PROFILE OF CAPACITY AND RESPONSE TO **NONCOMMUNICABLE DISEASES AND THEIR RISK FACTORS IN THE REGION OF THE AMERICAS**

Country capacity survey results, 2015

Pan American Health Organization

World Health Organization
REGIONAL OFFICE FOR THE Americas

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PROLOGUE

The rise in noncommunicable diseases (NCDs) is increasingly undermining sustainable development, especially in low- and middle-income countries which suffer the highest burden of disease. Over the past several decades, countries in the Americas have made important gains in economic and social development, as well as considerable progress in reducing vaccine preventable infectious diseases, undernutrition, access to potable water and sanitation, and improving maternal and child health outcomes. While this has resulted in overall improvements in population health, there are growing NCD-related challenges.

NCDs are a complex problem, responsible for 79% of all deaths in the Americas. They also cause significant negative economic impact, as a result of lost output due to premature deaths, disability, and costs of ill health. NCD prevention and control will require strong governmental commitment, leadership and multi-sectoral approaches, to reduce exposure to the four main risk factors: tobacco use, harmful use of alcohol, unhealthy diet and physical inactivity. This will be particularly relevant in the Americas, a region known to have the highest rates of overweight and obesity globally, coupled with high population levels of insufficient physical activity.

Global and Regional Plans of Action for the Prevention and Control of NCDs as well as the 2014 United Nations General Assembly Outcome Document on NCD Prevention and Control, have set out the roadmap to tackle NCDs. The overall goal is to reduce premature mortality from NCDs by 25% by 2025. As such, the roadmap defines a set of evidence-based policies and interventions, with a clear accountability framework to monitor countries' performance and progress.

The capacity to address NCDs in the region of the Americas is assessed through the NCD Country Capacity Survey, which periodically collects information on national NCD-related health infrastructure, policies, plans, surveillance and health system responses. This report summarizes the results of the last survey conducted in 2015, and completed by 34 of 35 Member States in the Americas.

These results are particularly relevant and timely as they illustrate that several countries have made important advances towards achieving some the time-bound NCD commitments. However, progress in the Region is uneven and there are many countries that have not yet achieved the commitments established for 2015. Fewer than half of the PAHO/WHO Member States reported having established an NCD policy, strategy or multisectoral and operational action plan. Additionally, fewer than half of the countries reported having established national indicators with targets.

This report is intended to call attention to the urgent need to accelerate national efforts and invest more resources to fulfill the NCD commitments. Countries in the Americas are called upon to scale up their efforts to prevent and control NCDs. If the status quo continues, the social, human and economic costs associated with NCDs will overwhelm our health systems and economies and challenge the Region's ability to successfully pursue the 2030 Sustainable Development Agenda

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ACRONYMS

ACE	angiotensin-converting enzyme
CARPHA	Caribbean Public Health Agency
CC	calcium channels
CRDs	chronic respiratory diseases
CVDs	cardiovascular diseases
DIRAC	Directory of Radiotherapy Centres
DM	diabetes mellitus
GYTS	Global Youth Tobacco Survey
HbA1c	glycated hemoglobin
HBSC	Health Behavior in School-aged Children (survey)
HPV	human papillomavirus
IARC	International Agency for Research on Cancer
NCDs	noncommunicable diseases
NV	not validated (data)
PAHO	Pan American Health Organization
PSA	prostate-specific antigen
RFs	risk factors
SDGs	Sustainable Development Goals
STEPS	STEPwise approach to Surveillance
US$	United States dollars
VIA	visual inspection with acetic acid
WHO	World Health Organization
WHO FCTC	World Health Organization Framework Convention on Tobacco Control

SUMMARY

Noncommunicable diseases (NCDs) and their risk factors (RFs) are the leading causes of morbidity, mortality, and disability in the Americas, and they represent both a public health challenge and a serious threat to the economic and social development of the Region. In response, countries of the Region have made commitments to address this problem from global, regional and national perspectives. These include the four time-bound commitments set forth in the outcome document of the second meeting of the United Nations General Assembly in 2014. The World Health Organization carries out the Country Capacity Surveys (CCS) periodically, that is used to develop Country Profiles of Capacity and Response to NCDs and their RFs. The CCS serves as an instrument both for monitoring progress and for identifying gaps and unmet needs in each country. It is also the main source of information defined by WHO to report on progress to the United Nations General Assembly.

Overall, the Country Capacity Survey 2015 was completed by 34 of the 35 Member States of the Region of the Americas (97%), and the responses of 30 of these countries (88%) were completely validated. This report summarizes the main findings of the Country Capacity Survey, as reported by the Member States, and includes results for the corresponding progress indicators.

Public health infrastructure, partnerships, and multisectoral collaboration for NCDs and their RFs

Regarding the available public health infrastructure, 23 of 34 countries (68%) reported having a dedicated NCD unit, branch, or department in their Ministry of Health staffed by at least one full-time employee, with funding for primary prevention, health promotion, early detection and screening, treatment, surveillance, monitoring and evaluation. General government revenues were the main source of NCD funding in the majority of countries, followed by health insurance and, to a lesser extent, earmarked taxes.

Regarding the implementation of NCD-related fiscal interventions, 32 of 34 countries (94%) reported the use of at least one of the interventions described in the Country Capacity Survey (most commonly, taxes on tobacco and alcohol). However, must be noted that these results only show that such taxes exist and do not indicate whether the existing enforcement framework employs best practices to ensure the desired impact on public health.

Only 9 of 34 countries (26%) reported having a dedicated national multisectoral commission, agency, or mechanism in place to oversee NCD engagement, policy coherence, and accountability among sectors other than health. Regarding broader policy frameworks, NCDs are part of the national health plans of 27 countries (27/34, 79%) and are included in the domestic development agendas of 16 (16/34, 47%). These findings demonstrate a need to promote further integration of NCDs and their RFs into national development plans and to establish mechanisms for multisectoral work that facilitate whole-of-government, whole-of-society and health-in-all-policies approaches, taking into account the recently adopted 2030 Agenda for Sustainable Development.

Status of policies, strategies, and action plans relevant to NCDs and their RFs

Regarding the status of policies, strategies, and action plans relevant to NCDs and their RFs, 17 of 34 countries (50%) reported having an operational, integrated policy, strategy, or multisectoral action plan that addresses the four main NCDs and RFs. In addition, 16 of 34 countries (47%) reported having NCD indicators related to a set of time-bound national targets. According to these results, approximately half of all countries in the Region have yet to reach two of the four time-bound commitments included in the outcome document of the second meeting of the United Nations General Assembly in 2014, namely "developing or strengthening national multisectoral policies and plans" and "setting national targets for 2025 and process indicators." Both commitments were to be accomplished by 2015, and thus their implementation is a priority.

Regarding the availability of cost-effective dietary policies, 6 of 34 countries (18%) reported having legislation in place to limit the use of saturated fats and virtually eliminate industrially produced trans fats from the food supply; 4 of 34 countries (12%) reported having active legislation to reduce the impact on children of marketing foods high in saturated fats, trans-fatty acids, free sugars, salt or non-alcoholic beverages. Only one country (1 of 34, 3%) reported having legislation designed to reduce population salt intake by mandating reformulation of products by industry across the food supply.

The small proportion of countries that reported having active legislation that addresses these issues, highlight the need to strengthen the national health authority's institutional capacity to regulate RFs. An indispensable component of this effort is the development of fiscal policies conducive to implementation of 10 of the 15 highly cost-effective interventions recommended by WHO to address NCDs and their RFs.

Surveillance

Regarding surveillance, 24 of 34 countries (71%) reported having an office, department or administrative branch within the Ministry of Health responsible for NCDs surveillance. Within these group of countries, 21% were exclusively (5/24) dedicated to NCDs surveillance and 79% were nonexclusively (19/24). Furthermore, all countries reported having a system for routine collection of mortality data by cause of death, and 16 countries reported having population-based registries at the national (11/34, 32%) or subnational (5/34, 15%) level. Finally, nine countries (9/34, 26%) reported carrying out recent (within the last 5 years) and periodic (at least every 5 years) surveys in adults to determine the levels of harmful alcohol consumption, physical inactivity, tobacco consumption, high blood glucose/diabetes, high blood pressure/hypertension, overweight and obesity, and salt/sodium intake.

Although the Country Capacity Survey reveals some capability for NCD and RF surveillance, enhancing integrated national systems that are capable of producing data periodically, systematically, sustainably, and in a standardized fashion remains a priority. At least four main sources of information should be tapped: vital registries, NCD registries, population surveys, and health information systems. Furthermore, population surveys must routinely include physical measurements and biochemical tests for several NCD risk factors, including overweight and obesity, salt/sodium intake, blood pressure, and elevated glucose and cholesterol.

Health systems capacity

The health systems module of the Country Capacity Survey provides an overview of national capabilities for the management of NCDs and their RFs, including such key aspects as the availability of evidence-based guidelines, standards, and protocols, as well as criteria for referral. It also provides information on services available at the primary care level for the early detection, diagnosis, and treatment of the main NCDs, as well as diagnostic procedures and treatments for this group of diseases in secondary and tertiary settings. Furthermore, it enables reporting on two of the progress indicators established by the United Nations General Assembly, namely, the availability and implementation of evidence-based guidelines, standards, and protocols and the provision of drugs and guidance for patients at high cardiovascular risk.

Only 7 of 34 countries (21%) reported having fully or partially implemented evidence-based guidelines, protocols, or standards for the four main NCDs, while 14 of 34 countries (41%) had such instruments in place for at least two. Furthermore, only 4 of 34 countries (12%) reported that cardiovascular risk stratification was carried out in more than 50% of primary care facilities for the identification of patients at high cardiovascular risk. Finally, essential medicines for the management of NCDs (insulin, aspirin, metformin, thiazide diuretics, ACE inhibitors, calcium channel blockers, statins and sulphonylureas) were usually available at the primary care level.

These results suggest that promoting the implementation of evidence-based clinical practice guidelines, standards or protocols for NCDs should be a priority in order to improve quality of care.

Limitations

When reviewing the results of the 2015 Country Capacity Survey, the limitations described below should be taken into account. It is a global tool that provides an overview of national capabilities for the prevention and control of NCDs and their RFs. It cannot capture all of the specific circumstances in each country, nor does it allow for a comprehensive situation analysis of each subject covered in its four modules.

The Country Capacity Survey is coordinated by a focal point designated by the national authorities. The quality of the collected data depends on the breadth of the consultation process carried out by this coordinator. It also reflects the perspectives and knowledge level of the informants at the time the survey was completed.

Finally, although the present round was accompanied by an expanded validation process, the survey still includes many questions for which no independent verification mechanism is available. Nevertheless, these results should prove useful in identifying gaps in health systems, services, surveillance and policies.

1.

INTRODUCTION

Noncommunicable diseases (NCDs), including cardiovascular diseases, cancer, diabetes and chronical respiratory disease were responsible for 4.8 million deaths in 2012, which represents 79% of all deaths in the Americas.*(1)*.

Tobacco, harmful alcohol consumption, physical inactivity, and unhealthy diet are the main risk factors for NCDs. According to 2013 estimates, there are approximately 127 million smokers aged 15 or older in the Americas. The prevalence of current tobacco smokers in the adult population is 17.1%, the fourth highest in the world by region *(2)*. The prevalence of binge drinking in the general population of the Americas is 14%, the second highest among the six World Health Organization (WHO) regions *(3)*. The Region of the Americas also has the world's highest prevalence of overweight and obesity in adults[1] (59%), and the prevalence of physical inactivity in adults[2] is almost 1.5 times higher than the global average (32.4% vs. 23.3%). The prevalence of high total cholesterol[3] in the Americas is the second highest in the world at 12.6%. Finally, the Region has the fourth highest prevalence of high fasting blood glucose[4] (7.9%) among adults and ranks sixth in prevalence of high blood pressure[5] (19.3%) *(4)*[6].

In response to this situation, a growing number of resolutions and political declarations have been issued in the last 15 years, at both the regional and global levels, which have helped raise the profile of NCDs and their RFs in the health and economic and social development agendas. These efforts culminated in the *Political Declaration of the UN High-Level Meeting on the Prevention and Control of Noncommunicable Diseases* in September 2011 *(5)*. This statement generated new commitments to address NCDs and their RFs, including the WHO Global Action Plan for the Prevention and Control of NCDs 2013-2020 *(6)*, the Pan American Health Organization (PAHO) *Plan of Action for the Prevention and Control of Noncommunicable Diseases in the Americas 2013-2019 (7)*, and the WHO Global Monitoring Framework for surveillance of NCDs and their RFs, which established nine voluntary goals and 25 indicators to monitor progress at the global level *(8)*. In 2014, a second High-level Meeting of the United Nations General Assembly was held to evaluate progress made, resulting in an *Outcome Document (9)* in which the Member States established four time-bound commitments and agreed to hold a third follow-up meeting and evaluation in 2018. Finally, one of the 17 Sustainable Development Goals (SDGs) within the 2030 Agenda for Sustainable Development, approved in September 2015, pertains to health and is associated with several NCD-related targets. Among these is the reduction of premature mortality from NCDs by one-third by 2030 *(10)*.

All of these commitments to action include a series of targets and corresponding indicators of progress and performance ***(Figure 1)***, and all contain a timeline for Member States to report to WHO and to the United Nations General Assembly.

1 Body mass index of 25 kg/m² or greater.

2 Less than 150 minutes of moderate physical activity per week or less than 75 minutes of vigorous physical activity per week (or equivalent).

3 Total cholesterol of 240 mg/dl or higher.

4 Fasting blood glucose of 126 mg/dl (7.0 mmol/l) or higher, or use of any medicines for high blood sugar.

5 Systolic blood pressure ≥ 140 mmHg or diastolic blood pressure ≥ 90 mmHg.

6 All prevalence figures except for prevalence of physical inactivity are age-standardized. All refer to the adult population aged 18 years or older, except for tobacco and alcohol (population aged 15 years or older) and high total cholesterol (population aged 25 years or older). All prevalence figures represent 2010 data, except for current tobacco use (2013) and high total cholesterol (2008).

The Country Capacity Survey, which has been carried out in 2000, 2006, 2010, and 2013, serves as an instrument for monitoring advances, identifying gaps and needs and thus, facilitating technical cooperation. Finally, this will be the source of information for the process indicators devised to monitor implementation of the WHO global action plan *(11)*.

WHO has developed 10 indicators to report to the United Nations Assembly. These 10 indicators measure progress across four areas: surveillance, risk factors, health services and policy. *(12)* (see *Annex 1* for a detailed description of the progress indicators and their information sources):

- Surveillance and monitoring (indicators 1, 2, 3);
- Risk Factors: tobacco use (indicators 5a, 5b, 5c, 5d), harmful use of alcohol (indicators 6a, 6b, 6c), unhealthy diets (indicators 7a, 7b, 7c, 7d), public awareness on diet and/or physical activity (indicator 8);
- NCDs policy, guidelines and drug therapy (indicators 4, 9 and 10)

Time-bound commitments made by the Member States in the outcome document of the second High-level Meeting of the United Nations General Assembly, 2014 *(9)*

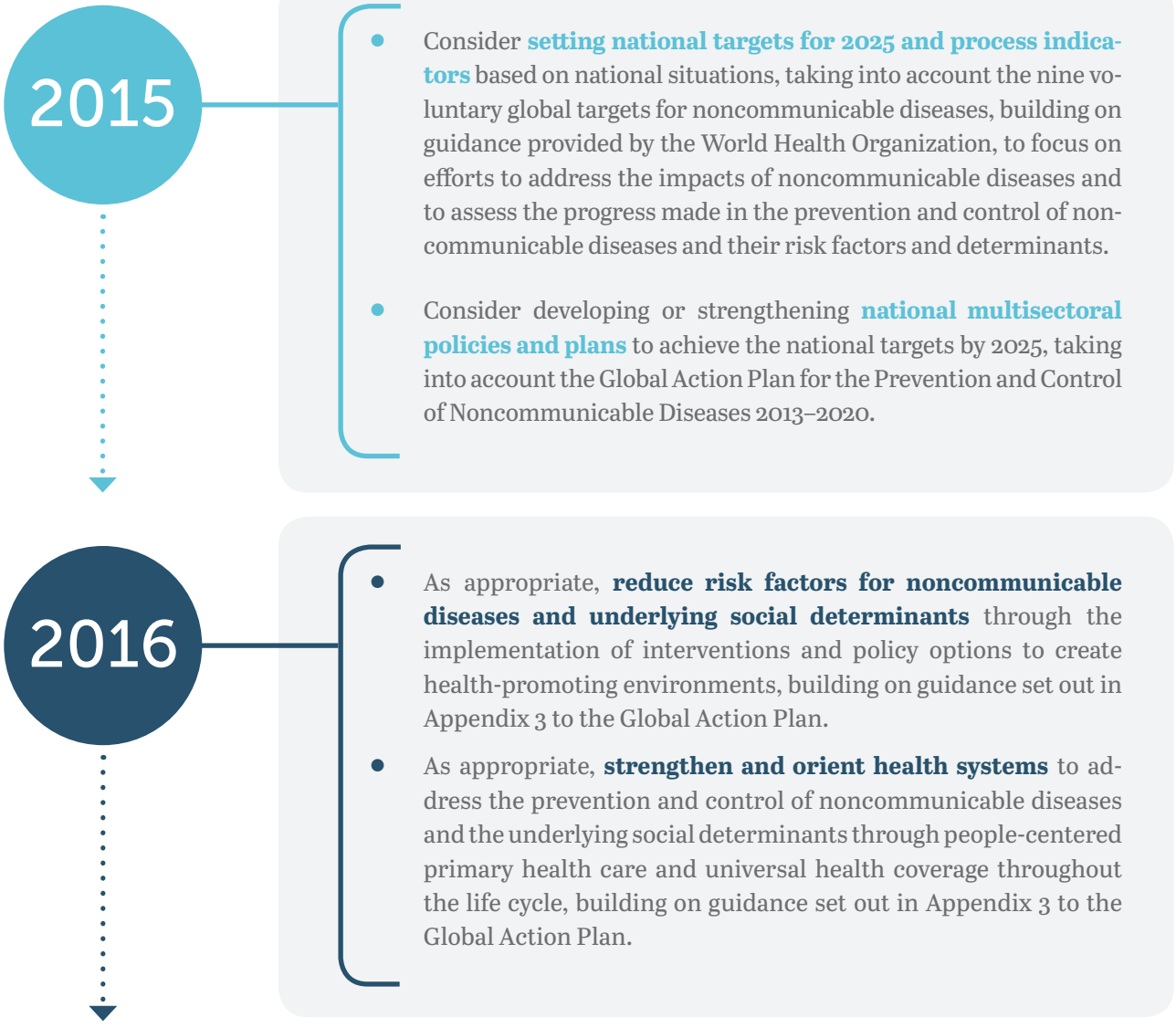


FIGURE 1

Timeline of key milestones for the prevention and control of NCDs and their RFs, with corresponding goals and indicators

2.

METHODS

2.1 QUESTIONNAIRE

The 2015 Country Capacity Survey questionnaire was developed by WHO and consists of four modules, as follows:

1. Public health infrastructure, partnerships, and multisectoral collaboration for NCDs and their RFs.
2. Status of NCD-relevant policies, strategies and action plans.
3. Capacity for NCD early detection, treatment and care within the health system.
4. Health information systems, surveillance, and surveys for NCDs and their RFs.

The survey is a self-administered questionnaire designed for online completion. The web page developed to host the questionnaire includes a glossary with definitions of important terms, as well as detailed instructions on how to complete the survey. Definitions of key terms used in the questionnaire are available in *Annex 2*.

The methodology of the 2015 Country Capacity Survey required countries to provide background documentation to enable the validation of "yes" answers to 38 items. To support this requirement, an upload function was added to the survey web page. *Annex 3* lists the questions for which background documentation was requested as part of the validation process.

The questionnaire for this fifth Country Capacity Survey overlaps substantially with those used in 2010 and 2013. *(13)*. Nevertheless, some modifications have been introduced to cover the progress and process indicators defined by WHO, to expand the scope of information collected on health services, and to streamline the modules by eliminating sub-items that did not provide essential information.

The complete 2015 Country Capacity Survey questionnaire is available online at http://www.paho.org/hq/dmdocuments/CCS-2015-NCD-Questionnaire.pdf.

2.2 DATA COLLECTION AND VALIDATION

Instructions and login information (user name and password) for the 2015 Country Capacity Survey website were provided to authorities in the 35 Member States of the Region of the Americas in July 2015 by the respective PAHO/WHO country offices. Data collection and validation took place between July and November 2015.

It was recommended that a focal point be designated within each country's Ministry of Health in order to improve the quality and completeness of responses. This focal point was in charge of coordinating data collection and validation and of convening a group of key informants with expert knowledge of the subject matter in the different modules of the questionnaire. The authorities of each country were responsible for appointing the focal point and establishing the consultation procedure and scope. In addition, the 2015 Country Capacity Survey included a broader validation process than previous rounds. Changes included:

- Verification of selected responses against **WHO databases**. These databases included the vital registration system of the WHO Department of Health Statistics and Informatics, the cancer registries of the International Agency for Research on Cancer (IARC), the WHO Global Health Observatory data repository *(4)*, statistics from the WHO Report on the Global Tobacco Epidemic *(14)*, and the internal registry of risk-factor surveys for which WHO provides technical cooperation, including the STEPS survey and the survey on Health Behavior in School-aged Children (HBSC).

- Verification of selected responses on cancer prevention and treatment against the American Cancer Society's *Cancer Atlas (15)* and the International Atomic Energy Agency's Directory of Radiotherapy Centers (DIRAC) *(16)*.

- A review of supporting **background documentation** provided in the case of positive responses to selected questions across the four modules.

When the answers provided by the country were at odds with information obtained through validation, a process of information exchange with the national authorities was carried out until consensus on the divergent answers was achieved.

A summary of the validation process defined by WHO is provided in *Annex 3*.

2.3 RESPONSE RATE AND VALIDATION

Overall, 34 of the 35 Member States of the Americas completed the 2015 Country Capacity Survey, which represents a 97% response rate. Furthermore, 30 of the 34 countries that completed the survey (88%) had their responses completely validated according to the process established by WHO. As part of this process, the countries submitted 811 documents through the survey website in support of their responses.

Table 1 provides a complete list of the countries that completed the questionnaire and validation process, grouped by subregion and classified by income level as defined by the World Bank *(17)*.

2.4 ANALYSIS

The database containing all responses provided by the Member States of the Region was uploaded from the survey website into a Microsoft Excel file *(18)*. First, a critical data review was carried out to ensure consistency between answers to each item and its sub-items and to identify responses that were not validated. Then, a descriptive analysis was carried out for all 34 Member States, as well as an analysis for country groups classified by income level according to World Bank definitions *(17)*. For the purpose of the present report, Haiti, the only low-income country in the Region *(Table 1)*, was pooled with the lower-middle-income countries under a single category of "low-income and lower-middle-income countries."

For analysis of the population surveys reported by countries in Module III, *"Health Information Systems, Surveillance, and Surveys for NCDs and their Risk Factors,"* results were categorized according to the key attributes needed for an NCD and RF surveillance system: representativeness (nationwide), frequency of data collection (at least every 5 years), timeliness (data collected in the last 5 years), and availability of measurements for RFs that are defined by quantitative parameters. The technical note in *Annex 4* provides a detailed description of this categorization for RFs that do and do not require specific measurements.

Annex 5 contains maps that present the results for progress indicators that have the Country Capacity Survey as their main source of information, as well as tables listing the variables used for construction of these indicators, presented by country. A definition of the indicator and its performance criteria are provided with each map.

For all analyses, the number of countries that completed the questionnaire, whether cumulatively or within the subgroup of interest, was used as the denominator, as specified in the tables and figures presented in the Results section. In all cases, nonvalidated responses were treated as a separate category. All statistical analyses were performed in STATA 14.1 *(20)*.

Finally, although the 2015 Country Capacity Survey questionnaire overlaps substantially with those used in 2010 and 2013, this report does not include a comparison of results across the three survey rounds due to changes in the methodology used for validation of responses in 2015.

2.5 LIMITATIONS

When reviewing the results of the 2015 Country Capacity Survey, the limitations described below should be taken into account. First, as a global tool that provides an overview of national capabilities for the prevention and control of NCDs and their RFs, this instrument cannot capture all of the specific circumstances of each country, nor does it allow for a comprehensive situation analysis of each subject covered in the four modules. For example, although the Country Capacity Survey can identify the existence of fiscal interventions for NCDs and their RFs, it does not provide enough information to determine whether those interventions are sufficient to bring about the desired public health impacts. In addition, because it is meant to be a global tool to monitor advances toward the global and regional commitments made by the Member States, it cannot be adjusted to fit all the specific circumstances that occur at the country level.

The Country Capacity Survey is coordinated by a focal point for NCDs designated by the national authorities. This coordinator is in charge of identifying key informants for each of the survey modules. The quality of the collected data depends on the breadth of this consultation process. It also reflects the perspective and knowledge level of the informants at the time they completed the survey. Changes among national authorities in some Member States may affect the quality of some of the answers provided.

Finally, although the present round of the survey featured an expanded validation process, there were still a substantial number of questions for which no independent verification mechanism was available. This limitation notwithstanding, the results should be very useful especially because they provide information on the absence of essential infrastructure, surveillance, policy and health service components.

TABLE 1

Countries that completed the 2015 Country Capacity Survey and their validation status, by subregion and World Bank income level *(18)

Sub-Region	Country	World Bank income level*	Completed	Validated
North America	Canada	High	Yes	Yes
	United States of America	High	Yes	Yes
Central America and Mexico	Costa Rica	Upper-middle	Yes	Yes
	El Salvador	Lower-middle	Yes	Incomplete
	Guatemala	Lower-middle	Yes	Yes
	Honduras	Lower-middle	Yes	Yes
	Mexico	Upper-middle	Yes	Yes
	Nicaragua	Lower-middle	Yes	Yes
	Panama	Upper-middle	Yes	Yes
Andean Region	Bolivia, Plurinational State of	Lower-middle	Yes	Incomplete
	Colombia	Upper-middle	Yes	Yes
	Ecuador	Upper-middle	Yes	Yes
	Peru	Upper-middle	Yes	Yes
	Venezuela, Bolivarian Republic of	High	No	N/A
Southern Cone	Argentina	High	Yes	Yes
	Brazil	Upper-middle	Yes	Yes
	Chile	High	Yes	Yes
	Paraguay	Upper-middle	Yes	Yes
	Uruguay	High	Yes	Incomplete
Non-Latin Caribbean	Antigua and Barbuda	High	Yes	Yes
	Bahamas	High	Yes	Yes
	Barbados	High	Yes	Yes
	Belize	Upper-middle	Yes	Yes
	Dominica	Upper-middle	Yes	Yes
	Grenada	Upper-middle	Yes	Yes
	Guyana	Lower-middle	Yes	Yes
	Jamaica	Upper-middle	Yes	Yes
	Saint Kitts and Nevis	High	Yes	Yes
	Saint Lucia	Upper-middle	Yes	Yes
	Saint Vincent and the Grenadines	Upper-middle	Yes	Yes
	Suriname	Upper-middle	Yes	Yes
	Trinidad and Tobago	High	Yes	Yes
Latin Caribbean	Cuba	Upper-middle	Yes	Yes
	Dominican Republic	Upper-middle	Yes	Yes
	Haiti	Low	Yes	Incomplete

* Income levels defined in relation to the following ranges of per capita gross domestic product for 2014, calculated by the *World Bank Atlas* method: low income, less than US$1,045 (United States dollars); lower-middle income, US$1,046-4,125; higher-middle income, US$4,126-12,735; high income, US$12,736 or more.
N/A, not applicable.

3.

RESULTS

3.1 PUBLIC HEALTH INFRASTRUCTURE, PARTNERSHIPS, AND MULTISECTORAL COLLABORATION FOR NCDs AND THEIR RFs

Highlights

01

23 of 34 countries (68%) reported having an **unit, branch, or department** responsible for NCDs in their Ministry of Health, with **at least one full-time professional staff member** and **funding for** primary prevention, health promotion, early detection and screening, treatment, surveillance, monitoring, and evaluation.

02

General government revenues were the **main source of funding** for NCDs in the majority of countries, regardless of income level.

03

9 of 34 countries (26%) reported having a dedicated, **nationwide multisectoral commission, agency, or mechanism** to oversee NCD engagement, policy coherence, and accountability in sectors other than health.

04

32 of 34 countries (94%) reported the implementation of at least one **fiscal intervention related to NCDs** (most commonly, taxes on tobacco and alcohol). However, these results only show that such taxes exist and do not indicate whether the current enforcement framework employs best practices to ensure the desired impact on public health.[7]

7 For more information, please see pages 52-54 of the Discussion section.

Unit, branch, or department dedicated to NCDs

Table 2 shows the main results of the survey module on infrastructure, human resources, and funding for NCDs and their RFs, for countries grouped by income level. Overall, **29 of 34 countries (85%)** reported having a **unit, branch, or department** within the Ministry of Health dedicated to NCDs and their RFs, with at least one full-time technical or professional staff member. Regarding **funding** for core functions or activities related to NCDs and their RFs, most countries reported having funding for primary prevention (32/34, 94%), health promotion (31/34, 91%), early detection and screening (31/34, 91%), treatment (32/34, 94%), and surveillance, monitoring, and evaluation of NCDs and their RFs (30/34, 88%). A smaller proportion of countries reported that funding was available for capacity-building (24/34, 71%) and for palliative care (15/34, 44%).

Overall, **23 of 34 countries (68%)** reported having an **operational unit, branch, or department** for NCDs within their ministry of health or equivalent agency, with **at least one full-time staff member** as well as **funding** for primary prevention, health promotion, early detection and screening, treatment, surveillance, monitoring, and evaluation. The proportion of countries that reported having a unit, branch, or department dedicated to NCDs with at least one professional staff member and funding for core NCD-related activities or functions turned out to be similar among groups of countries with different income levels. Funding for capacity-building and palliative care was substantially less available in low-income and lower-middle-income countries.

TABLE 2

Existing infrastructure to address NCDs and their RFs, by income group*

	Low and Lower-middle		Upper-middle		High		Total	
	Number of countries (of 34 total)	%	Number of countries (of 34 total)	%	Number of countries (of 34 total)	%	Number of countries (of 34 total)	%
Unit, branch, or department in the Ministry of Health or equivalent with responsibility for NCDs and their RFs	6/7	86%	15/17	88%	8/10	80%	**29/34**	**85%**
Number of full-time technical or professional staff in the unit, branch or department:								
1	1/6	14%	2/15	12%	0/8	0%	**3/29**	**10%**
2 to 5	3/6	43%	5/15	29%	3/8	30%	**11/29**	**38%**
6 to 10	2/6	29%	4/15	24%	1/8	10%	**7/29**	**24%**
11 or more	0/6	0%	4/15	24%	4/8	40%	**8/29**	**28%**
Funding for NCD and RF activities or functions:								
Primary prevention	6/7	86%	16/17	94%	10/10	100%	**32/34**	**94%**
Health promotion	6/7	86%	16/17	94%	9/10	90%	**31/34**	**91%**
Early detection/screening	5/7	71%	16/17	94%	10/10	100%	**31/34**	**91%**
Care and treatment	5/7	71%	17/17	100%	10/10	100%	**32/34**	**94%**
Surveillance, monitoring, and evaluation	5/7	71%	17/17	100%	8/10	80%	**30/34**	**88%**
Capacity-building	3/7	43%	13/17	76%	8/10	80%	**24/34**	**71%**
Palliative care	1/7	14%	10/17	59%	4/10	40%	**15/34**	**44%**

* A list of countries classified by World Bank income level is provided in Table 1.

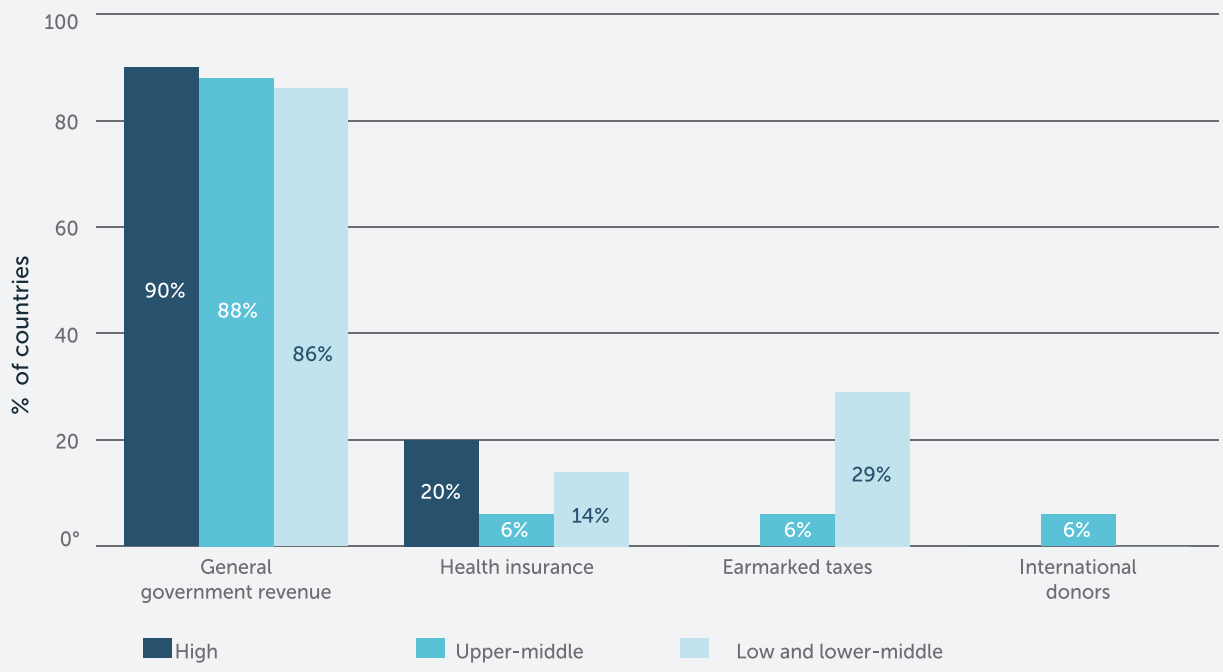
Sources of funding and fiscal interventions

Regarding **sources of funding to address NCDs and their RFs**, general government revenue was the **primary source** of funding in the majority of countries, regardless of income level. The **second major** source of funding was health insurance in 40% (4/10) of the high-income countries and 47% (8/17) of the upper-middle-income countries. Earmarked taxes represented the second major source of financing in 29% (2/7) of low- and lower-middle-income countries. Finally, international donors appeared as the **third or lowest-ranking source** of funding in the majority of countries, including 40% (4/10) of high-income countries *(Figure 2)*.

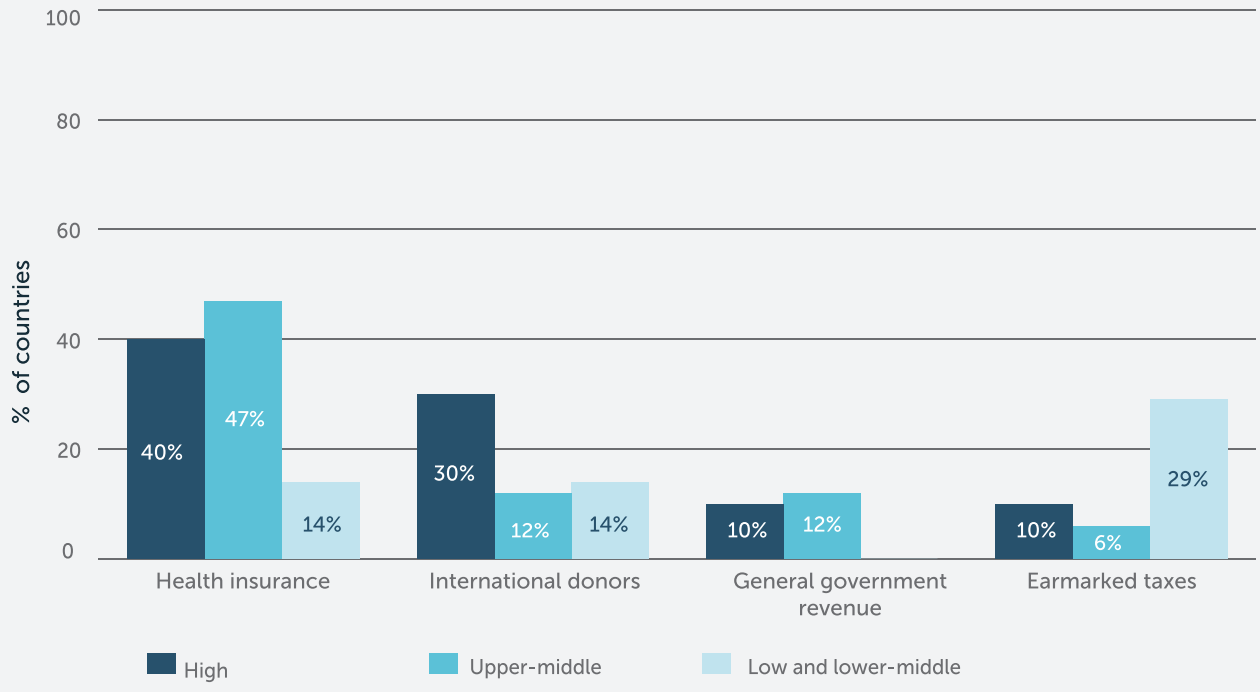
FIGURE 2

Main sources of funding to address NCDs and their RFs, by income group*

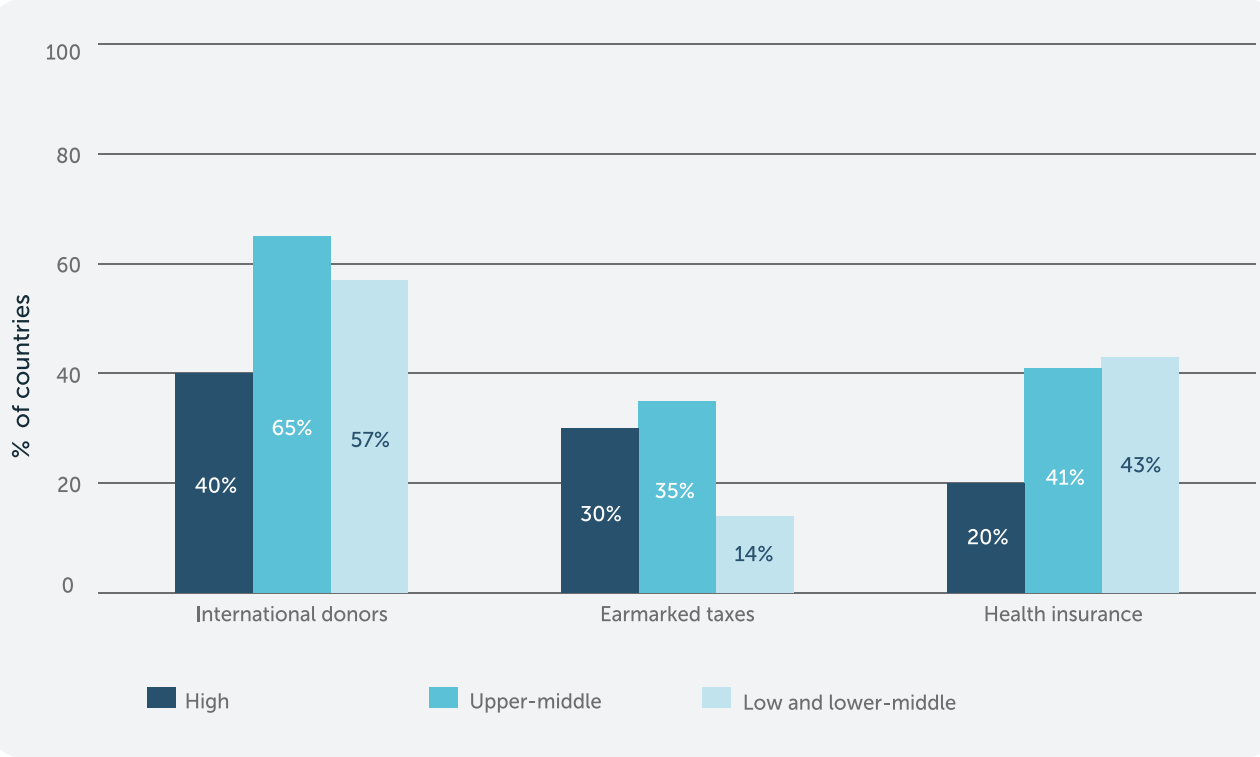
Primary source of funding



Secondary source of funding



Tertiary source of funding



* A list of countries classified by World Bank income level is provided in Table 1.

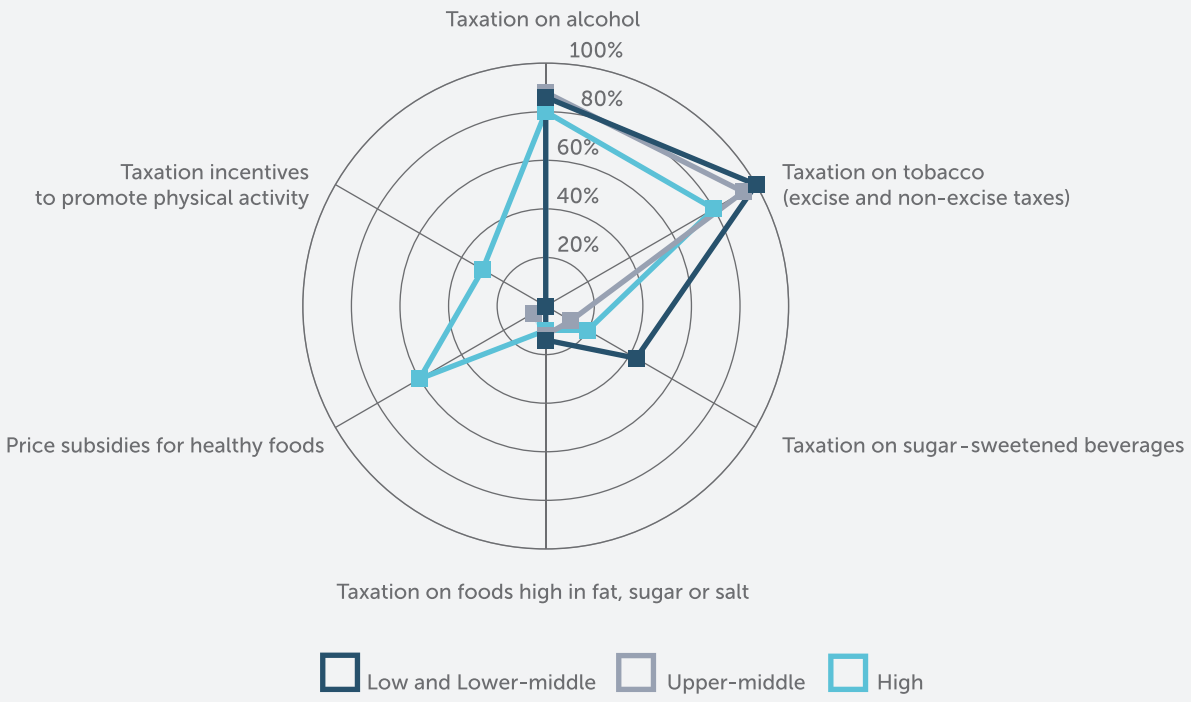
The survey revealed that 32 of 34 countries (94%) had implemented at least one of the six specified **fiscal interventions related to NCDs and their risk or protective factors**.[8] In most cases, these interventions were excise[9] and non-excise taxes on tobacco (31/34, 91%) and alcohol (29/34, 85%). Conversely, other types of interventions, such as taxes on sugar-sweetened beverages (7/34, 21%) and on foods high in fat, sugar, or salt (4/34, 12%), price subsidies for healthy foods (7/34, 21%), and incentives to promote physical activity (3/34, 9%), were considerably less widespread. *Figure 3* shows the proportion of countries that reported implementation of these fiscal interventions, by income level. Taxes on tobacco and alcohol were the most frequently implemented fiscal interventions in all countries, regardless of income level. Taxes on sugar-sweetened beverages were more likely to be enacted in low-income and lower-middle-income countries than in high-income countries, while incentives for healthy food and promotion of physical activity were most common in high-income countries.

8 These results only reveal that such taxes exist, not whether they are sufficient to ensure the desired impact on public health. For more information, please see pages 52-54 of the Discussion section.

9 Excise taxes have a greater public health impact, as they only affect tobacco products and increase their price in relation to other products or services *(3)*.

FIGURE 3

Percentage of countries that reported implementing fiscal interventions related to NCDs and their risk or protective factors, by income group*



* A list of countries classified by World Bank income level is provided in Table 1.

Finally, of the 31 countries that had implemented at least one of the types of taxes listed previously, 20 (65%) reported that most of the funds resulting were added to general government revenue, while eight countries (26%) reported that the revenue generated was combined with general health and health services funding. Only two countries (6%) reported that such funds were used to influence health behaviors.

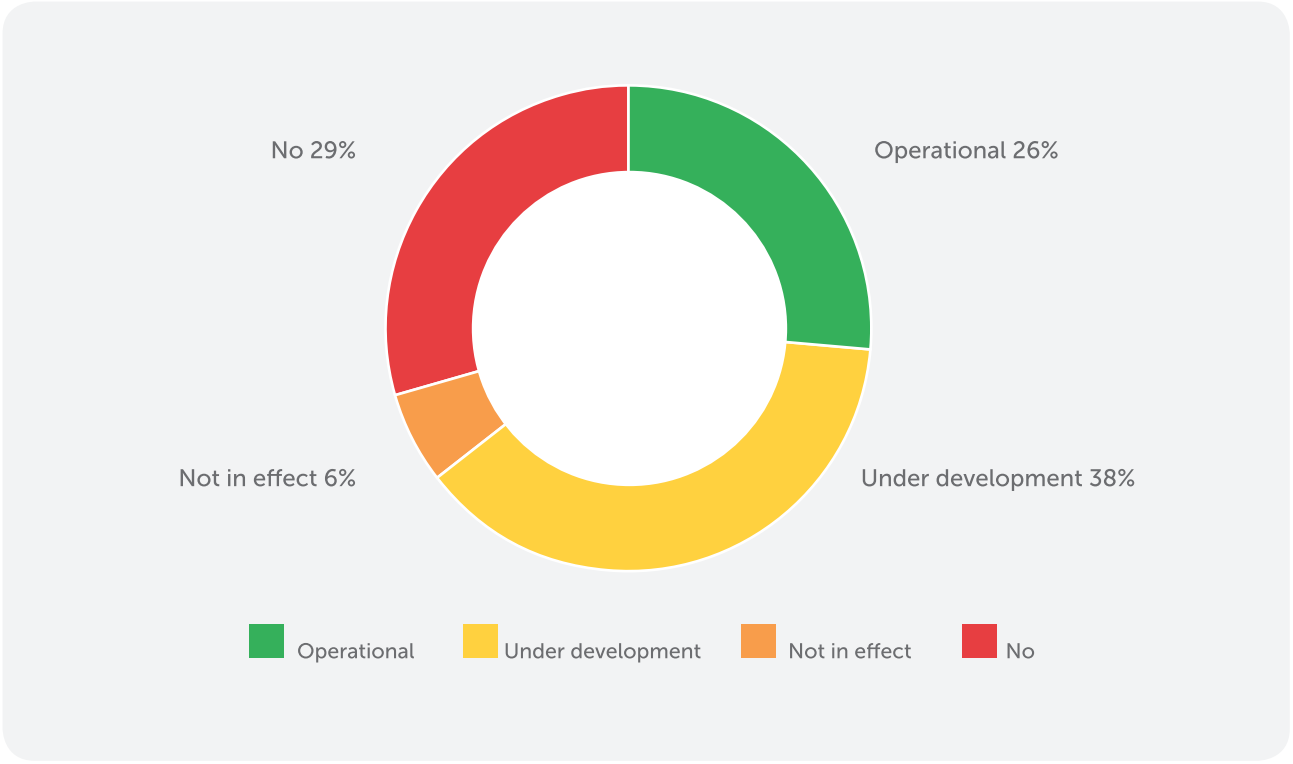
Multisectoral commissions, agencies, or mechanisms

Twenty-four countries (24/34, 71%) reported having a national multisectoral commission, agency, or mechanism[10] to oversee NCD engagement, policy coherence, and accountability in sectors other than health. However, such commissions, agencies, or mechanisms were only categorized as operational by nine countries (9/34, 26%), while the rest of the countries indicated that the entities were still under development or otherwise not in effect *(Figure 4)*.

10 According to the Country Capacity Survey glossary, the term "multisectoral" means "involving different sectors, such as health, agriculture, education, finance, infrastructure, transport, trade, etc." *(Annex 2)*.

FIGURE 4

Availability and status of national multisectoral commissions, agencies, or mechanisms for addressing NCDs



Note: The sum of percentages may not be 100% due to rounding.

Table 3 shows the main **types of entities** that participate in the multisectoral commissions, agencies, or mechanisms, stratified by status of the commission, agency, or mechanism. Overall, the most commonly reported participants in the 24 countries were ministries other than health (22/24, 92%), civil society (21/24, 88%), and academia (20/24, 83%), followed by the private sector (17/24, 71%). United Nations agencies (14/24, 58%) and other international institutions (9/24, 38%) were represented to a lesser extent. This membership pattern was observed both in operational commissions, agencies, or mechanisms and in those still under development.

TABLE 3

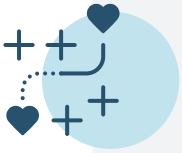
Members of NCD multisectoral commissions, agencies, or mechanisms, by status

	Operational		Under development		Not in effect		Total	
	Number of countries: (of 34 total)	%	Number of countries: (of 34 total)	%	Number of countries: (of 34 total)	%	Number of countries: (of 34 total)	%
Members of the multisectoral commission, agency, or mechanism								
Government ministries other than health	9/9	100	11/13	85	2/2	100	22/24	**92**
Academia (including research centers)	9/9	100	10/13	77	1/2	50	20/24	**83**
Nongovernmental or community-based organizations / civil society	9/9	100	10/13	77	2/2	100	21/24	**88**
Private sector	7/9	78	8/13	62	2/2	100	17/24	**71**
United Nations agencies	5/9	56	8/13	62	1/2	50	14/24	**58**
Other international institutions	3/9	33	6/13	46	0/2	0	9/24	**38**
Other	1/9	11	2/13	15	0/2	0	3/24	**13**

3.2 POLICIES, STRATEGIES, AND ACTION PLANS RELEVANT TO NCDs AND THEIR RFs

Highlights

01 NCDs are part of the **national health plan** of **27 countries (27/34, 79%)** and are included on the **national development agenda of 16 countries (16/34, 47%).**



17 countries (17/34, 50%) reported having an **operational multisectoral policy, strategy**, or action plan that addresses the four main NCDs and RFs. 02

03 **16 countries (16/34, 47%)** reported having NCD **indicators** related to a set of **time-bound national targets.**

Four countries (4/34, 12%) reported having **legislation in place to reduce the impact on children of marketing** of foods high in saturated fats, trans-fatty acids, free sugars, salt and non-alcoholic beverages. 04

05 **Six countries (6/34, 18%)** reported having **legislation in place to limit saturated fats and virtually eliminate industrially produced trans fats.**

One country (1/34, 3%) reported having **legislation in place to** reduce **population salt intake** through product reformulation by industry across the food supply. 06

07 Around two-thirds of countries reported having implemented some kind of **national program to raise awareness of healthy diets (24/34, 71%)** or **physical activity (21/34, 62%)** in the last 5 years.

Integrated policies, strategies, or action plans for NCDs and their RFs

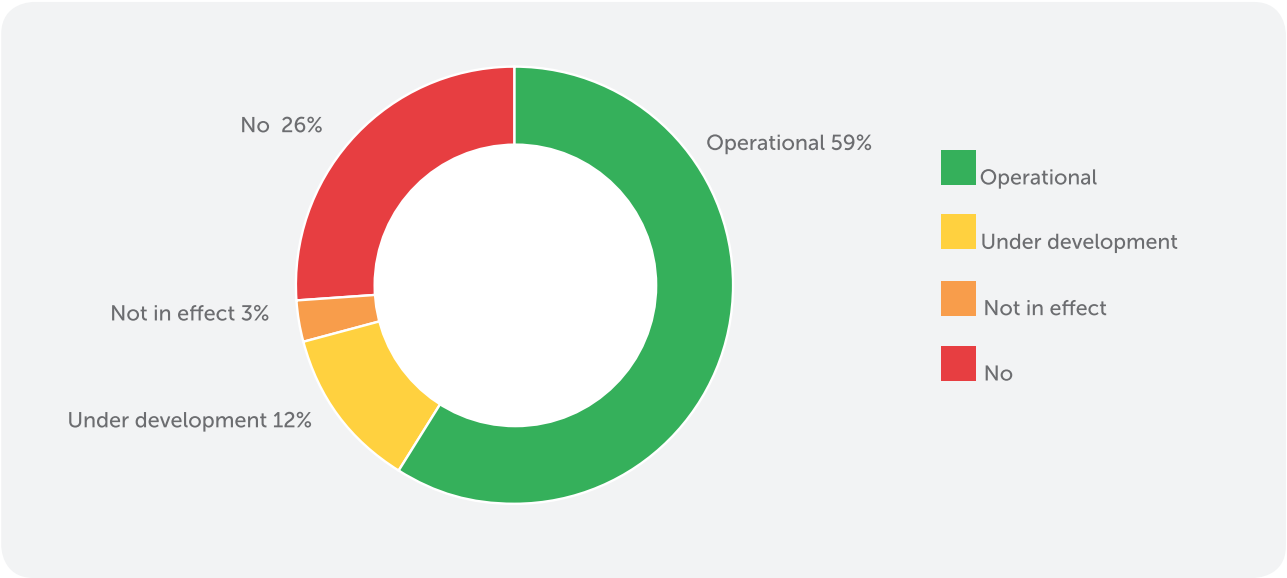
Regarding the position of NCDs within the national political framework, 27 countries (27/34, 79%) reported including this group of diseases in their **national health plan**. Almost half of the countries (16/34, 47%) also reported that NCDs were included in the **national development agenda**.

In addition, 25 countries (25/34, 74%) reported having a **national NCD policy, strategy, or action plan that covers the main NCDs and their RFs**. Overall, 20 countries (20/34, 59%) confirmed that the policy, strategy, or action plan is **operational**[11], 4 countries (4/34, 12%) reported it is **under development**, and one country (1/34, 3%) declared that it is **not in effect** *(Figure 5)*. It should be noted that in **6 of the 9 countries** that lack an integrated policy, strategy, or action plan, NCDs are at least included in the national health plan.

11 According to the Country Capacity Survey glossary, the term "operational" refers to "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" ***(Annex 2)***.

FIGURE 5

Integrated policies, strategies, or action plans for NCDs, according to status



As shown in *Table 4*, all the operational policies, strategies, or action plans were multisectoral in nature (20/20, 100%); 17 (17/20, 85%) addressed the four main RFs and four principal NCDs, but only 11 (11/20, 55%) included palliative care for patients with NCDs. Just over half (11/20, 55%) began in 2013 or later, which demonstrates rapid progress in the Region.

These results provide information on WHO **progress indicator number 4** to be reported to the United Nations General Assembly *(12)*. It measures the number of Member States with an operational, national multisectoral strategy or action plan that covers the main NCDs and their RFs. Overall, **17 countries (17/34, 50%)** fulfilled this indicator **completely** by having operational multisectoral policies, strategies, or action plans for all four NCDs and all four RFs. **Three countries (3/34, 9%)** partially achieved it by addressing at least two of the four main NCDs and at least two of the four main RFs. *Annex 5* presents results for this indicator for each country *(see Figure A-3 and Table A-5)*.

TABLE 4

Main characteristics of operational integrated national NCD policies, strategies, or action plans

	Number of countries with affirmative answers	%
Is there a national NCD policy, strategy, or action plan covering several NCDs and their RFs?	**20/34**	**59**
Is it a policy / strategy?	18/20	90
Is it an action plan?	16/20	80
Is it multisectoral?	20/20	100
Is it multi-stakeholder?	19/20	95
Does it address the 4 main NCDs and their 4 RFs?	17/20	85
Recent implementation (2013 or later)?	11/20	55
Does it address the following NCDs and RFs?		
Harmful use of alcohol	18/20	90
Unhealthy diet	20/20	100
Physical inactivity	20/20	100
Tobacco	19/20	95
Cancer	18/20	90
Cardiovascular diseases	20/20	100
Chronic respiratory diseases	18/20	90
Diabetes	20/20	100
Does it include palliative care for patients with NCDs?	**11/20**	**55**

Although **22 countrie**s (22/34, 65%) reported having national **indicators** for NCDs and their RFs, in only 16 of them (16/34, 47%) were these indicators associated with a set of national time-bound **targets**. On the other hand, 14 of the 16 countries with NCD targets and indicators also have an operational integrated policy, strategy, or action plan for the prevention and control of this group of diseases.

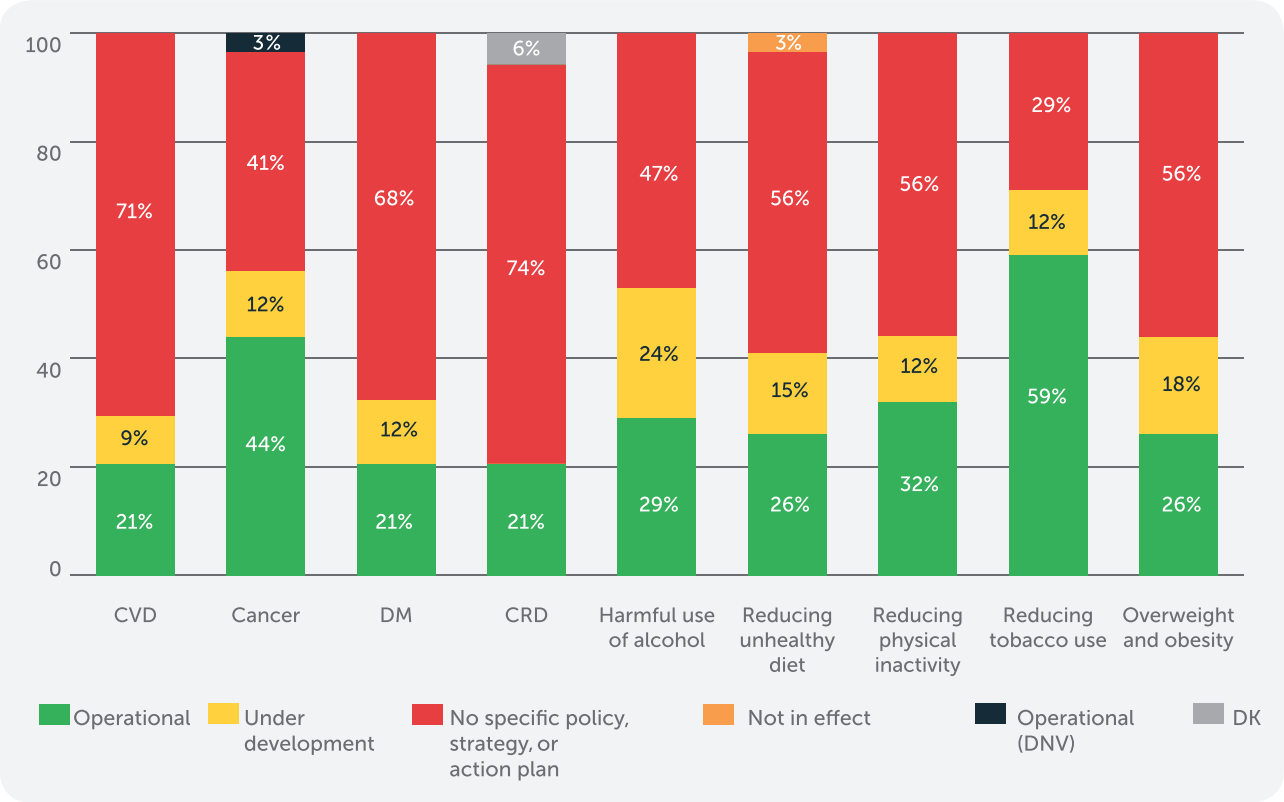
These results have been used to construct **progress indicator number 1** *(12)*, which measures the number of Member States that have established national indicators and time-bound targets that relate to the three areas covered by the targets of the WHO Global Monitoring Framework: mortality, risk factors, and health services *(8)*. Overall, **14 countries (14/34, 41%)** achieved this indicator **completely** by having indicators and time-bound targets that cover NCD mortality as well as key RFs for the country and/or health services, while **2 countries (2/34, 2%)** achieved it **partially** by covering only two of the three topics of the Global Monitoring Framework (one of them being mortality) or by not having time-bound targets. *Annex 5* provides information for this indicator for each country *(see Figure A-1 and Table A-3)*.

Specific policies, strategies, or action plans to address the main NCDs and their RFs

Figure 6 presents the specific policies, strategies, or action plans for the main NCDs and their RFs as reported in the survey, according to their implementation status. Cancer (15/34, 44%) and reduction of tobacco use (20/34, 59%) were the issues most commonly addressed by specific operational policies, strategies, and action plans of the countries. The remaining NCDs and RFs were only covered by specific operational policies, strategies, or action plans in 21% to 32% of countries.

FIGURE 6

Specific policies, strategies, and action plans for the main NCDs and RFs, by implementation status

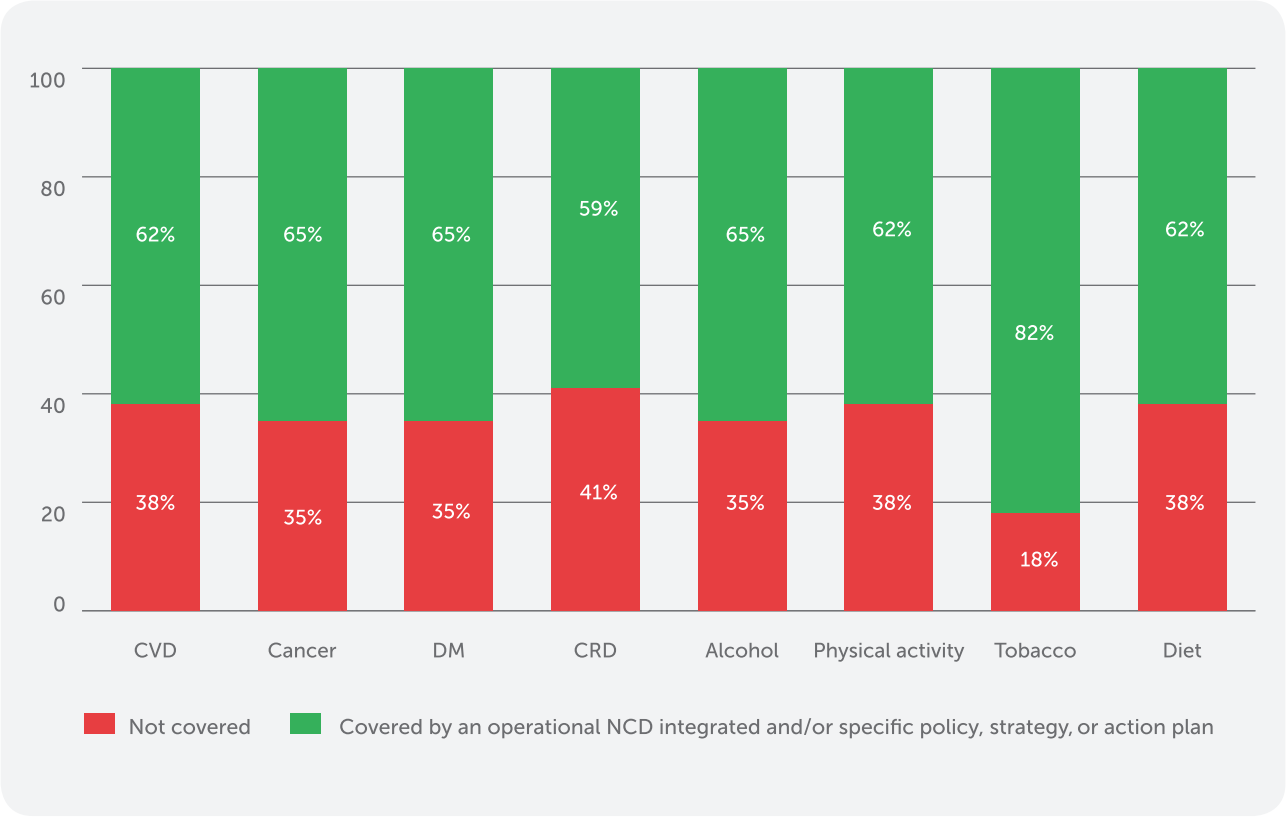


Notes: CVD: cardiovascular diseases; DM: diabetes; CRD: chronic respiratory diseases; DNV: data not validated; DK: don't know. The sum of percentages may not be 100% due to rounding.

In this analysis it is important to note the relatively high proportion of countries in which the four main NCDs and the four main RFs are not covered by any type of operational policy, strategy, or action plan, whether integrated or focused on a specific NCD or RF. As shown in *Figure 7*, this was the case in more than one-third of the 34 countries that completed the survey. The exception was tobacco control, for which only six countries (6/34, 18%) reported having no operational policies, strategies, or action plans (either integrated or specific). This pattern was independent of income level, but a higher proportion of low- and lower-middle-income countries lacked policies, strategies, or action plans, followed by high-income countries. Upper-middle- income countries reported the broadest coverage in terms of operational policies, strategies, and action plans for the main NCDs and RFs *(Figure 8)*.

FIGURE 7

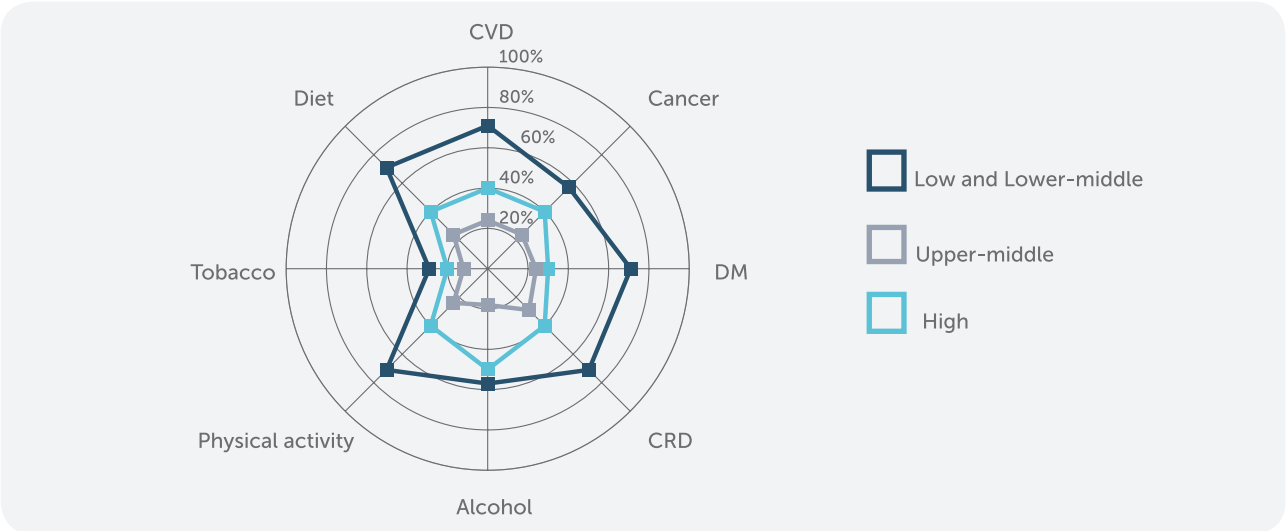
Availability of operational integrated and/or specific policies, strategies, or action plans to address the main NCDs and their RFs, by areas



Notes: CVD: cardiovascular diseases; DM: diabetes; CRD: chronic respiratory diseases.

FIGURE 8

Percentage of countries in which the main NCDs and their RFs are not covered by any type of operational policy, strategy, or action plan (integrated or specific), by income level



Notes: CVD: cardiovascular diseases; DM: diabetes; CRD: chronic respiratory diseases.

Cost-effective policies on diet and physical activity

Regarding the availability of cost-effective policies related to diet and physical activity, **6 countries (6/34, 18%)** reported having **policies to reduce the impact on children of marketing** of foods high in saturated fats, trans-fatty acids, free sugars, salt and non-alcoholic beverages. In four of these countries (4/34, 12%) the policies were enacted through governmental legislation, whereas in the remaining two countries (2/34, 6%) they were voluntary or depended on self-regulation. Furthermore, **9 countries** (9/34, 26%) reported having **national policies to limit saturated fatty acids and virtually eliminate industrially produced trans fats**, but only six countries (6/34, 18%) indicated that these policies were legislation-based. In the other three countries (3/34, 9%), they were voluntary or self-regulatory.

Eleven countries (11/34, 32%) reported having **national policies to reduce population salt intake**, but only **one country's** (1/34, 3%) legislation called for reformulation of products by industry throughout the food supply. The policies in another eight countries (8/34, 24%) included voluntary reformulation of products by industry, 10 countries (10/34, 29%) reported that such policies included awareness-raising programs aimed at the general public, and eight countries (8/34, 24%) implemented regulations on food salt content[12].

Regarding **labeling of packaged food**, 20 countries (20/34, 59%) reported having nutrition label regulations in line with international standards[13].

Finally, around two-thirds of countries have implemented some **national program to raise awareness** of **healthy diets** (24/34, 71%) or **physical activity** (21/34, 62%) in the last 5 years.

Survey items regarding policies to reduce population salt intake, limit saturated fats and virtually eliminate industrially produced trans fats, and reduce the impact of marketing on children, as well as those related to national programs to raise awareness of healthy diet and/or physical activity, represent the source of information for reporting on **progress indicators 7a, 7b, 7c, and 8**, respectively *(12)*. *Annex 5* reports results for these indicators for each country *(see Figures A-4, A-5, A-6, and A-7 and Table A-6)*.

12 The Country Capacity Profile did not collect information on whether regulations on salt/sodium content were voluntary or mandated by law.

13 For more information on the Codex Alimentarius guidelines on nutrition labeling, see http://www.fao.org/fao-who-codexalimentarius/en/

3.3 SURVEILLANCE

Highlights

01

24 countries (24/34, 71%) reported having an **office** within the Ministry of Health that is responsible for NCD surveillance, whether exclusively (5/34, 15%) or nonexclusively (19/34, 56%).

All countries reported having a system for **collecting mortality data by cause of death on a routine basis.**

02

03

11 countries (11/34, 32%) reported having nationwide **population-based registries** and 5 countries (5/34, 15%) had registries at the subnational level.

Nine countries (9/34, 26%) said they had carried out **recent (within the last 5 years) and periodic (at least every 5 years) surveys among adults** on harmful alcohol consumption, physical inactivity, tobacco use, high blood glucose/diabetes, high blood pressure/hypertension, overweight and obesity, and salt/sodium intake.

04

Infrastructure, mortality information systems, and NCD registries

Five countries (5/34, 15%) reported having an **office, department, or administrative branch** within the ministry of health dedicated exclusively to NCD surveillance, while in 19 countries (19/34, 56%) the ministry of health agency responsible for NCD surveillance also performed other duties. In the 10 remaining countries (10/34, 29%), the responsibility for surveillance was distributed across several offices, departments, or branches of the ministry of health.

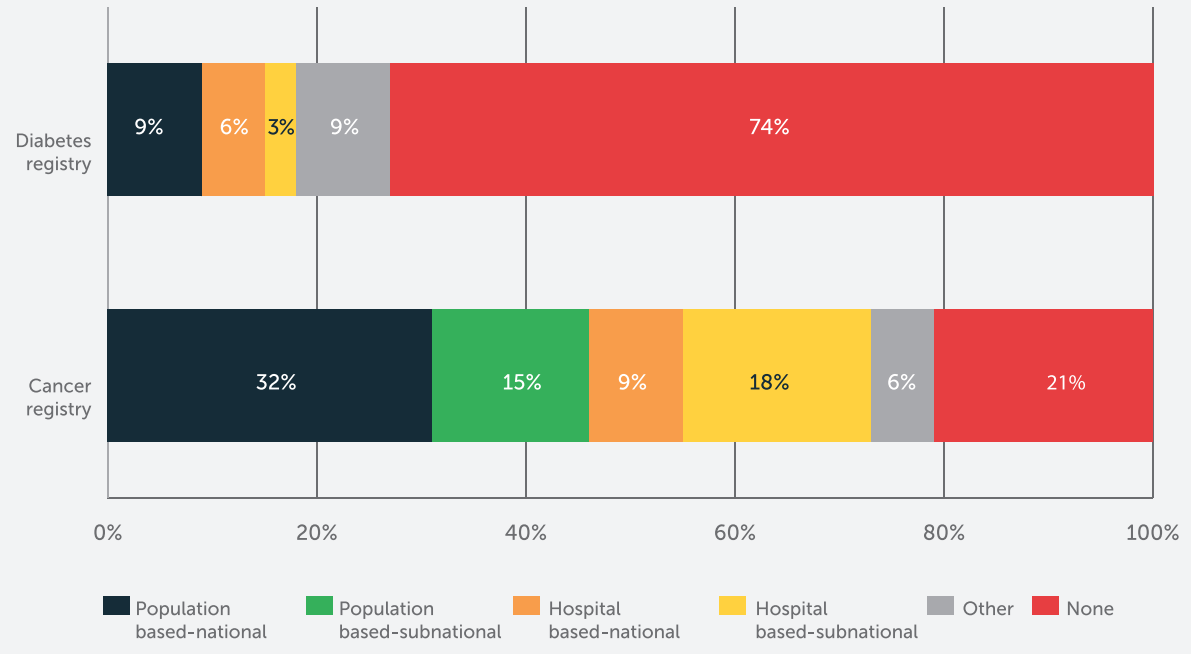
All countries that completed the Country Capacity Survey reported having a **system for collecting mortality data by cause of death** on a routine basis, with 24 countries (24/34, 71%) indicating that the latest available mortality data corresponded to 2013 or later. All countries could disaggregate mortality data by sex and age, and 28 countries (28/34, 82%) reported also being able to disaggregate data by other sociodemographic variables.

A total of 27 countries (27/34, 79%) reported having **cancer registries**, although a substantially lower proportion were population-based, at either the national (11/34, 32%) or subnational (5/34, 15%) level. In addition, 14 countries (14/34, 41%) reported that the last year for which data were available was 2013 or later *(Figure 9)*.

Finally, nine countries (9/34, 26%) reported having a **diabetes registry**, and in eight of these countries (8/34, 24%) the most recent data were obtained in 2013 or later. However, only three (3/34, 9%) countries' registries recorded and updated data on chronic complications of diabetes *(Figure 9)*.

FIGURE 9

Availability of cancer and diabetes registries, by coverage and source of information



Note: The sum of percentages may not be 100% due to rounding.

Population surveys on leading NCD risk factors

The proportion of countries that reported having conducted surveys on NCDs and their RFs among adults or youths ranged from 74% to 91%, depending on the risk factor *(Table 5)*.

TABLE 5

Availability of population surveys for leading NCD risk factors in adults and adolescents

Target population	Subject	Number of countries (of 34 total)	%
Adolescents	Harmful use of alcohol	27	79
	Low fruit and vegetable consumption	25	74
	Physical inactivity	28	82
	Tobacco use	31	91
	Overweight and obesity	27	79
Adults	Harmful use of alcohol	30	88
	Low fruit and vegetable consumption	26	76
	Physical inactivity	27	79
	Tobacco use	30	88
	Overweight and obesity	29	85
	High blood glucose/diabetes	29	85
	High total cholesterol	27	79
	High blood pressure/hypertension	29	85

The following graphs summarize characteristics of the reported surveys of adolescents and adults. A color-coded categorization scheme indicates the representativeness, frequency of data collection, latest date of data collection, and whether the surveys included physical measurements or biochemical assessments when applicable *(Table 6)*. A "green" rating denotes surveys that met all the criteria necessary for adequate surveillance of NCDs and their RFs. The technical note in *Annex 4* includes a detailed description of these categories.

TABLE 6

Categories for classification of adult and youth population surveys

Categorization scheme for risk factors that do not require physical or biochemical measurements (tobacco use, alcohol consumption, fruit and vegetable intake, physical inactivity)	Categorization scheme for risk factors that require physical measurements (weight, height, blood pressure) or biochemical assessments (glucose, cholesterol, sodium)
Green: recent, representative, and periodic data	**Green:** recent, representative, with measurements, and periodic data
Yellow: recent and representative data (not periodic)	**Yellow:** recent, representative, and with measurements (not periodic)
Orange: recent and periodic data (not representative)	**Orange:** recent data (representative or not, periodic or not, with measurements or self-reported)
Red: no data or no recent data	**Red:** no data or no recent data
Gray: did not answer or answer not validated	**Gray:** did not answer or answer not validated

Population surveys in adolescents

Figure 10 shows the proportion of countries that reported having conducted surveys of leading RFs in adolescents (young people between the ages of 10 and 19 years), by category as defined in *Table 6*.

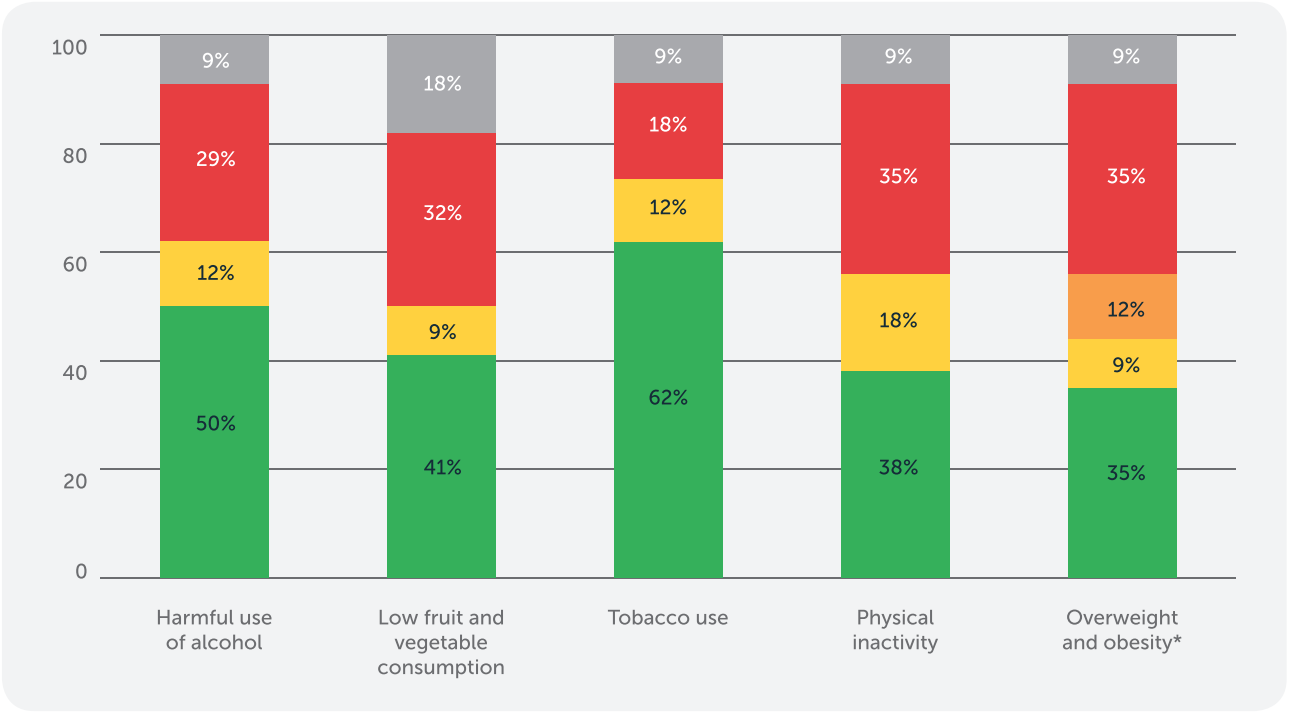
For RFs that do not require measurements, the **green category** indicates countries that have conducted recent (within the last 5 years) and periodic (carried out at least every 5 years) nationally representative surveys. Overall, 21 countries (21/34, 62%) met these criteria for surveys on tobacco in adolescents; 17 countries (17/34, 50%), for surveys of alcohol use; 14 countries (14/34, 41%), for surveys of low fruit and vegetable intake; and only 11 countries (11/34, 38%), for surveys about physical inactivity.

For surveys of overweight and obesity, the green category corresponds to countries with recent, periodic, nationally representative surveys that also include weight and height measurements. A total of 12 countries (12/34, 35%) reported surveys with these attributes.

In summary, only eight countries (8/34, 24%) reported surveys that could be classified in the green category (optimal performance) for all risk factors examined in adolescents (tobacco use, alcohol use, fruit and vegetable intake, physical inactivity, and overweight and obesity). The proportion of countries that reported a lack of data for adolescents or had last conducted surveys more than 5 years ago ranged from 20% to 35%, depending on risk factor. These surveys are classified in the **red category** in *Figure 10*.

FIGURE 10

Percentage of countries that reported conducting population surveys of leading RFs in adolescents, by category*

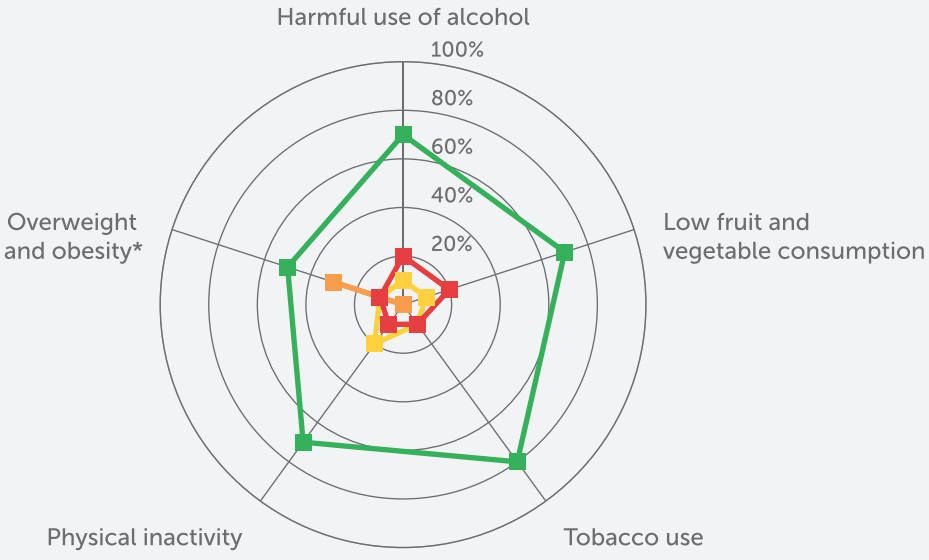


* For a detailed description of the categories, see Table 6 and the technical note in Annex 4.
Note: The sum of percentages may not be 100% due to rounding.

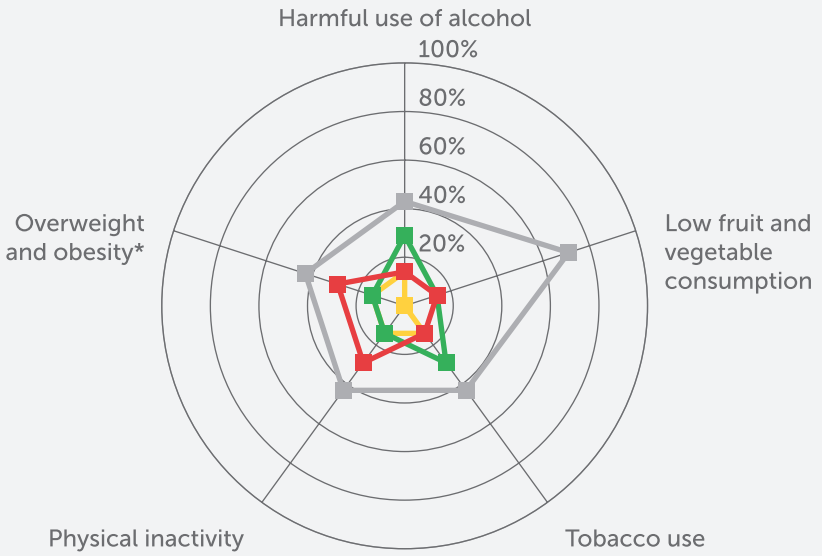
FIGURE 11

Percentage of countries that reported conducting population surveys of leading RFs in adolescents, for each survey category*, by income level**

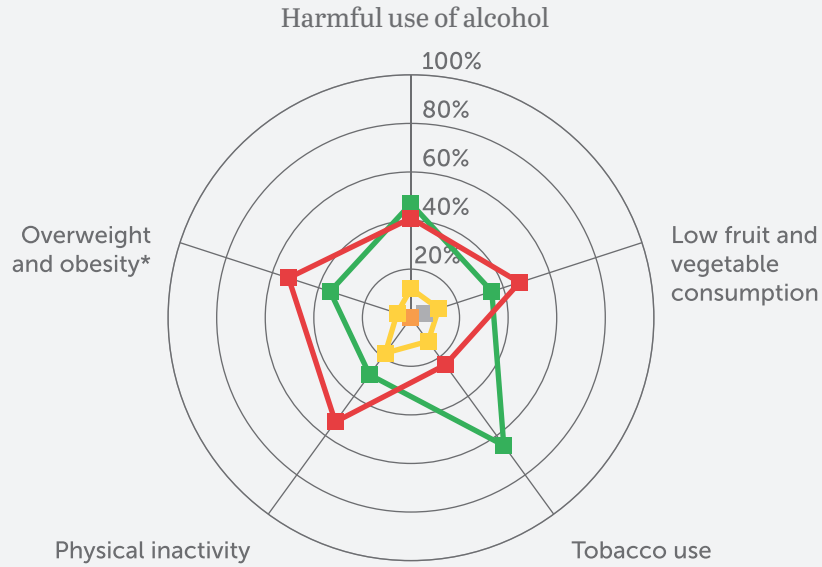
High income (n=10 countries)



Low and lower-middle income (n=7 countries)



Upper-middle income (n=17 countries)



* For a detailed description of the categories, see Table 6 and the technical note in Annex 4.
** A list of countries classified by World Bank income level is provided in Table 1.

The proportion of countries with recent, representative, and periodic surveys (green category) of tobacco use, harmful use of alcohol, physical activity, and fruit and vegetable consumption in adolescents increased with higher income level, as illustrated by the area encompassed by the green line in the graphs shown in *Figure 11.*

Population surveys in adults

Approximately half of all countries reported having conducted recent, periodic, and nationally representative surveys in adults of tobacco use (19, 56%), alcohol use (18, 53%), fruit and vegetable consumption (17, 50%), and physical inactivity (17, 50%), as shown by the green category in *Figure 12-a*. Regarding risk factors that require measurements, 35% to 44% of countries reported recent, periodic, nationally representative surveys with the necessary measurements for overweight and obesity (14, 41%), high blood glucose or diabetes (13, 38%), total cholesterol (12, 35%), and high blood pressure or hypertension (15, 44%), as shown by the green category in *Figure 12-b*. Conversely, only three countries (3/34, 9%) had conducted surveys on salt/sodium intake that met the requirements for classification in the green category.

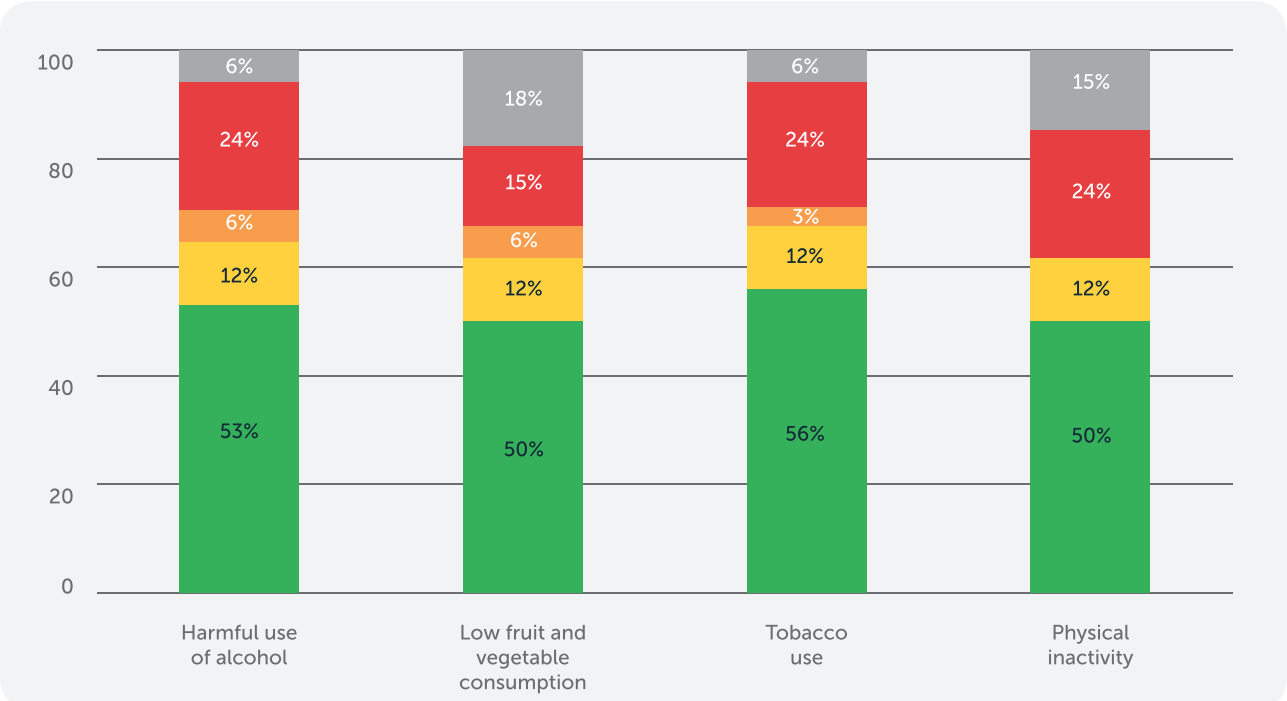
None of the countries that completed the Country Capacity Survey had carried out surveys classifiable under the green (optimal performance) category for all RFs of interest in adults. Nevertheless, 10 countries (10/34, 29%) reported surveys that met these requirements for all risk factors except salt/sodium intake.

Furthermore, 15% to 35% of countries reported not having conducted surveys for the leading RFs in adults or having last conducted a survey more than 5 years ago, as shown by the red category of *Figures 12-a and 12-b.* Again, salt/sodium intake was particularly neglected, with 21 countries (21/34, 62%) falling in the red category for this RF.

FIGURE 12

Percentage of countries that reported conducting population surveys on RFs in adults, by category*

12-a. Surveys on RFs that do not require physical or biochemical measurements



Note: The sum of percentages may not be 100% due to rounding.

12-b. Surveys on RFs that require physical or biochemical measurements

* For a detailed description of the categories, see Table 6 and the technical note in Annex 4.
Note: The sum of percentages may not be 100% due to rounding.

Disaggregating these data by country income level reveals a clear association between the proportion of surveys classified under the green category (i.e., meeting all of the necessary attributes for NCD surveillance) and income category *(Figure 13)*. The exception was surveys on salt/sodium intake, which were consistently poorly represented in the green category across all country income levels.

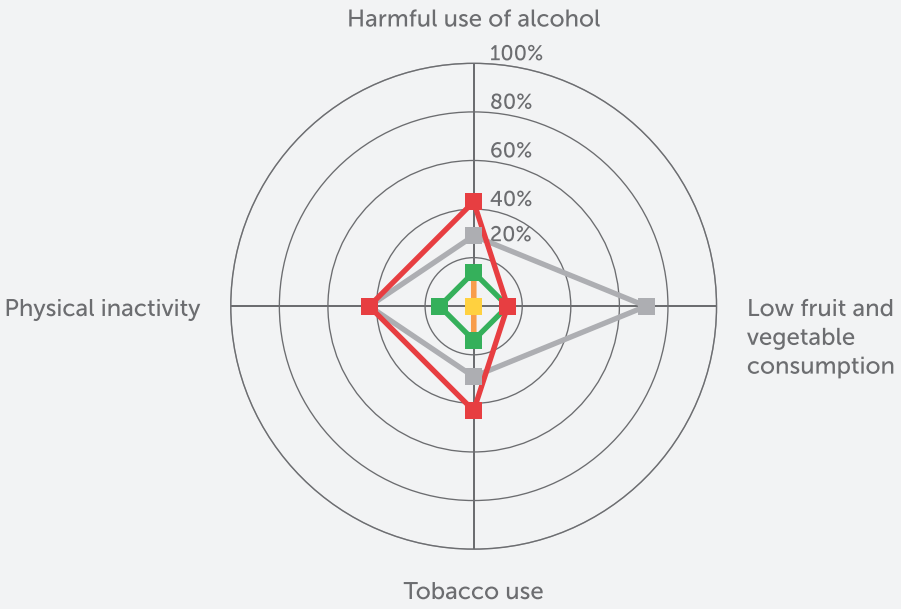
Progress indicator number 3, to be reported to the United Nations General Assembly *(12)*, is based on information collected by the Country Capacity Survey on the number of Member States that carry out a STEPS survey or similar comprehensive health survey every 5 years. Overall, **nine countries (9/34, 26%)** achieved this indicator **fully** by having conducted recent (2010 or later) and periodic (at least every 5 years) population surveys of adults for the following risk factors: harmful alcohol use, physical inactivity, tobacco use, high blood glucose/diabetes, high blood pressure/hypertension, overweight and obesity, and salt/sodium intake. Furthermore, **19 countries (19/34, 56%)** achieved this indicator **partially** by having conducted such surveys for at least three of the seven risk factors, or by conducting their latest surveys more than 5 years but less than 10 years ago. *Annex 5* provides results for these indicators for each country *(Figure A-2 and Table A-4)*.

FIGURE 13

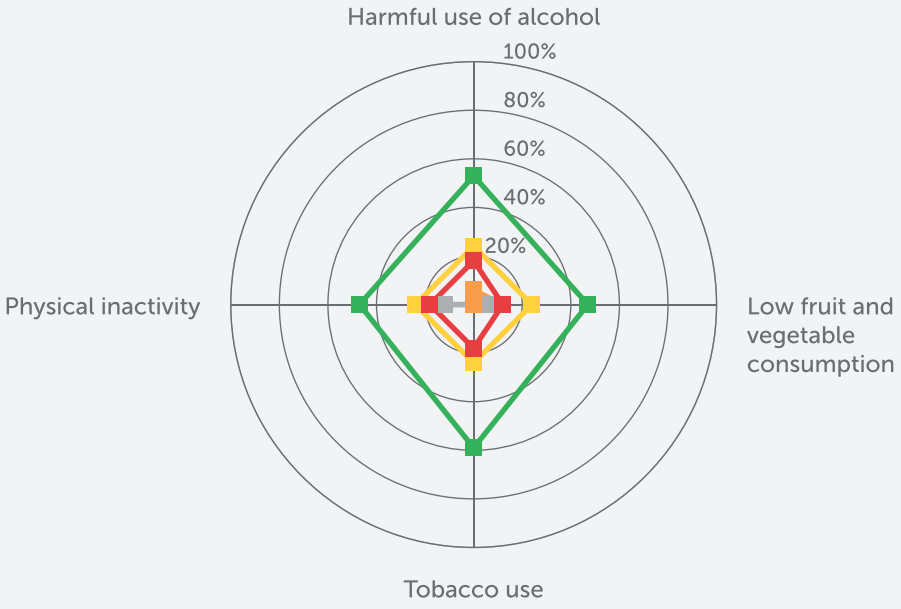
Percentage of countries that reported conducting population surveys of leading RFs in adults, for each category*, by income level**

13-a Surveys on RFs that do not require physical or biochemical measurements

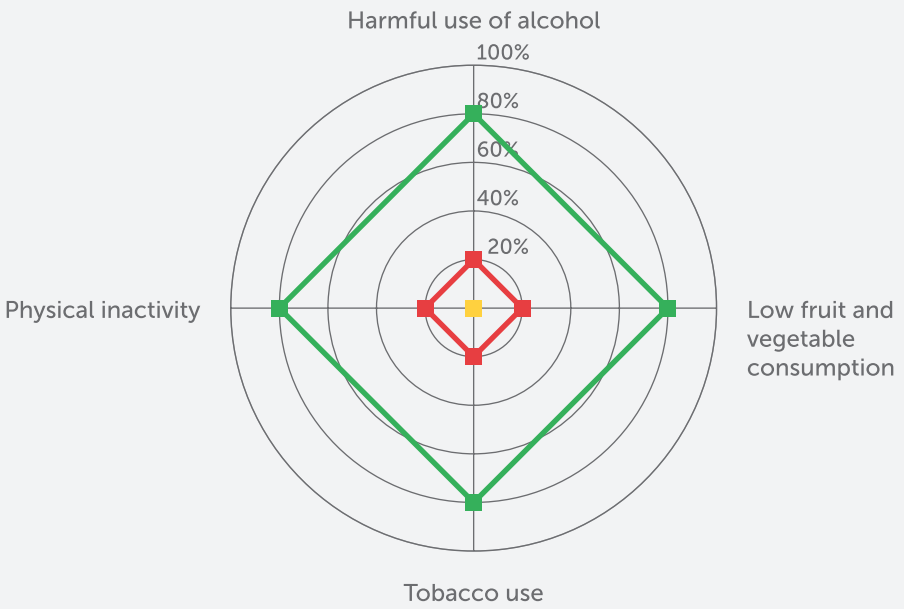
Low and lower-middle income (n=7 countries)



Upper-middle income (n=17 countries)

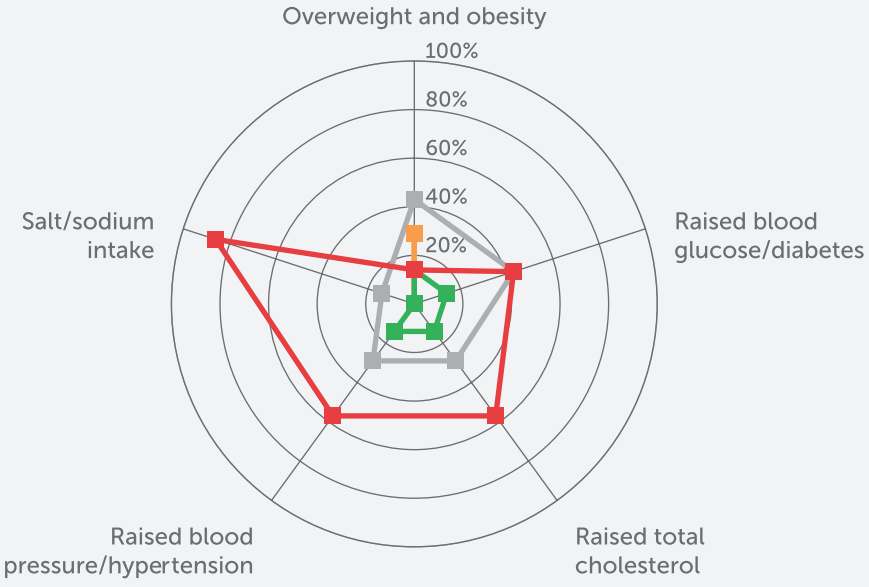


High income (n=10 countries)

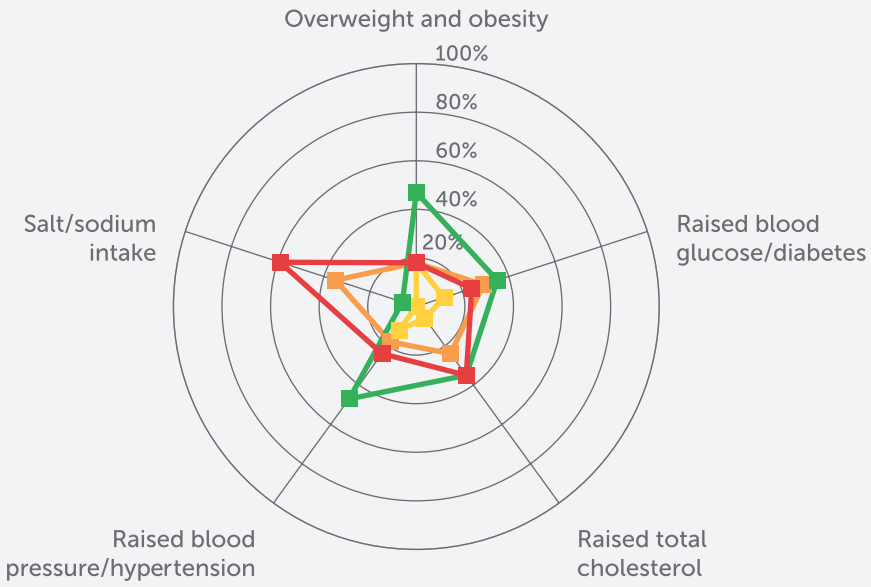


13-b. Surveys on RFs that do require physical or biochemical measurements

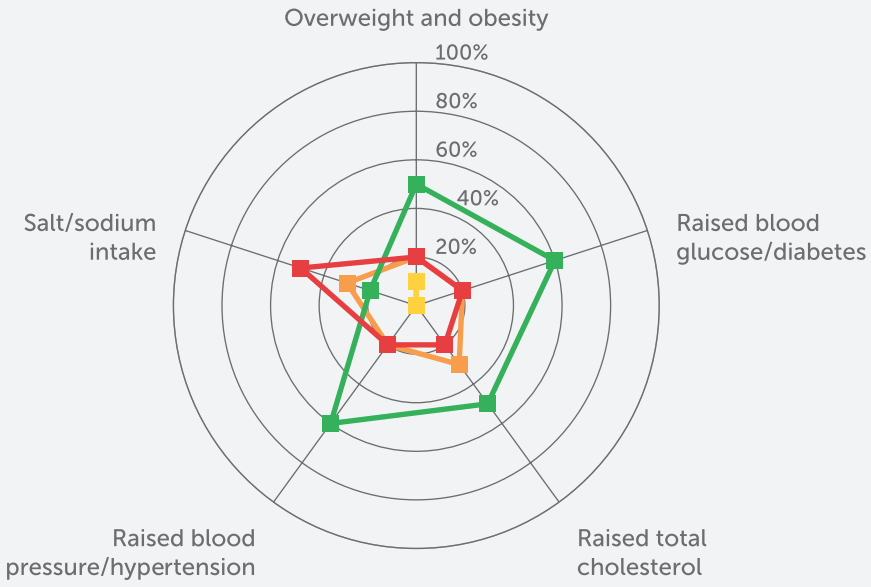
Low and lower-middle income (n=7 countries)



Upper-middle income (n=17 countries)



High income (n=10 countries)



* For a detailed description of the categories, see Table 6 and the technical note in Annex 4.
** A list of countries classified by World Bank income level is provided in Table 1.

3.4 HEALTH SYSTEM CAPACITY

Highlights

01

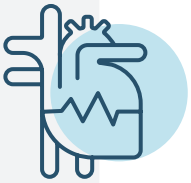
Seven countries (7/34, 21%) reported full or partial implementation of **evidence-based guidelines, protocols, or standards** for the management of the four main NCDs, and 14 countries (14/34, 41%) for at least two of the four main NCDs.

National screening programs exist in almost all countries for cervical cancer (31/34, 91%) and breast cancer (28/34, 82%), but in only about one-third of the countries for prostate cancer (12/34, 35%) and one-quarter for colon cancer (8/34, 24%). The proportion of countries that reported screening program coverage of 70% or higher was very low for all four types of cancer.

02

03

Only **four countries (4/34, 12%)** reported that **cardiovascular risk stratification** for the management of high-risk patients was available in more than 50% of primary care facilities.



Palliative care services were offered in 10 countries (10/34, 29%) at the primary care level and in nine countries (9/34, 26%) as part of home-based care, in both cases with coverage of at least 50% of patients.

04

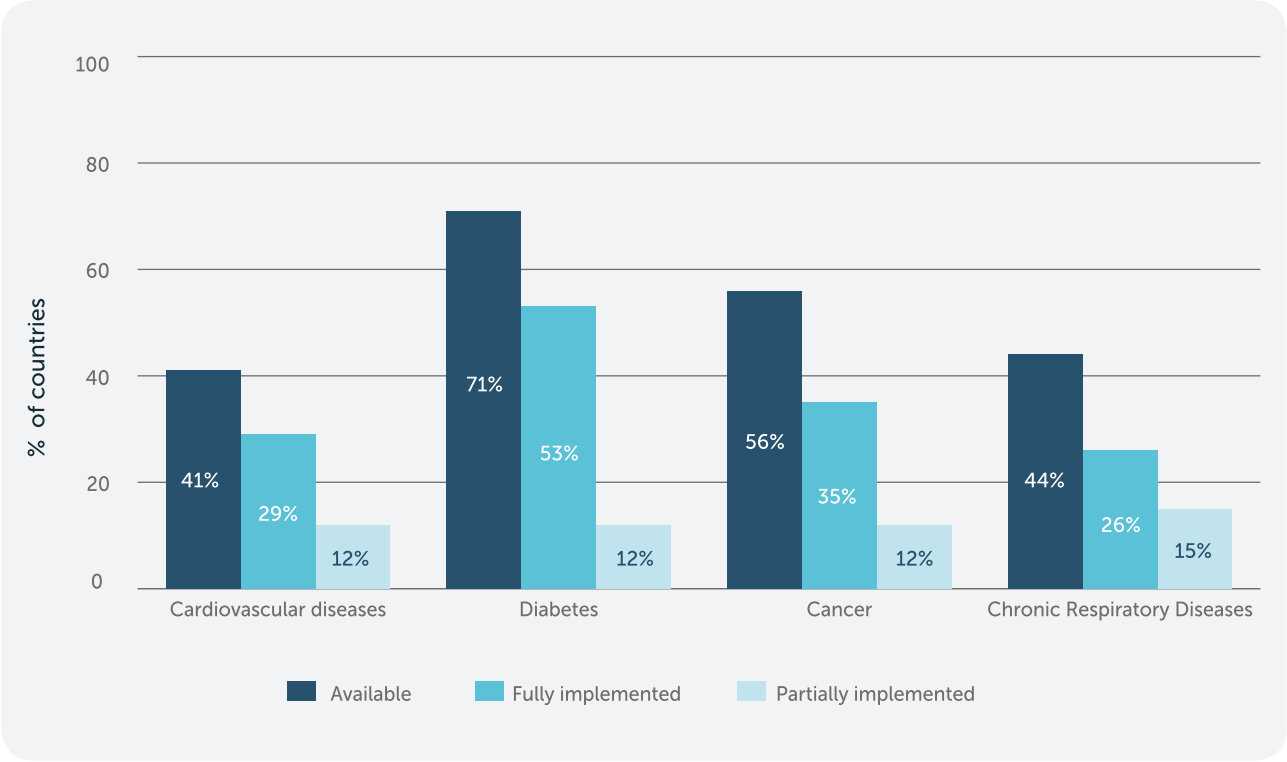
Evidence-based guidelines, protocols, and standards for the main NCDs

Evidence-based **guidelines, protocols, or standards**[14] approved by the government or competent health authorities were available for management of diabetes in 24 of 34 countries (71%) and for cancer in 19 of 34 countries (56%), while fewer than half of the countries reported having guidelines for the management of CVD (14/34, 41%) and CRD (15/34, 44%). As shown in *Figure 14*, the proportion of countries in which these guidelines are fully implemented was substantially lower: one-third or less for CRD, CVD, and DM guidelines, and slightly more than half for cancer guidelines.

14 For CVD, cancer, and CRD, all of which comprise more than one disease, the reported data refer to the availability and implementation status of guidelines, protocols, or standards for at least one such condition.

FIGURE 14

Availability and implementation status of evidence-based guidelines, protocols, and standards for the main NCDs



Progress indicator number 9 utilizes these data to inform reporting to the United Nations General Assembly on the number of Member States that have evidence-based national guidelines, protocols, or standards approved by government or competent authorities for the management (diagnosis and treatment) of the four main NCDs (CVDs, DM, cancer and CRDs) *(12)*. According to the results of the Country Capacity Survey, **seven countries (7/34, 21%)** satisfied this indicator **fully** by having partially or completely implemented national guidelines, protocols, or standards for all four NCDs, while **14 countries (14/34, 41%)** achieved it **partially** by covering at least two of the four main NCDs. *Annex 5* presents results for this indicator for each country *(Figure A-8 and Table A-7)*.

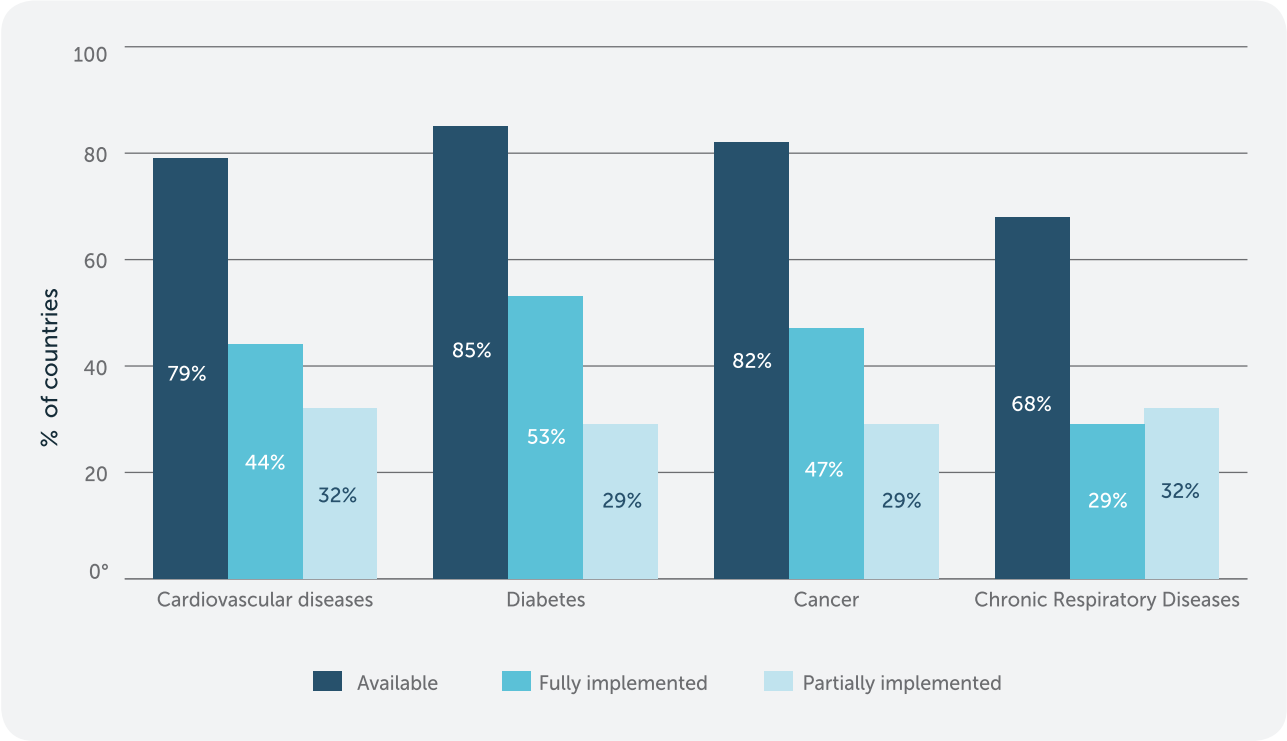
Standardized referral criteria

Most countries reported having **standardized criteria for referral**[15] of patients from primary care to higher levels of care (secondary and tertiary) for diabetes (29/34, 85%), cancer (28/34, 82%), CVDs (27/34, 79%), and, to a lesser extent, CRDs (23/34, 68%). However, these referral criteria are implemented fully in only about half of the countries for CVDs, diabetes, and cancer, and in less than one-third of the countries for CRDs *(Figure 15)*.

15 For CVD, cancer, and CRD, all of which comprise more than one disease, the reported data refer to the availability and implementation status of referral criteria for at least one such condition.

FIGURE 15

Availability and implementation status of referral criteria for the main NCDs



Primary prevention, screening, and early detection of leading types of cancer

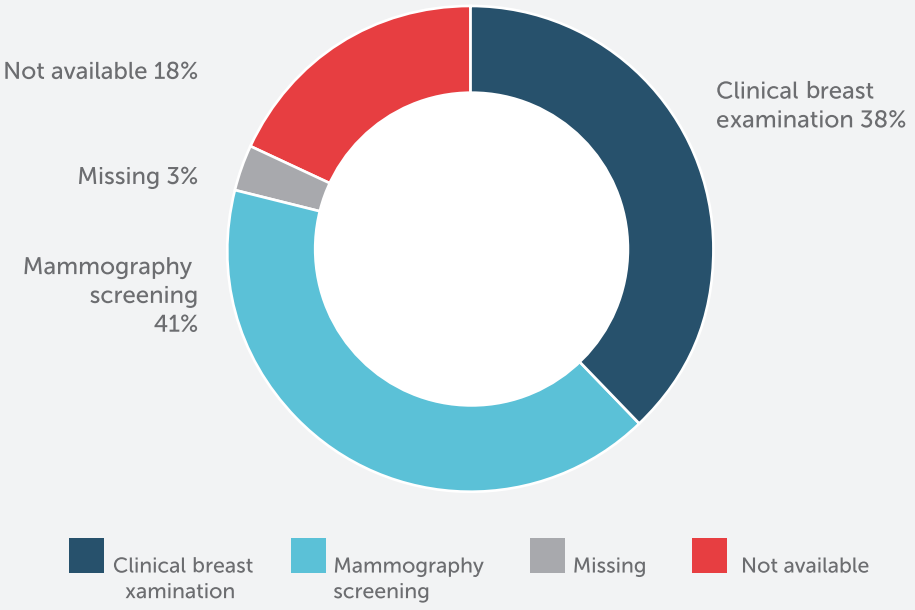
Regarding the availability of **strategies for primary prevention** of cancer, approximately half of the countries (18/34, 53%) reported having a national human papillomavirus (HPV) vaccination program, although only four (4/34, 12%) reported 70% or higher coverage with the vaccine.

Figure 16 shows the proportion of countries with **national screening programs for specific cancer types**, as well as the main screening test used. Nearly all countries reported having national screening programs for cervical cancer (31/34, 91%) and breast cancer (28/34, 82%), while only one-third reported national screening programs for prostate cancer (12/34, 35%) and only one-quarter for colon cancer (8/34, 24%). The proportion of countries with 70% or higher coverage by these programs was low for cervical cancer (6/34, 18%) and breast cancer (4/34, 12%), and even lower for colon and prostate cancer (1/34, 3%) *(Table 7)*.

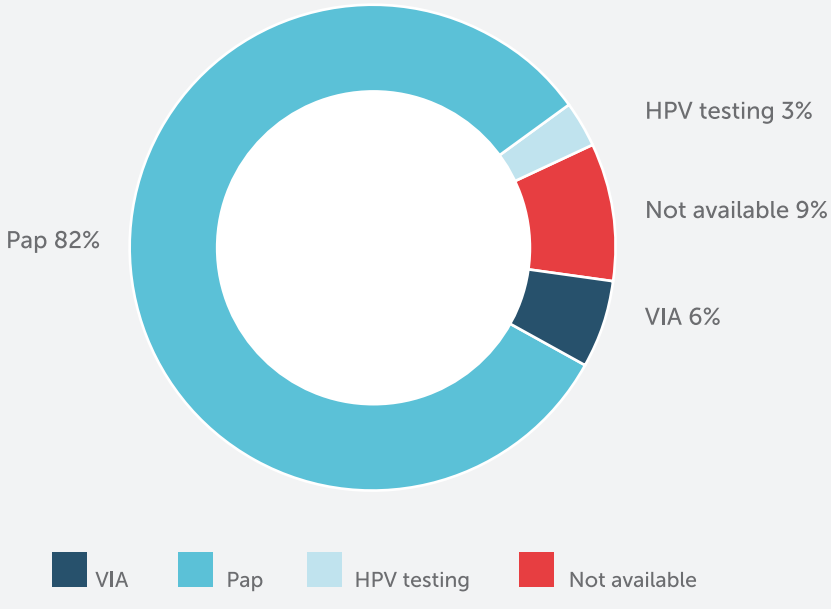
FIGURE 16

Availability of national screening programs for specific cancer types and main screening tests used

Breast cancer

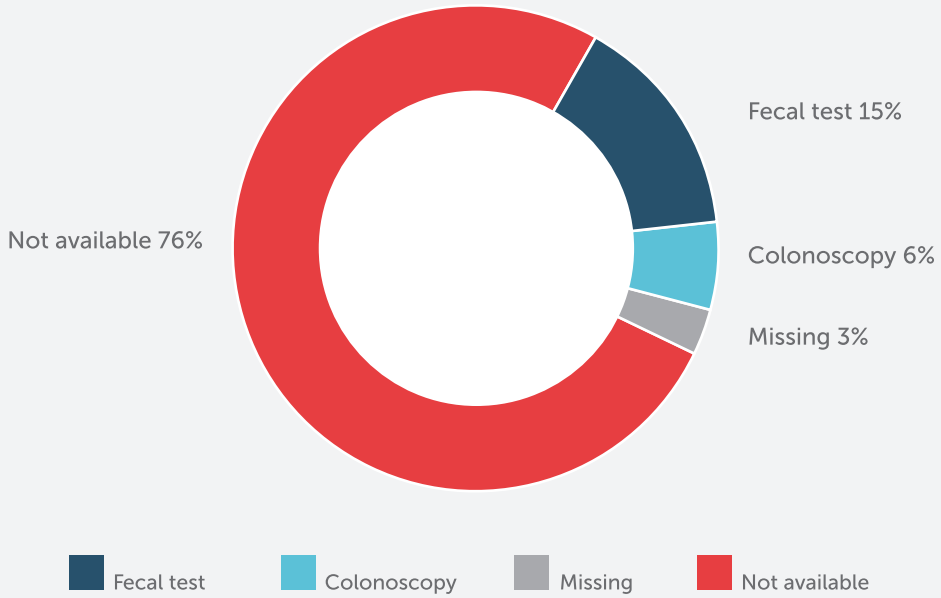


Cervical cancer

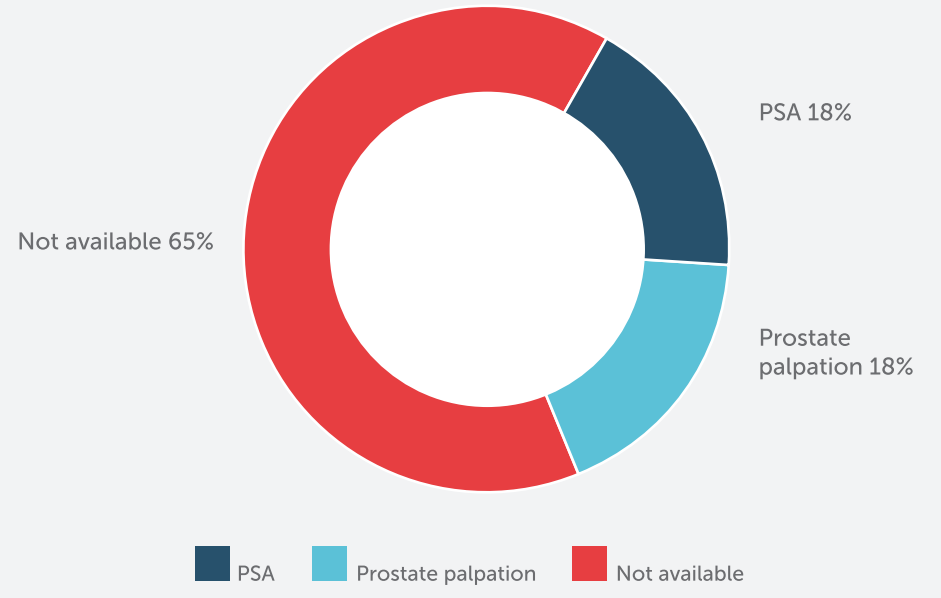


Notes: VIA: visual inspection with acetic acid; Pap: Pap smear; PSA: prostate-specific antigen; HPV: human papillomavirus.

Colon cancer



Prostate cancer



Notes: Information on availability of prostate cancer screening programmes as reported by countries in the Region. At present, WHO does not have an official position on prostate cancer screening. All cancer screening programmes should adhere to WHO guidelines on effectiveness, high-quality and safety.

TABLE 7

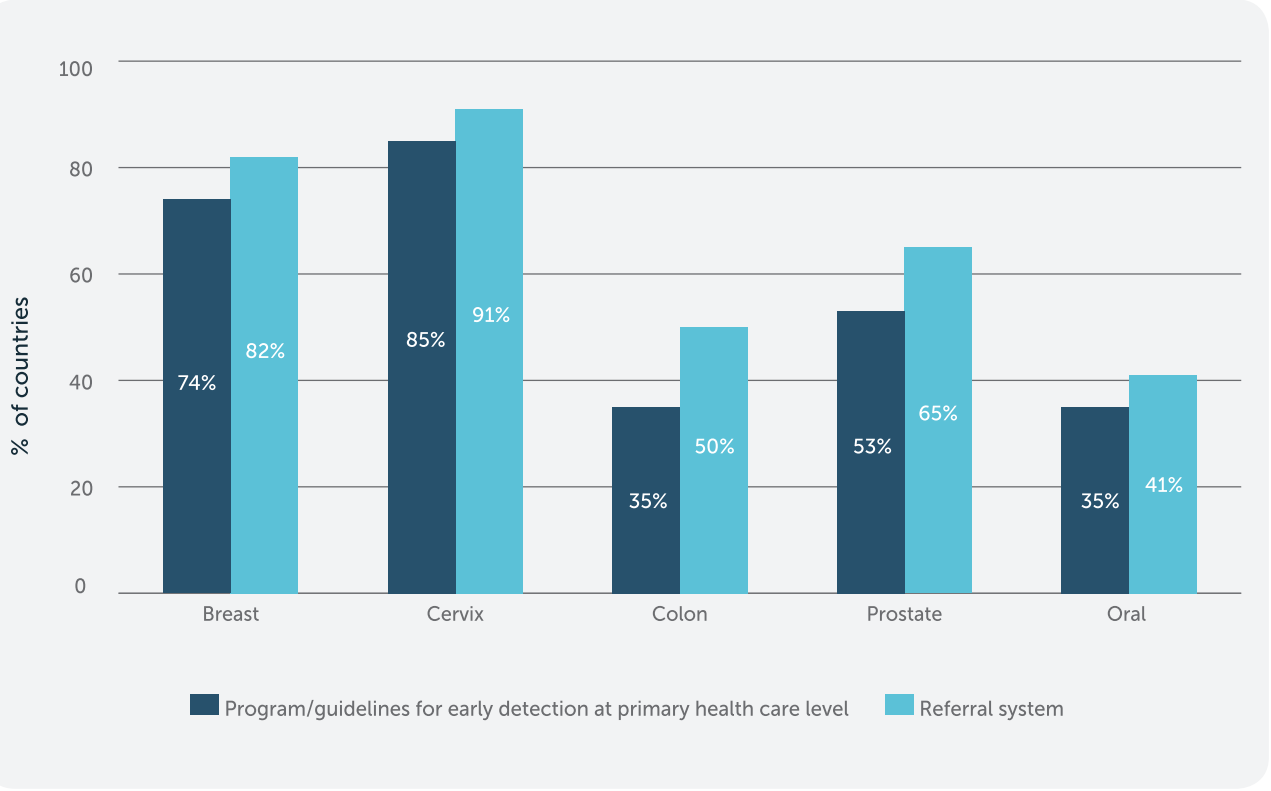
Key characteristics of national screening programs for specific cancers: program type and coverage

	Breast cancer		Cervical cancer		Colon cancer		Prostate cancer	
	Number of countries (of 34 total)	%	Number of countries (of 34 total)	%	Number of countries (of 34 total)	%	Number of countries (of 34 total)	%
National screening program	**28**	**82%**	**31**	**91%**	**8**	**24%**	**12**	**35%**
Type of program								
Organized population-based screening	9	26%	16	47%	4	12%	0	0%
Opportunistic screening	18	53%	15	44%	4	12%	12	35%
Don't know	1	3%	0	0%	0	0%	0	0%
Screening coverage								
Less than 10%	2	6%	1	3%	1	3%	2	6%
10% to 50%	11	32%	13	38%	3	9%	3	9%
More than 50% but less than 70%	3	9%	4	12%	1	3%	0	0%
70% or more	4	12%	6	18%	1	3%	1	3%
Don't know	8	24%	7	21%	2	6%	6	18%

The most commonly available **programs or guidelines for early detection** pertained to cervical cancer (29/34, 85%), breast cancer (25/34, 74%), and prostate cancer (18/34, 53%). Only about one-third of the countries reported such programs or guidelines for early detection of colon cancer (12/34, 35%) and oral cancer (12/34, 35%). A similar pattern with regard to cancer types was seen in the availability of **systems of referral** from primary care to the secondary and tertiary levels of care, although more countries reported having referral systems than early detection programs or guidelines *(Figure 17)*.

FIGURE 17

Availability of programs or guidelines for the early detection and referral of leading cancer types



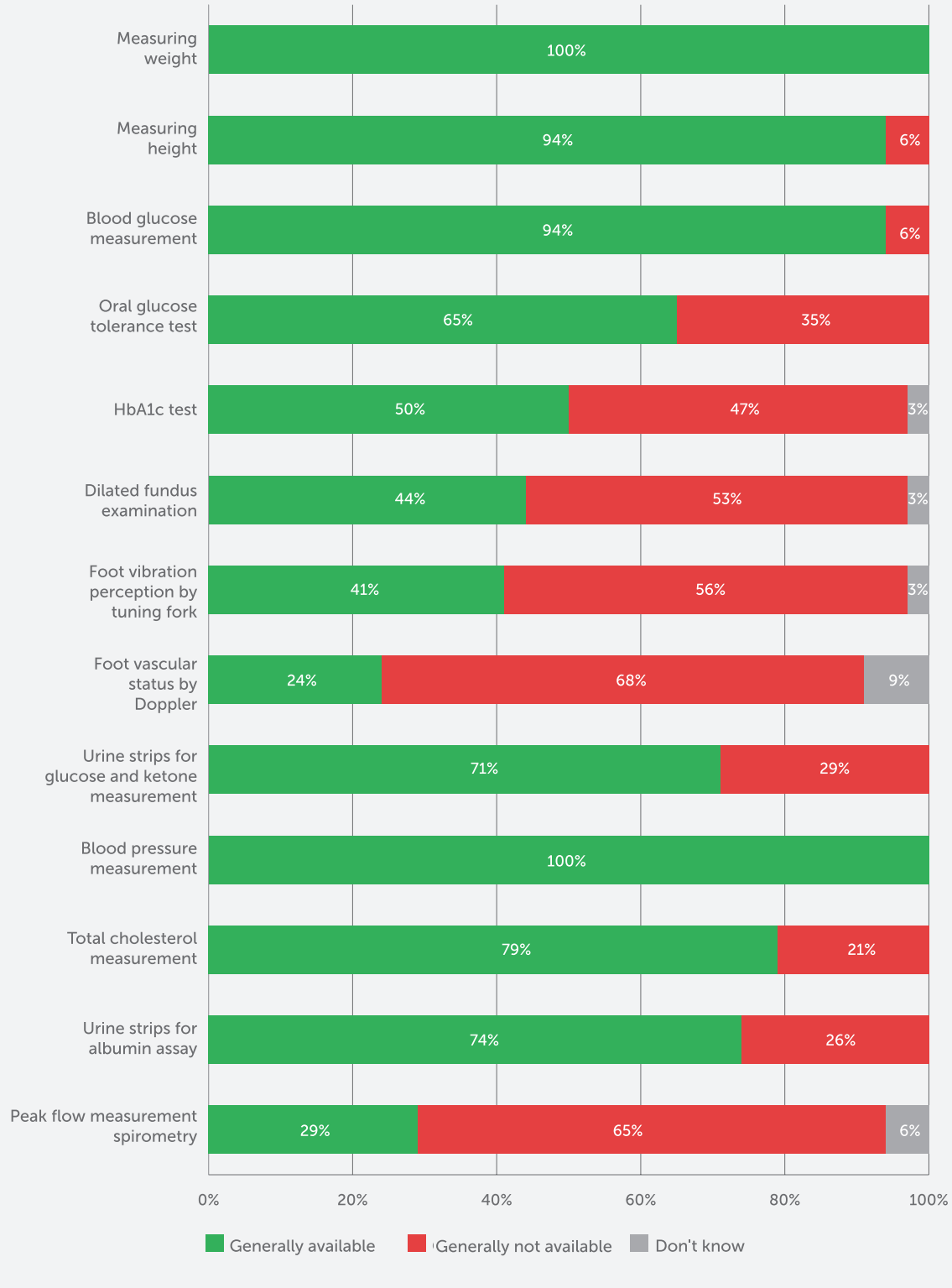
Early detection, diagnosis, and treatment of major NCDs at the primary care level

Figure 18 shows the availability of basic technologies for the early detection, diagnosis, and monitoring of major NCDs in primary care facilities in the public health sector *(Figure 18-a)* and in the private health sector *(Figure 18-b)*. Over two-thirds to nearly all countries reported that measurement of weight and height, blood pressure, blood glucose, blood cholesterol, and urine albumin are generally available in both the public and private sectors. However, more complex technologies, such as glycated hemoglobin measurement, dilated fundus examination, foot vascular status examination by Doppler ultrasound, or peak flow measurement through spirometry, were generally available at the primary care level in only one-third to one-half of the countries. Although no major differences were reported between the public and private sectors, it should be noted that respondents in 6% to 26% of the countries said they had no knowledge of the availability of certain technologies in the private health system.

FIGURE 18

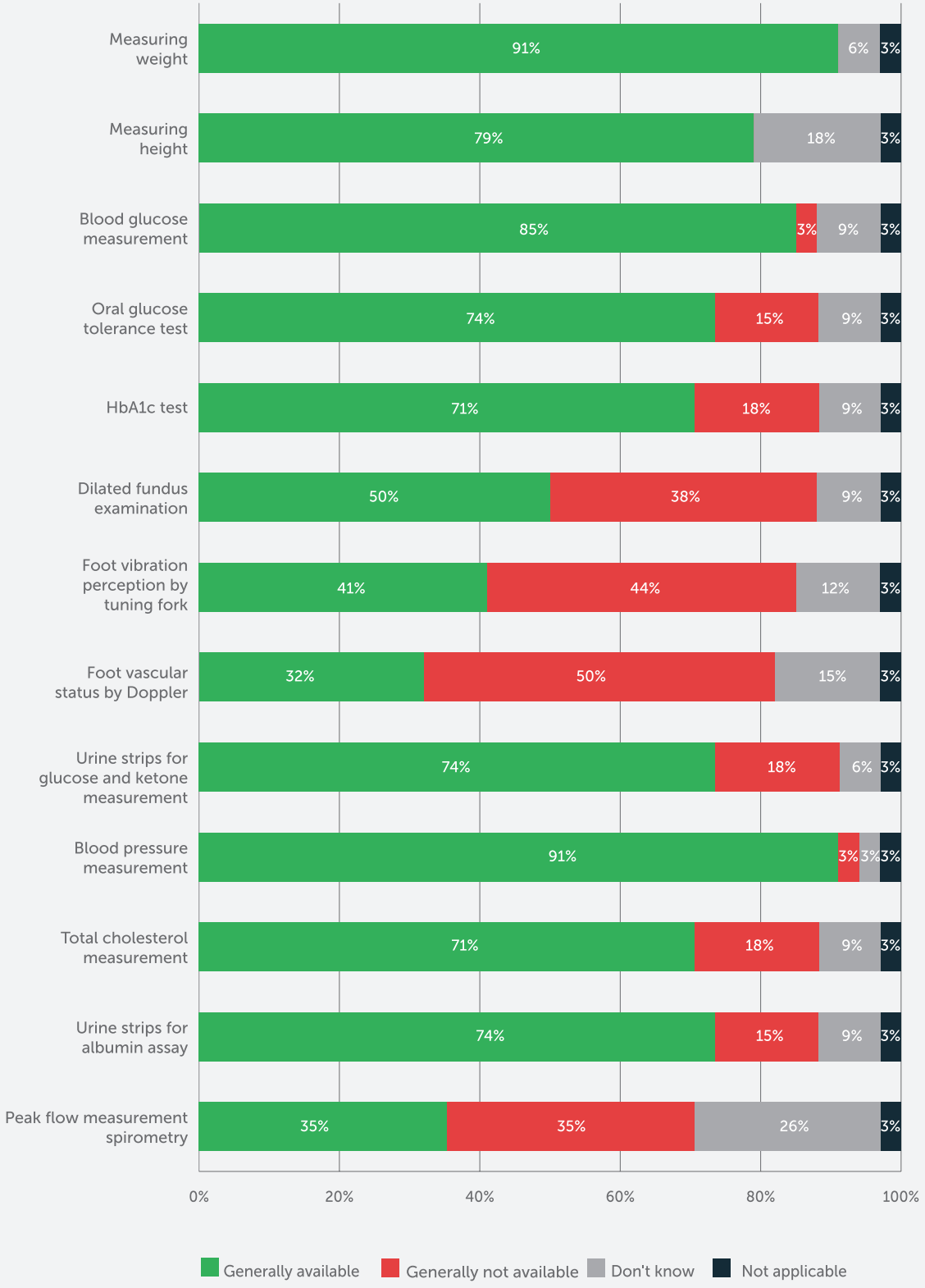
Availability of basic technologies to detect NCDs in primary care facilities in the public and private health sectors

18-a. Public health sector



Note: The sum of percentages may not be 100% due to rounding.

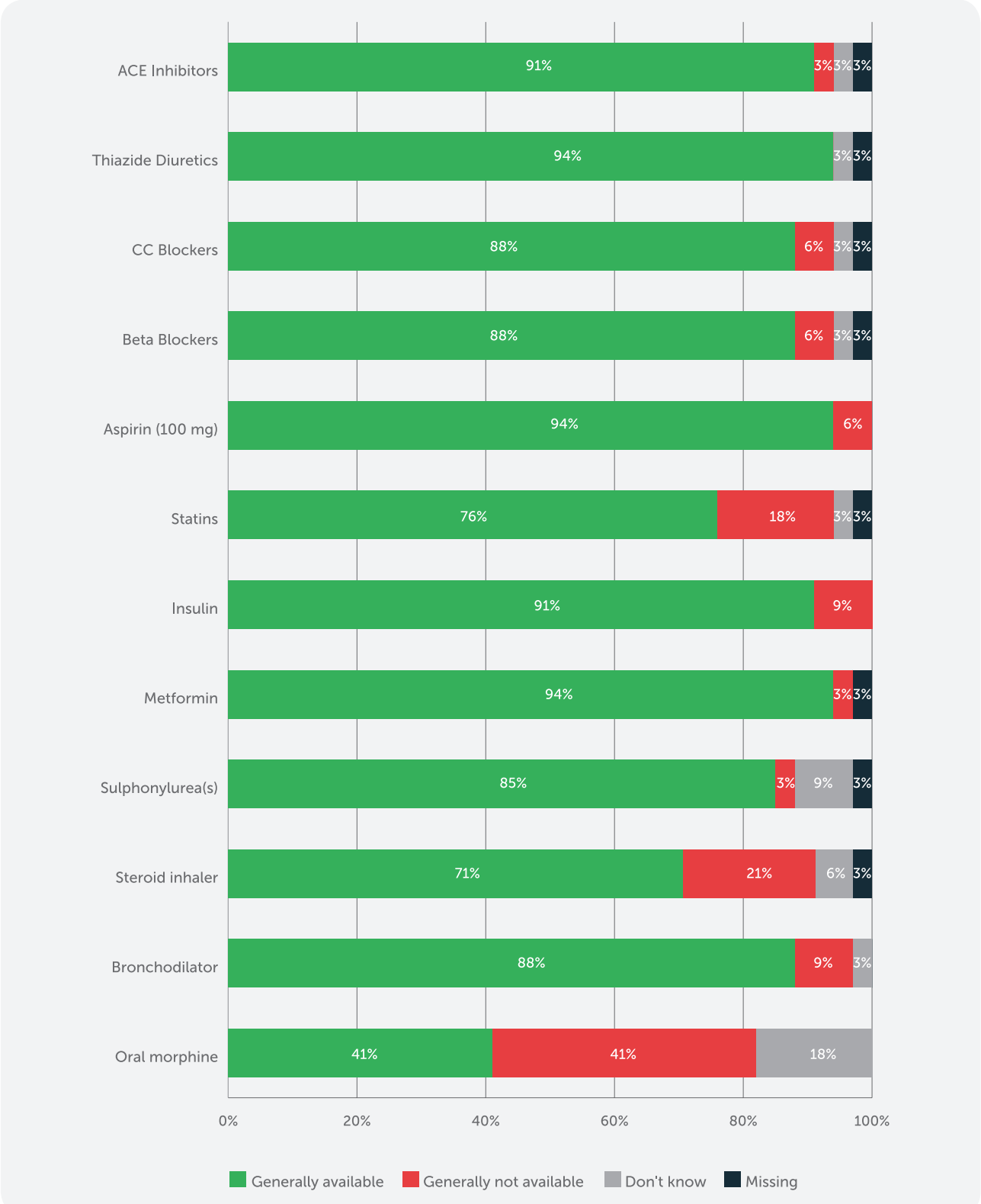
18-b. Private health sector



Notes: For the purpose of the Country Capacity Survey, "generally available" is defined as availability in at least 50% of health facilities.
HbA1c: glycated hemoglobin.
The sum of percentages may not be 100% due to rounding.

FIGURE 19

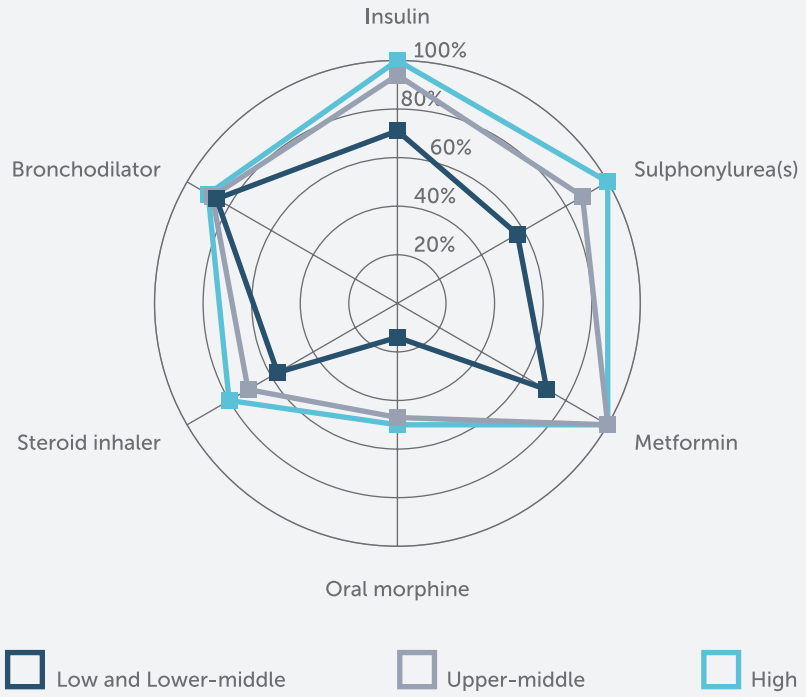
Availability of essential medicines for NCDs in primary care facilities in the public health system

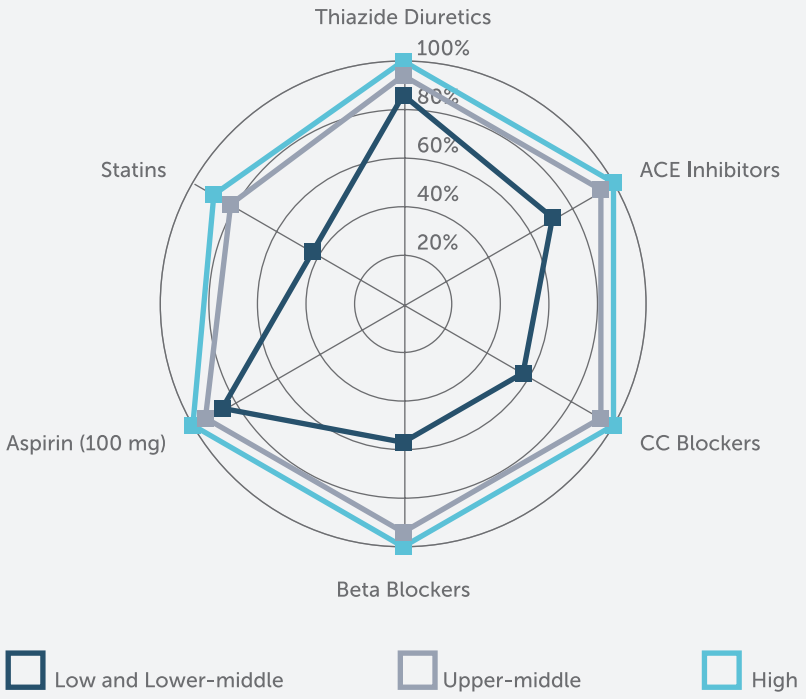


Notes: For the purpose of the Country Capacity Survey, "generally available" is defined as availability in at least 50% of pharmacies.
ACE: angiotensin-converting enzyme; CC: calcium channel.
The sum of percentages may not be 100% due to rounding.

FIGURE 20

Availability of essential medicines for NCDs in primary care facilities in the public health system, by country income level*





* A list of countries classified by World Bank income level is provided in Table 1.
Notes: For the purpose of the Country Capacity Survey, "generally available" is defined as availability in at least 50% of pharmacies.
ACE: angiotensin-converting enzyme; CC: calcium channel.

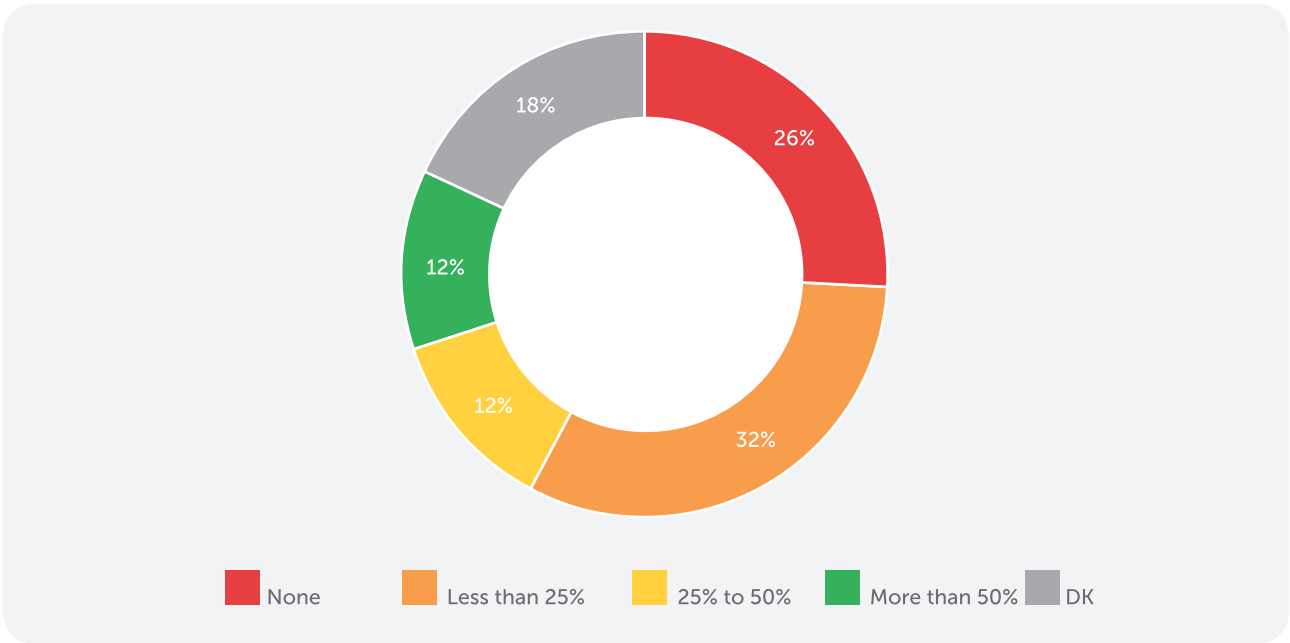
Regarding **essential medicines for the management of NCDs**, the majority of the 34 countries that answered the survey reported that insulin (91%), metformin (94%), sulphonylureas (85%), aspirin (100 mg) (94%), the main antihypertensive agents (88%-94%), and bronchodilators (88%) are generally available in at least 50% of pharmacies or primary care facilities in the public health sector. The reported availability of statins and inhaled steroids was somewhat lower (76% and 71%, respectively), while less than half of the countries (41%) indicated that oral morphine was available *(Figure 19)*. This pattern was similar regardless of income level *(Figure 20)*, although the availability of essential drugs was generally more limited in the low- and lower-middle-income countries.

Cardiovascular risk stratification in primary care facilities

Over half of the countries (19/34, 56%) reported offering **cardiovascular risk stratification** for the management of patients at high cardiovascular risk, although only four countries (4/34, 12%) said this service was available in more than 50% of primary care facilities *(Figure 21).*

FIGURE 21

Percentage of countries that offer cardiovascular risk stratification for the management of patients at high risk of heart attack or stroke



The Country Capacity Survey has been designated as a source of information for reporting on **progress indicator number 10**, which measures the number of Member States that provide drug therapy (including drugs for glycemic control) and counseling for eligible persons at high cardiovascular risk, with emphasis on interventions at the primary care level. According to the technical specifications for this indicator, only **four countries (4/34, 12%)** achieved it **fully**, with more than 50% of primary health care facilities offering cardiovascular risk stratification for the management of patients at high cardiovascular risk and with all essential drugs for NCD management and prevention (insulin, aspirin, metformin,

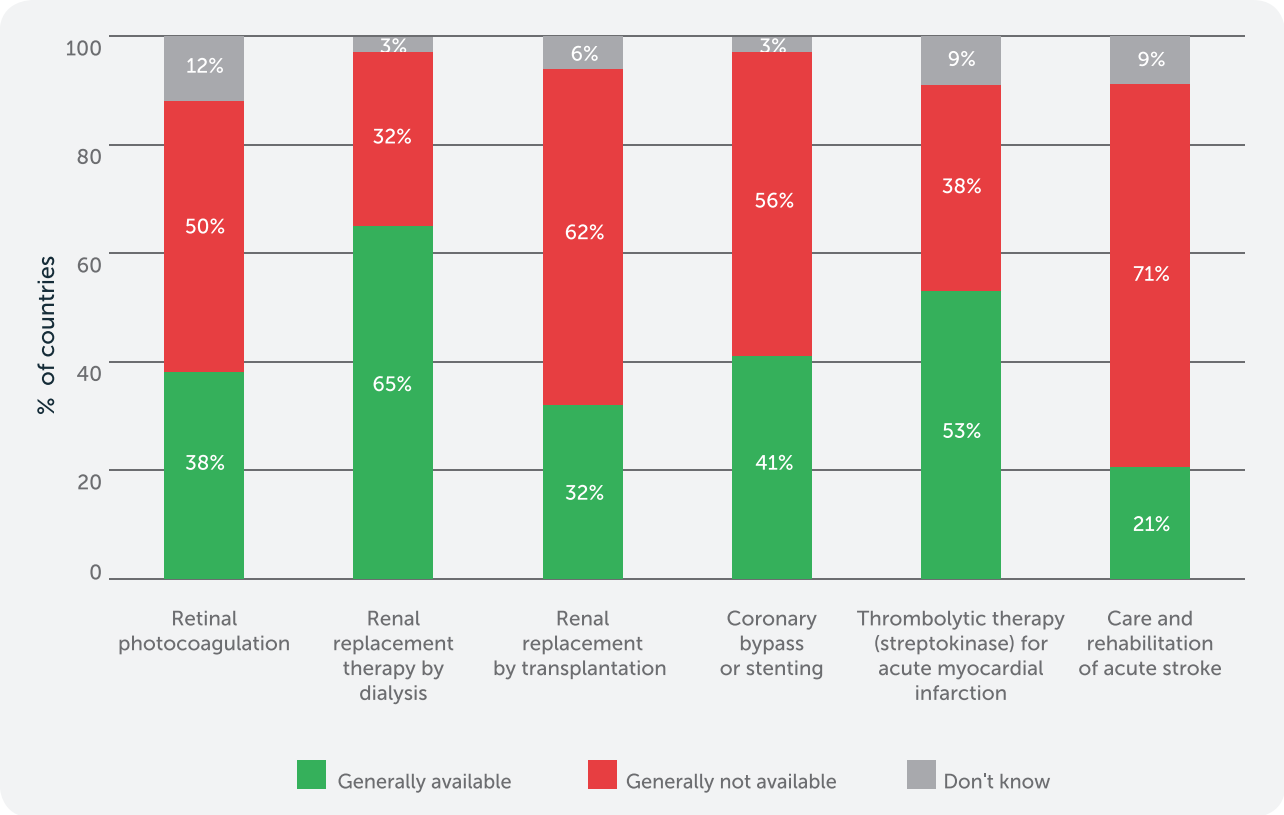
thiazide diuretics, ACE inhibitors, calcium channel blockers, statins, and sulphonylureas) being generally available at the primary care level. **Three countries (3/34, 9%)** achieved this indicator **partially** by having these essential medicines available in at least 50% of their pharmacies or primary care facilities but offering cardiovascular risk stratification in only 25% to 50% of primary care facilities. *Annex 5* shows the results for this progress indicator for each country.

Diagnosis and treatment of major NCDs at the secondary and tertiary levels of care

Figure 22 shows the availability of procedures for treating NCDs at the secondary and tertiary levels of care in public health systems. The therapeutic modalities reported as generally available by the majority of countries were renal replacement therapy by dialysis (22/34, 65%) and thrombolytic therapy for acute myocardial infarction (18/34, 53%); coronary bypass or stenting (14/34, 41%) and retinal photocoagulation (13/34, 38%) were less available. Overall, only two countries (2/34, 6%) reported that all six of the procedures listed in *Figure 22* were available in at least 50% of public health system facilities.

FIGURE 22

Availability of selected procedures for NCD treatment in the public health system

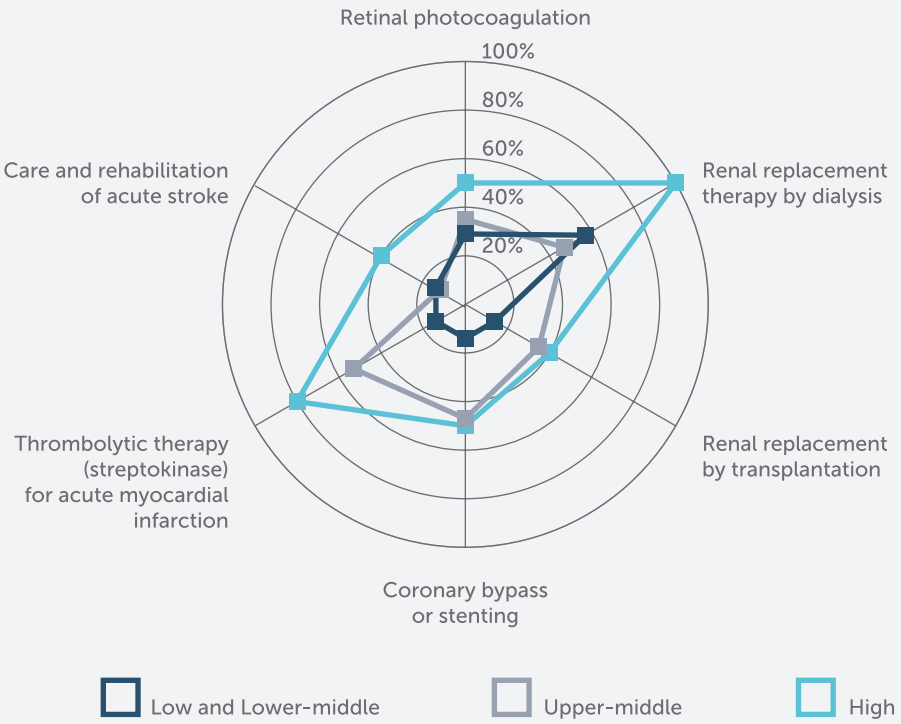


Notes: For the purpose of the Country Capacity Survey, "generally available" is defined as availability in at least 50% of health facilities. The sum of percentages may not be 100% due to rounding.

In general, there was a direct relationship between the availability of procedures for NCD treatment in the public health system and country income level *(Figure 23)*. However, the availability of certain therapeutic modalities, such as coronary revascularization (bypass or stenting), acute stroke care, and retinal photocoagulation, was relatively low even in high-income countries.

FIGURE 23

Proportion of countries where selected procedures for NCD treatment are generally available in the public health system, by country income level*



* A list of countries classified by World Bank income level is provided in Table 1.
Note: For the purpose of the Country Capacity Survey, "generally available" is defined as availability in at least 50% of health facilities.

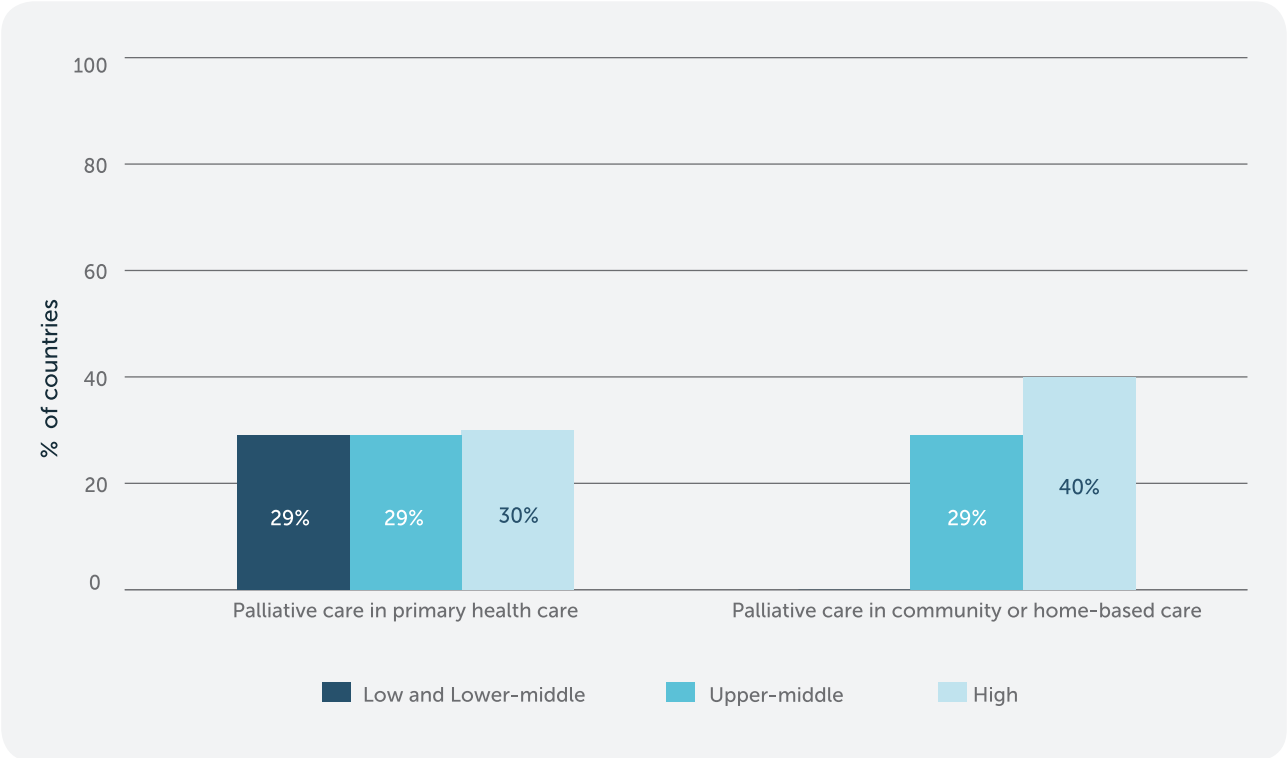
Availability of palliative care for NCD patients in the public health system

Palliative care[16] for patients with NCDs is offered in primary care facilities of the public health system in 10 countries (10/34, 29%), and nine countries (9/34, 26%) offer these services as part of home-based care. In both cases, coverage of at least 50% of patients was reported. As shown in *Figure 24*, the availability of palliative care in primary health care settings was similar regardless of country income level, while the availability of these services as part of home-based care was higher among high-income countries

16 The Country Capacity Survey did not specifically evaluate the availability and use of opioids as part of palliative care services provided through the public health system

FIGURE 24

Availability of palliative care for NCD patients in the public health system, by country income level*



* A list of countries classified by World Bank income level is provided in Table 1.

4.

DISCUSSION

The section below discusses the key findings of the 2015 Country Capacity Survey, organized around its four modules and taking into account the time-bound commitments made by the Member States in the outcome document of the second High-level Meeting of the United Nations General Assembly *(9)*.

Public health infrastructure, partnerships, and multisectoral collaboration for NCDs and their RFs

The results of the 2015 Country Capacity Survey provide evidence of at least a **minimum operational infrastructure** in most countries, regardless of income level. Approximately two-thirds of the 34 Member States that completed the questionnaire reported having a unit, branch, or department for NCDs that is staffed by at least one full-time professional, as well as funding for the core activities or functions needed to address these diseases (primary prevention, health promotion, early detection and screening, treatment, surveillance, monitoring, and evaluation). Although these results seem to point in the right direction, they do not reveal whether the reported financial and human resources are appropriate or sufficient to cope with the burden of NCDs and their RFs in each country. Indeed, many countries of the Region still tend to prioritize and focus their resources on communicable diseases and maternal and child health, especially emerging diseases such as dengue, chikungunya, and Zika, which means that building a sustainable infrastructure consistent with the magnitude of the NCD and RF problem continues to be a challenge *(20)*.

The majority of the countries reported that **the main sources of funding** for NCDs were general government revenues and health insurance (the first and second most important sources, respectively), while earmarked taxes ranked third or lower in terms of importance. These results suggest there is some leeway to increase mobilization of funds through fiscal policies. Such a strategy has been proposed in various venues as a funding mechanism for development *(21)*, as a way to eliminate out-of-pocket payments to health services *(22)*, and as a recommendation within the WHO Framework Convention on Tobacco Control (FCTC) *(23)* and the guidelines for implementation of its Article 6 *(24)*.

Fiscal interventions not only represent a potential source of funding but also constitute one of the most effective strategies for reducing consumption of products that have a negative impact on population health, such as tobacco, alcohol, sugar-sweetened beverages and ultra-processed foods *(2, 25–27)*. In fact, excise taxes on tobacco and alcohol are among the so-called "best buys," or highly cost-effective interventions recommended by WHO to address NCDs and their RFs *(3)*. To achieve the goal of reducing consumption of these products and consequently mitigate the associated morbidity and mortality burden, taxes must be levied to make products relatively more expensive than other products on the market. Such taxes must also be adjusted periodically to account for inflation and income growth *(2, 25–28)*.

Most countries reported taxing tobacco (91%) and alcohol (85%), while a smaller proportion of countries also taxed other products such as sugar-sweetened beverages (21%), or foods high in fat, sugar, or salt (12%). However, it should be noted that although the survey results show that while these taxes exist, they do not provide any information about the type of taxation (excise tax, value-added tax, sales tax, etc.), the proportion of the product's price represented by the tax, or whether these taxes will be

adjusted for inflation, among other practices to ensure that taxation contributes to public health targets *(2, 25–28)*.

In the specific case of **tobacco taxes**, one of the progress indicators established by the WHO that reports on the Global Tobacco Epidemic is the proportion of the final consumer sale price of the top-selling tobacco brand represented by the tax in a given country, with the highest level of this indicator being >75%. Thus, although 31 of the 34 Member States that completed the Country Capacity Survey reported having taxes on tobacco (excise and non-excise), according to the data from the 2015 WHO Report on the Global Tobacco Epidemic *(14)*, only one country in the region (Chile) achieved the highest level of application of this indicator, with a tax that represents 80% of the final sales price of the top-selling brand. Thirteen other countries (Argentina, Brazil, Canada, Costa Rica, the Dominican Republic, Ecuador, El Salvador, Mexico, Panama, Saint Lucia, Suriname, Uruguay and Venezuela) levy taxes that account for 51% to 75% of the final sales price, while the remaining countries apply taxes that represent 50% or less of the final price of tobacco products.

With regard to **alcohol**, even though 29 of the 34 countries reported taxes on alcohol, it is not known whether these taxation schemes seek to limit the availability of alcohol and thus discourage its consumption. For example, data from the 2012 WHO Global Status Report on Alcohol and Health *(29)* show that only seven countries adjust their taxes on alcoholic beverages according to inflation. Furthermore, the WHO Global Strategy to Reduce Harmful Use of Alcohol *(25)* recommends combining taxation with other pricing policies, such as setting minimum prices or banning volume discounts. Without such supplemental restrictions, the alcohol industry can compensate for the tax burden by offering promotions *(25, 29)*.

In light of these results, there is a clear need for continued enhancement of regulatory capacity in the countries of the Region in order to establish fiscal policies on tobacco and alcohol that follow the recommendations of the WHO FCTC *(23)*, the Global Strategy to Reduce Harmful Use of Alcohol *(25)*, and the "best buys" of the global *(6)* and regional *(7)* action plans, so that the desired impact on public health can be achieved. These efforts should be supplemented by strategies to end the illicit trade of tobacco products *(30)* and alcohol *(25)*.

The results of the Country Capacity Survey show that seven countries have taxes on sugar-sweetened beverages, while four countries levy taxes on foods high in fat, sugar or salt. However, to the best of our knowledge only Barbados, Dominica, and Mexico have implemented these fiscal measures as a public health intervention to address the obesity epidemic. In Mexico, this measure was introduced in January 2014 and was accompanied by a major social awareness campaign. It consisted of a specific excise tax of 1 peso per liter on sugar-sweetened beverages and an ad valorem tax of 8% on a list of nonessential foods with high caloric content. An independent evaluation found that the tax has led to an average reduction of 6% in the consumption of taxed beverages and a 4% increase in consumption of untaxed beverages, mainly bottled water, during its first year of implementation. These effects are greater still in households of lower socioeconomic status *(31)*. It should be noted that some countries of the Region taxed foods with high caloric content and low nutritional value as part of fiscal reforms designed to increase government income, i.e., without a public health objective. Nevertheless, there is a clear mandate for the implementation of fiscal regulations and measures as cost-effective means to reduce consumption of these products, in order to curb the rapid rise of the obesity epidemic and prevent NCDs. This mandate is set forth both in the Political Declaration of the High-level Meeting of the UN General Assembly on the Prevention and Control of NCDs *(5)* and in several global and regional strategies of WHO *(32)* and PAHO *(26)*.

Finally, the Country Capacity Survey revealed that only nine countries have a dedicated, **nationwide multisectoral commission, agency, or mechanism** to oversee NCD engagement, policy coherence, and

accountability in sectors other than health. Any effective approach to combat NCDs and their RFs requires multisectoral strategies and a whole-of-government, whole-of-society, and health-in-all-policies approach, as recognized in the Political Declaration of the High-level Meeting of the UN General Assembly *(5)* and in global *(6)* and regional *(7)* action plans. Such efforts are especially important in view of the new 2030 Agenda for Sustainable Development and the SDG-3 on health and well-being, which, for the first time, includes specific targets related to NCDs and their RFs *(10)*. In this context, the results of the Country Capacity Survey clearly highlight priorities for work in the Region and can serve as a starting point to identify successful experiences that can be replicated in other countries.

Status of policies, strategies, and action plans relevant to NCDs and their RFs

The Country Capacity Survey confirms that progress has been made in the Region in terms of **policies, strategies, and action plans** for the prevention and control of NCDs and their RFs. NCDs are included in the **national health plans** of approximately two-thirds of all countries in the Region and have been integrated into the **national development agenda** of almost half the countries, thus improving the position of these issues within the broader policy framework. The ongoing incorporation of NCDs and their RFs into development plans is of particular importance in the context of the 2030 Agenda for Sustainable Development *(10)*, and it signals recognition of the impact of these diseases and their RFs on economic and social development *(10, 33)*.

A total of 20 countries reported having **operational, integrated multisectoral policies, strategies, or action plans** for NCDs, 17 of which address the four principal NCDs and related RFs. Approximately half of these policies, strategies, or action plans were implemented in 2013 or later, which demonstrates rapid progress in the Region, consistent with the Political Declaration of the High-level Meeting of the UN General Assembly in 2011 *(5)* and the consequent approval of the Global Monitoring Framework *(8)* and the global *(6)* and regional *(7)* action plans in 2013. Although these results are encouraging, it must be noted that half of the countries that completed the survey still have not met the **time-bound commitments** which proposes, *"**By 2015**, consider developing or strengthening national multisectoral policies and plans"* on NCDs *(9)*. Furthermore, the Country Capacity Survey does not provide detailed information on the scope or implementation status of the reported policies, strategies or action plans. By way of an example, only seven of the 20 countries that reported having operational, integrated multisectoral policies, strategies, or action plans also reported not having an operational **nationwide multisectoral commission,** agency or mechanism for NCDs. Thus, the results indicate that although the importance of multisectoral work in addressing NCDs and their RFs is reflected in policies, plans, and strategies, the availability of formal entities to operationalize this approach remains limited.

Likewise, although 20 countries (20/34, 59%) have specific policies, strategies, or action plans for the reduction of tobacco use and 19 countries (19/34, 56%) reported addressing this issue within an integrated NCD policy, strategy, or action plan, only four countries have implemented three of the four "best buys" for tobacco control at the highest level of achievement as defined by WHO[17]. As a result, expanding the adoption and implementation of national laws consistent with the mandates and guidelines of the WHO FCTC remains a priority in order to allow full and coordinated implementation of all its measures

17 The highest level of achievement of the "best buys" for tobacco control is defined by WHO as follows *(2)*:

- All indoor public places and workplaces and public transport are completely smoke-free (or at least 90% of the population is covered by subnational legislation).
- Packaging contains a large warning (average of at least 50% coverage on the front and back of the package) with all appropriate characteristics.
- All forms of direct and indirect advertising are banned.
- Taxes are more than 75% of the retail sale price.

and ensure a positive impact on public health *(2)*. These actions are particularly important in light of the global target calling for a 30% relative reduction in the prevalence of tobacco use in persons aged 15 years or older, which in turn is essential to achieving the global target of a 25% reduction in NCD-related premature mortality by 2025 *(8)*. It has been estimated that a more ambitious reduction in the prevalence of tobacco use (50%) would be the most effective way to achieve the goal of reducing premature mortality attributable to NCDs in the Region of the Americas, in both men and women *(34)*. This finding highlights the urgent need to advance toward full implementation of the FCTC.

Regarding the harmful use of alcohol, the *Global Strategy to Reduce Harmful Use of Alcohol* *(25)* establishes 10 areas of political action[18]. Among them are three highly cost-effective interventions, or "best buys," that have been promoted to reduce the impact of alcohol use on NCDs: reduce the physical availability of alcohol, restrict all forms of advertising (direct and indirect), and implement pricing policies *(3)*. PAHO/WHO proposes that implementation of the three "best buys" be prioritized, as these highly cost-effective interventions have a greater potential for impact than the other seven policy areas, especially if implemented together. For example, policies and actions to prevent drunk driving help reduce traffic fatalities, but alcohol pricing policies and measures to reduce the physical availability of alcohol enhance this impact by affecting other causes of mortality and morbidity associated with alcohol use (36). Another example is the restriction on all forms of advertising and sponsorship, which has a much greater impact than health education initiatives, as the latter must compete with the massive promotion of alcoholic beverages intake in the media *(36)*. Nevertheless, the other seven policy areas are important within the context of a comprehensive policy for the reduction of harmful alcohol use *(25)*.

The Country Capacity Survey includes a series of questions about the availability of **policies on diet and physical activity**, which include three WHO "best buys" and other policy options proposed in the global *(6)* and regional *(7)* action plans.

The survey revealed that approximately two-thirds of the countries implemented a **national awareness program on diet** (24/34, 71%) **or physical activity** (21/34, 62%) in the last 5 years. However, a considerably lower proportion of countries reported implementation of more effective interventions involving legislation or regulation. Fewer than one-third of the countries have **policies to reduce population salt consumption** (11/34, 32%), and only one country reported having legislation for product reformulation by industry across the food supply. Furthermore, although about one-fourth of all countries reported **policies to limit saturated fat and virtually eliminate trans fats** (9/34, 26%), only six countries indicated that these policies were backed by governmental legislation.

Similarly, a very small proportion of countries (6/34, 18%) reported having policies to **reduce the impact on children of marketing of foods and non-alcoholic beverages with high caloric content and low nutritional value.** The percentage of countries in which these policies consisted of actual legislation was even lower (4/34, 12%). Furthermore, of the 20 countries (20/34, 59%) with regulations on nutritional content in **processed food labeling**, only two countries (Chile and Ecuador) have standards that allow rapid, easy identification of products with high caloric content and low nutritional value. Both of these measures are essential because they protect children from the persuasive power of advertising messages (to which they are especially susceptible) and they promote healthy choices by providing information about the energy content and nutritional value of food. Those measures are recommended by the PAHO *Plan of Action for the Prevention of Obe-*

18 *The Global Strategy to Reduce the Harmful Use of Alcohol* includes 10 recommended target areas for policy action: leadership, awareness, and commitment; health services' response; community action; drunk-driving policies and countermeasures; availability of alcohol; marketing of alcoholic beverages; pricing policies; reducing the negative consequences of drinking and alcohol intoxication; reducing the public health impact of illicit alcohol and informally produced alcohol; and monitoring and surveillance *(25)*.

sity in Children and Adolescents (26) and are among the policy options recommended by the global *(6)* and regional *(7)* plans of action, which means there is a clear mandate for their implementation.

These findings, along with the need to strengthen fiscal policies, underscore the importance of boosting the regulatory capacity of the Member States as an essential public health function for addressing NCDs and their RFs. They also demonstrate the importance of emphasizing fiscal policy-making and regulatory mechanisms in contrast to voluntary approaches. The latter have no proven impact on priority problems such as childhood obesity *(26)* and are more susceptible to interference from the private sector which acts to weaken, delay, or prevent implementation of the most effective measures. These ideas underpinned the process that led to negotiation of the WHO FCTC as an international legal instrument to tackle the smoking epidemic.

To support these efforts, PAHO has launched the REGULA Initiative, which is designed to strengthen the institutional capacity of health authorities in the Member States to regulate risk factors *(27)*. In addition, tools are available to facilitate these efforts at the country level, such as the *Manual for Developing Tobacco Control Legislation in the Region of the Americas (37)*, the *WHO Technical Manual on Tobacco Tax Administration (28)*, the WHO *(38)* and PAHO *(39)* recommendations on regulating the marketing of foods and non-alcoholic beverages to children, and the PAHO Nutrient Profile Model, which is designed to facilitate the identification of products that should be subject to regulation *(40)*.

Health information systems, surveillance, and surveys for NCDs and their RFs

The Political Declaration of the High-level Meeting of the United Nations held in 2011 *(5)* and subsequent resolutions established a clear mandate for surveillance of NCDs and their RFs as a core public health function. In this regard, the nine voluntary goals and 25 indicators of the WHO Global Monitoring Framework *(8)* and the progress indicators developed to inform reporting to the United Nations General Assembly *(12)* are especially noteworthy. The framework and the establishment of time-bound reporting commitments constitute a road map for strengthening surveillance at the country level and provide a mechanism to ensure accountability. They will be reinforced by the development of a monitoring framework for the SDGs, which for the first time include a goal and targets related to NCDs and their RFs *(10).*

As one of the four time-bound commitments adopted in the outcome document of the second meeting of the United Nations General Assembly in 2014 *(9)*, the countries pledged to establish **national targets and indicators** by 2015, taking into account the nine voluntary goals and 25 indicators of the WHO Global Monitoring Framework. According to the results of the Country Capacity Survey, although almost two-thirds (65%) of the 34 Member States that completed the questionnaire had national indicators for NCDs and their RFs, fewer than half reported having national time-bound targets associated with those indicators. These results are very useful, as they identify which countries lack targets and indicators and should thus be prioritized in preparation for the third meeting of the General Assembly in 2018. However, a more thorough analysis of the available targets and indicators is needed to examine key aspects, such as their alignment with the Global Monitoring Framework, the availability of baselines, country reporting capacity, their relationship with mortality rates, service access and delivery, and the interventions available or expected to become available in each country *(8)*.

National surveillance systems for NCDs and their RFs should be comprehensive and produce data periodically, systematically, sustainably, and in a standardized fashion, and they should cover everybody. The multisectoral approach necessary for addressing NCDs and their RFs is also key for surveillance, as it enables the use of data collected outside the health sector. The information gathered should be used to

guide development and evaluation of policies. To this end, surveillance systems should be able to obtain data through at least four main information sources: vital registries, NCD registries, population surveys, and health services information systems. Results from the Country Capacity Survey reveal core aspects related to the first three of these information sources.

All countries reported having **mortality information systems** able to generate reliable cause-specific mortality data on a routine basis. Approximately two-thirds of countries stated that they have data corresponding to 2013 or later years. Indeed, the quality of mortality data in the Americas has improved in recent years thanks to the strengthening of national vital statistics systems. The progress achieved includes better coverage and a reduction in the proportion of deaths assigned to ill-defined causes. Nevertheless, this progress has not been even throughout the Region, which means the quality of mortality statistics among the countries has become more unequal *(41)*.

Fewer than half of the 34 Member States that completed the Country Capacity Survey reported having population-based **cancer registries** (16/34, 47%). Nine other countries (9/34, 26%) reported having hospital-based registries; although these are a good starting point, it is important to note that only population-based registries can generate incidence data for this group of diseases *(42)*. Incidence data by specific type of cancer constitute one of the additional indicators of the Global Monitoring Framework *(8)* and represent the best tool for evaluating the impact of both primary prevention interventions and those geared to reducing exposure to risk factors. These data provide key information to support decision-making as well as monitoring and evaluation of cancer programs *(43)*. The majority of the Member States still do not provide complete and precise incidence data as part of the health information reported to PAHO. To improve this situation, PAHO is collaborating with the IARC Global Initiative for Cancer Registry Development with a view to strengthening the quality of such registries in the region *(44)*. Efforts include the establishment of a training center for Latin America headquartered in the National Cancer Institute of Argentina, as well as future development of a second training center for the Caribbean through the Caribbean Public Health Agency (CARPHA).

Population surveys of risk factors were the third source of information considered in the Country Capacity Survey. These surveys were available in 74% to 91% of the Member States, depending on the risk factor, and were conducted in both adults and young people. However, analysis of the representativeness (national), periodicity (data collection at least every 5 years), year of latest data collection (within the last 5 years), and availability of physical and biochemical measurements (for risk factors that require them) of reported surveys revealed that few countries conducted surveys of the highest quality.

Approximately half of the countries reported population surveys in adults that were classified in the green (highest-performing) category for risk factors reported (tobacco use, alcohol use, fruit and vegetable consumption, and physical activity). However this proportion fell to over one-third for surveys of risk factors requiring physical or biochemical measurements (overweight and obesity, raised blood pressure, raised blood glucose, and raised total cholesterol). Salt intake surveys were particularly under-represented, with only three countries reporting surveys that met the requirements for maximum performance by including urinary sodium measurements. As expected, there was a direct relationship between the proportion of countries with surveys classified in the green category and country income level, except in the case of salt/sodium intake surveys, for which a gap existed regardless of income level.

The information generated through population risk factor surveys in adults is key to reporting the 13 indicators of the Global Monitoring Framework *(8)*. These surveys contribute strategic data for the development and evaluation of policies and interventions to address NCDs and their RFs. To support this process, WHO has developed the STEPS methodology aimed

at obtaining basic data on risk factors for the main NCDs. The instrument of this household survey includes three steps for the evaluation of risk factors: a questionnaire, physical measurements and biochemical assessments *(45)*. The use of new technologies, including mobile devices for blood glucose and cholesterol measurement in capillary blood, is another strategy to improve the efficiency and quality of data. It is hoped that these advances will increase the proportion of countries reporting recent, high-quality data, including measurements.

Regarding surveys conducted in young people, the proportion of countries with such surveys classified in the green category (nationally representative, periodic, recent, and including measurements instead of self-reported data, when applicable) ranged from 62% for tobacco use to 35% for overweight and obesity.

The HBSC and Global Youth Tobacco Survey (GYTS) are the main school-based surveys conducted in this age group. Their use for more than a decade has helped consolidate surveillance of NCDs and their RFs in young people. Regarding the GYTS, 73% and 54% of Member States in the Region have implemented two or three rounds of the survey, respectively *(2)*. These surveys are particularly important because they provide data to inform reporting on four indicators from the Global Monitoring Framework *(8)*. They also contribute information on exposure to risk factors and the effect of tobacco control policies among young people, who are an especially vulnerable population at risk of future diseases.

Despite these achievements, and as observed for surveys of adults, the proportion of countries with surveys classified under the maximum performance category was directly related to income level. It is important to note that both the GYTS and the HBSC are low-cost surveys for which external funding is available, which has facilitated their periodic implementation for over a decade. The results of the Country Capacity Survey demonstrate that challenges remain for the sustainability of these surveys as part of a surveillance system. Tackling these challenges depends not only on the availability of funds but also on institutionalizing the surveys and strengthening technical capabilities.

The Country Capacity Survey not only contributed strategic information about the availability of population surveys on risk factors in adults and young people, it also allowed compilation of reports from such surveys as part of the validation process. A more thorough analysis of the documentation obtained is warranted. One limitation of the Country Capacity Survey is that no information was collected about surveys in children under 10 years of age, a population of special importance in the context of the global nutrition targets *(46)* and in light of the growing epidemic of childhood obesity *(26)*.

PAHO is working with countries in the Region to strengthen their surveillance systems through the institutionalization of efforts, emphasizing the importance of securing funds to provide sustainability and continuity, both of which are essential for proper monitoring of this group of diseases and their risk factors. Furthermore, PAHO is working with countries in the Region to coordinate the administration and optimal execution of surveys. It also seeks to harmonize the selection of questions so that the data generated can allow countries to report on the indicators to which they have committed.

Finally, it should be noted that the Country Capacity Survey does not include questions on health service information systems, which constitute one of the four essential sources of information for surveillance of NCDs and their RFs and contribute key data for health services planning and management.

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

A comprehensive approach to NCDs and their RFs requires strengthening and reorientation of health services, with an emphasis on primary care health, as called for in the Political Declaration of the United Nations High-level Meeting *(5)* and the global *(6)* and regional *(7)* action plans. This approach also takes as a reference point the four strategic lines of the PAHO *Strategy for Universal Access to Health and Universal Health Coverage (22)*. In addition, in the outcome document of the second meeting of the United Nations General Assembly, countries committed to strengthen and guide their health systems to address the prevention and control of NCDs and their underlying social determinants through people-centered primary health care and universal health coverage by 2016 *(9)*. Recently, universal health care has been incorporated as a target under the SDG-3 for health, further strengthening the mandate to improve health services response *(10)*.

Data from the health systems module of the Country Capacity Survey provide an overview of national capabilities for the management of NCDs and their RFs, including such key aspects as (I) the availability of evidence-based guidelines, standards, protocols, and referral criteria; (II) services for the early detection, diagnosis, and treatment of the main NCDs at the primary care level; and (III) procedures for the diagnosis and treatment of this group of diseases in the secondary and tertiary levels of care. The following sections discuss the main findings regarding health systems in relation to these three major topics.

I. Evidence-based guidelines, standards, protocols, and referral criteria

According to the results of the Country Capacity Survey, one-third or fewer of the countries in the Region have fully implemented evidence-based guidelines, protocols and standards for the four main NCDs, and between one-third and one half-have fully implemented referral criteria for patients with these diseases. In both cases, chronic respiratory diseases are the conditions addressed by the fewest countries. These low levels of full implementation are troubling and point to the need to rise the priority of these diseases. The availability and appropriate implementation of evidence-based **guidelines, protocols, and standards** are essential to providing high-quality care, reducing unjustifiable variability in clinical practice, and, consequently, improving health outcomes *(47)*. The dissemination of evidence-based clinical practice guidelines, their periodic updating, and their daily integration into clinical practice represent the core of one of the components of the Chronic Care Model: support for decision-making *(48)*. Furthermore, the availability of **operational criteria for referral** of patients from primary care to secondary and tertiary care ensures the continuity of care with appropriate access to necessary specialist care. Implementation of such criteria reduces delays, avoids unnecessary duplications and inappropriate diagnostic tests, and reduces unnecessary prescriptions *(47)*.

II. Early detection, diagnosis, and treatment of major NCDs at the primary care level

With regard to **technologies for the early detection, diagnosis, and treatment of the major NCDs**, most countries indicated that such technologies are available in at least 50% of their primary care facilities. The exceptions were more complex technologies, such as dilated-pupil fundus examination and foot vascular status evaluation by Doppler ultrasound. Likewise, the majority of countries reported that the main **essential medicines for NCDs** are available in at least 50% of primary care facilities in the public health system. The exception was oral morphine, which less than half of the countries (14/34, 41%)reported as being generally available.

Although the responses to the Country Capacity Survey seem to point in the right direction regarding the availability of medicines and basic technologies for NCDs, certain limitations must be taken into account when interpreting these results. The evaluation of whether drugs and technologies are available in at least 50% of primary care facilities is eminently subjective. Most countries lack an information system capable of reporting on this topic, which means that the responses provided are largely based on expert knowledge. Furthermore, the survey questions are not designed to evaluate important aspects such as the affordability of drugs and services, suitability of prescribing practices, availability of human resources trained in the use of these technologies, or patient adherence to therapy. Regarding affordability, direct payments are an especially important issue in the case of NCDs. Out-of-pocket costs can become a barrier to access at the point of service delivery and can generate catastrophic expenditures that lead to poverty. For these reasons, moving toward the elimination of direct payments is one of the priorities of the PAHO Strategy for Universal Health *(22)*. Finally, this section of the Country Capacity Survey did not include questions on the availability of essential drugs for cancer treatment.

Despite these limitations, the Country Capacity Survey contributes valuable information by identifying gaps and helping to set priorities. In this regard, the PAHO Revolving Fund *(49)* and Strategic Fund *(50)* are resources that can be used to improve the availability and affordability of vaccines, essential medicines, and technologies by facilitating acquisition at the lowest possible cost of products that meet international quality standards. In addition, use of these Funds provides the added value of technical assistance for supply management, including such key aspects as planning, storage and distribution.

The questionnaire of the 2015 Country Capacity Survey included a series of new questions addressing care provided at the primary level for cancer and CVD—the two leading causes of premature NCD-related mortality in the Region *(1)*. With regard to cancer, these items focused on the availability of **national screening programs for specific types of cancer**. A high proportion of countries reported having screening programs for cervical cancer (31/34, 91%) and breast cancer (28/34, 82%). However, most screening programs continue to be opportunistic and/or have coverage below 70%, which is insufficient to have a significant impact at the population level. Furthermore, there is much room for improvement in the availability of screening services for other types of cancer, especially colorectal cancer, for which only eight countries reported having a national program. Finally, it should be noted that, in order to be effective, screening programs require high-quality diagnostic tests and proper management of any lesions identified; neither aspect could be evaluated through this survey questionnaire. Therefore, a more in-depth analysis of health services is needed in order to provide a comprehensive evaluation of country capacity.

Regarding CVDs, the survey included items designed to assess country capacity in terms of access to **essential medicines for the prevention of heart attack and stroke in people at high cardiovascular risk**. Ensuring availability of these drugs is one of the targets of the Global Monitoring Framework *(8)* and one of the strategies listed as highly cost-effective in the global *(6)* and regional *(7)* action plans.

Although the essential medicines necessary for primary and secondary prevention of cardiovascular episodes were reported as being generally available by a high proportion of countries in the Region, there is limited use of cardiovascular risk stratification in public sector. According to the results of the survey, only four countries (4/34, 12%) offer such risk stratification in 50% or more of primary care facilities. Despite limitations inherent to the survey items on availability of essential medicines, these results suggest that a substantial gap exists and confirms the need to promote total cardiovascular risk assessment for individuals, as noted in the Regional Consultation on Priorities for Cardiovascular Health in the Americas and its later evaluation *(47, 51)*. To support these efforts, WHO has developed a cardiovascular risk assessment form that streamlines the process by making laboratory tests optional. Furthermore, PAHO has launched a free app for mobile devices and computers that is based on the WHO form and performs calculation of cardiovascular risk and body mass index (BMI). It also includes recommendations on how to modify risk profiles and provides the option of enabling reminders to improve treatment adherence. The app, available in English, Spanish, and Portuguese at http://www.paho.org, is designed for use by both primary care providers and the general public. Its objectives are to facilitate rapid cardiovascular risk assessment in primary care settings and to promote dialogue between patients and health providers *(52)*.

Finally, there is a significant shortfall in access to **palliative care** in the Region. This is the NCD-related function or activity for which the fewest countries report having funding. Palliative care is included in only 11 of the 20 operational integrated policies, strategies, or action plans for NCDs, and opioids are the medicines least likely to be generally available in primary care facilities in the public health system. This pattern, which was seen regardless of country income level, was more marked in low- and lower-middle-income countries. The progression of NCDs, compounded by rapid population aging in the majority of countries of the Region, will lead to increasing demand for services, including palliative care. Access to opioids and the provision of outpatient and community-based care are especially relevant.

III. Diagnosis and treatment of major NCDs at the secondary and tertiary levels of care

The Country Capacity Survey revealed a substantial gap in the availability of procedures for NCD treatment at the secondary and tertiary levels of care, especially in low-income countries. The proportion of countries reporting on the availability of selected retinal, renal, cardiac and stroke treatment in at least 50% of health facilities ranged from 21% (care and rehabilitation of acute stroke) to 65% (renal replacement therapy by dialysis). The growing demand for these highly specialized and costly services represents a great challenge for the health systems, not only for the secondary and third levels, but also for primary level where the efforts of prevention of NCDs complications should be reinforced.

5.

CONCLUSIONS

The results of the 2015 Country Capacity Survey suggest the following actions for strengthening the capacity and response of the countries of the Americas for the prevention and control of NCDs and their risk factors:

I. Promote integration of NCDs and their RFs into **national development plans and establish operational mechanisms for multisectoral work** to facilitate a whole-of-government, whole-of-society, health-in-all-policies approach, taking into account the new 2030 Agenda for Sustainable Development.

II. Prioritize development of **operational, integrated, multisectoral policies, strategies, or action plans** for the four main NCDs and four RFs in the 17 countries where these instruments are not yet available, as provided for in the time-bound commitments made in the outcome document of the United Nations General Assembly in 2014. In countries that do have policies, strategies, or action plans with these characteristics, a thorough analysis of their true scope and implementation status is advisable.

III. Strengthen the **institutional capability of country health authorities** to establish regulations pertaining to risk factors, including development of fiscal policies as a essential element for implementation of 10 of the 15 highly cost-effective interventions recommended by WHO for addressing NCDs and their RFs.

IV. Strengthen **national surveillance systems for NCDs and their RFs** so that they are comprehensive and capable of producing periodic, systematic, sustainable, standardized data through four key information sources: vital registries, NCDs registries, population surveys, and health information systems.

V. Prioritize the development of national **indicators** for NCDs and their RFs, as well as time-bound **national targets** for these indicators aligned with the WHO Global Monitoring Framework, in the 14 countries that reported they lack them, in response to one of the time-bound commitments included in the outcome document of the 2014 United Nations General Assembly meeting.

VI. Improve the availability of surveys that include **physical and biochemical measurements** for risk factors (including overweight and obesity, salt/sodium intake, blood pressure, glucose and cholesterol).

VII. Promote development and implementation of **evidence-based clinical practice guidelines, standards, or protocols** for the leading NCDs and improve the **availability** of essential medicines and technologies for the diagnosis and treatment of NCDs at all levels of care.

VIII. Strengthen **national screening programs** for the main types of **cancer** in order to achieve effective coverage and high-quality screening tests.

IX. Promote **assessment of total cardiovascular risk for individuals** at the primary care level to improve the management of patients with or at high risk of cardiovascular disease.

X. Improve access to **palliative care** by strengthening policy frameworks, strategies, or plans, as well as expanding the availability of opioids and the provision of ambulatory and community-based palliative care.

6.

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7.

ANNEXES

ANNEX 1

Technical specifications of the WHO progress indicators for reporting to the United Nations General Assembly *(12)*

PROGRESS INDICATORS		
	Definition	**Data collection tool**
INDICATOR 1 **Member State has set time-bound national targets and indicators based on WHO guidance**	Country has set national targets and indicators. The NCD-related targets and indicators should be time-bound and based on the 9 voluntary global targets and 25 indicators from the WHO Global Monitoring Framework.	*WHO NCD Country Capacity Survey tool*
INDICATOR 2 **Member State has a functioning system for generating reliable cause-specific mortality data on a routine basis**	Country has a vital registration system that captures deaths and the causes of death routinely. The International Form for Medical Certificate of the Cause of Death is completed by certifiers. The International Classification of Diseases (ICD) is used to code the causes of death. The data compiled are made available to policy-makers and researchers.	*WHO Mortality Database*
INDICATOR 3 **Member State has a STEPS survey or a comprehensive health examination survey every 5 years**	Country has completed a STEPS survey or another risk factor survey which includes physical measurements and biochemical assessments covering the key behavioral and metabolic risk factors for NCDs. Country must indicate that survey frequency is at least every 5 years.	*WHO NCD Country Capacity Survey tool*
INDICATOR 4 **Member State has an operational multisectoral national strategy/action plan that integrates the major NCDs and their shared risk factors**	Country has a multisectoral, integrated national NCD and risk factor policy/strategy/action plan that addresses the 4 main NCDs (cardiovascular disease, diabetes, cancer, chronic respiratory disease) and their main risk factors (tobacco use, unhealthy diet, physical inactivity, harmful use of alcohol).	*WHO NCD Country Capacity Survey tool*

PROGRESS INDICATORS

INDICATOR 5

Member State has implemented the following four demand-reduction measures of the WHO FCTC at the highest level of achievement:

	Definition	Data collection tool
INDICATOR 5.a **Reduce affordability of tobacco products by increasing tobacco excise taxes**	Country has a tobacco excise tax at a level that accounts for at least 70% of the retail price of tobacco products.	*WHO Report on the Global Tobacco Epidemic*
INDICATOR 5.b **Create by law completely smoke-free environments in all indoor workplaces, public places, and public transport**	All public places in the country are completely smoke-free (or at least 90% of the population is covered by subnational smoke-free legislation). "Completely" means that smoking is not permitted, with no exemptions allowed, except in residences and indoor places that serve as equivalents to long-term residential facilities, such as prisons and long-term health and social care facilities like psychiatric units and nursing homes. Neither ventilation nor any form of designated smoking room and/or area protects against the harm caused by second-hand tobacco smoke, and the only laws that provide protection are those that result in the complete absence of smoking in all public places.	*WHO Report on the Global Tobacco Epidemic*
INDICATOR 5.c **Warn people of the dangers of tobacco and tobacco smoke through effective health warnings and mass media campaigns**	Country has large warnings on tobacco packaging, which are defined as covering on average at least 50% of the front and back of the package, with all appropriate characteristics. Appropriate characteristics include: containing specific mandated health warnings; appearing on individual packages as well as on any outside packaging and labelling used in retail sale; describing specific harmful effects of tobacco use on health; being large, clear, visible, and legible (e.g., specific colors and font style and sizes are mandated); warnings rotate; including pictures or pictograms; written in (all) the principal language(s) of the country.	*WHO Report on the Global Tobacco Epidemic*

PROGRESS INDICATORS

	Definition	Data collection tool
INDICATOR 5.d **Ban all forms of tobacco advertising, promotion, and sponsorship**	Country has a ban on all forms of direct and indirect advertising. Direct advertising bans apply to national television and radio; local magazines and newspapers; billboards and outdoor advertising; point-of-sale ads. Indirect advertising bans prohibit free distribution of tobacco products in the mail or through other means; promotional discounts; non-tobacco goods and services identified with tobacco brand names (brand extension); brand names of non-tobacco products used for tobacco products (brand sharing); appearance of tobacco brands (product placement) or tobacco products in television and/or films; and sponsorship, including corporate social responsibility programs.	*WHO Report on the Global Tobacco Epidemic*

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:

	Definition	Data collection tool
INDICATOR 6.a **Regulations over commercial and public availability of alcohol**	Country has a licensing system or monopoly on retail sales of beer, wine, spirits. Country restricts on-/off-premise sales of beer, wine, spirits regarding hours, days, and locations of sales. Country has legal minimum age for being sold and served alcoholic beverages.	*WHO Global Survey on Alcohol and Health*
INDICATOR 6.b **Comprehensive restrictions or bans on alcohol advertising and promotions**	Country has regulatory or co-regulatory frameworks for alcohol advertising through different channels (public service/national TV, commercial/private TV, national radio, local radio, print media, billboards, points of sale, cinema, internet, social media). Country has a detection system for infringements on marketing restrictions.	*WHO Global Survey on Alcohol and Health*
INDICATOR 6.c **Pricing policies such as excise tax increases on alcoholic beverages**	Country has excise tax on beer, wine, spirits. Country adjusts level of taxation on alcoholic beverages for inflation.	*WHO Global Survey on Alcohol and Health*

PROGRESS INDICATORS

INDICATOR 7

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

	Definition	Data collection tool
INDICATOR 7.a **Adopted national policies to reduce population salt/ sodium consumption**	Country has implemented a policy(ies) to reduce population salt/sodium consumption, such as product reformulation by industry, regulation of salt content of food, or public awareness programs.	*WHO NCD Country Capacity Survey tool*
INDICATOR 7.b **Adopted national policies that limit saturated fatty acids and virtually eliminate industrially produced trans-fatty acids in the food supply**	Country has implemented a policy(ies) to limit saturated fatty acids and virtually eliminate industrially produced trans-fats in the food supply.	*WHO NCD Country Capacity Survey tool*
INDICATOR 7.c **WHO set of recommendations on marketing of foods and nonalcoholic beverages to children**	Country has implemented a policy(ies) to reduce the impact on children of marketing of foods and nonalcoholic beverages high in saturated fats, trans-fatty acids, free sugars, or salt.	*WHO NCD Country Capacity Survey tool*
INDICATOR 7.d **Legislation /regulations fully implementing the International Code of Marketing of Breast-milk Substitutes**	Country has implemented legislation/regulations that fully implement the International Code of Marketing of Breast-milk Substitutes.	*Under review*

PROGRESS INDICATORS		
	Definition	**Data collection tool**
INDICATOR 8 **Member State has implemented at least one recent national public awareness program on diet and/or physical activity**	Country has implemented at least one recent national public awareness program on diet, physical activity, or both.	*WHO NCD Country Capacity Survey tool*
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**	Country has government-approved, evidence-based national guidelines/ protocols/ standards for the management (diagnosis and treatment) of the four main NCDs – cardiovascular disease, diabetes, cancer, and chronic respiratory diseases.	*WHO NCD Country Capacity Survey tool*
INDICATOR 10 **Member State has provision of drug therapy, including glycemic control, and counselling for eligible persons at high risk to prevent heart attacks and strokes, with emphasis on the primary care level**	Country has provision of drug therapy, including glycemic control, and counseling for eligible persons at high risk in order to prevent heart attacks and strokes, with emphasis on the primary care level.	*WHO NCD Country Capacity Survey tool*

ANNEX 2

Key terms used in the 2015 NCD Country Capacity Survey

Term	Definition
Integrated national 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 disease prevention programs across sectors and disciplines.
Multisectoral	Involving different sectors, such as health, agriculture, education, finance, infrastructure, transport, trade, etc.
Multisectoral collaboration	A recognized relationship between parts of different sectors of society—such as ministries (e.g., health, education), government agencies, nongovernmental organizations, private for-profit entities, and community representatives—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.
National policy, strategy, action plan	**National 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 directives for attaining these goals. The policy document may include a strategy to give effect to the policy. **Strategy:** A long-term plan designed to achieve a particular goal. **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.
National survey	A survey conducted at fixed or unfixed time intervals on the main chronic diseases, or major risk factors common to chronic diseases.
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.
Surveillance	The systematic collection of data (through survey or registration) on risk factors, chronic diseases, and their determinants for continuous analysis, interpretation, and feedback.
Under development	An activity or measure that is still being developed or finalized and is not yet being implemented in the country.
Unit or department	Administrative entity with responsibility for NCD prevention and control in a Ministry of Health or national institute.

ANNEX 3

Validation process established by WHO for the 2015 NCD Country Capacity Survey

MODULE I: PUBLIC HEALTH INFRASTRUCTURE, PARTNERSHIPS AND MULTISECTORAL COLLABORATION FOR NCDs AND THEIR RISK FACTORS	
Question	**Validation**
1) Is there a unit/branch/department in the Ministry of Health or equivalent with responsibility for NCDs and their risk factors? 1a) Please indicate the number of full-time technical/professional staff in the unit/branch/department.	Can be compared to response from previous round of survey. If reversal is present, confirm with Member State that there has indeed been a reversal.
2) Is there funding for the following NCD activities/functions? • Primary prevention • Health promotion • Early detection/screening • Health care and treatment • Surveillance, monitoring, and evaluation • Capacity-building • Palliative care	Not Applicable
2a) What are the major sources of funding for NCDs and their risk factors?	Not Applicable
3) Is your country implementing any of the following fiscal interventions? • Taxation on alcohol • Taxation on tobacco (excise and non-excise taxes) • Taxation on sugar sweetened beverages • Taxation on foods high in fat, sugar, or salt • Price subsidies for healthy foods • Taxation incentives to promote physical activity • Others	Not Applicable
4) Is there a national multisectoral commission, agency, or mechanism to oversee NCD engagement, policy coherence, and accountability of sectors beyond health?	Not Applicable

MODULE II: STATUS OF NCD-RELEVANT POLICIES, STRATEGIES, AND ACTION PLANS	
Question	**Validation**
1a) Are NCDs included in your national health plan?	Provide a copy of the national health plan.
1b) Are NCDs included in your national development agenda?	Provide a copy of the national development agenda.
2) Is there a set of national NCD indicators?	Provide a copy of the indicators.
2a) Is there a set of time-bound national targets for these indicators?	Provide a copy of the targets.
3) Does your country have a national NCD policy, strategy, or action plan which integrates several NCDs and their risk factors?	Provide a copy of the policy, strategy, or action plan.
4-13) Is there a policy, strategy, or action plan for _____*_____ in your country? (* = cardiovascular diseases, cancer, diabetes, chronic respiratory diseases, reducing the harmful use of alcohol, reducing overweight/obesity, reducing physical inactivity and/or promoting physical activity, decreasing tobacco use, or reducing unhealthy diet related to NCD and/or promoting a healthy diet)	For each policy/strategy/action plan, provide a copy. For tobacco policies/strategies/action plans, compare with GTCR. For alcohol policies/strategies/action plans, compare with Global Information System on Alcohol and Health.
14) Is there a policy and/or plan on NCD-related research including community-based research and evaluation of the impact of interventions and policies?	Provide a copy of the policy/plan.
15) Is your country implementing any policies to reduce the impact on children of marketing of foods and nonalcoholic beverages high in saturated fats, trans-fatty acids, free sugars, or salt?	Provide a copy of the policy(ies).
16) Is your country implementing the International Code of Marketing of Breast-Milk Substitutes through adoption of national laws?	Provide a copy of the policy(ies).
17) Is your country implementing any national policies that limit saturated fatty acids and virtually eliminate industrially produced trans-fats (i.e., partially hydrogenated vegetable oils) in the food supply?	Provide a copy of the policy(ies).

MODULE II: STATUS OF NCD-RELEVANT POLICIES, STRATEGIES, AND ACTION PLANS	
Question	**Validation**
18) Is your country implementing any policies to reduce population salt consumption?	Provide a copy of the policy(ies).
19) Has your country implemented any national public awareness program on diet within the past 5 years?	Provide any documentation on the program and/or a link to the program website, if available.
20) Has your country implemented any national public awareness program on physical activity within the past 5 years?	Provide any documentation on the program and/or a link to the program website, if available.
21) Does your country have any nutrition labeling regulation, in line with international standards, in particular the Codex Alimentarius, for pre-packaged foods?	Provide a copy of the regulation.

MODULE III: HEALTH INFORMATION SYSTEMS, SURVEILLANCE AND SURVEYS FOR NCDs AND THEIR RISK FACTORS	
Question	**Validation**
1) In your country, who has responsibility for surveillance of NCDs and their risk factors?	Not Applicable
2) Does your country have a system for collecting mortality data by cause of death on a routine basis?	To be compared to data held by HSI (HQ).
3) Does your country have a cancer registry?	To be compared to data held by IARC
4) Does your country have a diabetes registry?	Not Applicable
5) Have surveys of risk factors been conducted in your country for any of the following? [...]	Provide a copy of the survey report. To be compared to data held by PND/SPP (HQ) and PND/CIC (HQ) and other data publicly available from other major global surveys.

MODULE IV: CAPACITY FOR NCD EARLY DETECTION, TREATMENT AND CARE WITHIN THE HEALTH SYSTEM	
Question	**Validation**
1) Please indicate whether evidence-based national guidelines/ prtocols/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 and when they were last updated.	Provide a copy of the guidelines/ protocols/standards that are available.
2) For each of the major NCDs, please indicate the availability of standard criteria for the referral of patients from primary care level to a higher level of care (secondary/tertiary). Where standard criteria are available, please indicate their implementation status.	Not Applicable
3) 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.	Not Applicable
4) Please indicate if there is a national screening program targeting the general population for the following cancers and, if yes, provide details.	To be compared to cancer atlas (http://canceratlas.cancer.org/data)
5) 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 suspected cases.	Not Applicable
6) Is there a national HPV vaccination program under implementation? 6a) Who is targeted by the program? 6b) What year did the program begin? 6c) What is the immunization coverage of the program?	To be compared to cancer atlas (http://canceratlas.cancer.org/data)
7) Describe the availability of the medicines below in the primary care facilities of the public health sector.	Not Applicable
8) Indicate the availability of the following procedures for treating NCDs in the publicly funded health system.	Not Applicable

Question	Validation
9) Indicate the number of treatment centers which offer radiotherapy.	To be compared to DIRAC database (http://www-naweb.iaea.org/nahu/dirac/)
10) Detail the cancer diagnosis and treatment services in the public sector.	Not Applicable
11) How many pathology laboratories for cancer diagnosis are there in the country?	Not Applicable
12) Indicate the availability of palliative care for patients with NCD in the public health system.	Not Applicable
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?	Not Applicable
14) What percentage of public sector health facilities have provision for care of acute stroke and rehabilitation?	Not Applicable
15) What percentage of public sector health facilities have provision for secondary prevention of rheumatic fever and rheumatic heart disease?	Not Applicable

ANNEX 4

Technical note: Categories for the classification of population surveys on NCD risk factors

Population surveys on the main RFs in adults and adolescents have been classified into categories defined according to the following criteria:

1. **Periodicity:** carried out at least every 5 years.
2. **Representative survey:** nationally representative.
3. **Recent survey:** data collected no more than 5 years ago.
4. **Measurements obtained:** in case of RFs that require physical measurements (weight and height for overweight and obesity; blood pressure for high blood pressure or hypertension) or biochemical analyses (blood glucose for high blood glucose or DM; blood cholesterol for high total cholesterol; urinary sodium for salt/sodium intake).

On the basis of these criteria, two color-coded sets of categories have been established, one for those RFs that do not require measurements and one for those that do, as shown below:

TABLE A-1

Categories for the classification of population surveys of risk factors that do not require measurements: harmful use of alcohol, tobacco use, low fruit and vegetable consumption, and physical inactivity

Category	Recent data (< 5 years)	Nationally representative	Periodicity of at least every 5 years
Green	Yes	Yes	Yes
Yellow	Yes	Yes	No
Orange	Yes	No	Yes
Red	No	Yes/No	Yes/No
Gray	Not answered or not validated		

TABLE A-2

Categories for the classification of population surveys of risk factors that do require measurements: overweight and obesity, high blood glucose/diabetes, high blood pressure/hypertension, high total cholesterol

Category	Recent data (<5 years)	Nationally representative	Physical or biochemical measurements (instead of self-reported data)	Periodicity of at least every 5 years
Green	Yes	Yes	Yes	Yes
Yellow	Yes	Yes	Yes	No
Orange	Yes	Yes/No	Yes/No	Yes/No
Red	No	Yes/No	Yes/No	Yes/No
Gray	Not answered or not validated			

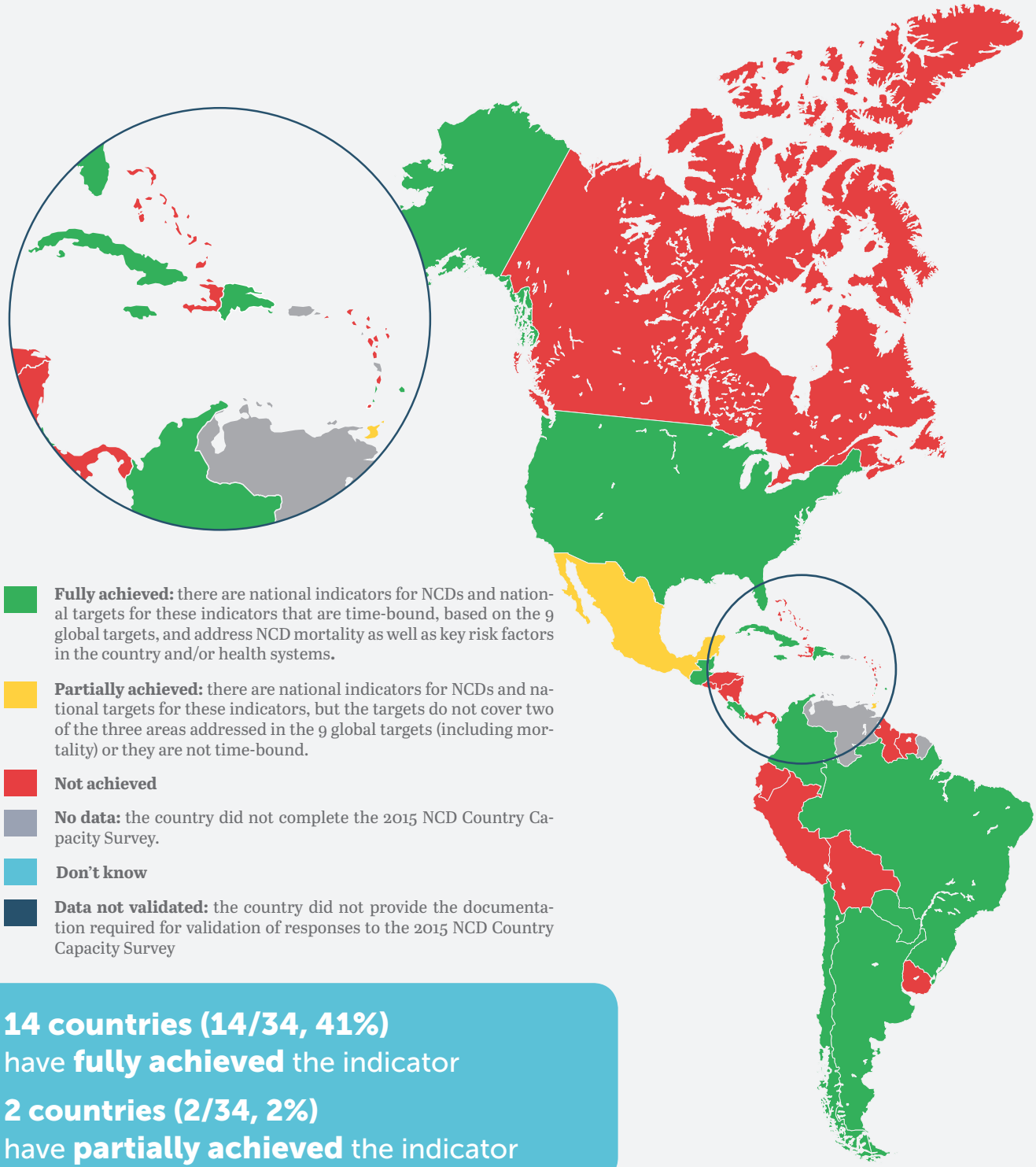
ANNEX 5

Progress indicators that use the 2015 NCD Country Capacity Survey as a source of information, disaggregated by country

FIGURE A-1

WHO progress indicator number 1 for reporting to the United Nations General Assembly

Definition: Number of Member States that have set time-bound national targets and indicators based on WHO guidance. The NCD-related targets and indicators should be time-bound and based on the 9 voluntary global targets and 25 indicators from the WHO Global Monitoring Framework. *(12).*



Fully achieved: there are national indicators for NCDs and national targets for these indicators that are time-bound, based on the 9 global targets, and address NCD mortality as well as key risk factors in the country and/or health systems.

Partially achieved: there are national indicators for NCDs and national targets for these indicators, but the targets do not cover two of the three areas addressed in the 9 global targets (including mortality) or they are not time-bound.

Not achieved

No data: the country did not complete the 2015 NCD Country Capacity Survey.

Don't know

Data not validated: the country did not provide the documentation required for validation of responses to the 2015 NCD Country Capacity Survey

14 countries (14/34, 41%)
have **fully achieved** the indicator

2 countries (2/34, 2%)
have **partially achieved** the indicator

TABLE A-3

Results for progress indicator number 1 and 2015 NCD Country Capacity Survey variables used to construct it, by country

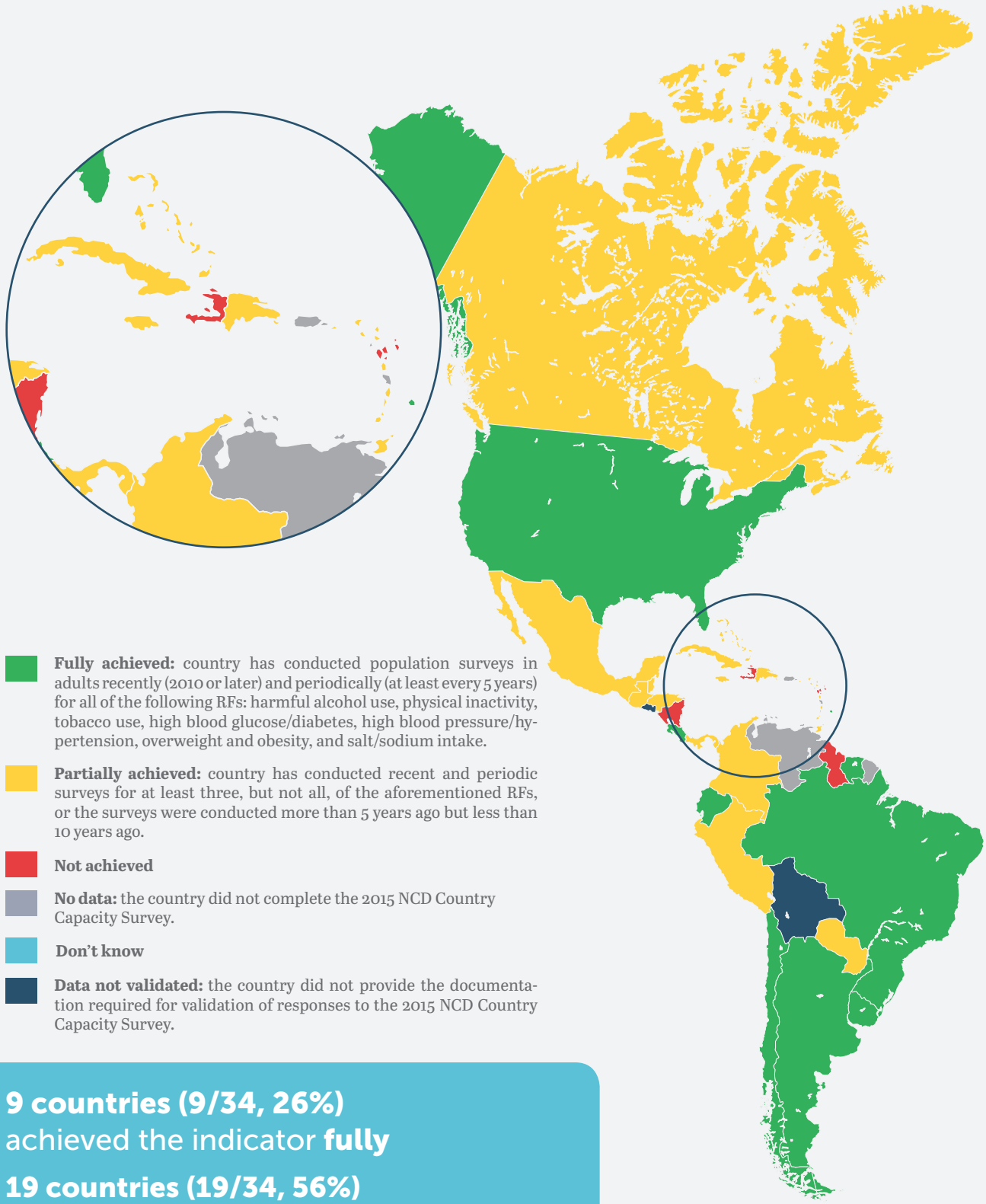
Country	Is there a set of national NCD indicators?	Are there time-bound targets for these indicators?	Do the time-bound targets cover all three areas of the WHO Global Monitoring Framework (mortality, RFs, and/or health services)?	Has progress indicator number 1 been achieved?
Antigua and Barbuda	No	N/A	N/A	No
Argentina	Yes	Yes	Yes	Fully
Bahamas	No	N/A	N/A	No
Barbados	Yes	Yes	Yes	Fully
Belize	Yes	Yes	Yes	Fully
Bolivia (Plurinational State of)	Yes	No	N/A	No
Brazil	Yes	Yes	Yes	Fully
Canada	Yes	No	N/A	No
Chile	Yes	Yes	Yes	Fully
Colombia	Yes	Yes	Yes	Fully
Costa Rica	Yes	Yes	Yes	Fully
Cuba	Yes	Yes	Yes	Fully
Dominica	No	N/A	N/A	No
Dominican Republic	Yes	Yes	Yes	Fully
Ecuador	No	N/A	N/A	No
El Salvador	No	N/A	N/A	No
Grenada	Yes	No	N/A	No
Guatemala	Yes	Yes	Yes	Fully
Guyana	No	N/A	N/A	No
Haiti	No	N/A	N/A	No
Honduras	No	N/A	N/A	No
Jamaica	Yes	Yes	Yes	Fully
Mexico	Yes	Yes	No	Partially
Nicaragua	No	N/A	N/A	No
Panama	No	N/A	N/A	No
Paraguay	Yes	Yes	Yes	Fully
Peru	Yes	No	N/A	No
Saint Kitts and Nevis	No	N/A	N/A	No
Saint Lucia	Yes	No	N/A	No
Saint Vincent and the Grenadines	Yes	Yes	Yes	Fully
Suriname	Yes	No	N/A	No
Trinidad and Tobago	Yes	Yes	No	Partially
United States of America	Yes	Yes	Yes	Fully
Uruguay	No	N/A	N/A	No
Venezuela (Bolivarian Republic of)	No data	No data	No data	No data

N/A: not applicable

FIGURE A-2

WHO progress indicator number 3 for reporting to the United Nations General Assembly

Definition: Number of Member States that have a STEPS survey or a comprehensive health survey every 5 years *(13)*.



Fully achieved: country has conducted population surveys in adults recently (2010 or later) and periodically (at least every 5 years) for all of the following RFs: harmful alcohol use, physical inactivity, tobacco use, high blood glucose/diabetes, high blood pressure/hypertension, overweight and obesity, and salt/sodium intake.

Partially achieved: country has conducted recent and periodic surveys for at least three, but not all, of the aforementioned RFs, or the surveys were conducted more than 5 years ago but less than 10 years ago.

Not achieved

No data: the country did not complete the 2015 NCD Country Capacity Survey.

Don't know

Data not validated: the country did not provide the documentation required for validation of responses to the 2015 NCD Country Capacity Survey.

9 countries (9/34, 26%)
achieved the indicator **fully**

19 countries (19/34, 56%)
achieved it **partially**

TABLE A-4

Results for progress indicator number 3 and 2015 NCD Country Capacity Survey variables used to construct it, by country

Country	Availability of recent, periodic surveys for the following RFs in adults:							
	Harmful use of alcohol		Physical inactivity		Tobacco use		High blood glucose/ DM	
	Year	Frequency of data collection	Year	Frequency of data collection	Year	Frequency of data collection	Year	Frequency of data collection
Antigua and Barbuda	No	N/A	No	N/A	No	N/A	No	N/A
Argentina	2013	3-5 years	2013	3-5 years	2013	3-5 years	2013	3-5 years
Bahamas	2012	3-5 years	2012	3-5 years	2012	3-5 years	2012	3-5 years
Barbados	2011	3-5 years	2011	3-5 years	2011	3-5 years	2011	3-5 years
Belize	2006	Ad hoc	2006	Ad hoc	2006	Ad hoc	2006	Ad hoc
Bolivia (Plurinational State of)	2014[a]	--	2014[a]	Ad hoc	2014[a]	Ad hoc	2014[a]	Ad hoc
Brazil	2014	1-2 years	2014	1-2 years	2014	1-2 years	2013	3-5 years
Canada	2014	1-2 years	2014	1-2 years	2014	1-2 years	2013	1-2 years
Chile	2013	1-2 years	2010	3-5 years	2013	1-2 years	2010	3-5 years
Colombia	2013	Other	2010	Other	2013	Other	2007	Other
Costa Rica	2010	3-5 years	2010	3-5 years	2010	3-5 years	2010	3-5 years
Cuba	2010	3-5 years	2010	3-5 years	2010	3-5 years	2010	3-5 years
Dominica	2008	Other	2008	Other	2008	Other	2008	Other
Dominican Republic	2013	3-5 years	2013	3-5 years	2010	3-5 years	2013	3-5 years
Ecuador	2012	3-5 years	2012	3-5 years	2012	3-5 years	2012	3-5 years
El Salvador	2014[a]	3-5 years	2013[a]	3-5 years	2014[a]	3-5 years	2014[a]	3-5 years
Grenada	2010	Other	2010	Other	2010	Other	2010	Other
Guatemala	2010	3-5 years	2010	3-5 years	2010	3-5 years	2010	3-5 years
Guyana	2009	Other	No	N/A	2009	Other	No	N/A
Haiti	No	N/A	--	--	No	N/A	2006[a]	Ad hoc
Honduras	2011	Ad hoc	No	N/A	2011	Ad hoc	2004	--
Jamaica	2008	Other	2008	Other	2008	Other	2008	Other
Mexico	2012	Other	2012	Other	2012	Other	2012	Other
Nicaragua	2003	Ad hoc	1998	Ad hoc	2001	Ad hoc	2003	Ad hoc
Panama	2010	Ad hoc	2010	Ad hoc	2013	3-5 years	2010	Ad hoc
Paraguay	2011	3-5 years	2011	3-5 years	2011	3-5 years	2011	3-5 years
Peru	2014	1-2 years	--	--	2014	1-2 years	2014	1-2 years
Saint Kitts and Nevis	2008	Ad hoc	2008	Ad hoc	2008	Ad hoc	2007	Other
Saint Lucia	2012	Ad hoc	2012	Ad hoc	2012	Ad hoc	2012	Ad hoc
Saint Vincent and the Grenadines	2014	3-5 years	2013	3-5 years	2013	3-5 years	2013	3-5 years
Suriname	2013	3-5 years	2013	3-5 years	2013	3-5 years	2013	3-5 years
Trinidad and Tobago	2011	3-5 years	2011	3-5 years	2011	3-5 years	2011	3-5 years
United States of America	2015	1-2 years	2015	1-2 years	2013	1-2 years	2013	1-2 years
Uruguay	2013	3-5 years	2013	3-5 years	2013	3-5 years	2013	3-5 years
Venezuela (Bolivarian Republic of)	No data	No data	No data	No data	No data	No data	No data	No data

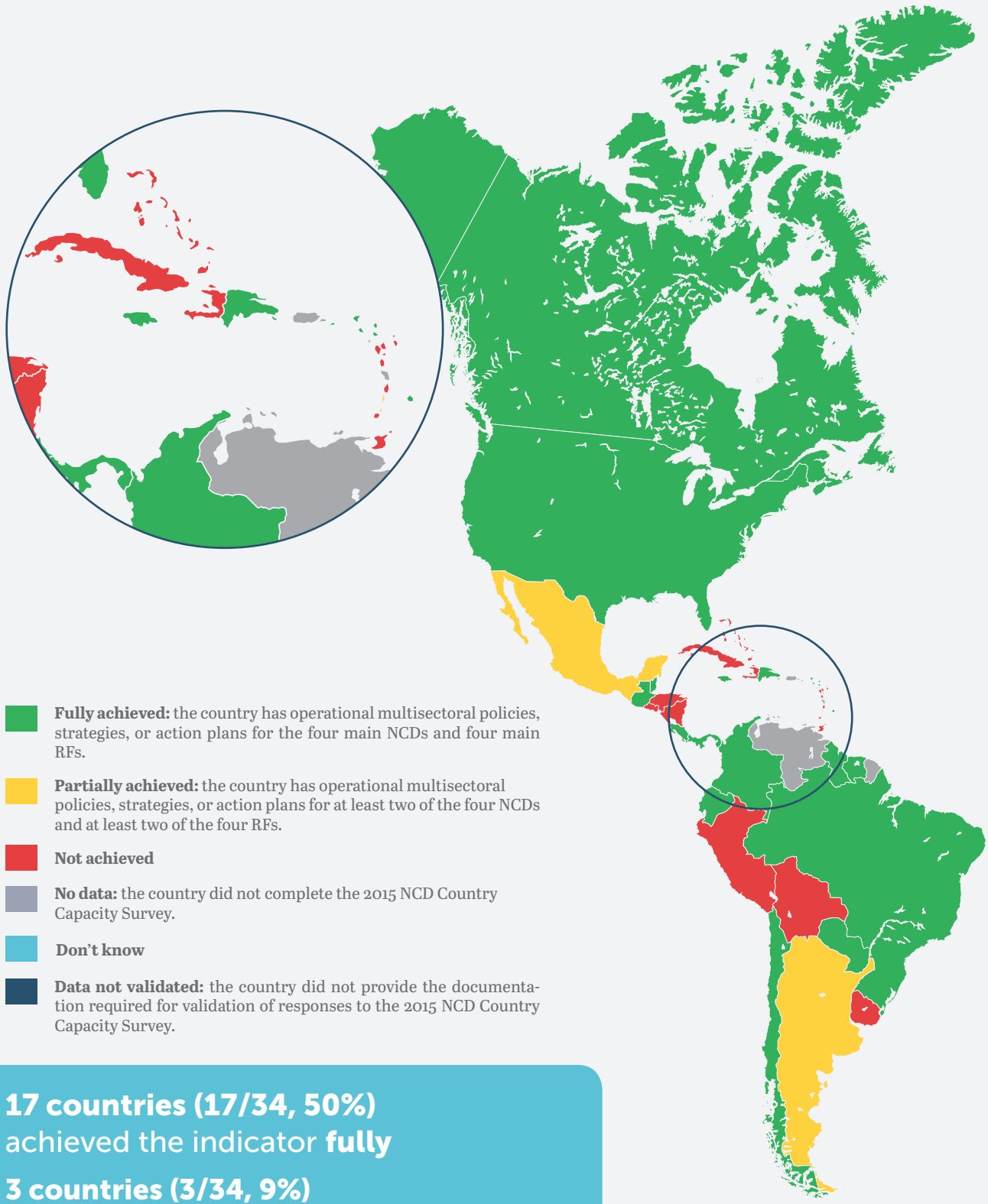
Country	Availability of recent, periodic surveys for the following RFs in adults:						Has progress indicator number 3 been achieved?
	High blood pressure/HTN		Overweight and obesity		Salt/sodium intake		
	Year	Frequency of data collection	Year	Frequency of data collection	Year	Frequency of data collection	
Antigua and Barbuda	No	N/A	No	N/A	No	N/A	No
Argentina	2013	3-5 years	2013	3-5 years	2013	3-5 years	Fully
Bahamas	2012	3-5 years	2012	3-5 years	No	N/A	Partially
Barbados	2011	3-5 years	2011	3-5 years	2011	3-5 years	Fully
Belize	2006	Ad hoc	2006	Ad hoc	No	N/A	Partially
Bolivia (Plurinational State of)	2014[a]	Ad hoc	2014[a]	Ad hoc	No	N/A	Data not validated
Brazil	2013	3-5 years	2014	1-2 years	2013	3-5 years	Fully
Canada	2013	1-2 years	2013	Other	2004	Other	Partially
Chile	2010	3-5 years	2010	3-5 years	2010	3-5 years	Fully
Colombia	2007	Other	2010	Other	2010	Other	Partially
Costa Rica	2010	3-5 years	2010	3-5 years	2013	3-5 years	Fully
Cuba	2010	3-5 years	2010	3-5 years	No	N/A	Partially
Dominica	2008	Other	2008	Other	No	N/A	Partially
Dominican Republic	2010	Other	2013	3-5 years	No	N/A	Partially
Ecuador	2012	3-5 years	2012	3-5 years	2012	3-5 years	Fully
El Salvador	2014[a]	3-5 years	2014[a]	3-5 years	2014[a]	3-5 years	Data not validated
Grenada	2010	Other	2010	Other	No	N/A	Partially
Guatemala	2010	3-5 years	2010	3-5 years	No	N/A	Partially
Guyana	No	N/A	No	N/A	No	N/A	No
Haiti	No	N/A	--	--	No	N/A	No
Honduras	2004	Ad hoc	2011	Ad hoc	No	N/A	Partially
Jamaica	2008	Other	2008	Other	No	N/A	Partially
Mexico	2012	Other	2012	Other	No	N/A	Partially
Nicaragua	2003	Ad hoc	2011	Ad hoc	No	N/A	No
Panama	2010	Ad hoc	2010	Ad hoc	No	N/A	Partially
Paraguay	2011	3-5 years	2011	3-5 years	2014	Ad hoc	Partially
Peru	2014	1-2 years	2014	1-2 years	No	N/A	Partially
Saint Kitts and Nevis	2007	--	2008	Ad hoc	No	N/A	Partially
Saint Lucia	2012	Ad hoc	2012	Ad hoc	2012	Ad hoc	Partially
Saint Vincent and the Grenadines	2013	3-5 years	2013	3-5 years	No	N/A	Partially
Suriname	2013	3-5 years	2013	3-5 years	2013	3-5 years	Fully
Trinidad and Tobago	2011	3-5 years	2011	3-5 years	No	N/A	Partially
United States of America	2015	2015	1-2 years	2015	1-2 years	1-2 years	Fully
Uruguay	2013	3-5 years	2013	3-5 years	2013	3-5 years	Fully
Venezuela (Bolivarian Republic of)	No data	No data	No data	No data	No data	No data	No data

[a]: data not validated; --: did not respond; N/A: not applicable.

FIGURE A-3

WHO progress indicator number 4 for reporting to the United Nations General Assembly

Definition: Number of Member States with an operational multisectoral national strategy or action plan that integrates the major NCDs and their RFs *(12)*.



Fully achieved: the country has operational multisectoral policies, strategies, or action plans for the four main NCDs and four main RFs.

Partially achieved: the country has operational multisectoral policies, strategies, or action plans for at least two of the four NCDs and at least two of the four RFs.

Not achieved

No data: the country did not complete the 2015 NCD Country Capacity Survey.

Don't know

Data not validated: the country did not provide the documentation required for validation of responses to the 2015 NCD Country Capacity Survey.

17 countries (17/34, 50%)
achieved the indicator **fully**

3 countries (3/34, 9%)
achieved it **partially**

TABLE A-5

Results for progress indicator number 4 and 2015 NCD Country Capacity Survey variables used to construct it, by country

Country	Integrated policy, strategy, or action plan for NCDs	Does it address the following NCDs and RFs?			
		Harmful alcohol use	Unhealthy diet	Physical inactivity	Tobacco use
Antigua and Barbuda	Under development	Yes	Yes	Yes	Yes
Argentina	Operational	No	Yes	Yes	Yes
Bahamas	No	N/A	N/A	N/A	N/A
Barbados	Operational	Yes	Yes	Yes	Yes
Belize	Operational	Yes	Yes	Yes	Yes
Bolivia (Plurinational State of)	No	N/A	N/A	N/A	N/A
Brazil	Operational	Yes	Yes	Yes	Yes
Canada	Operational	Yes	Yes	Yes	Yes
Chile	Operational	Yes	Yes	Yes	Yes
Colombia	Operational	Yes	Yes	Yes	Yes
Costa Rica	Operational	Yes	Yes	Yes	Yes
Cuba	No	N/A	N/A	N/A	N/A
Dominica	Under development	Yes	Yes	Yes	Yes
Ecuador	Operational	Yes	Yes	Yes	Yes
El Salvador	Under development	Yes	Yes	Yes	Yes
Grenada	Under development	Yes	Yes	Yes	Yes
Guatemala	Operational	Yes	Yes	Yes	Yes
Guyana	Operational	Yes	Yes	Yes	Yes
Haiti	No	N/A	N/A	N/A	N/A
Honduras	No	N/A	N/A	N/A	N/A
Jamaica	Operational	Yes	Yes	Yes	Yes
Mexico	Operational	No	Yes	Yes	No
Nicaragua	No	N/A	N/A	N/A	N/A
Panama	Operational	Yes	Yes	Yes	Yes
Paraguay	Operational	Yes	Yes	Yes	Yes
Peru	No	N/A	N/A	N/A	N/A
Dominican Republic	Operational	Yes	Yes	Yes	Yes
Saint Kitts and Nevis	Operational	Yes	Yes	Yes	Yes
Saint Lucia	Not operational	Yes	Yes	Yes	Yes
Saint Vincent and the Grenadines	Operational	Yes	Yes	Yes	Yes
Suriname	Operational	Yes	Yes	Yes	Yes
Trinidad and Tobago	No	N/A	N/A	N/A	N/A
United States of America	Operational	Yes	Yes	Yes	Yes
Uruguay	No	N/A	N/A	N/A	N/A
Venezuela	No data	No data	No data	No data	No data

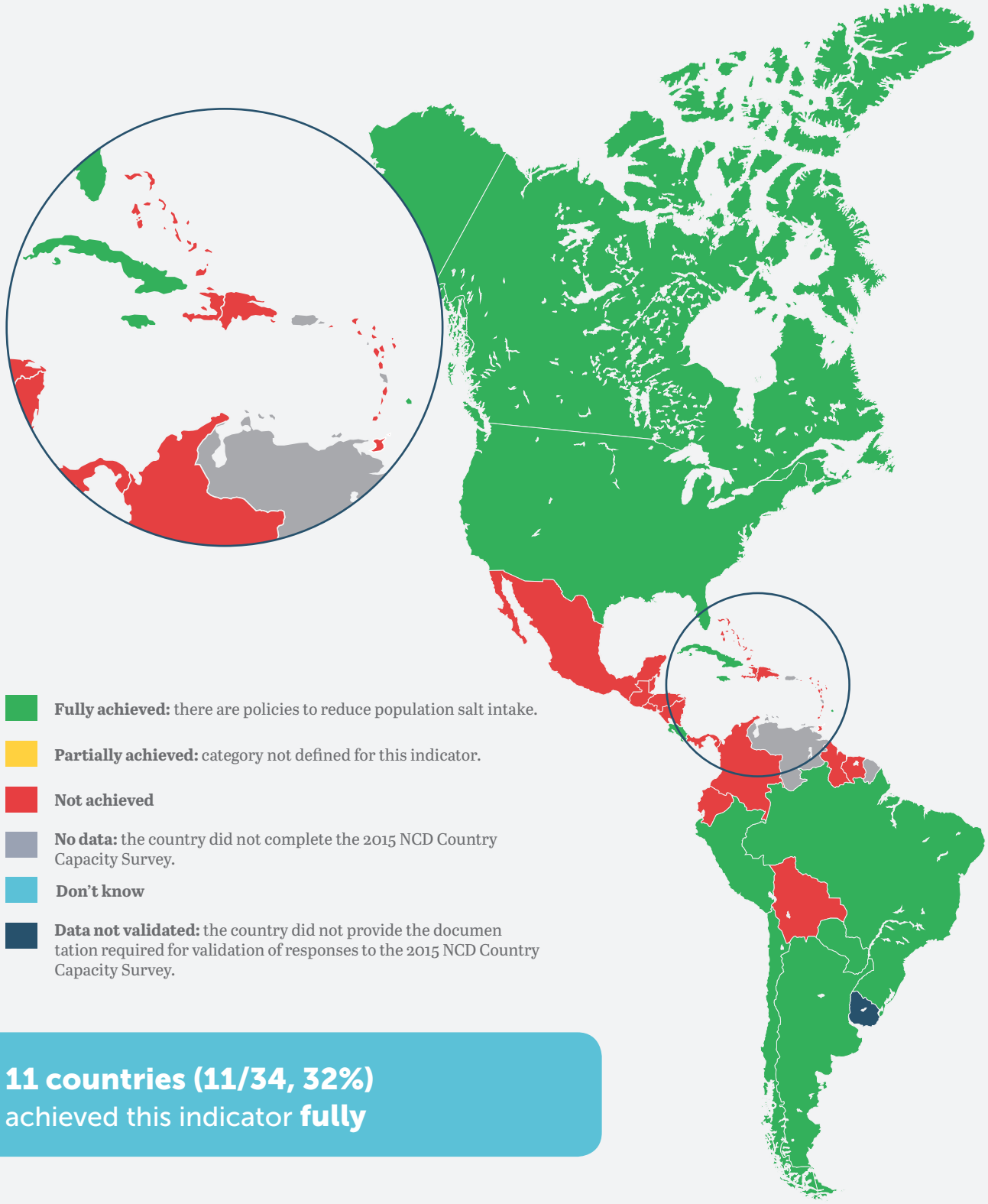
Country	Does it address the following NCDs and RFs?				First year of implementation	Has progress indicator number 4 been achieved?
	Cancer	CVD	CRD	DM		
Antigua and Barbuda	Yes	Yes	Yes	Yes	Yes	No
Argentina	Yes	Yes	Yes	Yes	Yes	Partially
Bahamas	N/A	N/A	N/A	N/A	N/A	No
Barbados	Yes	Yes	Yes	Yes	Yes	Fully
Belize	Yes	Yes	Yes	Yes	Yes	Fully
Bolivia (Plurinational State of)	N/A	N/A	N/A	N/A	N/A	No
Brazil	Yes	Yes	Yes	Yes	Yes	Fully
Canada	Yes	Yes	Yes	Yes	Yes	Fully
Chile	Yes	Yes	Yes	Yes	Yes	Fully
Colombia	Yes	Yes	Yes	Yes	Yes	Fully
Costa Rica	Yes	Yes	Yes	Yes	Yes	Fully
Cuba	N/A	N/A	N/A	N/A	N/A	No
Dominica	Yes	Yes	No	Yes	Yes	No
Ecuador	Yes	Yes	Yes	Yes	Yes	Fully
El Salvador	Yes	No	Yes	Yes	Yes	No
Grenada	Yes	Yes	No	Yes	Yes	No
Guatemala	Yes	Yes	Yes	Yes	Yes	Fully
Guyana	Yes	Yes	Yes	Yes	Yes	Fully
Haiti	N/A	N/A	N/A	N/A	N/A	No
Honduras	N/A	N/A	N/A	N/A	N/A	No
Jamaica	Yes	Yes	Yes	Yes	Yes	Fully
Mexico	No	Yes	No	Yes	Yes	Partially
Nicaragua	N/A	N/A	N/A	N/A	N/A	No
Panama	Yes	Yes	Yes	Yes	Yes	Fully
Paraguay	Yes	Yes	Yes	Yes	Yes	Fully
Peru	N/A	N/A	N/A	N/A	N/A	No
Dominican Republic	Yes	Yes	Yes	Yes	Yes	Fully
Saint Kitts and Nevis	Yes	Yes	Yes	Yes	Yes	Fully
Saint Lucia	Yes	Yes	Yes	Yes	Yes	No
Saint Vincent and the Grenadines	No	Yes	No	Yes	Yes	Partially
Suriname	Yes	Yes	Yes	Yes	Yes	Fully
Trinidad and Tobago	N/A	N/A	N/A	N/A	N/A	No
United States of America	Yes	Yes	Yes	Yes	Yes	Fully
Uruguay	N/A	N/A	N/A	N/A	N/A	No
Venezuela	No data	No data	No data	No data	No data	No data

DM: diabetes; CVD: cardiovascular diseases; CRD: chronic respiratory diseases; N/A: not applicable.

FIGURE A-4

WHO progress indicator number 7a for reporting to the United Nations General Assembly

Definition: Number of Member States that have adopted national policies to reduce population salt/sodium consumption, such as product reformulation by industry, regulation of salt content of food, or public awareness programs *(12)*.



Fully achieved: there are policies to reduce population salt intake.

Partially achieved: category not defined for this indicator.

Not achieved

No data: the country did not complete the 2015 NCD Country Capacity Survey.

Don't know

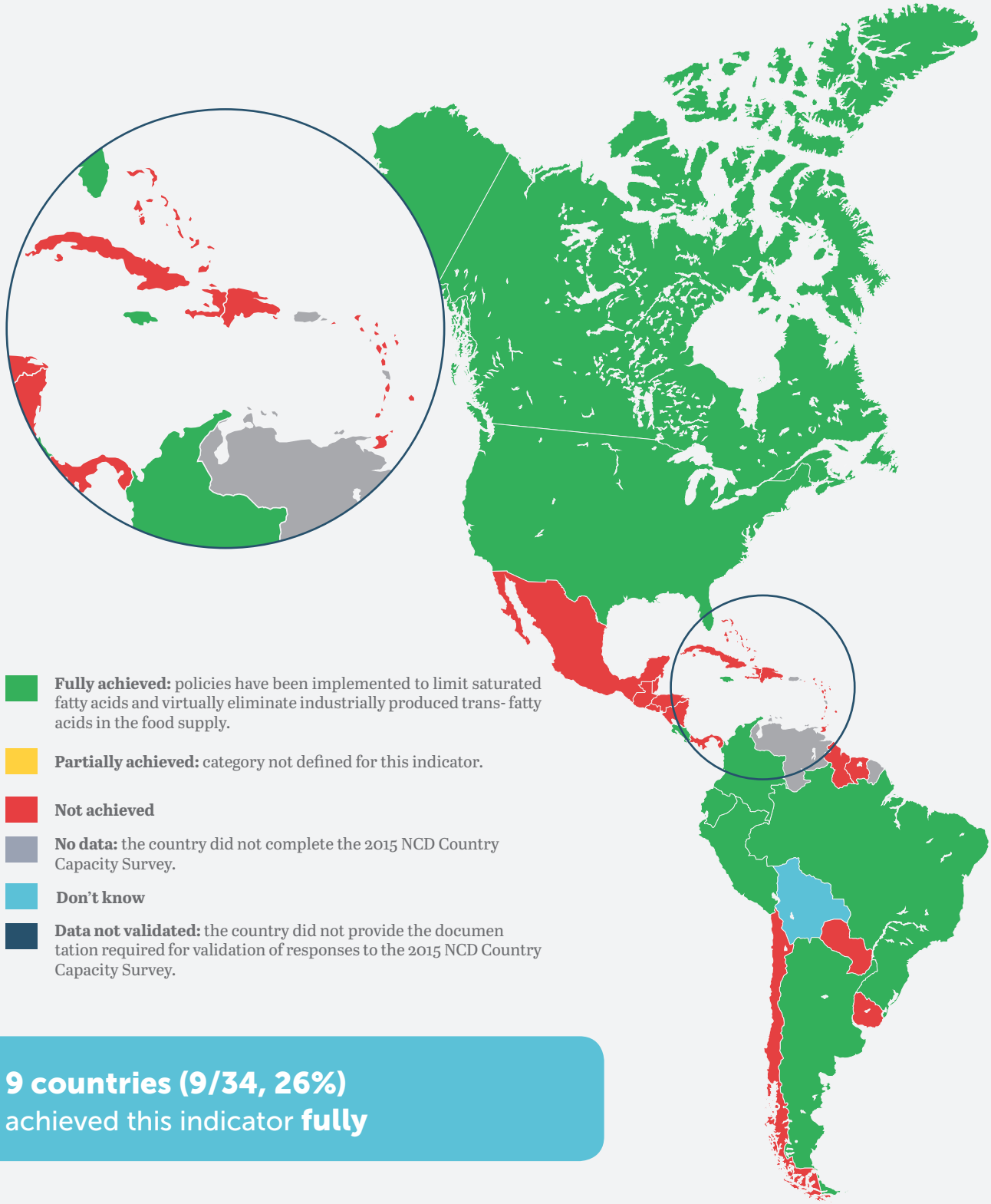
Data not validated: the country did not provide the documen tation required for validation of responses to the 2015 NCD Country Capacity Survey.

11 countries (11/34, 32%)
achieved this indicator **fully**

FIGURE A-5

WHO progress indicator number 7b for reporting to the United Nations General Assembly

Definition: Number of Member States that have adopted national policies that limit saturated fatty acids and virtually eliminate industrially produced trans-fatty acids in the food supply *(12)*.



Fully achieved: policies have been implemented to limit saturated fatty acids and virtually eliminate industrially produced trans- fatty acids in the food supply.

Partially achieved: category not defined for this indicator.

Not achieved

No data: the country did not complete the 2015 NCD Country Capacity Survey.

Don't know

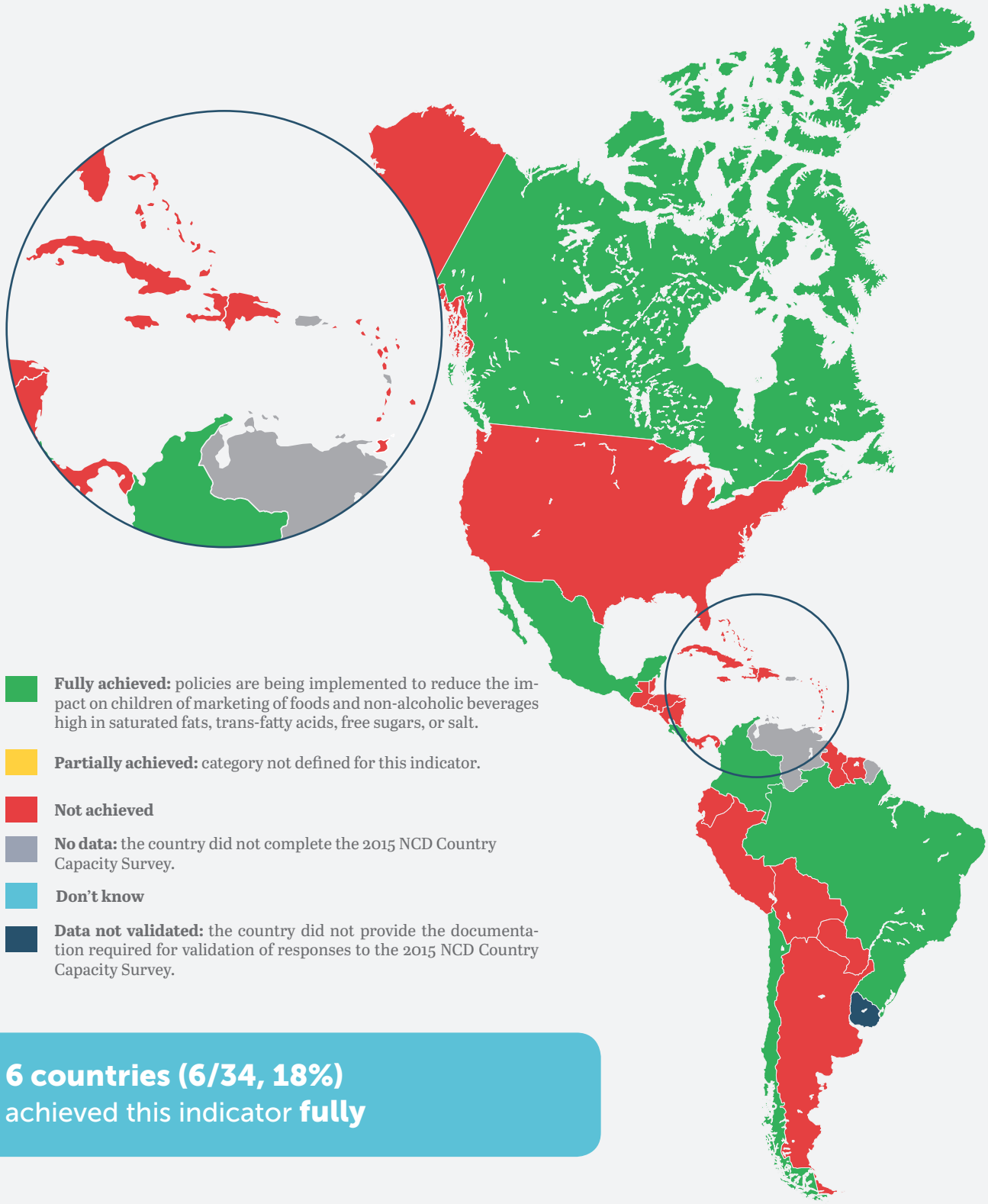
Data not validated: the country did not provide the documen tation required for validation of responses to the 2015 NCD Country Capacity Survey.

9 countries (9/34, 26%)
achieved this indicator **fully**

FIGURE A-6

WHO progress indicator number 7c for reporting to the United Nations General Assembly

Definition: Number of Member States that have implemented policies to reduce the impact on children of marketing of foods and non-alcoholic beverages high in saturated fats, trans-fatty acids, free sugars, or salt *(12)*.



Fully achieved: policies are being implemented to reduce the impact on children of marketing of foods and non-alcoholic beverages high in saturated fats, trans-fatty acids, free sugars, or salt.

Partially achieved: category not defined for this indicator.

Not achieved

No data: the country did not complete the 2015 NCD Country Capacity Survey.

Don't know

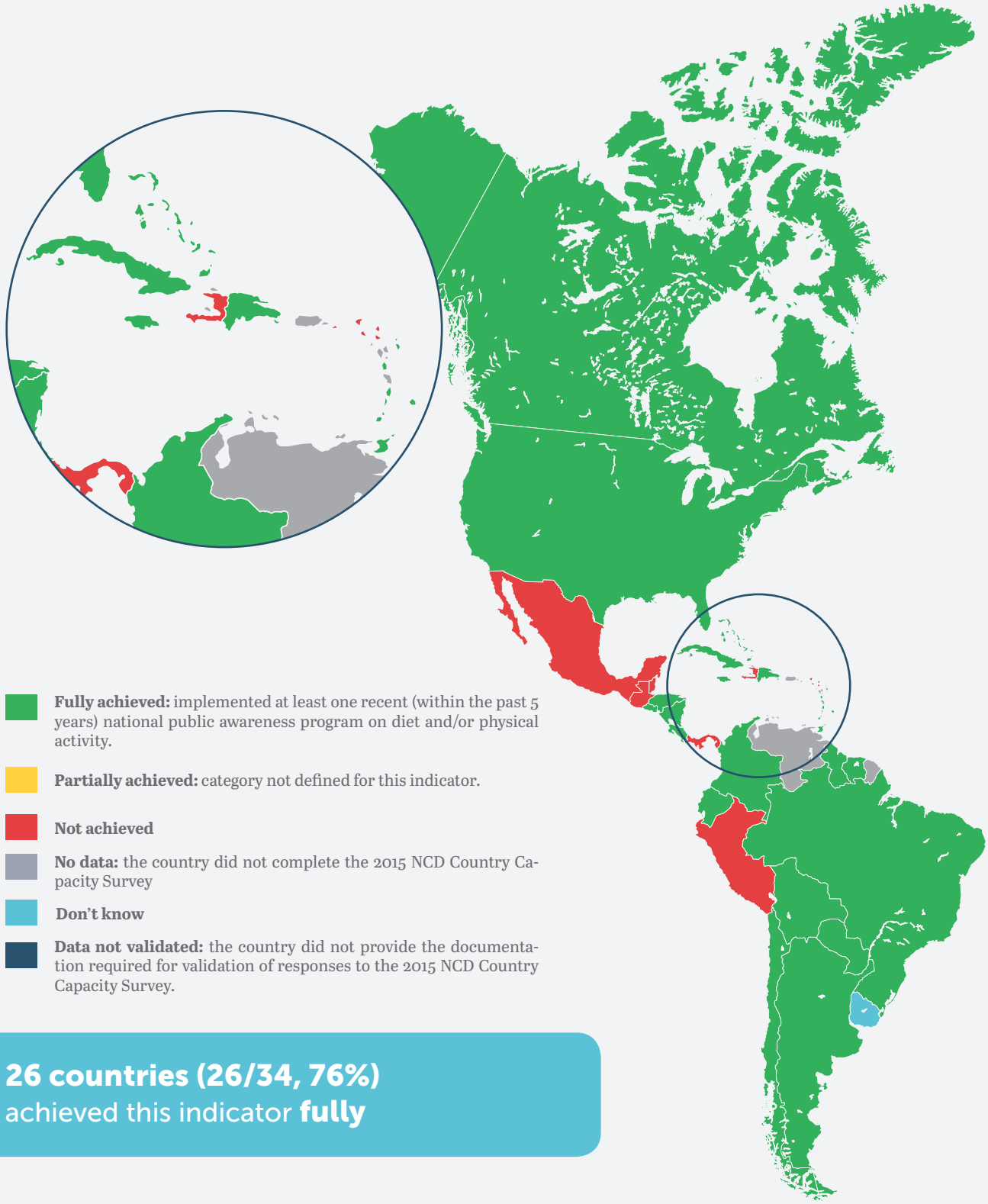
Data not validated: the country did not provide the documentation required for validation of responses to the 2015 NCD Country Capacity Survey.

6 countries (6/34, 18%)
achieved this indicator **fully**

FIGURE A-7

WHO progress indicator number 8 for reporting to the United Nations General Assembly

Definition: Number of Member States that have implemented at least one recent national public awareness program on diet and/or physical activity *(12)*.



Fully achieved: implemented at least one recent (within the past 5 years) national public awareness program on diet and/or physical activity.

Partially achieved: category not defined for this indicator.

Not achieved

No data: the country did not complete the 2015 NCD Country Capacity Survey

Don't know

Data not validated: the country did not provide the documentation required for validation of responses to the 2015 NCD Country Capacity Survey.

26 countries (26/34, 76%)
achieved this indicator **fully**

TABLE A-6

Results for progress indicators 7a, 7b, 7c, and 8 and 2015 NCD Country Capacity Survey variables used to construct indicator 8, by country

Country	Has progress indicator 7a (regarding population salt intake) been achieved?	Has progress indicator 7b (regarding saturated fatty acids and trans fats) been achieved?	Has progress indicator 7c (regarding impact of marketing on children) been achieved?
Antigua and Barbuda	No	No	No
Argentina	Fully	Fully	No
Bahamas	No	No	No
Barbados	Fully	No	No
Belize	No	No	No
Bolivia (Plurinational State of)	No	DK	No
Brazil	Fully	Fully	Fully
Canada	Fully	Fully	Fully
Chile	Fully	No	Fully
Colombia	No	Fully	Fully
Costa Rica	Fully	Fully	Fully
Cuba	Fully	No	No
Dominica	No	No	No
Dominican Republic	No	No	No
Ecuador	No	Fully	No
El Salvador	No	No	No
Grenada	No	No	No
Guatemala	No	No	No
Guyana	No	No	No
Haiti	No	No	No
Honduras	No	No	No
Jamaica	Fully	Fully	No
Mexico	No	No	Fully
Nicaragua	No	No	No
Panama	No	No	No
Paraguay	Fully	No	No
Peru	Fully	Fully	No
Saint Kitts and Nevis	No	No	No
Saint Lucia	No	No	No
Saint Vincent and the Grenadines	No	No	No
Suriname	No	No	No
Trinidad and Tobago	No	No	No
United States of America	Fully	Fully	No
Uruguay	Data not validated	No	Data not validated
Venezuela	No data	No data	No data

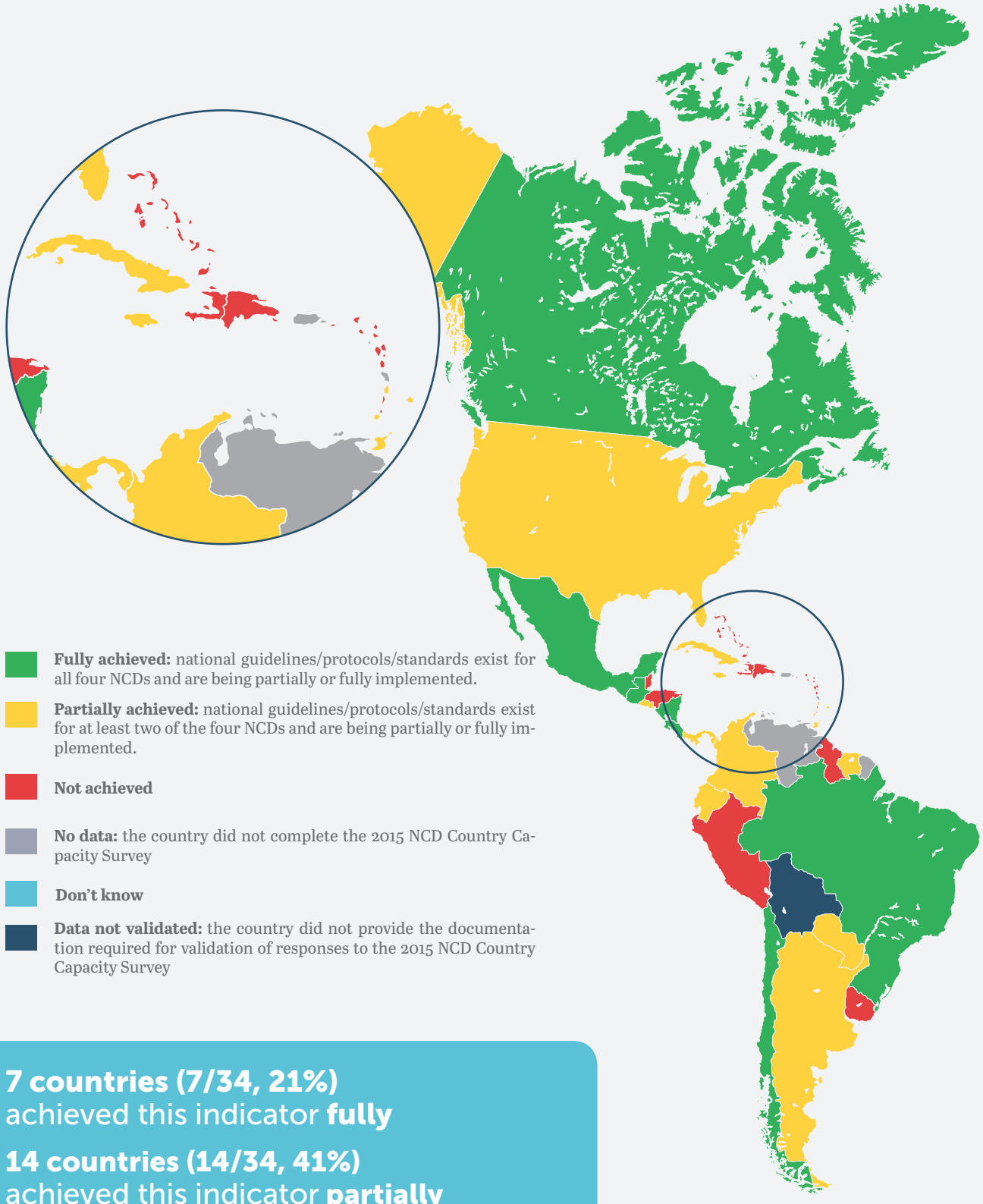
Country	Has a national awareness program on physical activity been implemented in the past 5 years?	Has a national awareness program on diet been implemented in the past 5 years?	Has progress indicator number 8 been achieved?
Antigua and Barbuda	Yes	Yes	Fully
Argentina	Yes	Yes	Fully
Bahamas	Yes	Yes	Fully
Barbados	Yes	Yes	Fully
Belize	No	No	No
Bolivia (Plurinational State of)	No	Yes	Fully
Brazil	Yes	Yes	Fully
Canada	Yes	Yes	Fully
Chile	Yes	Yes	Fully
Colombia	Yes	Yes	Fully
Costa Rica	Yes	Yes	Fully
Cuba	Yes	Yes	Fully
Dominica	Yes	Yes	Fully
Dominican Republic	Yes	No	Fully
Ecuador	Yes	Yes	Fully
El Salvador	No	Yes	Fully
Grenada	Yes	Yes	Fully
Guatemala	No	No	No
Guyana	Yes	Yes	Fully
Haiti	No	No	No
Honduras	Yes	No	Fully
Jamaica	Yes	Yes	Fully
Mexico	No	No	No
Nicaragua	No	Yes	Fully
Panama	No	No	No
Paraguay	Yes	Yes	Fully
Peru	No	No	No
Saint Kitts and Nevis	No	No	No
Saint Lucia	No	Yes	Fully
Saint Vincent and the Grenadines	No	Yes	Fully
Suriname	Yes	Yes	Fully
Trinidad and Tobago	Yes	Yes	Fully
United States of America	Yes	Yes	Fully
Uruguay	No	DK	DK
Venezuela	No data	No data	No data

Note: DK: don't know.

FIGURE A-8

WHO progress indicator number 9 for reporting to the United Nations General Assembly

Definition: Number of Member States that have evidence-based national guidelines/protocols/standards for the management (diagnosis and treatment) of major NCDs, recognized/approved by government or competent authorities *(12)*.



Fully achieved: national guidelines/protocols/standards exist for all four NCDs and are being partially or fully implemented.

Partially achieved: national guidelines/protocols/standards exist for at least two of the four NCDs and are being partially or fully implemented.

Not achieved

No data: the country did not complete the 2015 NCD Country Capacity Survey

Don't know

Data not validated: the country did not provide the documentation required for validation of responses to the 2015 NCD Country Capacity Survey

7 countries (7/34, 21%)
achieved this indicator **fully**

14 countries (14/34, 41%)
achieved this indicator **partially**

TABLE A-7

Results for progress indicator number 9 and 2015 NCD Country Capacity Survey variables used to construct it, by country

	Availability and implementation status of clinical practice guidelines, protocols, or standards for the four main NCDs				
Country	CVD	Implementation status	DM	Implementation status	Cancer
Antigua and Barbuda	No	N/A	Yes	Full	No
Argentina	Yes	Partial	Yes	Partial	Yes
Bahamas	No	N/A	No	N/A	No
Barbados	No	N/A	Yes	Partial	No
Belize	No	N/A	Yes	Full	No
Bolivia (Plurinational State of)	Yes (DNV)	Partial (DNV)	Yes (DNV)	Partial (DNV)	Yes (DNV)
Brazil	Yes	Full	Yes	Full	Yes
Canada	Yes	Full	Yes	Full	Yes
Chile	Yes	Full	Yes	Full	Yes
Colombia	Yes	Partial	No	N/A	Yes
Costa Rica	Yes	Full	Yes	Full	Yes
Cuba	Yes	Full	Yes	Full	Yes
Dominica	No	N/A	Yes	Full	Yes
Dominican Republic	No	N/A	No	N/A	Yes
Ecuador	Yes	Partial	Yes	Partial	No
El Salvador	No	N/A	Yes	Full	Yes
Grenada	No	N/A	Yes	Partial	Yes
Guatemala	Yes	Full	Yes	Full	Yes
Guyana	No	N/A	No	N/A	No
Haiti	No	N/A	No	N/A	No
Honduras	No	N/A	Yes	No	No data
Jamaica	No	N/A	Yes	Full	Yes
Mexico	Yes	Full	Yes	Full	Yes
Nicaragua	Yes	Full	Yes	Full	Yes
Panama	No	N/A	Yes	Full	Yes
Paraguay	Yes	Full	Yes	Full	Yes
Peru	No	N/A	No	N/A	No
Saint Kitts and Nevis	No	N/A	No	N/A	No
Saint Lucia	No	N/A	Yes	Full	Yes
Saint Vincent and the Grenadines	No	N/A	No	N/A	No
Suriname	Yes	Full	Yes	Full	No
Trinidad and Tobago	No	N/A	Yes	Full	Yes
United States of America	Yes	Partial	Yes	DK	No
Uruguay	No	N/A	No	N/A	No
Venezuela	No data	No data	No data	No data	No data

	Availability and implementation status of clinical practice guidelines, protocols, or standards for the four main NCDs			
Country	Implementation status	CRD	Implementation status	Has progress indicator 9 been achieved?
Antigua and Barbuda	N/A	No	N/A	No
Argentina	Partial	Yes	No	Partially
Bahamas	N/A	No	N/A	No
Barbados	N/A	Yes	Partial	Partially
Belize	N/A	No	N/A	No
Bolivia (Plurinational State of)	Partial (DNV)	No	N/A	DNV
Brazil	Full	Yes	Full	Fully
Canada	Full	Yes	Full	Fully
Chile	Full	Yes	Full	Fully
Colombia	Partial	Yes	Partial	Partially
Costa Rica	Full	Yes	Full	Fully
Cuba	Full	No	N/A	Partially
Dominica	No	No	N/A	No
Dominican Republic	Partial	No	N/A	No
Ecuador	N/A	No	N/A	Partially
El Salvador	Full	Yes	Full	Partially
Grenada	No data	Yes	Partial	Partially
Guatemala	Full	Yes	Full	Fully
Guyana	N/A	No	N/A	No
Haiti	N/A	No	N/A	No
Honduras	No data	No	N/A	No
Jamaica	Full	Yes	Full	Partially
Mexico	Full	Yes	Full	Fully
Nicaragua	Full	Yes	Partial	Fully
Panama	Full	No	N/A	Partially
Paraguay	DK	No	N/A	Partially
Peru	N/A	No	N/A	No
Saint Kitts and Nevis	N/A	No	N/A	No
Saint Lucia	Partial	Yes	Full	Partially
Saint Vincent and the Grenadines	N/A	No	N/A	No
Suriname	N/A	No	N/A	Partially
Trinidad and Tobago	Full	No	N/A	Partially
United States of America	N/A	Yes	Partial	Partially
Uruguay	N/A	No	N/A	No
Venezuela	No data	No data	No data	No data

Notes: DM: diabetes; DNV: data not validated; CVD: cardiovascular diseases; CRD: chronic respiratory diseases; N/A: not applicable; DK: don't know.

FIGURE A-9

WHO progress indicator number 10 for reporting to the United Nations General Assembly

Definition: Number of Member States that provide drug therapy, including glycemic control, and counseling for eligible persons at high cardiovascular risk, with emphasis on the primary care level *(12)*.

Fully achieved: more than 50% of primary health care facilities are offering cardiovascular risk stratification for the management of patients at high cardiovascular risk, and all essential drugs for NCD management and prevention (insulin, aspirin, metformin, thiazide diuretics, ACE inhibitors, calcium channel blockers, statins, and sulphonylureas) are generally available at the primary care level (in at least 50% of pharmacies or primary care facilities).

Partially achieved: all of the essential drugs listed above are generally available in primary care facilities, but only 25% to 50% of primary health care facilities are offering cardiovascular risk stratification.

Not achieved

No data: the country did not complete the 2015 NCD Country Capacity Survey

Don't know

Data not validated: the country did not provide the documentation required for validation of responses to the 2015 NCD Country Capacity Survey.

4 countries (4/34, 12%)
achieved this indicator **fully**

3 countries (3/34, 9%)
achieved this indicator **partially**

TABLE A-8

Results for progress indicator number 10 and 2015 NCD Country Capacity Survey variables used to construct it, by country

Country	Insulin	Aspirin	Metformin	Thiazides	ACE inhibitors	CCBs	BBs	Statins
Antigua and Barbuda	GA	GA	GA	GA	GA	GA	GA	GA
Argentina	GA	GA	GA	GA	GA	GA	GA	GA
Bahamas	GA	GA	GA	GA	GA	GA	GA	GA
Barbados	GA	GA	GA	GA	GA	GA	GA	GA
Belize	GA	GA	GA	GA	GA	GA	GA	GU
Bolivia (Plurinational State of)	GA	GA	--	--	--	--	--	--
Brazil	GA	GA	GA	GA	GA	GA	GA	GA
Canada	GA	GA	GA	GA	GA	GA	GA	GA
Chile	GA	GA	GA	GA	GA	GA	GA	GA
Colombia	GA	GA	GA	GA	GA	GA	GA	GA
Costa Rica	GA	GA	GA	GA	GA	GA	GA	GA
Cuba	GA	GA	GA	GA	GA	GA	GA	GA
Dominica	GA	GA	GA	GA	GA	GA	GA	GA
Dominican Republic	GA	GA	GA	GA	GA	GA	GA	GA
Ecuador	GA	GA	GA	GA	GA	GA	GA	GA
El Salvador	GU	GA	GA	GA	GA	GA	GA	GU
Grenada	GA	GA	GA	GA	GA	GA	GA	GA
Guatemala	GA	GU	GA	GA	GA	GU	GU	GU
Guyana	GA	GA	GA	GA	GA	GA	GA	GA
Haiti	GA	GA	GA	GA	GA	GA	GA	GA
Honduras	GU	GA	GU	GA	GU	GU	GU	GU
Jamaica	GA	GA	GA	GA	GA	GA	GA	GA
Mexico	GA	GU	GA	GA	GA	GA	GA	GA
Nicaragua	GA	GA	GA	GA	GA	GA	GA	GA
Panama	GA	GA	GA	GA	GA	GA	GA	GA
Paraguay	GA	GA	GA	GA	GA	GA	GA	GA
Peru	GU	GA	GA	DK	DK	DK	DK	DK
Saint Kitts and Nevis	GA	GA	GA	GA	GA	GA	GA	GU
Saint Lucia	GA	GA	GA	GA	GA	GA	GA	GU
Saint Vincent and the Grenadines	GA	GA	GA	GA	GA	GA	GA	GA
Suriname	GA	GA	GA	GA	GA	GA	GA	GA
Trinidad and Tobago	GA	GA	GA	GA	GA	GA	GA	GA
United States of America	GA	GA	GA	GA	GA	GA	GA	GA
Uruguay	GA	GA	GA	GA	GA	GA	GA	GA
Venezuela	No data	No data	No data	No data	No data	No data	No data	No data

Country	Sulphonylureas	Are all of these drugs generally available?	Proportion of primary care facilities that offer cardiovascular risk stratification for the management of high-risk patients	Has progress indicator 10 been achieved?
Antigua and Barbuda	GA	Yes	Unavailable	No
Argentina	GA	Yes	25% to 50%	Partially
Bahamas	GA	Yes	DK	DK
Barbados	GA	Yes	Less than 25%	No
Belize	GA	No	Less than 25%	No
Bolivia (Plurinational State of)	--	No	25% to 50%	No
Brazil	GA	Yes	25% to 50%	Partially
Canada	GA	Yes	More than 50%	Fully
Chile	GA	Yes	More than 50%	Fully
Colombia	GA	Yes	Less than 25%	No
Costa Rica	GA	Yes	Unavailable	No
Cuba	GA	Yes	25% to 50%	Partially
Dominica	GA	Yes	DK	DK
Dominican Republic	GA	Yes	More than 50%	Fully
Ecuador	GA	Yes	Less than 25%	No
El Salvador	GA	No	Unavailable	No
Grenada	GA	Yes	Unavailable	No
Guatemala	GA	No	Less than 25%	No
Guyana	GA	Yes	Less than 25%	No
Haiti	GA	Yes	DK	DK
Honduras	GU	No	Unavailable	No
Jamaica	GA	Yes	Unavailable	No
Mexico	GA	No	Less than 25%	No
Nicaragua	DK	No	Unavailable	No
Panama	GA	Yes	Less than 25%	No
Paraguay	GA	Yes	Less than 25%	No
Peru	DK	No	DK	DK
Saint Kitts and Nevis	GA	No	Less than 25%	No
Saint Lucia	GA	No	Unavailable	No
Saint Vincent and the Grenadines	DK	No	Unavailable	No
Suriname	GA	Yes	DK	DK
Trinidad and Tobago	GA	Yes	Less than 25%	No
United States of America	GA	Yes	DK	DK
Uruguay	GA	Yes	More than 50%	Fully
Venezuela	No data	No data	No data	No data

Notes: Aspirin: 100-mg dosage; BB: beta-blockers; GA: generally available (in at least 50% of pharmacies); GU: generally unavailable (in less than 50% of pharmacies); ACE: angiotensin-converting enzyme; DK: don't know; CCB: calcium channel blocker; --: no response.

NOTES

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