as generally available in 26% of low-income countries and in 93% of high-income countries. Considering the availability of all 11 essential medicines covered by the survey, disparities across the income groups were marked: 93% of countries in the high-income group reported having all 11 essential medicines as generally available, but this figure was reportedly just 15% for low-income countries (four countries). Well over a third (41%) of low-income countries reported that only five or fewer essential medicines were generally available.

### Table 5

*Percentage of countries with medicines reported as generally available in primary care facilities of the public health sector, by WHO region and World Bank income group*

| | | Angiotensin-converting enzyme (ACE) inhibitors* | Angiotensin receptor blockers (ARBs)* | Aspirin (100 mg)* | Benzathine penicillin injection | Beta blockers* | Bronchodilator* | Calcium channel (CC) blockers* | Combination budesonide-formoterol inhaler | Fixed dose combination (lisinopril + amlodipine) | Fixed dose combination (lisinopril + hydrochlorothiazide) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **WHO Region** | WHO African Region | 68 | 45 | 83 | 77 | 57 | 60 | 64 | 19 | 21 | 19 |
| | WHO Region of the Americas | 89 | 74 | 91 | 89 | 91 | 89 | 89 | 40 | 26 | 26 |
| | WHO South-East Asia Region | 100 | 91 | 100 | 64 | 91 | 82 | 91 | 36 | 36 | 27 |
| | WHO European Region | 92 | 91 | 92 | 89 | 92 | 92 | 92 | 75 | 62 | 64 |
| | WHO Eastern Mediterranean Region | 76 | 57 | 86 | 67 | 76 | 81 | 81 | 33 | 24 | 24 |
| | WHO Western Pacific Region | 81 | 67 | 85 | 70 | 74 | 74 | 81 | 37 | 11 | 15 |
| **World Bank income group** | Low-income | 67 | 33 | 85 | 70 | 56 | 52 | 63 | 7 | 22 | 19 |
| | Lower-middle-income | 67 | 52 | 78 | 72 | 61 | 63 | 69 | 26 | 19 | 17 |
| | Upper-middle-income | 94 | 79 | 94 | 83 | 92 | 92 | 91 | 42 | 32 | 32 |
| | High-income | 95 | 93 | 95 | 86 | 95 | 95 | 95 | 79 | 54 | 58 |
| ALL | | **83** | **70** | **89** | **79** | **79** | **79** | **82** | **43** | **33** | **33** |

| | | Fixed dose combination (telmisartan + amlodipine) | Fixed dose combination (telmisartan + hydrochlorothiazide) | Insulin* | Metformin* | Nicotine replacement therapy | Oral morphine | Statins* | Steroid inhaler* | Sulphonylurea(s) | Thiazide diuretics* |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **WHO Region** | WHO African Region | 17 | 17 | 68 | 81 | 9 | 26 | 49 | 30 | 49 | 81 |
| | WHO Region of the Americas | 23 | 23 | 91 | 100 | 23 | 51 | 86 | 77 | 97 | 89 |
| | WHO South-East Asia Region | 36 | 36 | 55 | 100 | 36 | 36 | 91 | 64 | 82 | 91 |
| | WHO European Region | 66 | 68 | 89 | 92 | 77 | 81 | 91 | 89 | 89 | 92 |
| | WHO Eastern Mediterranean Region | 24 | 24 | 71 | 86 | 38 | 29 | 76 | 76 | 67 | 67 |
| | WHO Western Pacific Region | 15 | 15 | 81 | 85 | 44 | 52 | 81 | 67 | 78 | 78 |
| **World Bank income group** | Low-income | 11 | 11 | 56 | 74 | 4 | 26 | 48 | 26 | 33 | 70 |
| | Lower-middle-income | 15 | 15 | 65 | 83 | 17 | 28 | 57 | 43 | 59 | 72 |
| | Upper-middle-income | 28 | 32 | 89 | 98 | 34 | 45 | 92 | 81 | 94 | 91 |
| | High-income | 67 | 65 | 95 | 95 | 82 | 84 | 93 | 93 | 95 | 95 |
| ALL | | **33** | **34** | **79** | **90** | **40** | **50** | **77** | **66** | **76** | **84** |

* Essential NCD medicine

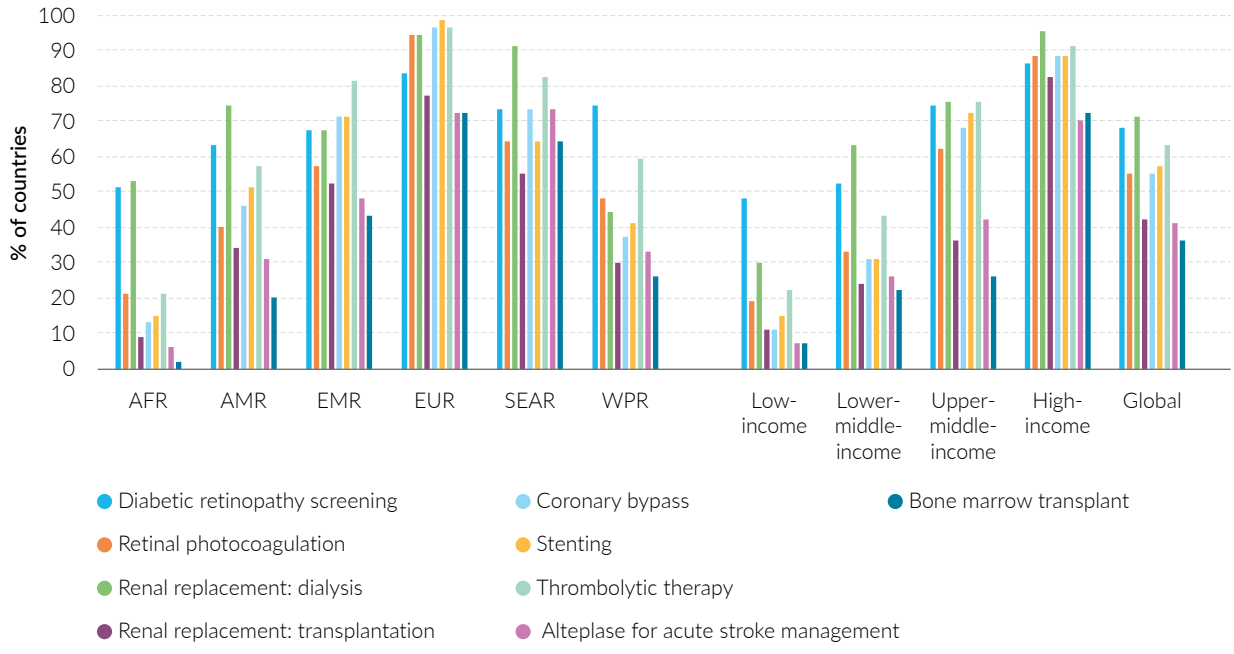
## Procedures for treating NCDs

Countries were asked to report on the general availability of key procedures for treating NCDs in the publicly funded health system ("generally available" was defined as reaching at least 50% of patients in need). Globally, renal replacement by dialysis and diabetic retinopathy screening were the procedures most widely reported as being generally available (by 71% and 68% of countries respectively); and thrombolytic therapy, stenting, retinal photocoagulation, and coronary bypass were reported as being generally available by 55–63% of countries (Fig. 46).

Renal replacement by transplantation, alteplase for acute stroke management, and bone marrow transplants were generally available in less than half of countries worldwide (42% for renal replacement by transplant, 41% for alteplase treatment, and 36% for bone marrow transplant), and there were marked regional and income group disparities. For all three procedures, around half of the countries reporting generally availability were in the European Region and more than half were high-income countries. Dialysis and diabetic retinopathy screening were the most widely available procedures and the only ones reported as generally available by over 50% of countries in the African Region. However, among low-income countries, fewer than half reported they were generally available. Disparities in the availability of key NCD treatments across income groups were more marked than for essential medicines: over half (58%) of high-income countries reported having all nine key procedures generally available, compared to just 12% of middle-income countries and one low-income country. These procedures were reported as being most widely available in the European Region (72–98% of countries) and least widely available in the African Region (2–53%).

### Fig. 46

*Percentage of countries with procedures for treating NCDs reported as being generally available in the publicly funded health system, by WHO region and World Bank income group*



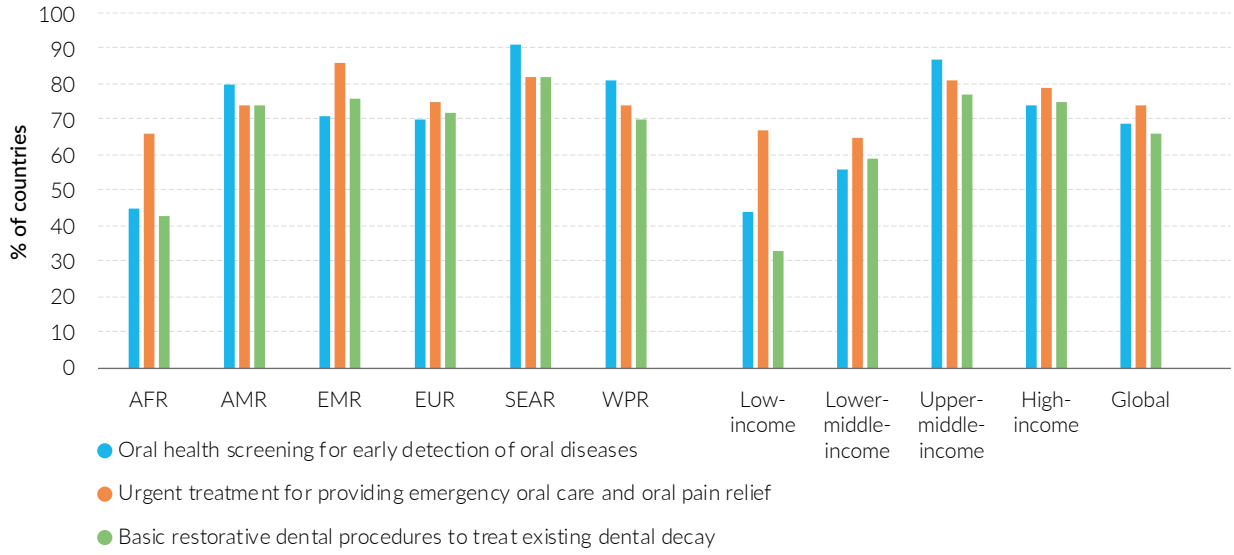

AFR: WHO African Region; AMR: WHO Region of the Americas; EMR: WHO Eastern Mediterranean Region; EUR: WHO European Region; SEAR: WHO South-East Asia Region; WPR: WHO Western Pacific Region.

## Oral health

In a new set of questions, countries were asked to report on their capacity to provide at least 50% of patients in need with procedures for detecting, managing and treating oral diseases in primary care facilities in the public health sector. Globally, well over 60% of countries were able to reach 50% of those in need with each of these services (Fig. 47). Across all regions except the African Region, at least 70% of countries were able to reach 50% of those in need with such procedures. In the African Region, over 40% of countries reported providing these services, with only urgent treatment being available in over 60% of countries in the region.

### Fig. 47

*Percentage of countries with oral health care reported as being generally available in primary care facilities in the public sector, by WHO region and World Bank income group*

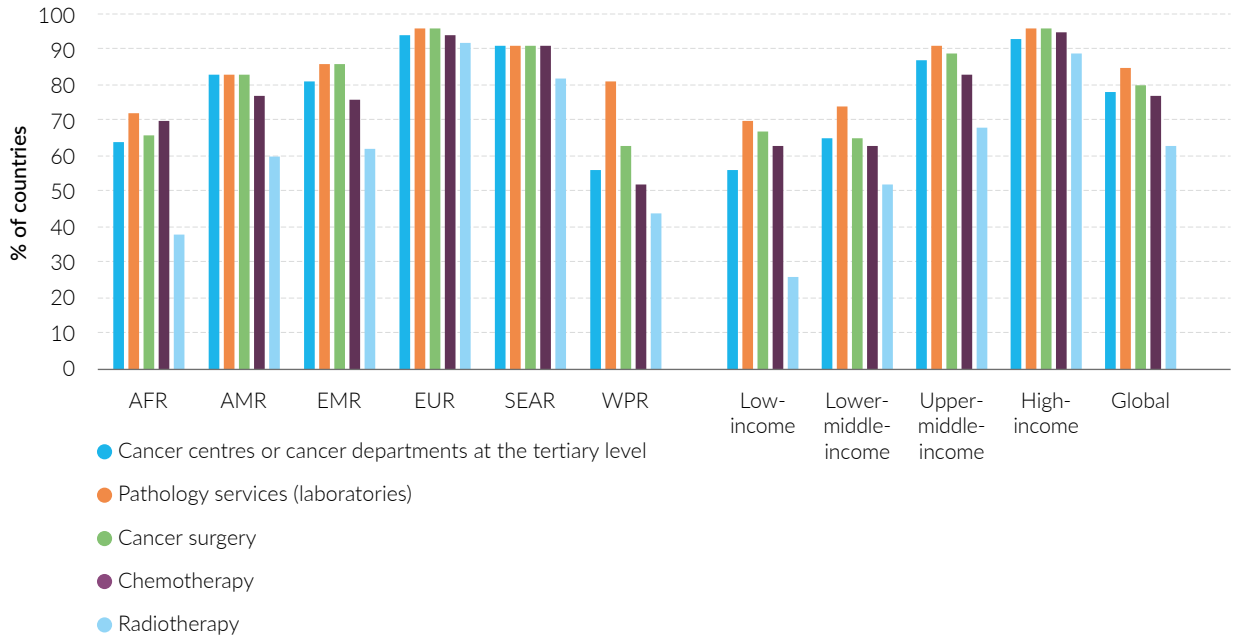


## Cancer diagnosis and treatment

Countries reported on the general availability of the following cancer diagnosis and treatment services in the public sector: cancer centres or cancer departments at a tertiary level; pathology services (laboratories); cancer surgery; chemotherapy; and radiotherapy. Generally available was defined as reaching 50% or more of the patients in need. Pathology services were the most widely available cancer diagnosis and treatment service globally (85% of countries) (Fig. 48). Cancer surgery, cancer centres or cancer departments at a tertiary level as well as chemotherapy were also reported as being generally available in the public health sector by 77–80% of countries. While radiotherapy was the least available service globally (63% of countries), it was approximately as widely available as all other cancer diagnosis and treatment services in the European Region and the South-East Asia Region, and among high-income countries. Availability of all cancer diagnosis and treatment services rose in line with country income level. All cancer diagnosis and treatment services were reported as being generally available in at least nine out of 10 countries in the high-income group and at least 50% of countries in the middle- and upper-middle-income groups. In the low-income group, such services were generally less available, with just 26% of countries reporting radiotherapy services as being generally available.

### Fig. 48

*Percentage of countries with cancer diagnosis and treatment services reported as being generally available in the public sector, by WHO region and World Bank income group*



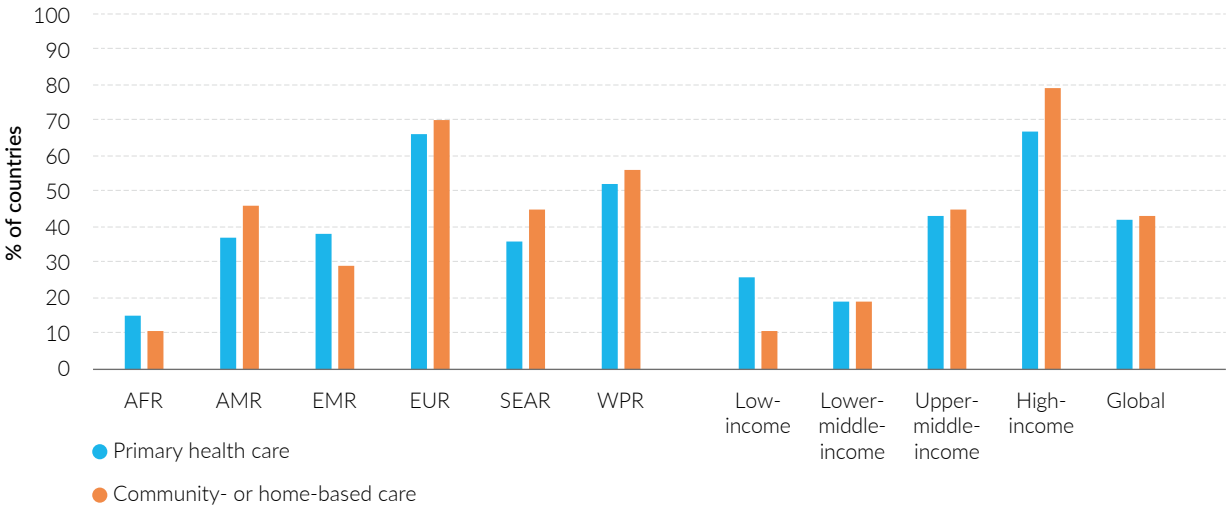

AFR: WHO African Region; AMR: WHO Region of the Americas; EMR: WHO Eastern Mediterranean Region; EUR: WHO European Region; SEAR: WHO South-East Asia Region; WPR: WHO Western Pacific Region.

## Palliative care

Globally, palliative care was reported as being generally available (reaching at least 50% of patients in need) in a community- or home-based care setting by 43% of countries (Fig. 49), and in a primary health care setting by 42% of countries. Palliative care was most commonly available in both settings among countries in the European Region and high-income group, with well over two thirds of countries (60–80%) reporting it as being generally available in each. In the low-income group, considerably more countries reported palliative care as being more generally available in a primary health care setting (26% of countries) than in a community- or home-based care setting (11% of countries). A similar pattern was seen in the African Region, where palliative care was reported as being generally available by 15% and 11% of countries for each setting, respectively. With the exception of the European Region, palliative care was available to the majority of patients in either setting in around, or less than, half of countries in all regions.

### Fig. 49

*Percentage of countries with palliative care reported as being generally available in a primary health care setting or community- or home-based care setting, by WHO region and World Bank income group*




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

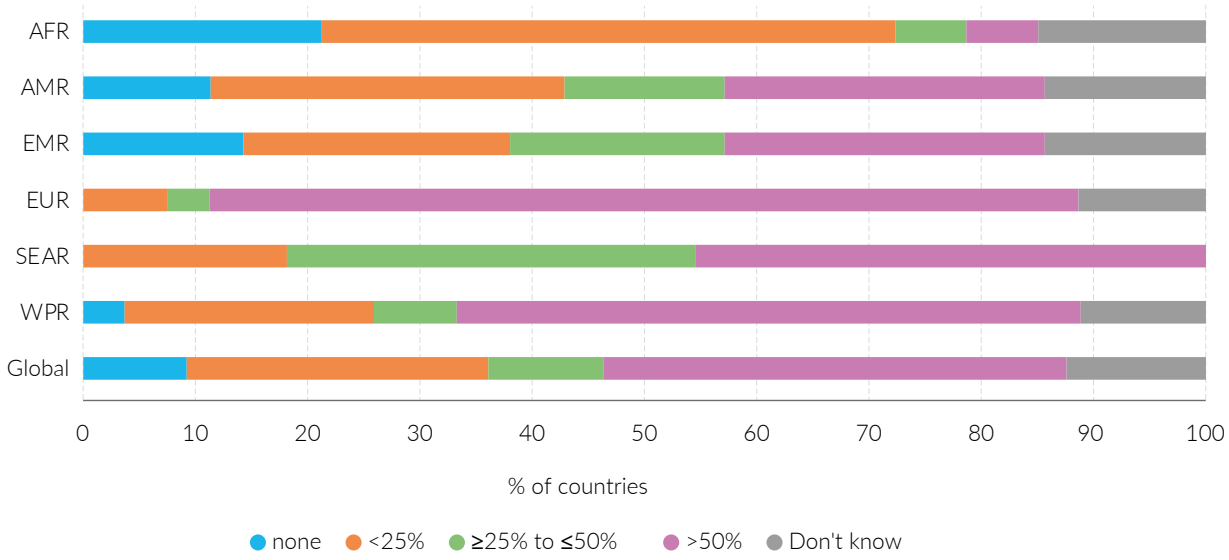
## Cardiovascular risk stratification

Over three quarters (78%) of countries reported that cardiovascular risk stratification was offered at primary health care facilities, though the availability reported within these countries varied widely. While just 41% of countries reported that risk stratification was available in over 50% of health care facilities, 27% reported that it was available in fewer than 25% of facilities, and an additional 10% reported that it was available in between 25% and 50% of facilities (Fig. 50). A further 12% of these countries did not know how widely the risk stratification was offered, if at all. Countries with availability in over 50% of facilities were predominantly in the high- or upper-middle-income groups, and just over half of these countries with such broad availability were from the European Region. Over one fifth (21%) of countries in the African Region and 14% of countries in the Eastern Mediterranean Region reported that risk stratification was not available in any health care facilities.

## Fig. 50

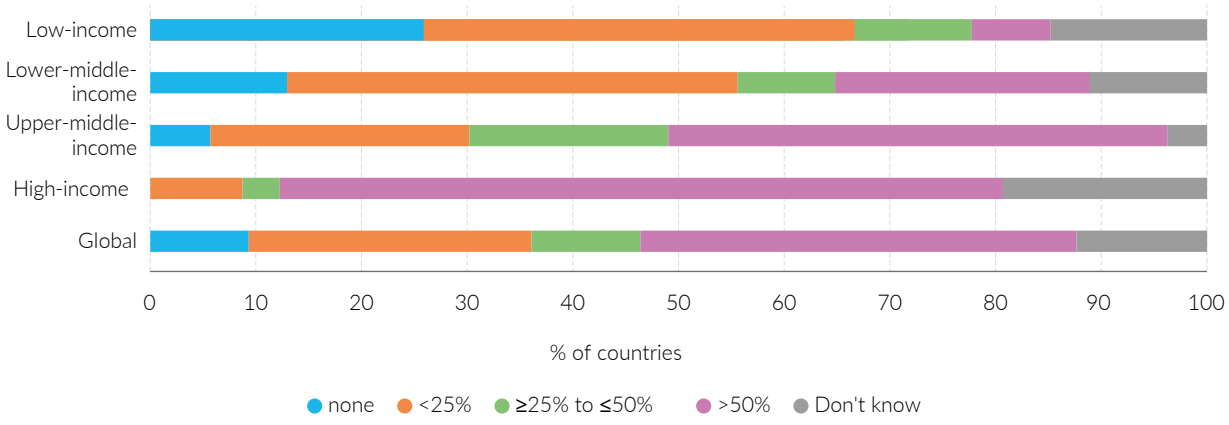
*Percentage of primary health care facilities offering cardiovascular risk stratification for the management of patients at high risk for heart attack and stroke*

**a) By WHO region**




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

**b) By World Bank income group**



## Rehabilitative care

The 2021 survey saw an expansion of questions pertaining to rehabilitation. While previous rounds of the survey asked only about care for acute stroke and rehabilitation for stroke, the 2021 questionnaire also asked countries about the availability of rehabilitation services for patients with cancer, acute myocardial infarction, CRD and musculoskeletal conditions. As for other questions, general availability was defined as reaching 50% or more of patients in need.

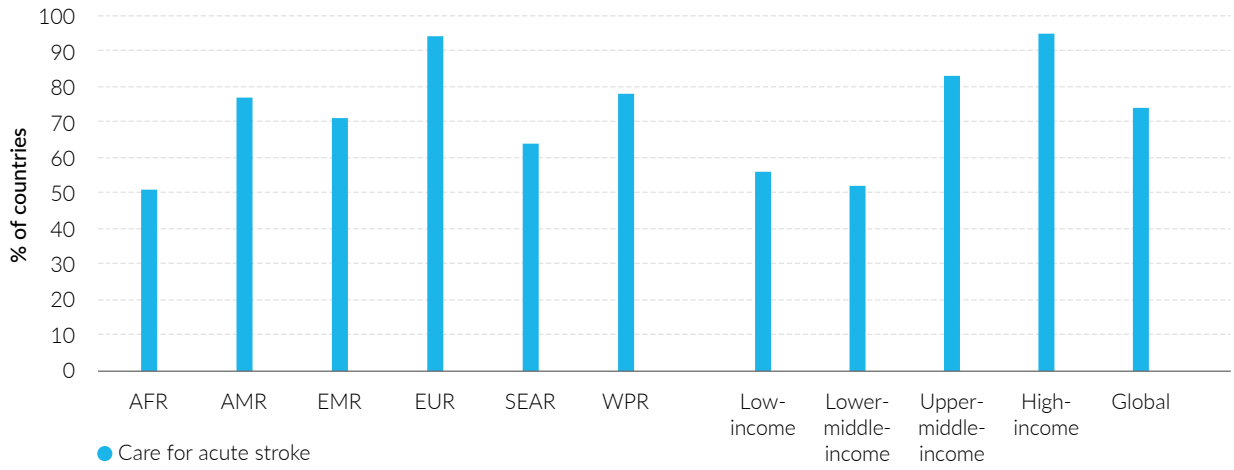
Globally, 74% of countries reported that services for the care of patients with acute stroke were generally available (Fig. 51a). By WHO region, this figure ranged from 51% in the African Region to 94% in the European Region, in which all but three countries had such provision. Approximately two thirds or more of countries in all other regions reported general availability of care for patients with acute stroke.

Additionally, when it came to rehabilitation services for stroke, 77% of countries reported such services as being generally available – in inpatient or outpatient settings, or both. Compared to care for acute stroke, rehabilitation for stroke patients was generally slightly less available in the European Region, Eastern Mediterranean Region, and the Region of the Americas. However, in the African Region, the South-East Asia Region and the Western Pacific Region, rehabilitation for stroke patients was more available than acute care. Disparities across income groups existed but were slight, with reported availability ranging from just 63% of low-income countries to 85% of upper-middle-income countries (Fig. 51b). Note the percentage of countries who did not indicate whether or not inpatient or outpatient rehabilitative care was available is exceptionally shown in these figures as it was a non-negligible percentage of countries for most regions and income groups.

## Fig. 51

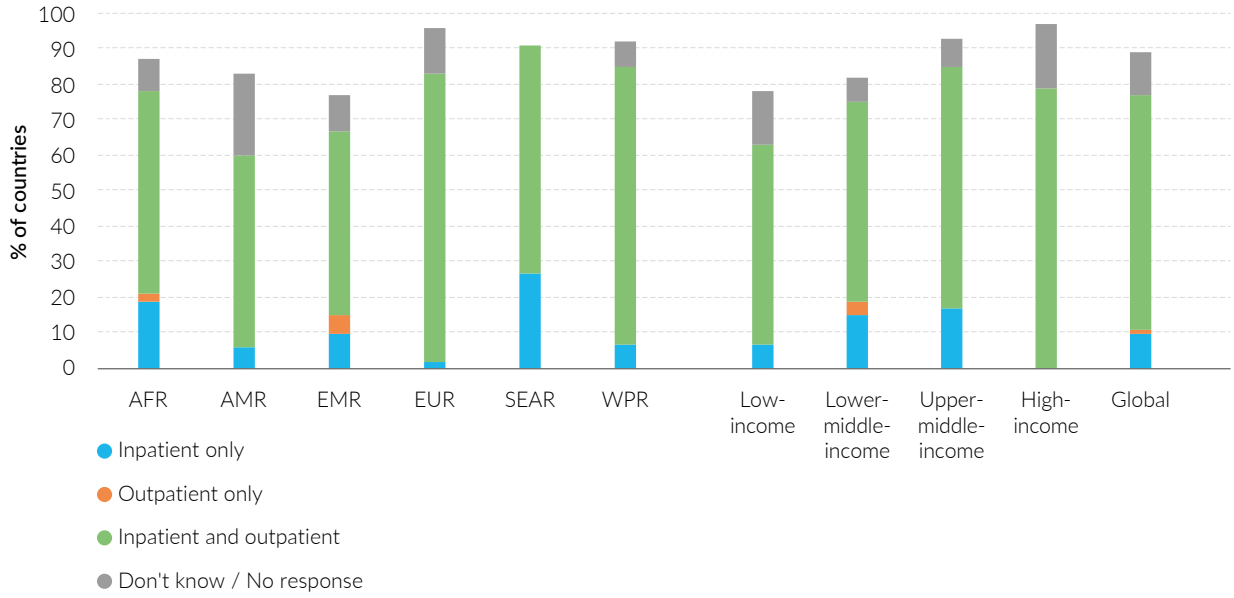
*Percentage of countries with available services for acute stroke, and rehabilitation for stroke, by WHO region and World Bank income group*

**a) Percentage of countries with services for provision of care for acute stroke reported as being generally available**




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

**b) Percentage of countries with rehabilitation for stroke reported as being generally available**




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

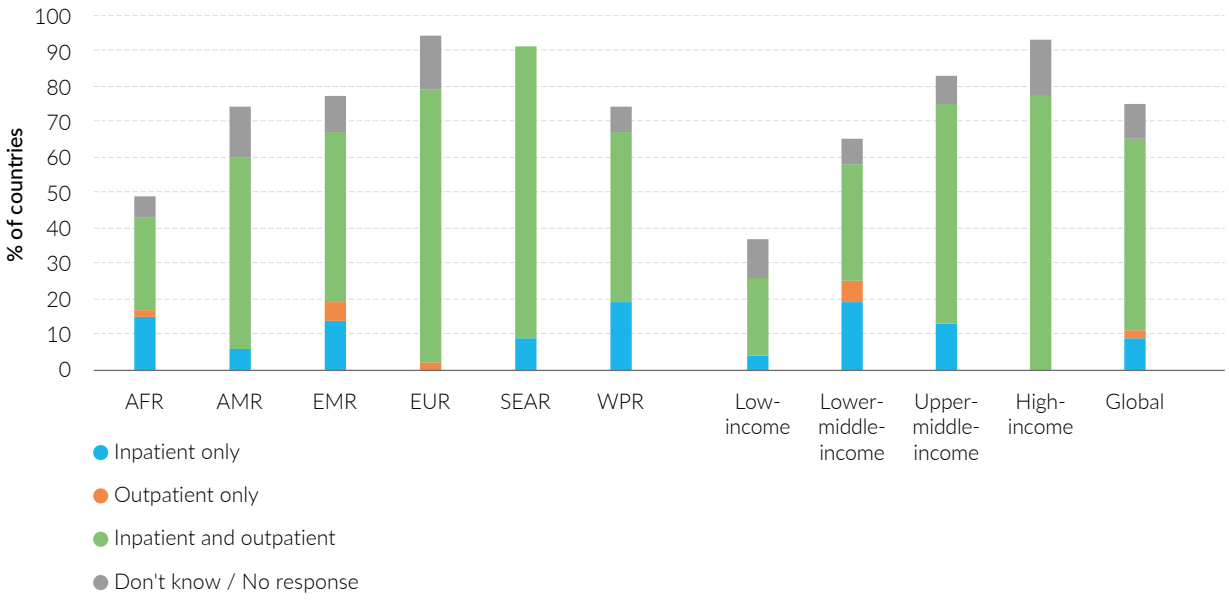
Rehabilitation services, whether inpatient or outpatient, for patients with cancer, acute myocardial infarction, CRD and musculoskeletal conditions were broadly available in around two thirds of countries globally, with roughly 10% of countries reporting the availability of such services only for inpatients (Figs. 52a-d). Over three quarters of high-income countries reported offering both inpatient and outpatient services for all of these NCDs, with none reportedly offering only inpatient services. However, a minority of low- and middle-income countries did report that rehabilitation services for each of these NCDs was limited to inpatients only.

Overall, 64% of countries reported having rehabilitation services (either inpatient or outpatient, or both) for cancer; 65% reported such services for acute myocardial infarction; 68% reported such services for CRD; and 72% reported such services for musculoskeletal conditions. While the likelihood of the presence of these services generally rose with country-income level, the differences were far more stark for some services than others. Rehabilitation for CRD, like that for stroke, showed far less disparity across income groups, while rehabilitation for cancer, acute myocardial infarction and musculoskeletal conditions were far more prevalent in high-income countries than low-income countries.

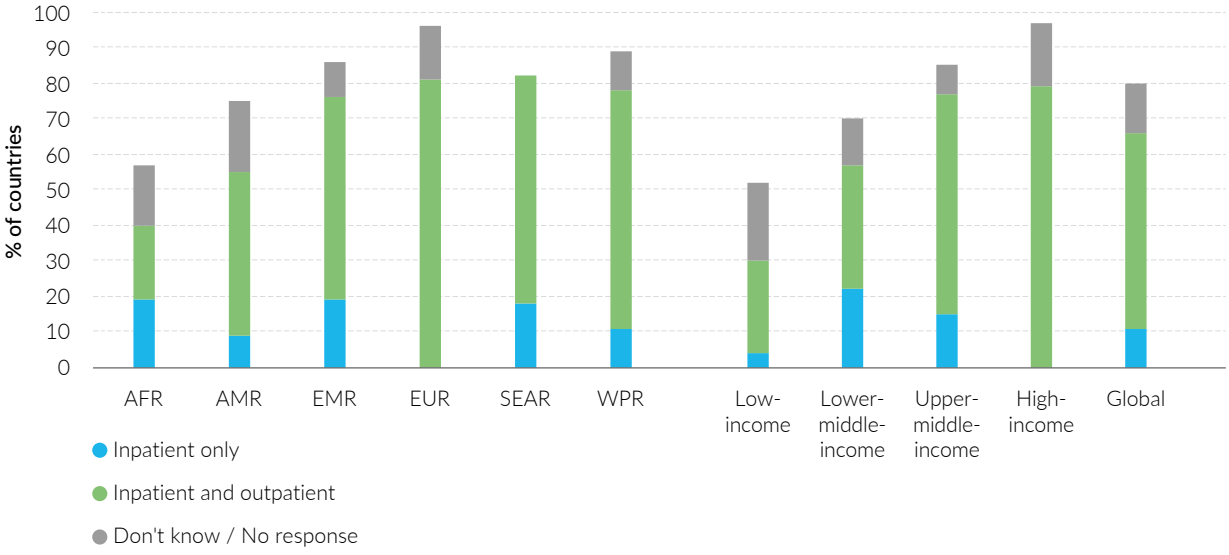
## Fig. 52

*Percentage of countries reporting inpatient/outpatient services for cancer, acute myocardial infarction, CRD and musculoskeletal rehabilitation as generally available, by WHO region and World Bank income group*

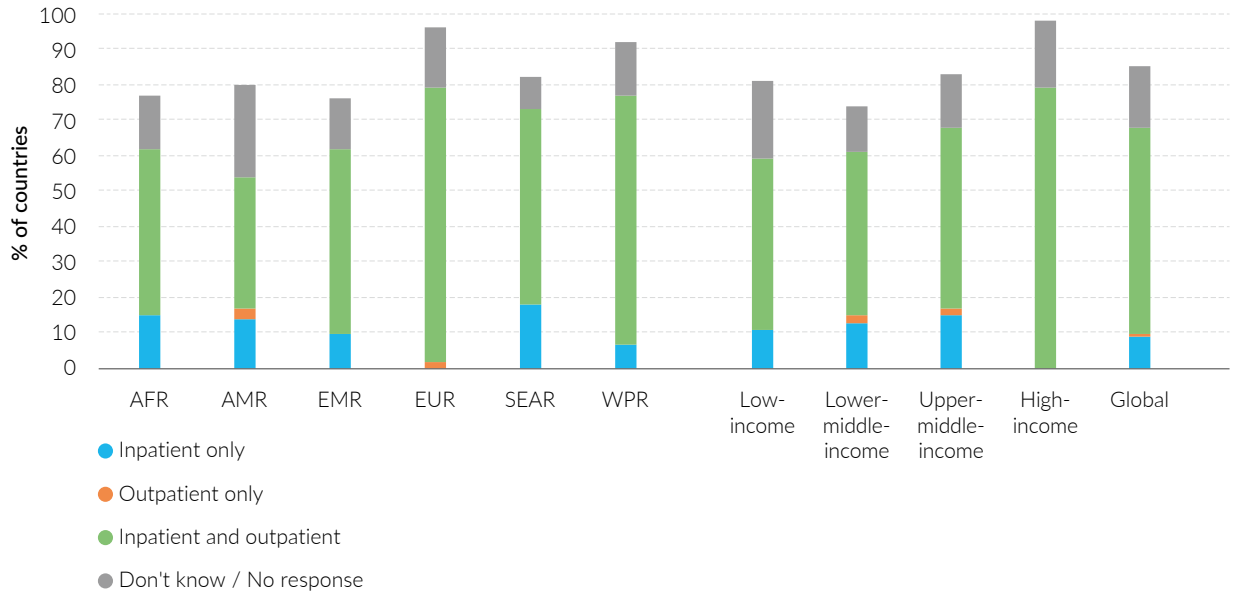
**a) Percentage of countries reporting inpatient/outpatient cancer rehabilitation services as generally available**



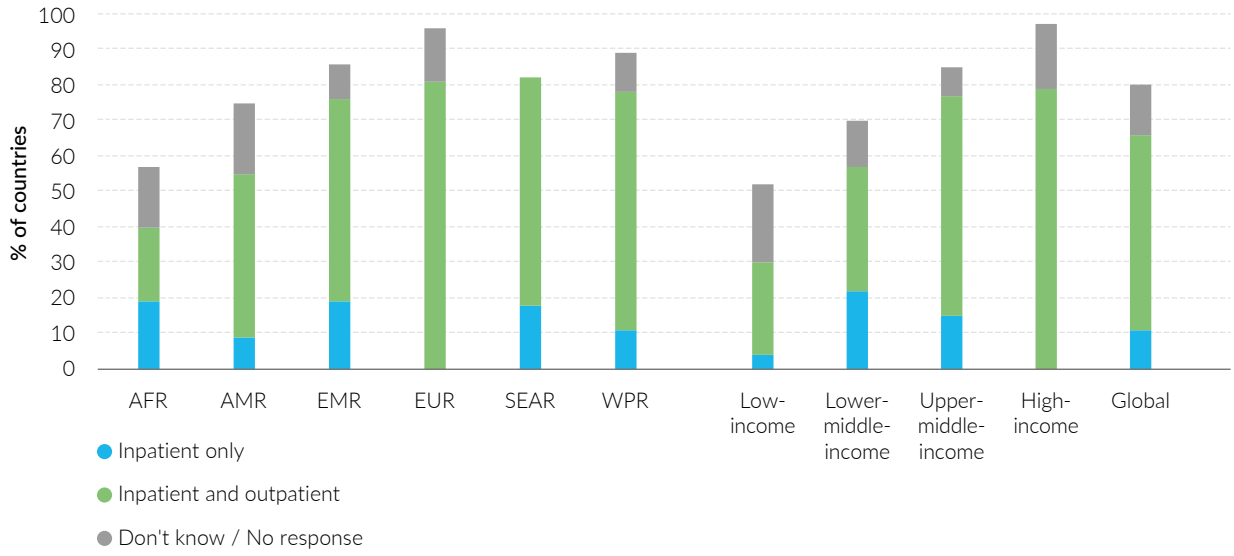

**b) Percentage of countries reporting inpatient/outpatient acute myocardial infarction rehabilitation services as generally available**



**c) Percentage of countries reporting inpatient/outpatient chronic respiratory diseases rehabilitation services as generally available**




**d) Percentage of countries reporting inpatient/outpatient chronic respiratory diseases rehabilitation services as generally available**




## Registers and follow-up systems for rheumatic fever and rheumatic heart disease

A third of all countries (30%) reported having registers of patients with rheumatic fever and rheumatic heart disease; 66% of these countries had systems in place for follow-up or recall to deliver long-term penicillin prophylaxis. Among the 74 countries where rheumatic heart disease was endemic,[10] nearly a third (32%) had registers, around two thirds (63%) of which had follow-up or recall systems in place. As seen in previous rounds of the survey, no endemic countries in the Eastern Mediterranean Region, and only six endemic countries (23%) in the African Region had registers, whereas nine of the 11 endemic countries

[10] Defined as in Watkins, D. A. et al. Global, regional, and national burden of rheumatic heart disease, 1990–2015. N. Eng. J. Med. 377, 713–722 (2017) using mortality data from Global Health Data Exchange (http://ghdx.healthdata.org/, accessed 31 May 2018).

(82%) in the Western Pacific Region reported having registers in place.

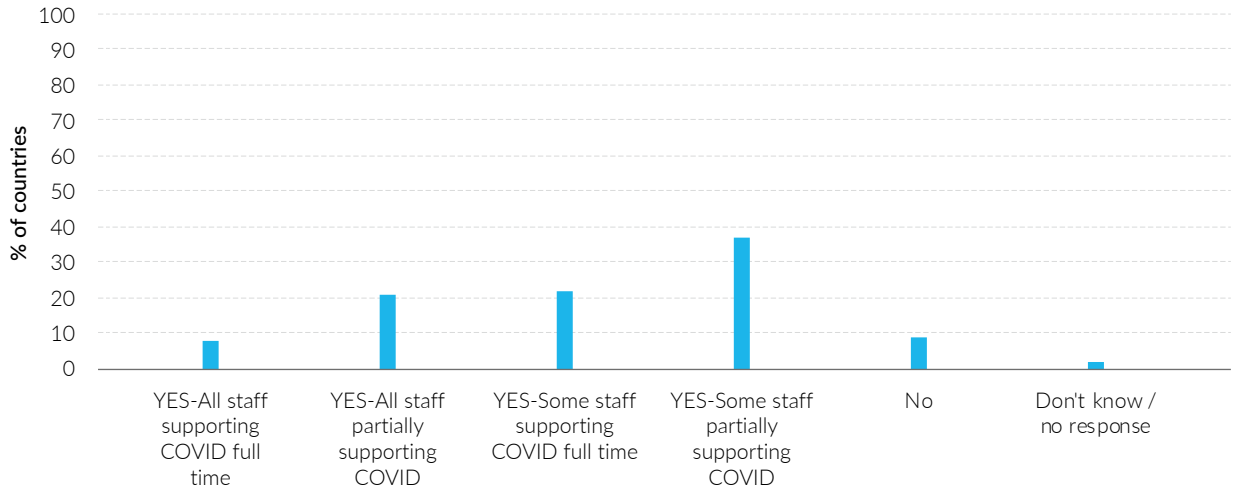
## NCD-related disruptions during the COVID-19 pandemic

### COVID-19 pandemic impact on infrastructure

The majority (89%) of countries who responded reported some level of disruption to ministry of health staffing in the previous 3 months because of COVID-19. Overall, 8% of countries reported that all of their NCD staff had been reassigned to work full time on COVID-19, with a further 21% of countries reporting all NCD staff at least partially reassigned to the COVID-19 response. A further 22% reported that some of their NCD staff had been reallocated to work full-time on COVID-19, with a further 37% reporting some NCD staff working part-time on the COVID-19 response (Fig. 53). Overall, around 20% of countries across all regions and income levels (though mainly in low- and lower-middle-income countries) had seen at least some NCD funds reallocated to the COVID-19 response during the previous 3 months.

**Fig. 53**

*Percentage of countries reporting reallocation of ministry of health NCD staff to COVID-19 response in the previous 3 months*

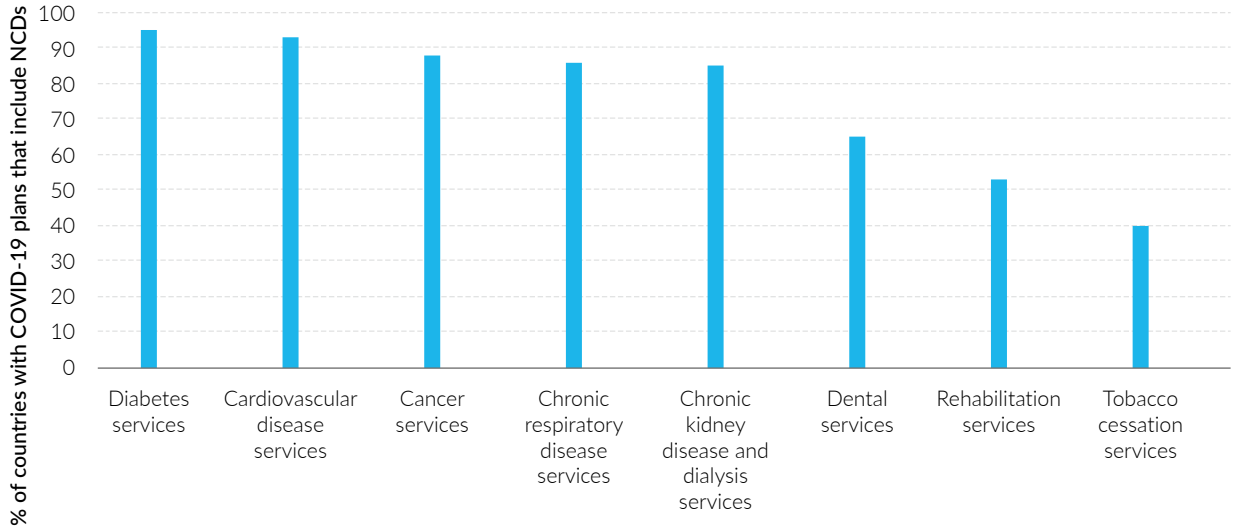



### COVID-19 pandemic impact on policies and plans

A slight majority of countries (57%) indicated that they had identified a core set of essential health services to be maintained during the COVID-19 pandemic. Of these, 83% (or just 47% of countries overall) reported that NCD-related services were included in these COVID-19 response plans. Some NCD services (for diabetes, CVD, cancer, CRD and chronic kidney disease) were included in 85% or more of these plans, with dental, rehabilitation and tobacco cessation services less likely to be included (Fig. 54). Among countries reporting the inclusion of essential services to be maintained in national COVID-19 response plans, there was little variation according to WHO region or country-income group as to whether or not they specifically included NCD-related services: at least 75% of countries in each region that included essential services in their COVID-19 response plans reported including NCDs, and across all income groups, between 73% and 87% of these countries did the same.

## Fig. 54

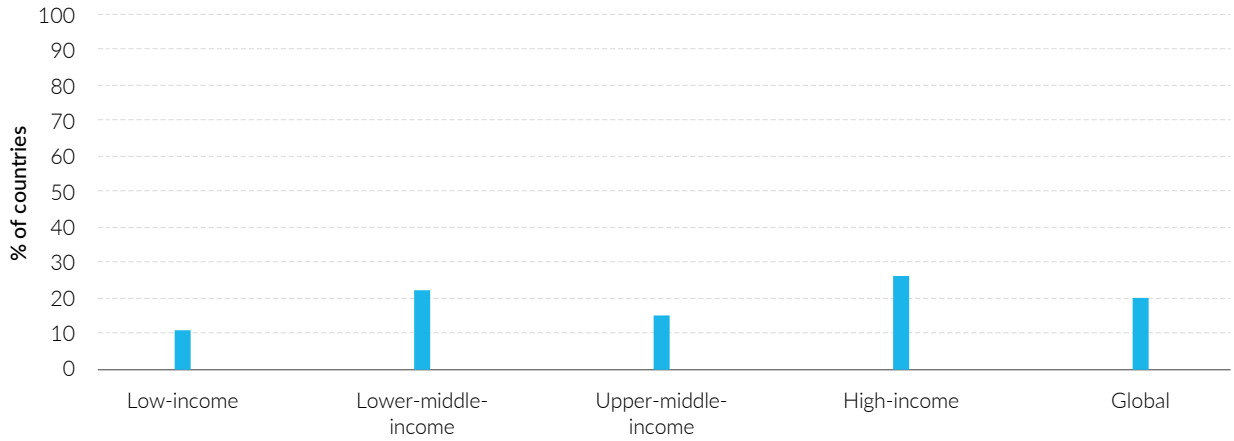
*Percentage of countries including various NCD-related essential health services in their COVID-19 response plans, among 92 countries reporting having included any NCD-related services in their COVID-19 response plans*




Countries reported on whether additional funding had been allocated for NCDs in the government budget for the COVID-19 response in the previous 3 months. Globally, 20% of countries that responded said that additional funds had been allocated – with high- and lower-middle-income groups displaying the highest percentage of countries allocating additional funds (Fig. 55).

## Fig. 55

*Percentage of countries with additional funding allocated to NCDs in the government budget for the COVID-19 response in the previous 3 months*




Around two thirds (68%) of countries reported some disruption to planned ministry of health NCD activities in the previous 3 months. The NCD activities most widely postponed because of the pandemic included NCD surveys (42% of countries); NCD screening (35% of countries); and mass-communication campaigns (34% of countries). The WHO Package for Essential NCDs (PEN) training and implementation in primary health was disrupted in 22% of low-income countries and 41% of lower-middle-income countries. Finally, 21% of middle-income countries reported postponement of activities related to implementation of the WHO HEARTS technical package.

## Impact of COVID-19 on planned NCD-related health services

Countries reported on government policies and directives impacting access to NCD services in various service delivery platforms in the past 3 months due to the COVID-19 pandemic. Forty-two per cent of countries reported that access to outpatient NCD services was restricted to some degree, including 1% (one country in the European Region and another in the Region of the Americas) reporting total closure, and 54% of countries reported that these services remained functioning as normal.

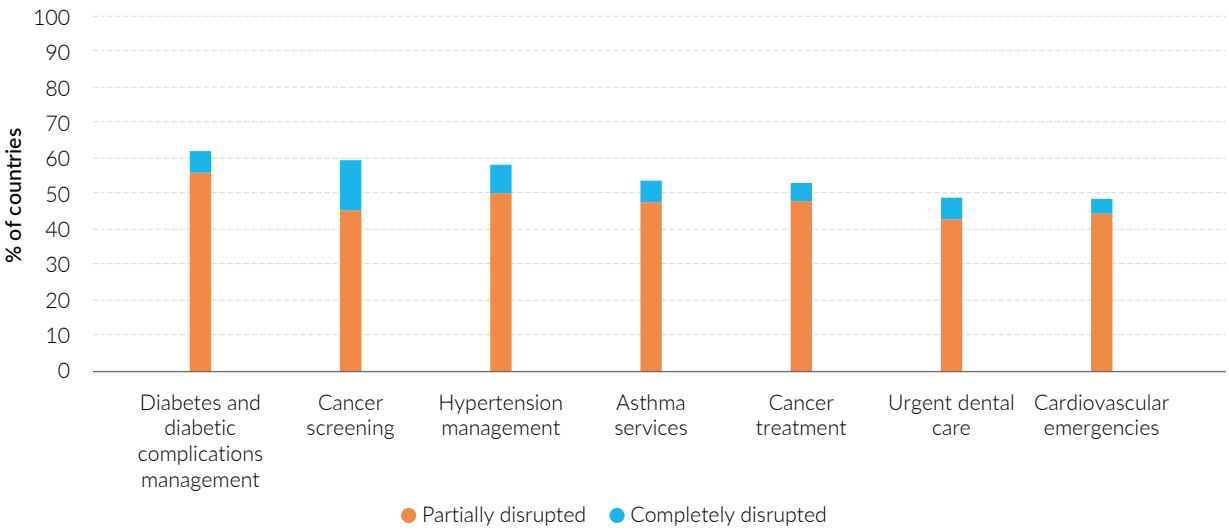
Access to inpatient NCD services was generally less affected. Fifty-eight per cent of countries reported that inpatient NCD services remained open while just over a third (38%) reported that inpatient NCD services were restricted. No countries reported suspending inpatient NCD services. Overall, 46% of countries reported that both inpatient and outpatient services were open, 29% had restricted access to both and 12% had restricted access only to outpatient services. Fifteen countries (8%) restricted inpatient services but maintained normal functioning of outpatient services.

Community-based NCD care and mobile NCD clinic services were most likely to be completely suspended during the COVID-19 pandemic – for the former, 47% of countries reported restricting or suspending services, and for the latter, 37% of countries reported restriction or suspension.

In addition to reporting on the recent impact of government policies on access to inpatient and outpatient services, countries reported more specifically on disruptions to a number of NCD-related services that occurred in the previous 3 months. For diabetes services, 62% reported disruption; for cancer screening, 59% of countries reported disruption (with 23% of these countries experiencing complete disruption – making this service the most severely disrupted of those listed in Fig. 56); for cancer treatment, 53% reported disruption; and for CVD emergencies, 48% reported disruption (Fig. 56). Overall, 70% of countries reported disruption to one or more NCD service. A higher percentage of low-, lower-middle and upper-middle-income countries reported disruption (74–80%) compared to high-income countries (54%). European Region countries reported the lowest percentage of disruption (51%) of all regions, with the South-East Asia Region reporting the highest percentage (91%) of countries experiencing disruption.

### Fig. 56

*Percentage of countries reporting disruptions to NCD services due to COVID-19 in the previous 3 months*



Reported causes of disruption fell into demand- and supply-side factors and are listed in decreasing order of prevalence in Table 6. Many of the more prevalent causes were demand-side factors, such as fear/mistrust (68% of countries reporting disruptions); patients not presenting (66%); travel restrictions (47%); and financial difficulties (46%). Many countries with disruptions also reported that disruptions were due to staff being deployed to assist with COVID-19 relief (67% of countries reporting disruptions); cancellation of elective care (57%); and insufficient staff (49%).

## Table 6

*Main causes of NCD service disruption during COVID-19 (percentages are out of 136 countries reporting any disruptions to specific NCD services)*

| | |
|---|---|
| Community fear/mistrust in seeking health care* | 68 |
| Related clinical staff deployed to provide COVID-19 relief | 67 |
| Decrease in outpatient volume due to patients not presenting* | 66 |
| Decrease in inpatient volume due to cancellation of elective care | 57 |
| Insufficient staff to provide services | 49 |
| Travel restrictions hindering access to the health facilities* | 47 |
| Financial difficulties during outbreak/lockdown* | 46 |
| Changes in treatment policies for care-seeking behaviour (e.g. stay-at-home policies) | 37 |
| Closure of population-level screening programmes | 33 |
| Inpatient services/hospital beds not available | 29 |
| Unavailability/stock-out of essential medicines | 29 |
| Closure of outpatient disease-specific consultation clinics | 21 |
| Insufficient Personal Protective Equipment (PPE) available for health care providers to provide services | 20 |
| Closure of outpatient services as per government directive | 16 |

** Demand-side factors are indicated with an asterisk, other causes are supply-side factors.*

## Mitigation strategies to maintain NCD services during COVID-19

Encouragingly, many countries appear to have adopted alternative strategies to ensure people at highest risk continued to receive treatment for NCDs. The most widely used strategy, implemented in over two thirds of countries with disruptions (69%), was communicating directly with communities to inform them of changes in services, and to counter misinformation about the virus and allay community fears of infection. Two other mitigation strategies – triaging to identify priorities and redirecting patients to alternative care sites – were also deployed by nearly two thirds of countries with disrupted services (Table 7). Around half of countries reported recruiting additional staff, deploying telemedicine initiatives, and promoting self-care interventions where appropriate. The percentages of countries that used these strategies were similar across income groups, except for telemedicine, which high-income countries were more than five times more likely (87%) to deploy than low-income countries (15%).

### Table 7

*Mitigation strategies to ensure NCD service provision continuity (percentages are out of 136 countries reporting any disruptions to specific NCD services)*

| | |
|---|---|
| Community communications (e.g. informing on changes to service delivery, addressing misinformation and community fears of infection) | 69 |
| Triaging to identify priorities | 65 |
| Redirection of patients to alternate care sites/reorientation of referral pathways | 61 |
| Recruitment of additional staff | 57 |
| Telemedicine deployment to replace in-person consultations | 55 |
| Self-care interventions where appropriate | 50 |
| Novel prescribing approaches (e.g. tele-prescription, extended drug prescriptions) | 49 |
| Provision of home-based care where appropriate | 49 |
| Novel dispensing approaches for medicines | 48 |
| Task shifting/role delegation | 40 |
| Integration of several services into single visit | 32 |
| Novel supply chain management and logistics approaches | 32 |
| Catch-up campaigns for missed appointments | 29 |
| Expanding facility hours | 19 |
| Government removal of user fees | 8 |

# Discussion

## Key findings

### Aspects of NCD infrastructure

All but six countries reported the presence of an NCD department within their ministry of health or equivalent agency – a 2% rise (three more countries) since the last survey and a notable increase since 2010. Overall, 95% of countries reported having at least one full-time staff member working within these departments, a slight increase from 2019. Encouragingly, and for the second survey in a row, low-income countries comprised the greatest proportion of countries with full-time staff. This survey is the first in which the African Region and the Western Pacific Region were able to report 100% of countries having at least one full-time technical member working in the NCD department.

Staffing for specific NCDs was widely reported overall and was generally well reported in low- and lower-middle-income countries, although provision for two conditions newly added to the survey in 2021 – ear and eye diseases – ranked below all other NCDs. Staff coverage for specific NCD risk factors (other than tobacco use) lagged a little behind that dedicated to NCDs themselves in these same country income groups – a pattern that held true for countries overall. And in response to a new question in the 2021 survey, 73% of countries overall reported the presence of NCD departments at subnational, state and regional levels.

Government funding for eight key NCD-activities showed very little change since 2019, with NCD research and palliative care continuing to be the least-funded areas. A new question on funding for rehabilitation showed that globally, funding for this area was similar to these least-funded areas. While tobacco taxation was already widely prevalent in 2019, the present survey showed a slight increase still, with all but five countries (97%) reporting levying taxes on tobacco. The number of countries imposing taxes on sugar-sweetened beverages showed a marked improvement over the past 2 years, up from 38% to 47% globally. Countries in the European Region had the lowest proportion of countries implementing sugar-sweetened beverage taxes – just 28%. Taxation of foods high in fat, sugars or salt remained relatively rare but the number of countries levying such taxes nonetheless doubled over the past 2 years (12 countries in 2019 compared to 25 countries in 2021).

A national multisectoral commission, agency, or mechanism to oversee NCD engagement, policy coherence and the accountability of sectors beyond health was reported by 59% of countries globally, and while this was small decline on the 2019 survey, the percentage of these commissions that were operational remained the same as in 2019 (77%). Only 11% of low-income countries had an operational NCD commission.

### Plans, policies and strategies

Globally, 86% of countries reported including NCDs in the outcomes or outputs national health plan – and though this represents a slight decline from 2019, this year was the first time over 90% of countries in the African Region responded positively to this question. The biggest decline was in the Region of the Americas where five fewer countries responded positively to this question. Similarly, the availability of targets saw a slight decline from 2019, perhaps an impact of the COVID-19 pandemic delaying related processes as old targets expired and the establishment of new ones was slowed. Roughly a quarter of countries noted disruptions to policy and guideline development in a survey earlier in the pandemic *(10)*.

The consistent rise in the availability of operational integrated NCD policies, strategies and action plans seen since 2010 noticeably slowed over the past 2 years, again most likely due to COVID-19-related delays in replacing expiring policies. The number of countries reporting such plans slipped slightly from 2019, yet a majority of countries across all income groups and almost all regions (except the African Region) did have an operational, integrated multisectoral NCD policy in place that covered all four main risk factors and conditions (i.e. they fully achieved Progress Monitor indicator 4).

Reviewing trends in the availability of operational plans addressing each of the four main NCDs over the past decade reveals a noticeable increase in such policies, with at least three quarters of countries addressing cancer, CVD and diabetes in operational policies. Of note are plans to address CVD in the

African Region, for which only 13% of countries in the region reported an operational plan in 2010, but by 2021 this figure had risen to 63%. And although CRD remained the least likely to be covered in the 2021 survey, policy coverage globally for CRD has nevertheless more than tripled since 2010.

When reviewing trends in the availability of operational policies addressing the four main NCD risk factors over the past decade, again the overall direction is positive. Policies addressing NCD risk factors were broadly present, except those addressing overweight and obesity, for which only 40% of countries had an operational policy (the same as in 2019). While policies covering alcohol use and physical activity globally dropped below 2017 levels, those covering healthy diet and tobacco reduction rose, with these two risk factors remaining the most widely addressed risk factors globally (over 80% of countries).

Countries also reported plans for oral health, eye health and ear health which revealed that these policies were not as widely available as policies for any of the main NCDs or NCD risk factors. And the survey also revealed a lack of NCD-related research, with only 28% of countries overall (and only 7% of low-income countries) reporting having an operational NCD research plan that included community-based research and impact evaluation.

And for just the second time, countries reported on guidelines for physical activity – 46% of countries overall had such guidelines, almost all of which had them for children and adolescents (96%) and for adults (94%). Compared to 2019, there has been a noticeable rise in the availability of guidelines (40% of countries reported having guidelines in 2019) and this rise is seen across guidelines targeting all sub-populations on which countries were queried.

Compared to 2019, 13 more countries reported implementing either voluntary or mandatory restrictions on the marketing of unhealthy foods to which children are exposed – a rise of 7% over this 2-year period. While most of the countries implementing these restrictions are in the European Region, just as in 2019, both the Region of the Americas and the Eastern Mediterranean Region saw several new countries implementing these voluntary or mandatory policies, while the African Region rose from zero countries to two countries implementing such policies. Still there are no low-income countries reporting the implementation of any kind of marketing restrictions.

There was little change since 2019 in the implementation of policies on trans fats and saturated fats (both remained at around one third of countries), however policies to reduce population salt consumption increased by 9% globally, with most of the increase coming from the Western Pacific Region, followed by the African Region and the European Region. Once again, no low-income countries reported implementing a salt-reduction policy.

Not surprisingly, public awareness campaigns on diet and physical activity saw a decline over the past 2 years, undoubtedly due to the COVID-19 pandemic: a third of countries reported disruptions to planned campaigns in the last section of this survey. Yet both types of campaigns were still implemented by just over half of countries and the declines from 2019 were around 10% or less, globally. Similarly, mass-participation events were slightly less prevalent over the past 2 years (56% of countries in 2021 versus 59% in 2019), although the declines were steeper among low- and lower-income countries. A very slight increase was seen in the implementation of mHealth initiatives (27% in 2021 versus 28% in 2019) with one to three more countries reporting initiatives in most regions.

## NCD surveillance

While there was little change in the reported responsibility for NCD surveillance within ministries of health, the number of countries reporting that no-one has this responsibility dropped from three in 2019 to just two in 2021.

And while cancer registries were reported by 87% of countries globally (no change over 2019), more countries reported that their cancer registries were population-based (71% in 2021 versus 64% in 2019). Reviewing the trend on cancer registries since 2010, the progress is remarkable. In 2010, only 47% of the 160 responding countries reported having a population-based cancer registry, but by 2021 this had risen to 74%. The most notable progress was seen in the African Region, where among the 30 countries responding to all rounds of the survey, the number of countries reporting population-based cancer registries had more than doubled, from only eight countries in 2010 to 19 in 2021.

Just under half of all countries reported having a diabetes registry and of those with registries, 42% were hospital-based, and 40% population based – a small improvement on 2019. Across regions, the Western Pacific Region reported the highest percentage of countries with any kind of diabetes registry (74%) followed by the European Region (60%). Registries

for myocardial infarction, stroke, and any other NCDs were far less prevalent (less than a third of countries for each). Once again, the Western Pacific Region had the highest percentage of countries reporting myocardial infarction and stroke registries (48% for both conditions). While just a single country in the African Region reported having either a myocardial infarction or stroke registry, just over a quarter of countries in the region reported that other registries could provide some information on NCDs.

A slight majority of countries (55%) reported having patient information systems that included information on NCDs in public primary health care centres or in public hospitals. While low-income countries were less likely to have such systems in place than middle- and high-income countries, the differences between the income groups was relatively modest. Among countries with systems in place, the great majority reported their system had national coverage, included over half of facilities and was electronic-based or a mix or paper-based and electronic-based.

Forty per cent of countries reported having implemented recent, national surveys among adults that covered at least eight of the nine major NCD risk factors – a decline of about 10% from 2019. Given that 42% of countries reported in this same survey that their plans for implementing NCD surveys had been curtailed by the COVID-19 pandemic, this decline is not surprising. The decline was most marked in the African Region and Western Pacific Region, where in the latter the number of countries with no risk factors covered by a recent, national adult survey had doubled from five to 10 since 2019 (37% of countries in the region). The percentage of countries reporting having implemented a recent, national survey among adolescents saw a similar drop: 30% reported covering all five major NCD risk factors in 2021 compared to 39% in 2019. For adolescent surveys, the decline was most marked in the Eastern Mediterranean Region, where the number of countries reporting no surveys covering any NCD risk factors among adolescents nearly doubled – from six in 2019 to 11 in 2021 (52% of countries in the region).

## Health systems capacity

Available guidelines for all four main NCDs were reported by more than half of countries (58%) – a rise of 10% over 2019. While guidelines for all four main NCDs were more widely available in 2021, the increase in the availability of guidelines for CRD was the greatest (72% in 2021 versus 64% in 2019). There remains a clear relationship between income group and guideline availability, which is most notable for cancer guidelines (44% of low-income countries have cancer guidelines compared to 82% of high-income countries). And when it came to guidelines for major NCD risk-factor management (alcohol dependence, tobacco dependence, overweight, and physical inactivity), all saw a modest rise in global availability compared to 2019. Guidelines for tobacco dependence remained the most widely available (48% of countries).

Breast and cervical cancer screening programmes saw a slight decline in prevalence compared to 2019 (1% and 4% declines, respectively), which may simply reflect over-reporting in previous years if non-established (e.g. pilot) programmes were reported when only established national programmes should have been reported. The availability of breast cancer screening programmes varied markedly across regions, from a high of 96% among countries in the European Region to a low of 21% in the African Region. Cervical cancer screening programmes were available in over 80% of countries in all regions except the Eastern Mediterranean Region (38%) and African Region (34%). Organized, population-based programmes for breast and cervical cancers were far more prevalent among high-income countries and were increasingly less prevalent with decreasing income group.

There was little change since 2019 in the availability of essential tests for NCDs – a slim majority of countries reported all six essential tests and procedures were generally available (measurement of height, weight, blood pressure, blood glucose, and total cholesterol, as well as urine strips for albumin assay), with clear income group disparities. As in the last survey, the availability of total cholesterol measurement varied most drastically across income groups compared to the other five essential tests.

While many NCD-related medicines were widely available globally (generally available in over 75% of countries), several important medicines, such as sulphonylurea, ARBs, steroid inhalers, oral morphine and a variety of fixed-dose combinations, were less so. Significant differences were observed between income groups when it came to availability of statins and steroid inhalers, with the latter being reported as generally available in only 26% of low-income countries but 93% of high-income countries. Just over half of countries (54%) reported that all 11 essential NCD medicines covered by the survey were generally available, the vast majority of which were high- or upper-middle-income countries. Low-income countries were equally likely to report having all 11 essential NCD medicines available as to report having none at all (15% of low-income countries each).

Compared to 2019, the availability of many procedures for NCDs remained more or less unchanged. The most widely available procedures for treating NCDs were dialysis (71%) and diabetic retinopathy screening (68%). Kidney transplants and bone marrow transplants were available in less than half of countries worldwide (42% and 36% respectively), with considerable gaps in the availability of bone marrow transplants across regions: almost three quarters (72%) of countries in the European Region but less than a quarter (20%) of countries in the Region of the Americas and just a single country in the African Region reported the procedure as generally available.

Slight increases were seen in global availability across all cancer diagnosis and treatment services covered in the survey. There remained, however, marked differences across income groups, particularly for radiotherapy (generally available in 26% of low-income countries versus 89% of high-income countries) and, to a lesser degree, for cancer centres or departments at the tertiary level (56% of low-income countries versus 93% of high-income countries). Globally, palliative care in a community- or home-based-care setting was reported by 43% of countries, and in a primary health care setting by 42% of countries – a very modest rise over 2019. However, these services were much more likely to exist in both settings in high- than low-income countries. Cardiovascular risk stratification in health care facilities was reported as available by over three quarters (78%) of countries – a slight rise over 2019, but the proportion of these countries reporting wide availability (>50% of primary health care facilities) remained just over 50%.

Overall, country reporting on rehabilitation services for NCDs revealed that NCD outpatient care was somewhat less developed than NCD inpatient care for all WHO regions, even though outpatient care is a critical component of NCD rehabilitation. The European Region was the only region that was an exception to this pattern. And while the majority of countries reported providing both inpatient and outpatient rehabilitation services, a significant minority of countries offered inpatient rehabilitation only (7–17% of low-, lower-middle, and upper-middle-income countries). All high-income countries offered both. Rehabilitation for NCDs with less-visible rehabilitation needs (e.g. cancer or acute myocardial infarction) was generally less available than rehabilitation for more visible conditions such as stroke and musculoskeletal conditions.

## NCD-related disruptions during the COVID-19 pandemic

Data from the final module of the questionnaire can be broadly compared to data collected one year prior to the 2021 NCD country capacity survey, although this comparison is limited because only 163 Member States responded to the earlier survey *(10)*. Still, this gives some indication of the continued or lessening impact of the pandemic over the course of the year. The majority (89%) of countries reported at least some level of staffing disruption in the ministry of health or equivalent due to COVID-19 – a figure very comparable to the staffing disruptions seen a year earlier. Overall, around 20% of countries in all regions and income groups (though mainly in low- and lower-middle-income countries) had seen at least some NCD funds reallocated to the COVID-19 response during the previous 3 months. While this is somewhat less than what was reported a year ago, the reallocation of NCD funds clearly remains an issue for many countries. On the flip side, 20% of countries reported that additional government funding had been allocated for NCDs for the COVID-19 response – with high- and lower-middle-income groups displaying the highest percentage of countries allocating additional funds.

Just under half of countries (47%) reported that NCD-related services were included in the list of essential health services to be maintained in national COVID-19 response plans, but this represents a sizeable majority (83%) of countries with such plans in place and positive responses varied little across income groups and regions. In countries where COVID-19 response plans identified NCD services to be maintained, some services were included in over 85% of these plans (services for diabetes, CVD, cancer and CRD, as well as dialysis), while others were much less likely to be included (dental services, tobacco cessation services and rehabilitation were included in 65% of such plans or less).

Dishearteningly, disruptions to ministry of health activities were even more widely reported than a year ago. Given the larger number of countries reporting in the present survey, this indicates even greater disruption to such activities one year further into the pandemic. While disruptions to the implementation of the HEARTS technical package were reported by just 30 countries (nearly the same number as a year earlier), other activities were markedly impacted, namely NCD surveys (42% of countries reporting postponement in the previous 3 months), NCD screening (35% of countries) and mass-communication campaigns (34% of countries).

Countries also reported on the impact of the COVID-19 pandemic on government policies on access to essential NCD services for both inpatient and outpatient services, as well as community-based NCD care and mobile NCD clinics. At least one third or more of countries reported some level of disruption to each of these services, with community-based NCD care most likely to be disrupted (47% of countries). Outpatient care was generally more affected than inpatient care, with two countries reporting complete suspension of outpatient care within the past 3 months. While the questions posed on this topic a year earlier were somewhat different, the overall picture suggests a slight improvement in availability of care. For example, 59% of the 163 responding countries in 2020 reported disruptions to outpatient care compared to just 42% of the 194 responding countries in the 2021 survey.

Similarly, disruptions reported on specific NCD services suggest there may be a slight improvement over disruptions reported a year earlier. While 75% of the 163 responding countries reported disruptions to one or more NCD services in 2020, only 70% of all 194 countries reported recent disruptions in the present survey. In 2021, 59% of countries reported some level of disruption to cancer screening; 53% for cancer treatment; 48% for CVD emergencies; and 62% for diabetes. A higher percentage of low-, lower-middle and upper-middle-income countries reported disruption (74–80%) compared to high-income countries (54%). European Region countries reported the lowest percentage of disruption (51%) of all regions, with the South-East Asia Region reporting the highest percentage (91%).

Encouragingly, many countries adopted alternative strategies to ensure treatment continuity for NCDs – the most widely used of which (by over two thirds of countries) was communicating directly with communities to inform them of changes in services, to counter misinformation about the virus and allay community fears of infection. Two other mitigation strategies – triaging to identify priorities and redirecting patients to alternative care sites – were also deployed by around two thirds of countries. Around half of countries reported recruiting additional staff, deploying telemedicine initiatives, and promoting self-care interventions where appropriate. The percentages of countries that used these strategies were similar across income groups except for telemedicine, where high-income countries were more than five times more likely (87%) than low-income countries (15%) to deploy this measure. Three quarters (75%) of countries reported that their ministries of health were collecting or collating data on NCD-related comorbidities in COVID-19 patients.

## Strengths and limitations of the survey

The NCD Country Capacity Survey has allowed for the continued tracking of countries' progress on resources and actions to address NCDs. By probing countries on the availability of resources and policies and actions taken on such a wide range of areas, the survey also serves as a means to help countries identify areas where stronger action is needed. The consistent 100% response rate over the past three rounds of the survey indicates that this survey is of value to countries too. While the survey relies in part on accurate reporting by respondents in ministries of health and equivalent agencies, the validation process has been strengthened with each round of the survey. Where available, countries are required to provide supporting documents. Over 7200 documents were submitted in the present round, which were reviewed by a small team of staff across WHO headquarters and the regional offices. Most of these documents are now available in the NCD Document Repository[11] so they can benefit the entire public health community. Thus, while the survey is limited for certain items by the absence of supporting documents (where there is no obvious supporting document to request), the volume of supporting documents for other items bolsters the quality of the survey. While every effort is made to standardize the validation process across the validation team through training and clear guidelines, there is an inevitable subjective aspect to this process – representing a further limitation of the data.

While the questionnaire includes a detailed glossary to help clarify all terms used, another potential limitation of the survey is the possible misinterpretation of questions. Additionally, the focus on national activities/policies and public health sector services throughout the survey may result in some countries with a less-centralized means of governance, or with a greater reliance on the private health sector, less accurately reflecting the status of their NCD responses and policies.

[11] The NCD document repository provides access to thousands of documents containing NCD targets, policies, and guidelines submitted by WHO Member States (see: https://extranet.who.int/ncdccs/documents/).

# Conclusion

## Priorities for further action

As the countdown begins for the final decade before we reach the 2030 SDG deadline, this report presents a global snapshot of the world's ability to address the challenge of NCDs. It draws on 10 years of comparable data, and overall, progress has been made. More countries than ever have an NCD department within their ministry of health, and more countries than ever also report having at least one full-time staff member – the greatest proportion of which are low-income countries. Reviewing the trend in the availability of operational policies that address each of the four main NCDs over the past decade also reveals a noticeable rise, likewise the trend in the availability of operational policies addressing the four main NCD risk factors. However, the data presented in this report (the first post-COVID-19 NCD CCS report) show there are key areas of concern for more concerted action.

### Health infrastructure

Funding for primary prevention has increased only modestly, or has stagnated or regressed depending on region. Funding for surveillance, monitoring and evaluation have also fluctuated. Taxes on sugar-sweetened beverages are not common (with the European Region reporting the lowest deployment of this measure) and price subsidies for healthy foods remain relatively rare or non-existent. Each of these activities – alongside a multisectoral approach to undertake them – requires stronger action globally.

### Plans, policies and strategies

Operational, integrated plans covering NCDs and their risk factors have become less common – possibly because of expiry, non-renewal or because of exceptional situations (e.g. COVID-19 pandemic, emergencies). But whatever the reason, this trend must be reversed wherever possible. In particular, plans to implement mandatory policies to restrict the marketing of unhealthy foods to which children are exposed; to reduce the intake of saturated fats and salt;[12] and to eliminate industrially produced trans fats must be given more attention (including through WHO's REPLACE package[13] to eliminate industrially produced trans-fatty acids). Physical activity plans are also much in need of prioritization as are plans for the provision of ear and eye health, and NCD-related research policies – the lack of which represents a major gap and an opportunity. By investing in research, Member States can deliver evidence to guide policy and practice – a focus for the WHO Technical Advisory Group of Experts on NCD-related Research and Innovation.[14]

### Surveillance

Almost half of countries have no dedicated NCD office, and less than half of countries have registries such as those for diabetes. Recent national NCD surveys have declined – by 10% since the last NCD country capacity survey – meaning fewer than 20% of countries achieved the Progress Monitor indicator on surveillance and leaving surveillance as a worryingly under-used tool to assess the burden of NCDs.

### Health systems capacity

Availability of NCD screening programmes, tests, treatments and essential medicines varied starkly across regions – an inequity requiring urgent action. Palliative care in all settings was reported by less than half of countries, with rehabilitation services for NCDs revealing that outpatient care was less developed than inpatient care for all NCDs and for all WHO regions except the European Region. Greater global investment in rehabilitation and palliative care is urgently needed.

### NCD-related disruptions during the COVID-19 pandemic

Globally, NCD activities most widely postponed because of the pandemic included NCD surveys (42% of countries); NCD screening (35% of countries);

[12] WHO's recently published (March 2023) *Global report on sodium intake reduction* is available at: https://www.who.int/publications/i/item/9789240069985.

[13] REPLACE (see https://www.who.int/teams/nutrition-and-food-safety/replace-trans-fat) is accompanied by a *Global progress monitoring report* (see https://www.who.int/publications/i/item/9789240067233) and accompanying country score cards (see https://extranet.who.int/nutrition/gina/en/scorecard/TFA).

[14] For more information, see: https://www.who.int/groups/who-technical-advisory-group-of-experts-on-ncd-research-and-innovation.

and suspension of mass-communication campaigns (34% of countries). Mitigating any ongoing impact from COVID-19 disruption to NCD services is critical so as not to lose momentum on addressing NCDs, or risk any further erosion of gains to date.

# References


1. Alwan AD, Maclean D, Mandil A. Assessment of national capacity for noncommunicable disease prevention and control: the report of a global survey. Geneva: World Health Organization, 2001 (http://apps.who.int/iris/bitstream/10665/67305/1/WHO_MNC_01.2.pdf, accessed 12 March 2023).

2. Global Health Estimates 2019: Deaths by cause, age, sex, by country and by region, 2000–2019. Geneva: World Health Organization; 2020 (https://www.who.int/data/global-health-estimates, accessed 12 March 2023).

3. United Nations, General Assembly. Outcome document of the High-Level meeting of the General Assembly on the comprehensive review and assessment of the progress achieved in the prevention and control of non-communicable diseases, 10 July 2014 (https://digitallibrary.un.org/record/774662, accessed 12 March 2023).

4. United Nations, General Assembly. Political declaration of the High-level Meeting of the General Assembly on the prevention and control of non-communicable diseases, A/66/L.1, 16 September 2011 (http://www.un.org/ga/search/view_doc.asp?symbol=A/66/L.1, accessed 12 March 2023).

5. United Nations, General Assembly. Political declaration of the third High-Level meeting of the General Assembly on the prevention and control of non-communicable diseases, A/RES/73/2; 17 October 2018 (https://www.un.org/en/ga/search/view_doc.asp?symbol=A/RES/73/2, accessed 12 March 2023).

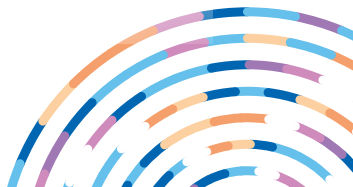
6. Global action plan for the prevention and control of noncommunicable diseases 2013–2020. Geneva: World Health Organization; 2013 (http://apps.who.int/iris/bitstream/10665/94384/1/9789241506236_eng.pdf, accessed 12 March 2023).

7. Resolution WHA66.10. Follow-up to the Political Declaration of the High-level Meeting of the General Assembly on the prevention and control of non-communicable diseases. In: Sixty-sixth World Health Assembly, 20–28 May 2013. Geneva: World Health Organization, 2013 (http://apps.who.int/gb/ebwha/pdf_files/WHA66/A66_R10-en.pdf?ua=1, accessed 12 March 2023).

8. Political declaration of the third high-level meeting of the General Assembly on the prevention and control of non-communicable diseases, EB150/7 Add. 1, 11 January 2022 (https://apps.who.int/gb/ebwha/pdf_files/EB150/B150_7Add1-en.pdf, accessed 12 March 2023).

9. 'Best buys' and other recommended interventions for the prevention and control of noncommunicable diseases. Geneva: World Health Organization; 2017 (http://apps.who.int/iris/bitstream/10665/259232/1/WHO-NMH-NVI-17.9-eng.pdf, accessed 12 March 2023).

10. The impact of the COVID-19 pandemic on noncommunicable disease resources and services: results of a rapid assessment. Geneva: World Health Organization; 2020 (https://apps.who.int/iris/handle/10665/334136, accessed 12 March 2023).



# Annexes

# Annex 1: WHO Member States and survey respondents

**† signifies that the country responded to the 2021 survey but not to one or more of the 2010, 2013 or 2015 surveys (all countries responded in 2017 and 2019). These countries were thus excluded from the multi-year comparisons.**

## WHO African Region

Algeria
Angola†
Benin
Botswana†
Burkina Faso
Burundi
Cabo Verde†
Cameroon
Central African Republic
Chad†
Comoros
Congo
Côte d'Ivoire†
Democratic Republic of the Congo†
Equatorial Guinea†
Eritrea
Eswatini
Ethiopia†
Gabon†
Gambia
Ghana
Guinea
Guinea-Bissau†
Kenya
Lesotho
Liberia†
Madagascar
Malawi
Mali
Mauritania
Mauritius†
Mozambique
Namibia†
Niger
Nigeria
Rwanda
Sao Tome and Principe
Senegal
Seychelles
Sierra Leone†
South Africa†
South Sudan†
Togo
Uganda
United Republic of Tanzania†
Zambia
Zimbabwe

## WHO Region of the Americas

Antigua and Barbuda†
Argentina
Bahamas†
Barbados
Belize
Bolivia (Plurinational State of)
Brazil
Canada
Chile
Colombia†
Costa Rica
Cuba
Dominica
Dominican Republic
Ecuador
El Salvador
Grenada†
Guatemala
Guyana†
Haiti†
Honduras
Jamaica
Mexico
Nicaragua

Panama
Paraguay
Peru
Saint Kitts and Nevis
Saint Lucia
Saint Vincent and the Grenadines†
Suriname
Trinidad and Tobago
United States of America
Uruguay
Venezuela (Bolivarian Republic of) †

## WHO Eastern Mediterranean Region

Afghanistan
Bahrain
Djibouti†
Egypt
Iran (Islamic Republic of)
Iraq
Jordan
Kuwait
Lebanon
Libya
Morocco
Oman
Pakistan
Qatar
Saudi Arabia
Somalia
Sudan
Syrian Arab Republic
Tunisia
United Arab Emirates
Yemen

## WHO European Region

Albania
Andorra
Armenia
Austria
Azerbaijan
Belarus†
Belgium
Bosnia and Herzegovina†
Bulgaria
Croatia
Cyprus
Czechia
Denmark
Estonia
Finland
France
Georgia
Germany
Greece
Hungary
Iceland
Ireland
Israel
Italy
Kazakhstan
Kyrgyzstan†
Latvia
Lithuania
Luxembourg†
Malta
Monaco
Montenegro
Netherlands (Kingdom of the)
North Macedonia
Norway
Poland
Portugal
Republic of Moldova
Romania
Russian Federation
San Marino
Serbia
Slovakia
Slovenia
Spain
Sweden
Switzerland
Tajikistan
Türkiye
Turkmenistan†
Ukraine
United Kingdom
Uzbekistan

## WHO South-East Asia Region

Bangladesh
Bhutan
Democratic People's Republic of Korea
India
Indonesia
Maldives
Myanmar
Nepal
Sri Lanka
Thailand
Timor-Leste†

## WHO Western Pacific Region

Australia
Brunei Darussalam
Cambodia
China
Cook Islands†
Fiji
Japan
Kiribati
Lao People's Democratic Republic
Malaysia
Marshall Islands
Micronesia (Federated States of)
Mongolia
Nauru
New Zealand
Niue
Palau
Papua New Guinea
Philippines
Republic of Korea
Samoa†
Singapore
Solomon Islands
Tonga
Tuvalu
Vanuatu
Viet Nam

# Annex 2: List of countries by World Bank income group

**Categories for this report were based on the income categories for 2021**

No category was available for Cook Islands, Niue and Venezuela (Bolivarian Republic of). These countries were thus excluded from analyses by income group.

## High income

Andorra
Antigua and Barbuda
Australia
Austria
Bahamas
Bahrain
Barbados
Belgium
Brunei Darussalam
Canada
Chile
Croatia
Cyprus
Czechia
Denmark
Estonia
Finland
France
Germany
Greece
Hungary
Iceland
Ireland
Israel
Italy
Japan
Kuwait
Latvia
Lithuania
Luxembourg
Malta
Monaco
Nauru
Netherlands (Kingdom of the)
New Zealand
Norway
Oman
Palau
Poland
Portugal
Qatar
Republic of Korea
Saint Kitts and Nevis
San Marino
Saudi Arabia
Seychelles
Singapore
Slovakia
Slovenia
Spain
Sweden
Switzerland
Trinidad and Tobago
United Arab Emirates
United Kingdom
United States of America
Uruguay

## Upper-middle income

Albania
Argentina
Armenia
Azerbaijan
Belarus
Bosnia and Herzegovina
Botswana
Brazil
Bulgaria
China
Colombia
Costa Rica

Cuba
Dominica
Dominican Republic
Ecuador
Equatorial Guinea
Fiji
Gabon
Georgia
Grenada
Guatemala
Guyana
Iraq
Jamaica
Jordan
Kazakhstan
Lebanon
Libya
Malaysia
Maldives
Marshall Islands
Mauritius
Mexico
Montenegro
Namibia
North Macedonia
Panama
Paraguay
Peru
Republic of Moldova
Romania
Russian Federation
Saint Lucia
Saint Vincent and the Grenadines
Serbia
South Africa
Suriname
Thailand
Tonga
Türkiye
Turkmenistan
Tuvalu

## Lower-middle income

Angola
Bangladesh
Belize
Benin
Bhutan
Bolivia (Plurinational State of)
Cabo Verde
Cambodia
Cameroon
Comoros
Congo
Côte d'Ivoire
Djibouti
Egypt
El Salvador
Eswatini
Ghana
Haiti
Honduras
India
Indonesia
Iran (Islamic Republic of)
Kenya
Kiribati
Kyrgyzstan
Lao People's Democratic Republic
Lesotho
Mauritania
Micronesia (Federated States of)
Mongolia
Morocco
Myanmar
Nepal
Nicaragua
Nigeria
Pakistan
Papua New Guinea
Philippines
Samoa
Sao Tome and Principe
Senegal
Solomon Islands
Sri Lanka
Tajikistan
Timor-Leste
Tunisia
Ukraine
United Republic of Tanzania
Uzbekistan

Vanuatu
Viet Nam
Zambia
Zimbabwe

## Low income

Afghanistan
Burkina Faso
Burundi
Central African Republic
Chad
Democratic People's Republic of Korea
Democratic Republic of the Congo
Eritrea
Ethiopia
Gambia
Guinea
Guinea-Bissau
Liberia
Madagascar
Malawi
Mali
Mozambique
Niger
Rwanda
Sierra Leone
Somalia
South Sudan
Sudan
Syrian Arab Republic
Togo
Uganda
Yemen

# Annex 3: Country Profile of Capacity and Response to Noncommunicable Diseases (NCDs)

**MODULES:**

I. Public health infrastructure, partnerships and multisectoral collaboration for NCDs and their risk factors

II. Status of NCD-relevant policies, strategies, and action plans

III. Health information systems, monitoring, surveillance and surveys for NCDs and their risk factors

IV. Capacity for NCD early detection, treatment and care within the health system

V. NCD-related disruptions during the COVID-19 pandemic

## Purpose

- The purpose of this survey is to gauge your country's capacity for responding to noncommunicable diseases (NCDs). It will guide Member States, WHO Regional Offices and WHO HQ in planning future actions and technical assistance required to address NCDs and their risk factors. This is also the basis for ongoing assessment of changes in country capacity and response. Responses to the survey enable reporting against NCD Global Action Plan process indicators and UN High Level Meeting national commitment progress indicators.

- The information collected through this survey will also be used to produce some of the indicators that Member States have agreed to monitor and will be held accountable to the United Nations General Assembly (UNGA) and World Health Assembly (WHA).

- Use of standardized questions allows comparisons of country capacities and responses. We have divided this survey into four modules, assessing key aspects of NCD prevention and control.

- The four main types of noncommunicable diseases are cardiovascular diseases (like heart attacks and stroke), cancers, chronic respiratory diseases (such as chronic obstructed pulmonary disease and asthma) and diabetes. The survey also captures information on policies related to other NCDs of importance to countries such as oral health, diseases of eyes or ears and sensory impairments including hearing or vision impairment.

- The main risk factors for NCDs are harmful use of alcohol, tobacco use, unhealthy diet, and physical inactivity. Capacity assessment related to some specific risk factors is also captured in other topic-specific assessments such as tobacco, alcohol, and nutrition, which may be used to cross-validate some survey items.

## Process

- The survey is intended to assess national level capacity and response to NCDs. If responsibility for health is decentralized to sub-national levels, it can also be applied at subnational levels.

- A focal point or survey coordinator will need to be identified to coordinate and ensure survey completion. However, in order to provide a complete response, **a group of respondents** with expertise in the topics covered in the modules will be needed. Please use the table provided to indicate the names and titles of all of those who have completed the survey and which sections they have completed. Please also add any additional information on other sources you may have consulted in developing your response.

- Please note that while there is space to indicate "Don't know" for most questions, there should be very few of these. If someone is filling in numerous "Don't knows", another person who is more aware of this information should be found to complete this section.

- In order to validate responses, documentation will be requested for affirmative responses throughout the questionnaire. Please make every effort to provide electronic copies of the requested documentation. If documentation has been provided previously and is available in the NCD Document Repository (https://extranet.who.int/ncdccs/documents), please indicate this. If you are unable to provide electronic copies through the provided links, please ask your regional focal point for an alternative means to submit documentation.

## Information on those who completed the survey

Who is the focal point for completion of this survey?

Name: .....

Position: .....

Contact Information: .....

Sections completed: .....

| Name and contact information of others completing survey | Sections completed |
|---|---|
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

Additional information sources consulted:

# I. Public health infrastructure, partnerships and multisectoral collaboration for NCDs and their risk factors

**This module includes questions related to the presence of a unit or division in the ministry of health dedicated to NCDs and risk factors, staff and funding. It also includes an assessment of the existence of fiscal interventions as incentives to influence health behaviour and/or to raise funds for health-related activities. Finally, it assesses the existence of a formal multisectoral mechanism to coordinate NCD-related activities in sectors outside of health.**

1) **Is there a unit/branch/department in the ministry of health or equivalent with responsibility for NCDs and their risk factors?**

☐ Yes ☐ No ☐ Don't know

If no: Go to Question 2

1a) Please indicate the number of full-time-equivalent technical/professional staff in the unit/branch/ department.

☐ 0 ☐ 1 ☐ 2–5 ☐ 6–10 ☐ 11 or more ☐ Don't know

1b) Are there technical/professional staff in the unit/branch/ department dedicating a significant proportion of their time to:

i) Harmful use of alcohol ☐ Yes ☐ No ☐ Don't know

ii) Unhealthy diet ☐ Yes ☐ No ☐ Don't know

iii) Physical inactivity ☐ Yes ☐ No ☐ Don't know

iv) Tobacco use ☐ Yes ☐ No ☐ Don't know

v) Cancer ☐ Yes ☐ No ☐ Don't know

vi) Cardiovascular diseases ☐ Yes ☐ No ☐ Don't know

vii) Chronic respiratory diseases ☐ Yes ☐ No ☐ Don't know

viii) Diabetes ☐ Yes ☐ No ☐ Don't know

ix) Oral diseases ☐ Yes ☐ No ☐ Don't know

x) Ear diseases/hearing impairment ☐ Yes ☐ No ☐ Don't know

xi) Eye diseases/vision impairment ☐ Yes ☐ No ☐ Don't know

1c) Are there units/branches/departments with responsibility for NCDs and their risk factors at the subnational/state/regional level?

☐ Yes ☐ No ☐ Don't know

2) **Is there dedicated funding allocated in the government budget for the following NCD and risk factor activities/functions?**

i) Primary prevention ☐ Yes ☐ No ☐ Don't know

ii) Health promotion ☐ Yes ☐ No ☐ Don't know

iii) Early detection/screening ☐ Yes ☐ No ☐ Don't know

iv) Health care and treatment ☐ Yes ☐ No ☐ Don't know

v) Surveillance, monitoring and evaluation ☐ Yes ☐ No ☐ Don't know

vi) Capacity building ☐ Yes ☐ No ☐ Don't know

vii) Palliative care ☐ Yes ☐ No ☐ Don't know

viii) Research ☐ Yes ☐ No ☐ Don't know

ix) Rehabilitation ☐ Yes ☐ No ☐ Don't know

If at least one Yes to above questions:

2a) What percentage of regular funding for NCDs and their risk factors come from each of the following sources?

..... General government revenues

..... Health insurance

..... International Donors

..... National Donors

..... Earmarked taxes on alcohol, tobacco, etc.

..... Other (specify) .....

☐ Don't know

3) **Is your country implementing any of the following fiscal interventions? (for taxes, please respond "Yes" only if excise taxes and/or special VAT/sales tax rates are applied)**

taxation on alcoholic beverages ☐ Yes ☐ No ☐ Don't know

taxation on tobacco (excise and non-excise taxes) ☐ Yes ☐ No ☐ Don't know

taxation on sugar sweetened beverages ☐ Yes ☐ No ☐ Don't know

taxation on foods high in fat, sugars or salt ☐ Yes ☐ No ☐ Don't know

price subsidies for healthy foods ☐ Yes ☐ No ☐ Don't know

taxation incentives to promote physical activity ☐ Yes ☐ No ☐ Don't know

others (specify) ☐ Yes ☐ No ☐ Don't know

If yes to at least one of the above, other than price subsidies:

3a) Are any of these funds earmarked for health promotion or health service provision?

☐ Yes ☐ No ☐ Don't know

4) **Is there a national multisectoral commission, agency or mechanism to oversee NCD engagement, policy coherence and accountability of sectors beyond health?**

☐ Yes ☐ No ☐ Don't know

If no: Go to MODULE II

4a) Indicate its stage:

☐ Operational ☐ Under development ☐ Not in effect ☐ Don't know

If operational or under development:

4b) Please provide name: .....

4c) Please provide year of establishment: .....

4d) Who leads or chairs the commission/agency/mechanisms (provide name): .....

4e) Which of the following are members?

*(Check all that apply)*

☐ Other Government Ministries (non-health, e.g. ministries of sport, education, transport, urban planning)

☐ United Nations Agencies

☐ Other international institutions

☐ Academia (including research centres)

☐ Nongovernmental organizations/community-based organizations/civil society

☐ Private Sector

☐ Other (specify: .....)

☐ Don't know

If "Private Sector" is one of the members:

4f) Is the participation of industry (i.e. tobacco, food, beverage) to the consultations and decision-making process excluded from the national multisectoral commission?

☐ Yes ☐ No ☐ Don't know

If yes, please indicate which industries:

Tobacco ..... ☐ Yes ☐ No ☐ Don't know

Food ..... ☐ Yes ☐ No ☐ Don't know

Sugar-sweetened beverages ..... ☐ Yes ☐ No ☐ Don't know

Alcohol ..... ☐ Yes ☐ No ☐ Don't know

Other (specify) ..... ☐ Yes ☐ No ☐ Don't know

# II. Status of NCD-relevant policies, strategies, and action plans

**This module includes questions relating to the presence of policies, strategies, or action plans - the questions differentiate between integrated policies/strategies/action plans that address several risk factors or diseases, and policies/strategies/action plans that address a specific disease or risk factor. Additional questions address the existence of specific policies related to the cost-effective interventions for NCDs.**

1a) Are NCDs included in the outcomes or outputs of your current national health plan?

☐ Yes ☐ No ☐ Don't know

1b) Are NCDs included in the outcomes or outputs of your current national development agenda?

☐ Yes ☐ No ☐ Don't know

1c) Are NCD services included in your national essential package of health services or universal health coverage-priority benefits package?

☐ Yes ☐ No ☐ Don't know

1c-i) If yes, please specify the scale of implementation:

.....

2) **Is there a set of time-bound national targets for NCDs based on the 9 voluntary global targets from the WHO Global Monitoring Framework for NCDs?**

☐ Yes ☐ No ☐ Don't know

If yes:

2a) Is there a set of national indicators for these targets based on the indicators from the WHO Global Monitoring Framework for NCDs?

☐ Yes ☐ No ☐ Don't know

## II A. Integrated policies, strategies, and action plans

3) **Does your country have a national NCD policy, strategy or action plan which integrates several NCDs and their risk factors?**

*Please note that this may be a stand-alone NCD policy, strategy or action plan, or a national health policy, strategy or action plan where NCDs comprise a significant proportion of the document. Also note that disease- and risk factor-specific policies, strategies, and action plans will be reported in other questions later in this module.*

☐ Yes ☐ No ☐ Don't know

If no: Go to Question 4

If yes:

Is it multisectoral? ..... ☐ Yes ☐ No ☐ Don't know

Is it multi-stakeholder? ..... ☐ Yes ☐ No ☐ Don't know

Please provide the following information about the policy, strategy or action plan:

3a) **Title:** .....

3b) **Does it address one or more of the following major risk factors?**

Harmful use of alcohol ..... ☐ Yes ☐ No ☐ Don't know

Unhealthy diet..... ☐ Yes ☐ No ☐ Don't know

Physical inactivity ..... ☐ Yes ☐ No ☐ Don't know

Tobacco..... ☐ Yes ☐ No ☐ Don't know

3c) **Does it include early detection, treatment and care for:**

Cancer..... ☐ Yes ☐ No ☐ Don't know

Cardiovascular diseases ..... ☐ Yes ☐ No ☐ Don't know

Chronic respiratory diseases ..... ☐ Yes ☐ No ☐ Don't know

Diabetes ..... ☐ Yes ☐ No ☐ Don't know

3d) **Does it include palliative care for patients with NCDs?**

☐ Yes ☐ No ☐ Don't know

3e) **Does it include rehabilitative care for patients with NCDs?**

☐ Yes ☐ No ☐ Don't know

3f) **Indicate its stage:**

☐ Operational ☐ Under development ☐ Not in effect ☐ Don't know

If operational:

3f-i) What was the first year of implementation?

3f-ii) What year will it expire?

## II B. Policies, strategies, action plans for specific key NCDs

*The questions in this sub-section only refer to policies, strategies and action plans that are specific to key NCDs. If your integrated policy, strategy or action plan addresses the NCD, you do not need to re-enter that information.*

4) **Is there a policy, strategy, or action plan for cardiovascular diseases in your country?**

☐ Yes ☐ No ☐ Don't know

If no: Go to Question 5

If yes:

4a) **Write the title** .....

4b) **Indicate its stage:**

☐ Operational ☐ Under development ☐ Not in effect ☐ Don't know

If operational:

4b-i) What was the first year of implementation? .....

4b-ii) What year will it expire? .....

5) **Is there a policy, strategy, or action plan for cancer or some particular cancer types in your country?**

☐ Yes for all cancers or cancer in general

☐ Yes but only for specific cancers (specify: .....)

☐ No

☐ Don't know

If no: Go to Question 6

If yes, provide the following for the general cancer policy/strategy/action plan or, if there isn't one, for the most important specific cancer policy/strategy/action plan:

5a) Write the title .....

5b) Indicate its stage:

☐ Operational ☐ Under development ☐ Not in effect ☐ Don't know

If operational:

5b-i) What was the first year of implementation? .....

5b-ii) What year will it expire? _____

6) **Is there a policy, strategy, or action plan for diabetes in your country?**

☐ Yes ☐ No ☐ Don't know

If no: Go to Question 7

If yes:

6a) Write the title .....

6b) Indicate its stage:

☐ Operational ☐ Under development ☐ Not in effect ☐ Don't know

If operational:

6b-i) What was the first year of implementation? .....

6b-ii) What year will it expire? .....

7) **Is there a policy, strategy, or action plan for chronic respiratory diseases in your country?**

☐ Yes ☐ No ☐ Don't know

If no: Go to Question 8

If yes:

7a) Write the title .....

7b) Indicate its stage:

☐ Operational ☐ Under development ☐ Not in effect ☐ Don't know

If operational:

7c) What was the first year of implementation? .....

7d) What year will it expire? .....

8) **Is there a policy, strategy, or action plan for oral health in your country?**

☐ Yes ☐ No ☐ Don't know

If no: Go to Question 9

If yes:

8a) Write the title .....

8b) Indicate its stage:

☐ Operational ☐ Under development ☐ Not in effect ☐ Don't know

If operational:

8b-i) What was the first year of implementation? .....

8b-ii) What year will it expire? .....

9) **Is there a policy, strategy, or action plan for eye health in your country?**

☐ Yes ☐ No ☐ Don't know

If no: Go to Question 10

If yes:

9a) Write the title .....

9b) Indicate its stage:

☐ Operational ☐ Under development ☐ Not in effect ☐ Don't know

If operational:

9b-i) What was the first year of implementation? .....

9b-ii) What year will it expire? .....

10) **Is there a policy, strategy, or action plan for hearing health in your country?**

☐ Yes ☐ No ☐ Don't know

If no: Go to Question 11

If yes:

10a) Write the title .....

10b) Indicate its stage:

☐ Operational ☐ Under development ☐ Not in effect ☐ Don't know

If operational:

10b-i) What was the first year of implementation? .....

10b-ii) What year will it expire? .....

11) **Is there a policy, strategy, or action plan for another non-communicable disease of importance in your country?**

☐ Yes ☐ No ☐ Don't know

If no: Go to Question 12

If yes:

Please provide the following information about the policy / strategy / action plan. If there is more than one, please provide the information for the most recent one.

Please specify which NCD: .....

11a) Write the title .....

11b) Indicate its stage:

☐ Operational ☐ Under development ☐ Not in effect ☐ Don't know

If operational:

11b-i) What was the first year of implementation? .....

11b-ii) What year will it expire? .....

## II C. Policies, action plans, strategies for NCD risk factors

*The questions in this sub-section only refer to policies, strategies and action plans that are specific to an NCD risk factor. If your integrated policy, strategy or action plan addresses the risk factor, you do not need to re-enter that information.*

**12) Is there a policy, strategy, or action plan for reducing the harmful use of alcohol in your country?**

☐ Yes ☐ No ☐ Don't know

If no: Go to Question 13

If yes:

12a) Write the title .....

12b) Indicate its stage:

☐ Operational ☐ Under development ☐ Not in effect ☐ Don't know

If operational:

12b-i) What was the first year of implementation? .....

12b-ii) What year will it expire? .....

**13) Is there a policy, strategy, or action plan for reducing overweight / obesity in your country?**

☐ Yes ☐ No ☐ Don't know

If no: Go to Question 14

If yes:

13a) Write the title .....

13b) Indicate its stage:

☐ Operational ☐ Under development ☐ Not in effect ☐ Don't know

If operational:

13b-i) What was the first year of implementation? .....

13b-ii)What year will it expire? .....

**14) Is there a policy, strategy, or action plan for reducing physical inactivity and/or promoting physical activity in your country?**

☐ Yes ☐ No ☐ Don't know

If no: Go to Question 15

If yes:

14a) Write the title .....

14b) Indicate its stage:

☐ Operational ☐ Under development ☐ Not in effect ☐ Don't know

If operational:

14b-i) What was the first year of implementation? .....

14b-ii)What year will it expire? .....

**15) Are there national guidelines which provide recommended levels of physical activity for the population or a specific segment of the population?**

☐ Yes ☐ No ☐ Don't know

If no: Go to Question 16

If yes:

15a) Are there guidelines specifically addressing any of the following age groups:

Children under 5..... ☐ Yes ☐ No ☐ Don't know

Children and adolescents (ages 5 – 19) ..... ☐ Yes ☐ No ☐ Don't know

Adults..... ☐ Yes ☐ No ☐ Don't know

Older adults ..... ☐ Yes ☐ No ☐ Don't know

**16) Is there a policy, strategy, or action plan for reducing unhealthy diet related to NCD and/or promoting a healthy diet in your country?**

☐ Yes ☐ No ☐ Don't know

If no: Go to Question 17

If yes:

16a) Write the title .....

16b) Indicate its stage:

☐ Operational ☐ Under development ☐ Not in effect ☐ Don't know

If operational:

16b-i) What was the first year of implementation? .....

16b-ii) What year will it expire? .....

**17) Are there national food-based dietary guidelines for the population or a specific segment of the population?**

☐ Yes ☐ No ☐ Don't know

**18) Is there a policy, strategy, or action plan to decrease tobacco use in your country?**

☐ Yes ☐ No ☐ Don't know

If no: Go to Question 19

If yes:

18a) Write the title .....

18b) Indicate its stage:

☐ Operational ☐ Under development ☐ Not in effect ☐ Don't know

If operational:

18b-i) What was the first year of implementation? .....

18b-ii) What year will it expire? .....

## II D. Selected cost-effective policies for NCDs and related risk factors

*NB: Only selected policies are captured here as information on some policy measures, e.g. for tobacco and alcohol, are included in other assessment tools.*

**19) Is there a policy and/or plan on NCD-related research including community-based research and evaluation of the impact of interventions and policies?**

☐ Yes ☐ No ☐ Don't know

If no: Go to Question 20

If yes:

19a) Indicate its stage:

☐ Operational ☐ Under development ☐ Not in effect ☐ Don't know

**20) Is there a national network for NCD-related research including community-based research and evaluation of the impact of interventions and policies?**

☐ Yes ☐ No ☐ Don't know

**21) Is your country implementing any policies to reduce the impact on children of marketing of foods and non-alcoholic beverages high in saturated fatty acids, *trans*-fatty acids, free sugars, or salt?**

☐ Yes ☐ No ☐ Don't know

If no: Go to Question 22

If yes:

21a) Are the policies:

☐ Voluntary ☐ Mandatory ☐ Don't knoww

21b) Who is responsible for overseeing enforcement and complaints?

☐ Government ☐ Food Industry ☐ Independent regulator

☐ Other, please specify: .....

21c) Do they include steps taken to address the effects of cross-border marketing of food and non-alcoholic beverages on children?

☐ Yes ☐ No ☐ Don't know

21c-i) If yes, please provide details: .....

**22) Is your country implementing any policies on nutrition labelling to identify foods high in saturated fatty acids, *trans*-fatty acids, free sugars, or salt?**

☐ Yes ☐ No ☐ Don't know

If no: Go to Question 23

If yes, please indicate which types of nutrition labelling are being implemented:

22a) List of ingredients

☐ Yes ☐ No ☐ Don't know

22b) Nutrient declaration (i.e. back-of-pack labelling)

☐ Yes ☐ No ☐ Don't know

22c) Front-of-pack labelling

☐ Yes ☐ No ☐ Don't know

**23) Is your country implementing any national policies to reduce population saturated fatty acid intake?**

☐ Yes ☐ No ☐ Don't know

If no: Go to Question 24

23a) If yes, are the policies:

☐ Voluntary ☐ Mandatory ☐ Don't know

**24) Is your country implementing any national policies to eliminate industrially produced *trans*-fatty acids in the food supply?**

☐ Yes ☐ No ☐ Don't know

If no: Go to Question 25

24a) If yes, indicate which policies are being implemented:

***Select all that apply***

☐ Mandatory national ban on the production or use of partially hydrogenated oils (PHO) as an ingredient in all foods

☐ Mandatory national limit of 2g of industrially produced trans-fatty acids per 100g of total fat in all foods

☐ Don't know

**25) Is your country implementing any policies to reduce population salt/sodium consumption?**

☐ Yes ☐ No ☐ Don't know

If no: Go to Question 26

If yes:

25a) Are these targeted at:

Product reformulation by industry across the food supply .....
☐ Yes, Voluntary ☐ Yes, Mandatory ☐ No ☐ Don't know

Regulation of salt content of food served in specific settings such as hospitals, schools, workplaces ....
☐ Yes, Voluntary ☐ Yes, Mandatory ☐ No ☐ Don't know

Public awareness programme .....
☐ Yes ☐ No ☐ Don't know

Front-of-pack nutrition labeling .....
☐ Yes, Voluntary ☐ Yes, Mandatory ☐ No ☐ Don't know

**26) Has your country implemented any national public education and awareness campaign on diet within the past 2 years?**

☐ Yes ☐ No ☐ Don't know

If no: Go to Question 27

26a) If yes, please provide details of the public education and awareness campaign(s):

.....

**27) Is your country implementing any national policies in the following areas to promote population physical activity?**

*This question refers to national policy actions by Ministry of Health or Ministry of Transport or Ministry of Education or Ministry of Sport, Recreation, Leisure, or Ministry of Labour or Ministry of Social Welfare or Ministry of Planning or other related ministries, or municipalities or local authorities. The policy actions taken should be formal and sustained national initiatives or programmes but do NOT include ad hoc events.*

Walking and cycling ..... ☐ Yes ☐ No ☐ Don't know

Workplace physical activity initiatives ..... ☐ Yes ☐ No ☐ Don't know

Active aging ..... ☐ Yes ☐ No ☐ Don't know

Community-based physical activity and sports initiatives ..... ☐ Yes ☐ No ☐ Don't know

Public open spaces (including parks) ..... ☐ Yes ☐ No ☐ Don't know

Childcare settings ..... ☐ Yes ☐ No ☐ Don't know

28) **Has your country implemented any national public education and awareness campaign on physical activity within the past 2 years?**

*Examples of national public education and awareness campaigns include large scale campaigns targeted at large segments of the population or the whole population, using mass media, and lasting for a longer period of time or repeated throughout the year. Conducting "one day events" (such as a car free day, sport days, physical activity day) on their own is not included in the definition of "public education campaign" and should be considered and reported in the following question on mass participation events.*

☐ Yes ☐ No ☐ Don't know

If no: Go to Question 29

If yes:

28a) Does the national public education campaign integrate with community-based programmes or initiatives supporting promotion of physical activity?

☐ Yes ☐ No ☐ Don't know

28b) Is the national public education campaign supported by any environmental changes that aim to improve access to facilities that enable physical activity (such as infrastructure for walking or cycling, design or improvements to public open space or other facilities)?

☐ Yes ☐ No ☐ Don't know

28c) Do the national public education campaign "messages" address any of the social, environmental and economic benefits of physical activity, in addition to the mental and physical health benefits?

☐ Yes ☐ No ☐ Don't know

28d) Please provide brief details of the national public education campaign(s), including where possible the primary focus and name of campaign, target audience(s), type of mass media used, duration of campaign, and links to any reports, campaign resources and evaluations:

.....

29) **Has your country implemented any national or subnational mass participation events to encourage participation by the general public in free opportunities for physical activity within the past 2 years?**

*Examples of free mass participation events include holding national walk to school or work days; car-free days; national PA or sports days, or days celebrating other physical activities providing free participation, such as cycling, yoga, tai chi, dance, or sports. Note this does NOT include hosting of major competitive sporting events, nor events such as marathons, which require paid participation, unless there is opportunity for free participation in shorter distances (e.g. 1km, 5km).*

☐ Yes ☐ No ☐ Don't know

If no: Go to Question 30

29a) Please provide details of the event(s): .....
.....

30) **Has your country implemented any national, NCD-related mHealth initiatives, such as tobacco cessation, hypertension management, cervical cancer screening awareness, promotion of physical activity, within the past 2 years?**

☐ Yes ☐ No ☐ Don't know

If no: Go to MODULE III

30a) Please provide details of the mHealth initiative(s): .....

# III. Health information systems, monitoring, surveillance and surveys for NCDs and their risk factors

**The questions in this module assess surveillance relating to the NCD morbidity and risk factor reporting systems of each country and whether data were included in their national health reporting systems.**

**1) In your country, who has responsibility for surveillance of NCDs and their risk factors?**

- ☐ An office/department/administrative division within the MOH exclusively dedicated to NCD surveillance
- ☐ An office/department/ administrative division within the MOH not exclusively dedicated to NCD surveillance
- ☐ Responsibility is shared across several offices/departments/administrative divisions within the MOH
- ☐ Coordination is by an external agency, such as an NGO or statistical organization
- ☐ No one has this responsibility
- ☐ Don't know

## III A. Data included in the national health information system (National health information system refers to the annual or regular reporting system of the National Statistical Office or Ministry of Health)

**2) Does your country have a disease registry for:**

*(Please fill in all columns)*

| 2a) Cancers | 2b) Diabetes | 2c) Myocardial Infarction/ coronary events |
|---|---|---|
| ☐ Yes<br>☐ No<br>☐ Don't know | ☐ Yes<br>☐ No<br>☐ Don't know | ☐ Yes<br>☐ No<br>☐ Don't know |
| If no: Skip to next column. | If no: Skip to next column. | If no: Skip to next column. |
| If yes, is it: | If yes, is it: | If yes, is it: |
| i) ☐ National (covers the whole population of the country)<br>☐ Sub-national (covers only the population of a defined region, not the whole country)<br>☐ Don't know | i) ☐ National (covers the whole population of the country)<br>☐ Sub-national (covers only the population of a defined region, not the whole country)<br>☐ Don't know | i) ☐ National (covers the whole population of the country)<br>☐ Sub-national (covers only the population of a defined region, not the whole country)<br>☐ Don't know |
| ii) ☐ Population –based<br>☐ hospital based<br>☐ other<br>If other, specify: .....<br>☐ Don't know | ii) ☐ Population –based<br>☐ hospital based<br>☐ other<br>If other, specify: .....<br>☐ Don't know | ii) ☐ Population –based<br>☐ hospital based<br>☐ other<br>If other, specify: .....<br>☐ Don't know |
| iii) What is the latest year for which data are available?<br>..... | iii) Does the registry include data on any chronic complications which are updated as the patient's complications status changes?<br>☐ Yes ☐ No ☐ Don't know<br>iv) What is the latest year for which data are available?<br>..... | iii) What is the latest year for which data are available?<br>..... |

| 2d) Cerebro-vascular accident/Stroke | 2e) Other NCD of importance to your country |
|---|---|
| ☐ Yes<br>☐ No<br>☐ Don't know<br>**If no: Skip to next column.**<br>**If yes, is it:**<br>i) ☐ National (covers the whole population of the country)<br>☐ Sub-national (covers only the population of a defined region, not the whole country)<br>☐ Don't know<br>ii) ☐ Population –based<br>☐ hospital based<br>☐ other<br>If other, specify: .....<br>☐ Don't know<br>iii) What is the latest year for which data are available?<br>..... | ☐ Yes<br>☐ No<br>☐ Don't know<br>**If no: Skip to next column.**<br>**If yes, is it:**<br>i) ☐ National (covers the whole population of the country)<br>☐ Sub-national (covers only the population of a defined region, not the whole country)<br>☐ Don't know<br>ii) ☐ Population –based<br>☐ hospital based<br>☐ other<br>If other, specify: .....<br>☐ Don't know<br>iii) What is the latest year for which data are available?<br>..... |

2f) Are there any other registries that can provide information on NCDs?

☐ Yes ☐ No ☐ Don't know

If yes, please list: .....

**3) Please indicate the existence of a standardized system for recording patient level data that includes NCD status and risk factors in the following PUBLIC facilities:**

| | Primary Health Care Centres | Hospitals |
|---|---|---|
| i) Does a standardized system for recording patient level data that includes NCD status and risk factors exist? | ☐ Yes<br>☐ No<br>☐ Don't know<br>**If no: Go to next column.** | ☐ Yes<br>☐ No<br>☐ Don't know<br>**If no: Go to next question.** |
| ii) What is the scope of the system? | ☐ National (covers the whole population of the country)<br>☐ Subnational (covers only the population of a defined region or regions or only certain segments of the population)<br>☐ Don't know | ☐ National (covers the whole population of the country)<br>☐ Subnational (covers only the population of a defined region or regions or only certain segments of the population)<br>☐ Don't know |
| iii) What type of system is it? | ☐ Paper-based<br>☐ Electronic<br>☐ Mixed (please describe .....)<br>☐ Don't know | ☐ Paper-based<br>☐ Electronic<br>☐ Mixed (please describe .....)<br>☐ Don't know |

| | Primary Health Care Centres | Hospitals |
|---|---|---|
| iv) What is the coverage of the system? | ☐ <25% of facilities<br>☐ 25% to 50% of facilities<br>☐ More than 50% of facilities to 75% of facilities<br>☐ More than 75% of facilities<br>☐ Don't know | ☐ <25% of facilities<br>☐ 25% to 50% of facilities<br>☐ More than 50% of facilities to 75% of facilities<br>☐ More than 75% of facilities<br>☐ Don't know |
| v) Can private facilities access or share data with this system? | ☐ Yes<br>☐ No<br>☐ Don't know | ☐ Yes<br>☐ No<br>☐ Don't know |
| vi) Which NCDs and related risk factors are covered? | | |

If yes to having a patient information system including NCD status and risk factors in both Primary Health Care Centres & Hospitals:

3a) Are the patient information systems in primary health care centres & hospitals interoperable? (does one system cover both types of facilities or can information be passed between the two systems?)

☐ Yes ☐ No ☐ Don't know

## III B. Risk Factor Surveillance

### 4) Have population-based surveys of risk factors (may be a single RF or multiple) been conducted in your country for any of the following:

(Please fill in all columns, start in the first row, going left to right, and then continue left to right across the second row.)

For the questions on surveys on adolescents or children, please include here only surveys specifically targeting adolescents or children (i.e. do not repeat adult surveys that may have covered part of the adolescent or child age range).

| 4a) Harmful alcohol use | 4b) Unhealthy diet |
|---|---|
| ☐ Yes ☐ No ☐ Don't know<br>If no: Go to next column.<br>If yes:<br>i) Was there a survey on adolescents?<br>☐ Yes ☐ No ☐ Don't know<br>If yes:<br>i-1) Was it:<br>☐ National ☐ Subnational ☐ Don't know<br>i-2) How often is the survey conducted?<br>☐ Ad hoc ☐ Every 1 to 2 years<br>☐ Every 3 to 5 years ☐ Other ☐ Don't know<br>i-3) When was the last survey conducted?<br>*(give year)* .....<br>ii) Was there a survey on adults?<br>☐ Yes ☐ No ☐ Don't know<br>If yes:<br>ii-1) Was it:<br>☐ National ☐ Subnational ☐ Don't know<br>ii-2) How often is the survey conducted?<br>☐ Ad hoc ☐ Every 1 to 2 years<br>☐ Every 3 to 5 years ☐ Other ☐ Don't know<br>ii-3) When was the last survey conducted?<br>*(give year)* ..... | ☐ Yes ☐ No ☐ Don't know<br>If no: Go to next column.<br>If yes:<br>i) Was there a survey on adolescents?<br>☐ Yes ☐ No ☐ Don't know<br>If yes:<br>i-1) Was it:<br>☐ 24-hour recall ☐ Food frequency<br>☐ Other ☐ Don't know<br>i-2) Was it:<br>☐ National ☐ Subnational ☐ Don't know<br>i-3) How often is the survey conducted?<br>☐ Ad hoc ☐ Every 1 to 2 years<br>☐ Every 3 to 5 years ☐ Other ☐ Don't know<br>i-4) When was the last survey conducted?<br>*(give year)* .....<br>ii) Was there a survey on adults?<br>☐ Yes ☐ No ☐ Don't know<br>If yes:<br>ii-1) Was it:<br>☐ 24 hour recall ☐ Food frequency<br>☐ Other ☐ Don't know<br>ii-2) Was it:<br>☐ National ☐ Subnational ☐ Don't know<br>ii-3) How often is the survey conducted?<br>☐ Ad hoc ☐ Every 1 to 2 years<br>☐ Every 3 to 5 years ☐ Other ☐ Don't know<br>ii-4) When was the last survey conducted?<br>*(give year)* ..... |

## 4) Have population-based surveys of risk factors (may be a single RF or multiple) been conducted in your country for any of the following:

(Please fill in all columns, start in the first row, going left to right, and then continue left to right across the second row.)

For the questions on surveys on adolescents or children, please include here only surveys specifically targeting adolescents or children (i.e. do not repeat adult surveys that may have covered part of the adolescent or child age range).

### 4c) Physical inactivity

☐ Yes ☐ No ☐ Don't know

If no: Go to next column.

If yes:

i) Was there a survey on children?

☐ Yes ☐ No ☐ Don't know

If yes:

i-1) Was it:

☐ Measured ☐ Self-reported ☐ Don't know

i-2) Was it:

☐ National ☐ Subnational ☐ Don't know

i-3) How often is the survey conducted?

☐ Ad hoc ☐ Every 1 to 2 years
☐ Every 3 to 5 years ☐ Other ☐ Don't know

i-4) When was the last survey conducted?

*(give year)* .....

ii) Was there a survey on adolescents?

☐ Yes ☐ No ☐ Don't know

If yes:

ii-1) Was it:

☐ Measured ☐ Self-reported ☐ Don't know

ii-2) Was it:

☐ National ☐ Subnational ☐ Don't know

ii-3) How often is the survey conducted?

☐ Ad hoc ☐ Every 1 to 2 years
☐ Every 3 to 5 years ☐ Other ☐ Don't know

ii-4) When was the last survey conducted?

*(give year)* .....

iii) Was there a survey on adults?

☐ Yes ☐ No ☐ Don't know

If yes:

iii-1) Was it:

☐ Measured ☐ Self-reported ☐ Don't know

iii-2) Did it assess physical activity for work/in the household, for transport and during leisure time?

☐ Yes ☐ No ☐ Don't know

iii-3) Was it:

☐ National ☐ Subnational ☐ Don't know

iii-4) How often is the survey conducted?

☐ Ad hoc ☐ Every 1 to 2 years
☐ Every 3 to 5 years ☐ Other ☐ Don't know

iii-5) When was the last survey conducted?

*(give year)* .....

### 4d) Tobacco use

☐ Yes ☐ No ☐ Don't know

If no: Go to next column.

If yes:

i) Was there a survey on adolescents?

☐ Yes ☐ No ☐ Don't know

If yes:

i-1) Was it:

☐ National ☐ Subnational ☐ Don't know

i-2) How often is the survey conducted?

☐ Ad hoc ☐ Every 1 to 2 years
☐ Every 3 to 5 years ☐ Other ☐ Don't know

i-3) When was the last survey conducted?

*(give year)* .....

ii) Was there a survey on adults?

☐ Yes ☐ No ☐ Don't know

If yes:

ii-1) Was it:

☐ National ☐ Subnational ☐ Don't know

ii-2) How often is the survey conducted?

☐ Ad hoc ☐ Every 1 to 2 years
☐ Every 3 to 5 years ☐ Other ☐ Don't know

ii-3) When was the last survey conducted?

*(give year)* .....

## 4) Have population-based surveys of risk factors (may be a single RF or multiple) been conducted in your country for any of the following:

(Please fill in all columns, start in the first row, going left to right, and then continue left to right across the second row.)

For the questions on surveys on adolescents or children, please include here only surveys specifically targeting adolescents or children (i.e. do not repeat adult surveys that may have covered part of the adolescent or child age range).

| 4e) Raised blood glucose/diabetes | 4f) Raised total cholesterol |
|---|---|
| ☐ Yes ☐ No ☐ Don't know | ☐ Yes ☐ No ☐ Don't know |
| If no: Go to next column. | If no: Go to next column. |
| If yes: | If yes: |
| i) Was it: | i) Was it: |
| ☐ Measured ☐ Self-reported ☐ Don't know | ☐ Measured ☐ Self-reported ☐ Don't know |
| ii) Was it: | ii) Was it: |
| ☐ National ☐ Subnational ☐ Don't know | ☐ National ☐ Subnational ☐ Don't know |
| iii) How often is the survey conducted? | iii) How often is the survey conducted? |
| ☐ Ad hoc ☐ Every 1 to 2 years<br>☐ Every 3 to 5 years ☐ Other ☐ Don't know | ☐ Ad hoc ☐ Every 1 to 2 years<br>☐ Every 3 to 5 years ☐ Other ☐ Don't know |
| iv) When was the last survey conducted? | iv) When was the last survey conducted? |
| *(give year)* ..... | *(give year)* ..... |

## 4) Have population-based surveys of risk factors (may be a single RF or multiple) been conducted in your country for any of the following:

(Please fill in all columns, start in the first row, going left to right, and then continue left to right across the second row.)

For the questions on surveys on adolescents or children, please include here only surveys specifically targeting adolescents or children (i.e. do not repeat adult surveys that may have covered part of the adolescent or child age range).

### 4g) Raised blood pressure/Hypertension

☐ Yes ☐ No ☐ Don't know

If no: Go to next column.

If yes:

i) Was it:

☐ Measured ☐ Self-reported ☐ Don't know

ii) Was it:

☐ National ☐ Subnational ☐ Don't know

iii) How often is the survey conducted?

☐ Ad hoc ☐ Every 1 to 2 years
☐ Every 3 to 5 years ☐ Other ☐ Don't know

iv) When was the last survey conducted?

*(give year)* .....

### 4h) Overweight and obesity

☐ Yes ☐ No ☐ Don't know

If no: Go to next column.

If yes:

i) Was there a survey on children?

☐ Yes ☐ No ☐ Don't know

If yes:

i-1) Was it:

☐ Measured ☐ Self-reported ☐ Don't know

i-2) Was it:

☐ National ☐ Subnational ☐ Don't know

i-3) How often is the survey conducted?

☐ Ad hoc ☐ Every 1 to 2 years
☐ Every 3 to 5 years ☐ Other ☐ Don't know

i-4) When was the last survey conducted?

*(give year)* .....

ii) Was there a survey on adolescents?

☐ Yes ☐ No ☐ Don't know

If yes:

ii-1) Was it:

☐ Measured ☐ Self-reported ☐ Don't know

ii-2) Was it:

☐ National ☐ Subnational ☐ Don't know

ii-3) How often is the survey conducted?

☐ Ad hoc ☐ Every 1 to 2 years
☐ Every 3 to 5 years ☐ Other ☐ Don't know

ii-4) When was the last survey conducted?

*(give year)* .....

iii) Was there a survey on adults?

☐ Yes ☐ No ☐ Don't know

If yes:

iii-1) Was it:

☐ Measured ☐ Self-reported ☐ Don't know

iii-2) Was it:

☐ National ☐ Subnational ☐ Don't know

iii-3) How often is the survey conducted?

☐ Ad hoc ☐ Every 1 to 2 years
☐ Every 3 to 5 years ☐ Other ☐ Don't know

iii-4) When was the last survey conducted?

*(give year)* .....

## 4) Have population-based surveys of risk factors (may be a single RF or multiple) been conducted in your country for any of the following:

(Please fill in all columns, start in the first row, going left to right, and then continue left to right across the second row.)

For the questions on surveys on adolescents or children, please include here only surveys specifically targeting adolescents or children (i.e. do not repeat adult surveys that may have covered part of the adolescent or child age range).

| | |
|---|---|
| 4i) Salt/Sodium intake | |
| ☐ Yes ☐ No ☐ Don't know<br>If no: Go to MODULE IV.<br>If yes:<br>i) Was it:<br>☐ Measured by 24-hr urine collection<br>☐ Measured by 12-hr urine collection<br>☐ Measured by spot urine collection<br>☐ Measured by combination of urine collection methods<br>☐ Self-reported salt intake<br>☐ Don't know<br>ii) Was it:<br>☐ National ☐ Subnational ☐ Don't know<br>iii) How often is the survey conducted?<br>☐ Ad hoc ☐ Every 1 to 2 years<br>☐ Every 3 to 5 years ☐ Other ☐ Don't know<br>iv) When was the last survey conducted?<br>*(give year)* ..... | |

# IV. Capacity for NCD early detection, treatment and care within the health system

**The questions in this module assess the health care systems capacity related to NCD early detection, treatment and care within the health care sector. Specific questions focus on availability of guidelines or protocols to treat major NCDs, and the tests, procedures and equipment related to NCDs within the health-care system. It also assesses the availability of palliative care services for NCDs.**

1a) Please indicate whether evidence-based national guidelines/protocols/standards are available for the management (diagnosis and treatment) of each of the major NCDs through a primary care approach recognized/approved by government or competent authorities. Where guidelines/protocols/standards are available, please indicate their implementation status, when they were last updated and whether they contain standard criteria for the referral of patients from primary care to a higher level of care (secondary/tertiary).

| | Cardiovascular Disease | Diabetes | Cancer | Chronic Respiratory Disease |
|---|---|---|---|---|
| i) Are they available? | ☐ Yes (specify topics covered)<br>☐ No<br>☐ Don't know | ☐ Yes<br>☐ No<br>☐ Don't know | ☐ Yes (specify cancer types)<br>☐ No<br>☐ Don't know | ☐ Yes (specify topics covered)<br>☐ No<br>☐ Don't know |
| ii) Do they include drug- and dose-specific protocols? | ☐ Yes<br>☐ No<br>☐ Don't know<br>If yes: If there are multiple guidelines, specify for which conditions:<br>..... | ☐ Yes<br>☐ No<br>☐ Don't know | ☐ Yes<br>☐ No<br>☐ Don't know<br>If yes: If there are multiple guidelines, specify for which cancers:<br>..... | ☐ Yes<br>☐ No<br>☐ Don't know<br>If yes: If there are multiple guidelines, specify for which conditions:<br>..... |
| iii) Are they being utilized in at least 50% of health care facilities | ☐ Yes<br>☐ No<br>☐ Don't know | ☐ Yes,<br>☐ No<br>☐ Don't know | ☐ Yes,<br>☐ No<br>☐ Don't know | ☐ Yes<br>☐ No<br>☐ Don't know |
| iv) When were they last updated? | | | | |
| v) Do they include referral criteria? | ☐ Yes<br>☐ No<br>☐ Don't know | ☐ Yes<br>☐ No<br>☐ Don't know | ☐ Yes<br>☐ No<br>☐ Don't know | ☐ Yes<br>☐ No<br>☐ Don't know |

1b) Please indicate whether evidence-based national guidelines/protocols/standards are available for the management of each of the following NCD risk factors through a primary care approach recognized/ approved by government or competent authorities.

| | Alcohol use disorders | Tobacco dependence | Overweight/ obesity | Physical inactivity |
|---|---|---|---|---|
| i) Are they available? | ☐ Yes<br>☐ No<br>☐ Don't know | ☐ Yes<br>☐ No<br>☐ Don't know | ☐ Yes<br>☐ No<br>☐ Don't know | ☐ Yes<br>☐ No<br>☐ Don't know |
| ii) Are they being utilized in at least 50% of health care facilities | ☐ Yes<br>☐ No<br>☐ Don't know | ☐ Yes<br>☐ No<br>☐ Don't know | ☐ Yes<br>☐ No<br>☐ Don't know | ☐ Yes<br>☐ No<br>☐ Don't know |
| iii) When were they last updated? | | | | |
| iv) Do they include referral criteria? | ☐ Yes<br>☐ No<br>☐ Don't know | ☐ Yes<br>☐ No<br>☐ Don't know | ☐ Yes<br>☐ No<br>☐ Don't know | ☐ Yes<br>☐ No<br>☐ Don't know |

**2) Indicate the availability of the following basic technologies for early detection, diagnosis / monitoring of NCDs in the primary care facilities of the public and private health sector where: Generally available=1; Generally not available = 2, Don't know = 3.**

** Generally available: in 50% or more health care facilities*
*Generally not available: in less than 50% health care facilities*

| | Availability in the primary care facilities of the public health sector (1, 2, or 3) | Availability in the primary care facilities of the private health sector (1, 2, or 3) |
|---|---|---|
| **Overweight and obesity** | | |
| 2a) Measuring of weight | ..... | ..... |
| 2b) Measuring of height | ..... | ..... |
| **Diabetes mellitus** | | |
| 2c) Blood glucose measurement | ..... | ..... |
| 2d) Oral glucose tolerance test | ..... | ..... |
| 2e) HbA1c test | ..... | ..... |
| 2f) Dilated fundus examination | ..... | ..... |
| 2g) Foot vibration perception by tuning fork | ..... | ..... |
| 2h) Urine strips for glucose and ketone measurement | ..... | ..... |
| **Cardiovascular disease** | | |
| 2i) Blood pressure measurement | ..... | ..... |
| 2j) Total cholesterol measurement | ..... | ..... |
| 2k) Urine strips for albumin assay | ..... | ..... |
| **Asthma and chronic obstructive pulmonary disease** | | |
| 2l) Peak flow measurement | ..... | ..... |
| 2m) Spirometry | ..... | ..... |

3) **Please indicate if there is a national screening program targeting the general population for the following cancers and, If yes, provide details.**

| Cancers | Initial screening method (indicate only one, the most widely used) | Population targeted by the program | Type of program | Screening coverage |
|---|---|---|---|---|
| **Breast**<br>☐ Yes<br>☐ No<br>☐ Don't know<br>If no: Go to next row | ☐ Clinical breast exam<br>☐ Mammography screening<br>☐ Don't know | Women aged .....<br>to .....<br>Other, specify:<br>☐ Don't know | ☐ Organised population-based screening<br>☐ Opportunistic screening<br>☐ Don't know | ☐ Less than 10%<br>☐ 10% to 50%<br>☐ more than 50% but less than 70%<br>☐ 70% or more<br>☐ Don't know |
| **Cervix**<br>☐ Yes<br>☐ No<br>☐ Don't know<br>If no: Go to next row | ☐ Visual inspection<br>☐ PAP smear<br>☐ HPV test<br>☐ Don't know | Women aged.....<br>to .....<br>Other, specify:<br>☐ Don't know | ☐ Organised population-based screening<br>☐ Opportunistic screening<br>☐ Don't know | ☐ Less than 10%<br>☐ 10% to 50%<br>☐ more than 50% but less than 70%<br>☐ 70% or more<br>☐ Don't know |
| **Colon**<br>☐ Yes<br>☐ No<br>☐ Don't know<br>If no: Go to next row | ☐ Faecal test<br>☐ Colonoscopy/ sigmoidoscopy<br>☐ Don't know | People aged .....<br>to .....<br>Other, specify:<br>☐ Don't know | ☐ Organised population-based screening<br>☐ Opportunistic screening<br>☐ Don't know | ☐ Less than 10%<br>☐ 10% to 50%<br>☐ more than 50% but less than 70%<br>☐ 70% or more<br>☐ Don't know |
| **Other cancer type(s)**<br>**Specify: .....**<br>☐ Yes<br>☐ No<br>☐ Don't know | | | | |

4) **Please indicate if early detection of the following cancers by means of rapid identification of the first symptoms is integrated into primary health care services and if there is a clearly defined referral system from primary care to secondary / tertiary care for suspect cases (in low- and middle-income countries this set of measures may be designated as an "early diagnosis" programme):**

| | Breast | Cervix | Colon | Cancers in Children | Other cancer types (specify: .....) |
|---|---|---|---|---|---|
| **Program/ guidelines to strengthen early diagnosis of first symptoms at primary health care level** | ☐ Yes<br>☐ No<br>☐ Don't know | ☐ Yes<br>☐ No<br>☐ Don't know | ☐ Yes<br>☐ No<br>☐ Don't know | ☐ Yes (please specify types of cancer)<br>☐ No<br>☐ Don't know | ☐ Yes<br>☐ No<br>☐ Don't know |
| **Clearly defined referral system from primary care to secondary and tertiary care** | ☐ Yes<br>☐ No<br>☐ Don't know | ☐ Yes<br>☐ No<br>☐ Don't know | ☐ Yes<br>☐ No<br>☐ Don't know | ☐ Yes<br>☐ No<br>☐ Don't know | ☐ Yes<br>☐ No<br>☐ Don't know |

**5) HPV vaccination included in the national immunization schedule?**

☐ Yes ☐ No ☐ Don't know

If no: Go to Question 6.

5a) What was the HPV vaccine coverage (last dose) in the last calendar year?

☐ Less than 10% ☐ 10% to 50% ☐ more than 50% but less than 80% ☐ 80% or more ☐ Don't know

**6) Describe the availability* of the medicines below in the primary care facilities of the public health sector, where: Generally available=1; Generally not available = 2, Don't know = 3.**

** Generally available: in 50% or more pharmacies*

*Generally not available: in less than 50% of pharmacies*

| Generic drug name | Availability |
|---|---|
| 6a) Insulin | |
| 6b) Aspirin (75/100 mg) | |
| 6c) Metformin | |
| 6d) Thiazide Diuretics | |
| 6e) ACE Inhibitors | |
| 6f) Angiotensin II receptor blockers (ARBs) | |
| 6g) Calcium channel Blockers | |
| 6h) Fixed dose combination (lisinopril + amlodipine) | |
| 6i) Fixed dose combination (lisinopril + hydrochlorothiazide) | |
| 6j) Fixed dose combination (telmisartan + amlodipine) | |
| 6k) Fixed dose combination (telmisartan + hydrochlorothiazide) | |
| 6l) Beta Blockers | |
| 6m) Statins | |
| 6n) Oral morphine | |
| 6o) Steroid inhaler | |
| 6p) Combination budesonide-formoterol inhaler | |
| 6q) Bronchodilator inhaler | |
| 6r) Sulphonylurea(s) | |
| 6s) Benzathine penicillin injection | |
| 6t) Nicotine Replacement Therapy | |

**7) Indicate the availability* of the following procedures for managing and treating NCDs in the publicly funded health system, where: 1=Generally available; 2=Generally not available; 3=Don't know.**

** Generally available: reaches 50% or more patients in need*
*Generally not available: reaches less than 50% of patients in need*

| Procedure name | Availability |
|---|---|
| 7a) Diabetic retinopathy screening | |
| 7b) Retinal photocoagulation | |
| 7c) Renal replacement therapy by dialysis | |
| 7d) Renal replacement by transplantation | |
| 7e) Coronary bypass | |
| 7f) Coronary stenting | |
| 7g) Thrombolytic therapy (streptokinase) for acute myocardial infarction | |
| 7h) Alteplase for acute stroke management | |
| 7i) Bone marrow transplantation | |

**8) Indicate the availability* of the following procedures for detecting, managing and treating oral diseases in the primary care facilities in the public health sector**

** Generally available: reaches 50% or more patients in need*
*Generally not available: reaches less than 50% of patients in need*

| Procedure name | Availability |
|---|---|
| **Oral health screening for early detection of oral diseases** | ☐ Generally available<br>☐ Generally not available<br>☐ Don't know |
| **Urgent treatment for providing emergency oral care and oral pain relief** | ☐ Generally available<br>☐ Generally not available<br>☐ Don't know |
| **Basic restorative dental procedures to treat existing dental decay** | ☐ Generally available<br>☐ Generally not available<br>☐ Don't know |

**9) Detail the availability* of cancer diagnosis and treatment services in the public sector:**

** Generally available: reaches 50% or more patients in need*
*Generally not available: reaches less than 50% of patients in need*

| Service | Availability |
|---|---|
| **Cancer centres or cancer departments at tertiary level** | ☐ Generally available<br>☐ Generally not available<br>☐ Don't know |
| **Pathology services (laboratories)** | ☐ Generally available<br>☐ Generally not available<br>☐ Don't know |

| Service | Availability |
|---|---|
| **Cancer surgery** | ☐ Generally available<br>☐ Generally not available<br>☐ Don't know |
| **Chemotherapy** | ☐ Generally available<br>☐ Generally not available<br>☐ Don't know |
| **Radiotherapy** | ☐ Generally available<br>☐ Generally not available<br>☐ Don't know |

**10) How many dedicated cancer centres are there in the country?**

*Cancer centres provide coordinated, multi-disciplinary care inclusive of all services generally available in the country. This may include, for example, pathology, radiotherapy, surgery and systemic therapy. A facility can count as a "cancer centre" even if other non-oncology services are provided in that facility. If you Don't know the exact number, please give an estimated range.*

Number of public cancer centres: ..... ☐ Don't know

Number of private cancer centres: ..... ☐ Don't know

**11) Detail the availability* of rehabilitative care in the public sector for patients with the following NCDs:**

** Generally available: reaches 50% or more patients in need*
*Generally not available: reaches less than 50% of patients in need*

| | Inpatient care availability | Outpatient care availability |
|---|---|---|
| **Cancer** | ☐ Generally available<br>☐ Generally not available<br>☐ Don't know | ☐ Generally available<br>☐ Generally not available<br>☐ Don't know |
| **Stroke** | ☐ Generally available<br>☐ Generally not available<br>☐ Don't know | ☐ Generally available<br>☐ Generally not available<br>☐ Don't know |
| **Acute Myocardial Infarction** | ☐ Generally available<br>☐ Generally not available<br>☐ Don't know | ☐ Generally available<br>☐ Generally not available<br>☐ Don't know |
| **Chronic Respiratory Diseases** | ☐ Generally available<br>☐ Generally not available<br>☐ Don't know | ☐ Generally available<br>☐ Generally not available<br>☐ Don't know |
| **Musculoskeletal Conditions** | ☐ Generally available<br>☐ Generally not available<br>☐ Don't know | ☐ Generally available<br>☐ Generally not available<br>☐ Don't know |

**12) Indicate the availability* of palliative care for patients with NCD in the public health system:**

** Generally available: reaches 50% or more patients in need*
*Generally not available: reaches less than 50% of patients in need*

12a) In primary health care facilities:

☐ Generally available ☐ Generally not available ☐ Don't know

12b) In community or home-based care:

☐ Generally available ☐ Generally not available ☐ Don't know

**13) What proportion of primary health care facilities are offering cardiovascular risk stratification for the management of patients at high risk for heart attack and stroke?**

☐ none ☐ less than 25% ☐ 25% to 50% ☐ more than 50% ☐ Don't know

**14) Indicate the availability* of provision of care for acute stroke in the public health system:**

** Generally available: reaches 50% or more patients in need*
*Generally not available: reaches less than 50% of patients in need*

☐ Generally available ☐ Generally not available ☐ Don't know

**15) Is there a register of patients who have had rheumatic fever and rheumatic heart disease?**

☐ Yes ☐ No ☐ Don't know

If yes:

15a) Are there systems for follow-up/recall to deliver long-term penicillin prophylaxis?

☐ Yes ☐ No ☐ Don't know

# V. NCD-related disruptions during the COVID-19 pandemic

**The questions in this module assess how NCD essential services and programmes are being impacted in your country by the current COVID-19 pandemic.**

## Infrastructure

1) **During the previous 3 months, have the Ministry of Health (or equivalent institutes) staff with responsibility for NCDs and their risk factors been reassigned/deployed to help with overall COVID-19 response?**

- ☐ Yes – All staff supporting COVID-19 efforts full time
- ☐ Yes – All staff partially supporting COVID-19 efforts along with routine NCD activities
- ☐ Yes – Some staff supporting COVID-19 efforts full time
- ☐ Yes – Some staff partially supporting COVID-19 efforts along with routine NCD activities
- ☐ No
- ☐ Don't know

2) **During the previous 3 months, how much of the government (or Ministry of Health) funds initially allocated for NCDs have been reassigned to non-NCD services due to COVID-19 response efforts?**

☐ None or not yet ☐ 1–25% ☐ 26–50% ☐ 51–75% ☐ 76–100% ☐ Don't know

## Policies and plans

3) **Has your country defined a national essential health services package prior to the COVID-19 pandemic?**

☐ Yes ☐ No ☐ Don't know

4) **Has your country identified a core set of essential health services to be maintained during the COVID-19 pandemic?**

☐ Yes ☐ No ☐ Don't know

If no: Go to Question 7

5) **Is ensuring continuity of NCD services included in the list of essential health services in your country's COVID-19 response plan?**

☐ Yes ☐ No ☐ Don't know

If no: Go to Question 7

6) **Which NCD services are included in the list of essential health services of your country's COVID-19 response plan?**

i) Cardiovascular disease services ..... ☐ Yes ☐ No ☐ Don't know

ii) Cancer services ..... ☐ Yes ☐ No ☐ Don't know

iii) Diabetes services ..... ☐ Yes ☐ No ☐ Don't know

iv) Chronic respiratory disease services ..... ☐ Yes ☐ No ☐ Don't know

v) Chronic kidney disease and dialysis services ☐ Yes ☐ No ☐ Don't know

vi) Dental services ☐ Yes ☐ No ☐ Don't know

vii) Rehabilitation services ☐ Yes ☐ No ☐ Don't know

viii) Tobacco cessation services ☐ Yes ☐ No ☐ Don't know

ix) Others (specify: ) ☐ Yes ☐ No ☐ Don't know

7) **During the previous 3 months, has additional funding been allocated for NCDs in the government budget for the COVID-19 response?**

☐ Yes ☐ No ☐ Don't know

8) **During the previous 3 months, which of the following Ministry of Health NCD activities planned for this year been postponed because of COVID-19?**

i) None ☐ Yes ☐ No ☐ Don't know

ii) Implementation of NCD Surveys ☐ Yes ☐ No ☐ Don't know

iii) Public screening programmes for NCDs ☐ Yes ☐ No ☐ Don't know

iv) WHO Package for Essential NCDs (PEN) training and implementation in Primary Health Care ☐ Yes ☐ No ☐ Don't know

v) WHO HEARTS technical package ☐ Yes ☐ No ☐ Don't know

vi) Mass communication campaigns ☐ Yes ☐ No ☐ Don't know

vii) Others (specify: ) ☐ Yes ☐ No ☐ Don't know

## NCD-Related health services

9) **During the previous 3 months, how have government policies and directives affected the level of access to the following service delivery platforms?**

i) Outpatient NCD services

☐ Functioning as normal ☐ Limited Access ☐ Suspended ☐ Don't know ☐ Not applicable

ii) Inpatient NCD services

☐ Functioning as normal ☐ Limited Access ☐ Suspended ☐ Don't know ☐ Not applicable

iii) Community-based NCD care (e.g. outreach campaigns, home-based care, care in long-term facilities)

☐ Functioning as normal ☐ Limited Access ☐ Suspended ☐ Don't know ☐ Not applicable

iv) Mobile NCD clinics

☐ Functioning as normal ☐ Limited Access ☐ Suspended ☐ Don't know ☐ Not applicable

**10) During the previous 3 months, which of the following services have been disrupted due to COVID-19?**

*Definitions: More than 50% of users not served as usual; 26–50% of users not served as usual 5–25% of users not served as usual; Less than 5% of users not served as usual;Don't know: Information is not /not yet available; Not applicable: Service/intervention is not usually delivered in country*

| Service | Level of disruption | | |
|---|---|---|---|
| i) Hypertension management | ☐ More than 50%<br>☐ Less than 5%<br>☐ Not applicable | ☐ 26–50%<br>☐ Not disrupted | ☐ 5–25%<br>☐ Don't know |
| ii) Cardiovascular emergencies (including MI, Stroke and cardiac Arrhythmias) | ☐ More than 50%<br>☐ Less than 5%<br>☐ Not applicable | ☐ 26–50%<br>☐ Not disrupted | ☐ 5–25%<br>☐ Don't know |
| iii) Cancer screening | ☐ More than 50%<br>☐ Less than 5%<br>☐ Not applicable | ☐ 26–50%<br>☐ Not disrupted | ☐ 5–25%<br>☐ Don't know |
| iv) Cancer treatment | ☐ More than 50%<br>☐ Less than 5%<br>☐ Not applicable | ☐ 26–50%<br>☐ Not disrupted | ☐ 5–25%<br>☐ Don't know |
| v) Diabetes and diabetic complications management | ☐ More than 50%<br>☐ Less than 5%<br>☐ Not applicable | ☐ 26–50%<br>☐ Not disrupted | ☐ 5–25%<br>☐ Don't know |
| vi) Asthma services | ☐ More than 50%<br>☐ Less than 5%<br>☐ Not applicable | ☐ 26–50%<br>☐ Not disrupted | ☐ 5–25%<br>☐ Don't know |
| vii) Urgent dental care | ☐ More than 50%<br>☐ Less than 5%<br>☐ Not applicable | ☐ 26–50%<br>☐ Not disrupted | ☐ 5–25%<br>☐ Don't know |

If response to all subquestions is "Not disrupted" or "Don't know" or "Not applicable": Go to Question 14

**11) During the previous 3 months, what have been the main reasons for service disruption(s) and/or change(s) in service utilization? *(check all that apply)***

Supply-side factors

- ☐ Closure of outpatient services as per government directive
- ☐ Closure of outpatient disease specific consultation clinics
- ☐ Closure of population level screening programmes
- ☐ Decrease in inpatient volume due to cancellation of elective care
- ☐ Inpatient services/hospital beds not available
- ☐ Insufficient staff to provide services
- ☐ Related clinical staff deployed to provide COVID-19 relief
- ☐ Insufficient Personal Protective Equipment (PPE) available for health care providers to provide services
- ☐ Unavailability/Stock out of essential medicines, medical diagnostics or other health products at health facilities
- ☐ Changes in treatment policies for care seeking behaviour (e.g. stay at home policies)
- ☐ Others (please specify what are the other causes of this disruption and/or changes in service utilization):

☐ Don't know

Demand-side factors

☐ Decrease in outpatient volume due to patients not presenting

☐ Community fear/mistrust in seeking health care

☐ Travel restrictions hindering access to the health facilities

☐ Financial difficulties during outbreak/lock down

☐ Others (please specify what are the other causes of this disruption and/or changes in service utilization):

☐ Don't know

12) **During the previous 3 months, what approaches have been used to overcome service disruptions to essential health services in public sector health facilities and long-term care facilities? *(check all that apply)***

☐ Triaging to identify priorities

☐ Redirection of patients to alternate care sites /reorientation of referral pathways

☐ Telemedicine deployment to replace in-person consults

☐ Integration of several services into single visit

☐ Self-care interventions where appropriate

☐ Provision of home-based care where appropriate

☐ Catch-up campaigns for missed appointments

☐ Task shifting / role delegation

☐ Recruitment of additional staff

☐ Expanding facility hours

☐ Novel supply chain management and logistics approaches

☐ Novel dispensing approaches for medicines

☐ Novel prescribing approaches (e.g. tele-prescription, extended drug prescriptions)

☐ Community communications (e.g. informing on changes to service delivery, addressing misinformation and community fears of infection)

☐ Government removal of user fees

☐ Others (please describe what other approaches are being used): .....

☐ Do not know

13) **What are your country's plans to re-initiate any suspended NCD services?**

.....

.....

14) **Is the country collecting or collating data on NCD-related comorbidities in COVID-19 patients?**

☐ Yes ☐ No ☐ Don't know ☐ Not applicable

15) **Are there any technical guidance or tools that you would suggest WHO to develop related to NCDs during COVID-19 pandemic?**

.....

.....

.....

# Glossary

**Academia:** Refers to educational institutions, especially those for higher education.

**Broadcast media:** Media which is broadcast to the public through radio and television.

**Cancer:** A generic term for a large group of diseases that can affect any part of the body. Other terms used are malignant tumours and neoplasms. One defining feature of cancer is the rapid creation of abnormal cells that grow beyond their usual boundaries, and which can then invade adjoining parts of the body and spread to other organs.

**Cancer registry:** A systematic collection of data about cancer cases in a certain region or a certain hospital. The first aim is to count cancer cases to get an idea of the magnitude of the problem. WHO advises national coverage by population-based registry in small countries only.

**Capacity building:** The development of knowledge, skills, commitment, structures, systems and leadership to enable effective action.

**Cardiovascular diseases:** A group of disorders of the heart and blood vessels that includes coronary heart disease, cerebrovascular disease, peripheral arterial disease, rheumatic heart disease, congenital heart disease, deep vein thrombosis and pulmonary embolism.

**Cardiovascular risk stratification:** Use of risk prediction charts to indicate the risk of a fatal or non-fatal major cardiovascular event in the next 5 to 10 years. Based on the assessment people can be stratified into different levels of risk, which will help in management and follow up.

**Chronic respiratory diseases:** Diseases of the airways and other structures of the lung. Some of the most common are: asthma, chronic obstructive pulmonary disease, occupational lung diseases and pulmonary hypertension.

**Collaboration:** A recognized relationship between different groups with a defined purpose.

**Community:** A specific group of people, often living in a defined geographical area, who share a common culture, values and norms, and are arranged in a social structure according to relationships which the community has developed over a period of time. Members of a community exhibit some awareness of their identity as a group, and share common needs and a commitment to meeting them.

**Cross-border marketing:** Marketing originating in one country that crosses national borders through broadcast media and internet, print media, sponsorship of events and programmes or any other media or communication channel. It includes both in-flowing and out-flowing cross-border marketing.

**Diabetes:** A disease that occurs either when the pancreas does not produce enough insulin or when the body cannot effectively use the insulin it produces.

**Early detection/screening:** Measures performed in order to identify individuals who have early stages of a disease (with apparent symptoms in the case of early detection and without in the case of screening).

**Earmarked taxes:** Taxes which are collected and used for a specific purpose.

**Electronic health record:** An electronic health record is an in-house electronic version of the traditional paper charts that collect, store and display patient information.

**Fiscal interventions:** Measures taken by the government such as taxes and subsidies.

**Free sugars:** Monosaccharides and disaccharides added to foods by the manufacturer, cook or consumer, plus sugars naturally present in honey, syrups, fruit juices and fruit juice concentrates.

**Front-of-pack labelling (FOPL):** Nutrition labelling systems that are presented on the front of food packages (in the principle field of vision) and can be applied across the packaged retail food supply. FOPL comprise an underpinning nutrient profile model that considers the overall nutrition quality of the product and/or the nutrients of concern for NCD; and presents simple, often graphic information on the nutrient content and/or nutritional quality of products to complement the more detailed nutrient declarations usually provided on the back of food packages. There are two major categories of FOPL, including interpretive and non-interpretive systems. Non-interpretive nutrient-based systems provide a summary of nutrient information, but no advice on the overall nutritional value of the food to assist with purchasing decisions. Interpretive systems may provide no nutrient information but only at-a-glance guidance on the relative healthiness of a product.

**General government revenue:** The money received from taxation, and other sources, such as privatization of government assets, to help finance expenditures.

**Health:** A state of complete physical, social and mental well-being, and not merely the absence of disease or infirmity. A resource for everyday life which permits people to lead an individually, socially and economically productive life. A positive concept emphasizing social and personal resources as well as physical capabilities.

**Health behaviour:** Any activity undertaken by an individual, regardless of actual or perceived health status, for the purpose of promoting, protecting or maintaining health, whether or not such behaviour is objectively effective towards that end.

**Health care and treatment:** The diagnosis and treatment of diseases.

**Health care facility:** Facilities which provide health services. They may include mobile clinics, pharmacies, laboratories, primary health care clinics, specialty clinics, and private and faith-based establishments.

**Health promotion:** The process of enabling people to increase control over, and to improve their health.

**Healthy diet:** A healthy diet throughout the life-course helps prevent malnutrition in all its forms as well as a range of noncommunicable diseases (NCDs) and conditions. The exact make-up of a healthy, balanced diet will vary depending on the individual needs (e.g. age, gender, lifestyle, degree of physical activity). For adults, a healthy diet contains fruits, vegetables, legumes, nuts and whole grains and should be limited in free sugars, salt, total fat, saturated fats and free of industrial trans-fats.

**International donors:** Organizations which extend across national boundaries and which give funds for projects of a development nature.

**Intervention:** Any measure whose purpose is to improve health or alter the course of disease.

**Legislation:** A law or laws which have been enacted by the governing bodies in a country.

**Long-term care facility:** Long-term care facilities may vary by country. Nursing homes, skilled nursing facilities, assisted living facilities, residential facilities and residential long-term care facilities are collectively known as long-term care facilities that provide a variety of services, including medical and assistive care, to people who are unable to live independently in the community.

**Marketing:** Any form of commercial communication or message that is designed to, or has the effect of, increasing the recognition, appeal and/or consumption of particular products and services. It comprises anything that acts to advertise or otherwise promote a product or service.

**mHealth:** The use of mobile and wireless technologies to support the achievement of health objectives.

**Multisectoral:** Involving different sectors, such as health, agriculture, education, finance, infrastructure, transport, trade, etc.

**Multisectoral collaboration:** A recognized relationship between part or parts of different sectors of society (such as ministries (e.g. health, education), agencies, non-governmental agencies, private for-profit sector and community representation) which has been formed to take action to achieve health outcomes in a way that is more effective, efficient or sustainable than might be achieved by the health sector acting alone.

**Multi-stakeholder:** Involving stakeholders from across the public sector, civil society, NGOs and the private sector.

**Musculoskeletal conditions:** Musculoskeletal conditions comprise more than 150 conditions that affect the locomotor system of individuals. They range from conditions that arise suddenly and are short-lived, such as fractures, sprains and strains, to conditions associated with long-term functional limitations and disability, such as low back pain and osteoarthritis. Musculoskeletal conditions are typically characterized by pain (often persistent) and limitations in mobility, dexterity and overall level of functioning, reducing people's ability to engage in their regular activities.

**National Cancer Screening Programme:** A government-endorsed programme where screening is offered. NGO-led programmes or national recommendations to go for screening at one's own cost, do not qualify as national screening programmes.

**National focal point, unit or department:**

I. ***National focal point:*** the person responsible for the prevention and control of chronic diseases in a ministry of health or national institute.

II. ***Unit or department:*** a unit or department with responsibility for NCD disease prevention and control in a ministry of health or national institute.

**National health reporting system, survey and surveillance:**

I. ***National health reporting system:*** The process by which a ministry of health produces annual health reports that summarize data on, for example, national health human resources, population demographics, health expenditures, and health indicators such as mortality and morbidity. Includes the process of collecting data from various health information sources, e.g. disease registries, hospital admission or discharge data.

II. ***National survey:*** A fixed or unfixed time interval survey on the main chronic diseases, or major risk factors common to chronic diseases.

III. ***Surveillance:*** The systematic collection of data (through survey or registration) on risk factors, chronic diseases and their determinants for continuous analysis, interpretation and feed-back.

**National integrated action plan:** A concerted approach to addressing a multiplicity of issues within a chronic disease prevention and health promotion framework, targeting the major risk factors common to the main chronic diseases, including the integration of primary, secondary and tertiary prevention, health promotion and diseases prevention programmes across sectors and disciplines.

**National policy, strategy, action plan:**

I. ***Policy*:** A specific official decision or set of decisions designed to carry out a course of action endorsed by a political body, including a set of goals, priorities and main directions for attaining these goals. The policy document may include a strategy to give effect to the policy.

II. ***Strategy*:** A long-term plan designed to achieve a particular goal.

III. ***Action plan*:** A scheme of course of action, which may correspond to a policy or strategy, with defined activities indicating who does what (type of activities and people responsible for implementation), when (time frame), how and with what resources to accomplish an objective.

**National protocols/guidelines/standards for chronic diseases and conditions:** A recommended evidence-based course of action to prevent a chronic disease or condition or to treat or manage a chronic disease or condition aiming to prevent complications, improve outcomes and quality of life of patients.

**NGO:** Non-governmental organization.

**Noncommunicable diseases (NCDs):** The four main types of noncommunicable diseases are cardiovascular diseases (such as heart attacks and stroke), cancers, chronic respiratory diseases (such as chronic obstructed pulmonary disease and asthma) and diabetes.

**Noncommunicable diseases prevention and control:** All activities related to surveillance, prevention and management of the chronic noncommunicable diseases.

**Not in effect:** Any policy, strategy or plan of action which has been previously developed and is no longer under development, but for various reasons is not being implemented.

**Nutrient declaration:** A standardized statement or listing of the nutrient content of a food.

**Nutrition labelling:** A description intended to inform consumers of the nutritional properties of food. Nutrition labelling consists of two components: (a) nutrient declaration; (b) supplementary nutrition information (e.g. front-of-pack labelling).

**Operational:** A policy, strategy or plan of action which is being used and implemented in the country, and has resources and funding available to implement it. Also applies to a multisectoral commission/mechanism which is functional and meets on a regular basis.

**Palliative care:** Palliative care is an approach that improves the quality of life of patients (adults and children) and their families who are facing problems associated with life-threatening illness. It prevents and relieves suffering through the early identification, correct assessment and treatment of pain and other problems, whether physical, psychosocial or spiritual.

**Partnership for health:** An agreement between two or more partners to work cooperatively towards a set of shared health outcomes.

**Peak flow measurement:** A peak flow meter is a simple, hand-held device which measures how well a person can expel air from their lungs. The patient blows quickly and forcefully through a mouthpiece at one end, and a measurement is read from a built-in numbered scale on the device. Peak flow measurement can be done by a patient at home or in a health facility.

**Price subsidies:** Economic benefit provided by the government (such as a tax allowance or duty rebate) to keep the price of healthy foods low.

**Primary health care:** Refers to core functions of a nation's health system. Encompassing front-line health service delivery (primary care) as well as health system structure; governance and financing; the intersectoral policy environment; and social determinants of health, primary health care provides essential health interventions according to a community's needs and expectations.

**Primary prevention:** Measures directed towards preventing the initial occurrence of a disease or disorder.

**Print media:** Communicating with the public through printed materials such as magazines, newspapers and billboards.

**Product reformulation by industry:** Refers to the process of changing the composition of processed foods to be healthier and reduce the salt content.

**Public awareness programme:** A comprehensive effort that includes multiple components (messaging, grassroots outreach, media relations, government affairs, budget, etc.) to help increase public understanding about the importance of an issue.

**Public health sector:** Publicly funded health care sector.

**Rehabilitation:** A set of measures that assist individuals who experience, or are likely to experience, disability to achieve and maintain optimal functioning in interaction with their environments.

**Risk factors associated with noncommunicable diseases:** The four main risk factors for NCDs are tobacco use, harmful use of alcohol, unhealthy diet and low levels of physical activity.

**Saturated fats:** Fats found in animal products, including meat and whole milk dairy products, as well as certain plant oils like palm, palm kernel and coconut oils.

**Screening:** Measures preformed across an apparently healthy population in order to identify individuals who are at high risk or in the early stages of disease, but do not yet have symptoms.

**Screening coverage:** The proportion of people in the population targeted by the programme who actually received screening in the time frame defined by the programme. (For example, if a country recommends mammography screening every 2 years for women aged 50 to 60. The screening coverage is the number of women aged 50 to 60 who benefitted from mammography thanks to the programme in the past 2 years, divided by the total number of women aged 50 to 60 in the country.)

**Self-regulation:** In this context refers to when a group or private sector entity governs or polices itself without outside assistance or influence.

**Spirometry:** A spirometer is a complex piece of equipment which provides a number of different lung function measurements. The patient makes a prolonged, but forceful exhalation into a mouthpiece, connected to a machine which typically produces a graphical output. Spirometry requires a trained technician to oversee the testing and to interpret the results.

**Sugar-sweetened beverages:** Sugar-sweetened beverages (SSB) are defined as all types of beverages containing free sugars and these include carbonated or non-carbonated soft drinks, fruit/vegetable juices and drinks, liquid and powder concentrates, flavoured water, energy and sports drinks, ready-to-drink tea, ready-to-drink coffee, and flavoured milk drinks. Free sugars include monosaccharide and disaccharides added to foods and beverages by the manufacturer, cook or consumer, and sugars naturally present in honey, syrups, fruit juices and fruit juice concentrates.

**Target:** A specific aim to be achieved, should be time bound, and define a 'desired', 'promised', 'minimum' or 'aspirational' level of achievement.

**Taxation incentives to promote physical activity:** Involve removing the tax (or a portion of the tax) in order to promote increased use of goods or services to encourage physical activity.

***Trans*-fatty acids (trans fats):** Unsaturated fatty acids with at least one double carbon–carbon bond in the trans configuration. *Trans*-fatty acids can be produced industrially by the partial hydrogenation of vegetable and fish oils, but also occur naturally in meat and dairy products from ruminant animals (e.g. cattle, sheep, goats, camels). Industrially-produced *trans*-fatty acids can be found in baked and fried foods, pre-packaged snacks and food, and partially hydrogenated cooking oils and fats which are often used at home, in restaurants, or in the informal food sector (such as street vendors), and are the predominant source of *trans*-fatty acid intake in many populations.

**Under development:** Something which is still being developed or finalized and is not yet being implemented in the country.

**Universal Health Coverage-Priority Benefits Package:** A universal health coverage-priority benefits package (UHC-PBP) is a set of evidence-informed prioritized health interventions, services and programmes, including intersectoral actions and fiscal policies, defined through a deliberative process that accounts for economic realities and social preferences. A UHC-PBP should be available for all, in good quality, at the appropriate service delivery platform(s) using an integrated people-centred approach and covered by relevant financial protection arrangement(s).

**VAT/Sales Tax: "**Value-added tax" (VAT) is a "multi-stage" tax on all consumer goods and services applied proportionally to the price the consumer pays for a product. Although manufacturers and wholesalers also participate in the administration and payment of the tax all along the manufacturing/distribution chain, they are all reimbursed through a tax credit system, so that the only entity who pays in the end is the final consumer. Most countries that impose a VAT do so on a base that includes any excise tax and customs duty. Example: VAT representing 10% of the retail price. Some countries, however, impose sales taxes instead. Unlike VAT, sales taxes are levied at the point of retail on the total value of goods and services purchased.

ISBN 978-92-4-007169-8