

Noncommunicable diseases and mental health in small island developing states



World Health
Organization

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ISBN 978-92-4-007221-3 (electronic version)

ISBN 978-92-4-007222-0 (print version)

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Acknowledgements

This report was prepared by the Noncommunicable Diseases Department, World Health Organization. Gretchen Stevens was the lead writer, with inputs and support from Daniel Chisholm, Melanie Cowan, Sophie Gummy, Tomo Kanda, Silvana Luciano, Annet Mahanani, Bente Mikkelsen, Tara Neville, Annette Pruss, Leanne Riley, Susannah Robinson, Amy Savage, Kerolyn Shairsingh, Slim Slama and Elena Villalobos Prats.

Key points

1

Small island developing states (SIDS) face unique challenges in preventing and managing noncommunicable diseases (NCDs) and mental health conditions. Key factors include geography, population size, climate change and food security.

2

SIDS also have diverse economic resources and institutional situations from which they address NCDs.

3

SIDS are disproportionately represented among the countries with the highest estimated risk of dying prematurely from any of the four main NCDs, although specific rates and challenges vary by country.

4

Within some areas of NCD prevention and management, SIDS face the same issues as non-SIDS peers. In others, such as diet, they face specific and usually increased levels of risk.

5

To respond more effectively, most SIDS need additional support in specific disease areas. Many also require support in overall capacity development, infrastructure investment and routine data collection for NCDs and mental health, including death registration.

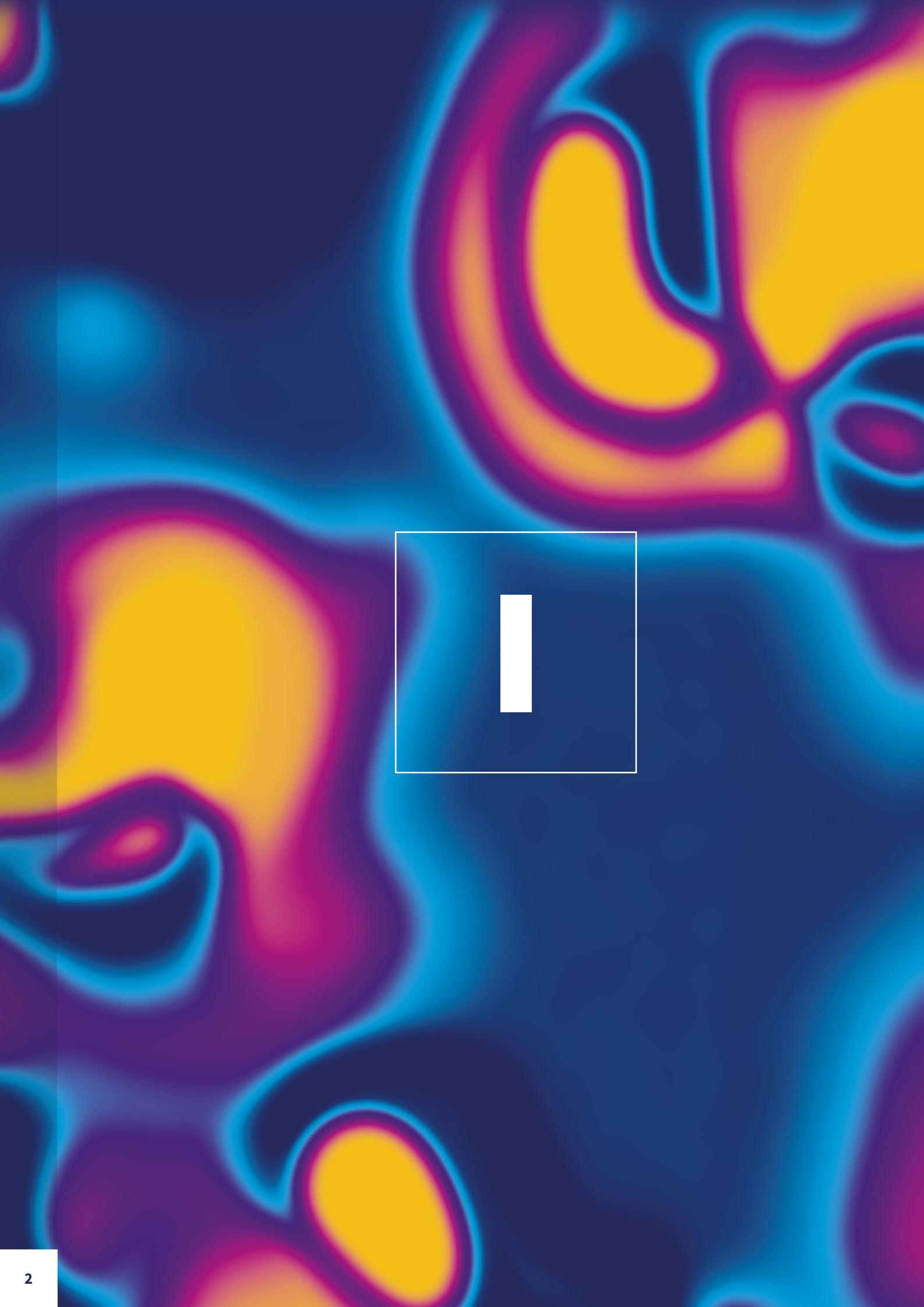
Background

Small island developing states (SIDS) are a set of islands and coastal states that share similar sustainable development challenges, as a result of their size, geography and vulnerability to climate change. Thirty-nine WHO member states in four regions – the African Region, the Region of the Americas, the South-East Asian Region, and the Western Pacific region – are classified as SIDS. Whilst the individual countries differ in many respects, collectively they face unique social, economic and environmental challenges including:

- i. **Geography.** All SIDS face similar geographical constraints as islands or coastal states, though some are more remote than others. They are particularly vulnerable to adverse impacts of climate change, such as sea level rise and extreme weather events. Their growth and development are also hindered by high transportation and communication costs, including disproportionately expensive infrastructure.
- ii. **Population.** The population of most SIDS is small, ranging from less than 2000 people in Niue to 11.4 million people in Haiti in 2021, with a group median of 320,000 (**Table 1**). In total, 67 million people lived in SIDS in 2021, equivalent to less than 1% of the global population. Due to their small populations, many SIDS have constrained human resources for coordination, planning and priority setting specific to NCDs or mental health.
- iii. **Economy.** The economic situation of SIDS is varied. Three-quarters of SIDS are classified as middle-income (28 countries), but the group also includes one low-income and 8 high-income countries (1).¹

Aside from factors associated with climate change, geography, and population size, they have diverse NCD and mental health risk factors, burden, and responses, as described in this report.

1. Data for 2021.

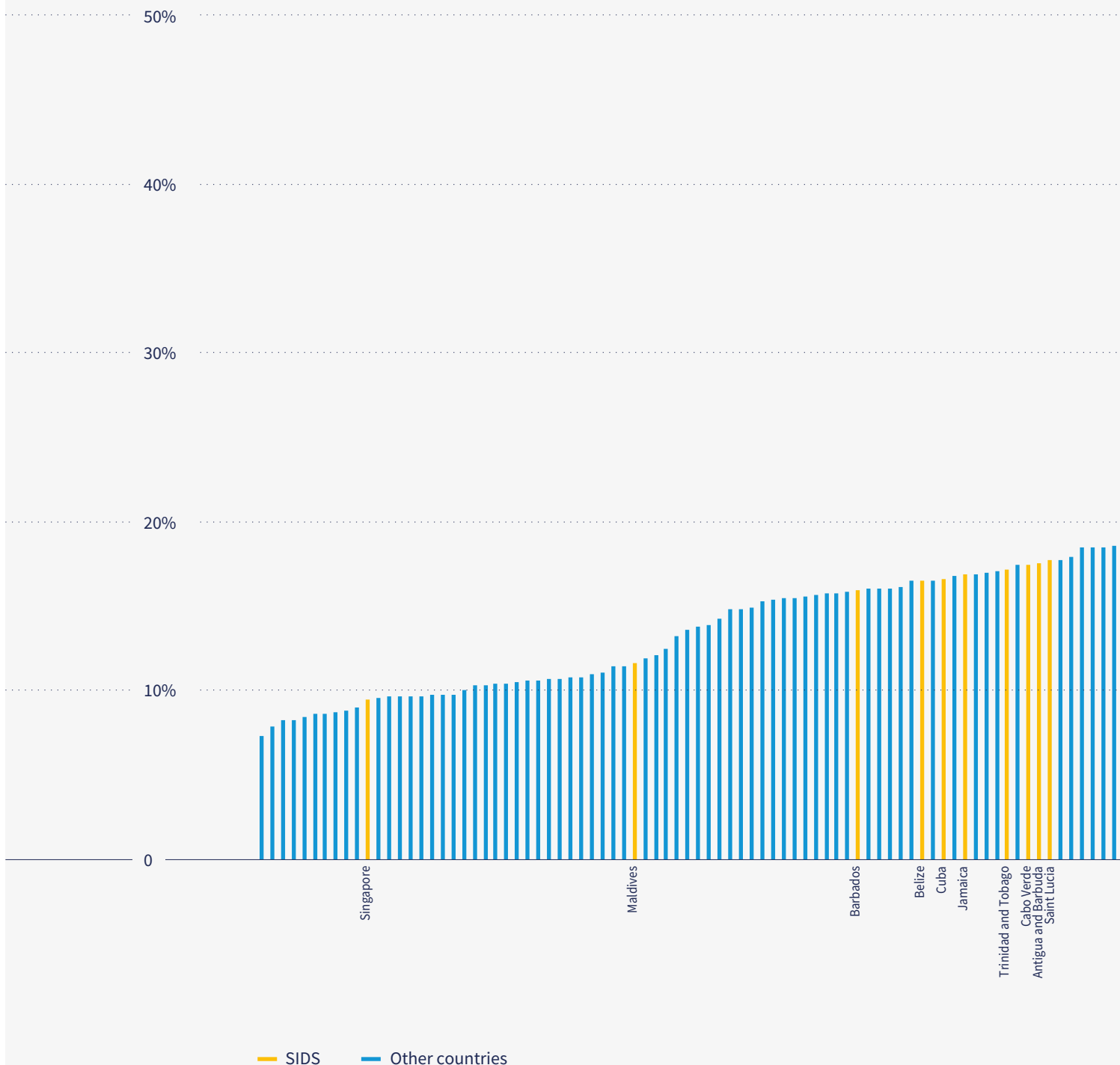


Mortality

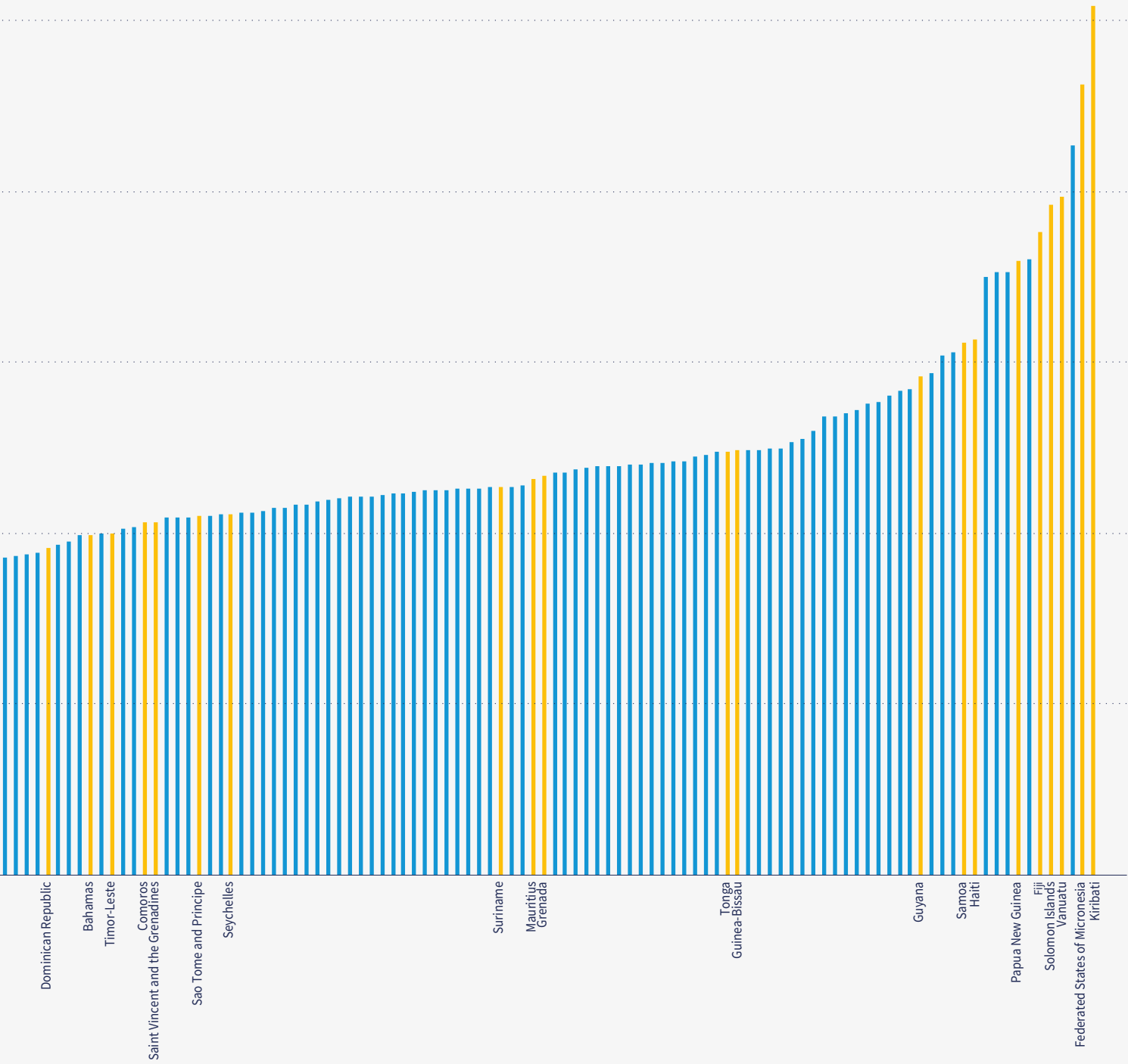
SIDS are disproportionately represented among the countries with the highest estimated risk of dying prematurely from any of the four main **NCDs**.² In 2019, only one SIDS (Singapore) featured amongst the 19 countries with a risk of less than 10% of dying prematurely from an NCD. Yet of the 15 countries with over 30% risk of premature death, eight were SIDS (**Figure 1**). As with any country, these high risks of premature NCD mortality could be addressed by reducing exposure to NCD risk factors and by improving access to and quality of health care.

2. In this instance, premature is defined as deaths occurring between the ages of 30 and 70 years old.

Fig. 1. Likelihood of dying from any of cardiovascular disease, cancer, diabetes, or chronic respiratory disease between 30 and 70 years of age (SDG indicator 3.4.1) in 2019 in SIDS and in other countries. Estimates are for 31 SIDS and 152 other member states.



Source: Global health estimates 2019: deaths by cause, age, sex, by country and by region, 2000–2019. Geneva: World Health Organization; 2020 (<https://www.who.int/data/gho/data/themes/mortality-and-global-health-estimates/>, accessed 16 December 2022). WHO Member States with a population of less than 90 000 in 2019 were not included in the analysis.



People with mental health conditions face a substantially higher risk of premature mortality, including from unaddressed physical health conditions and from **suicide**. Suicide mortality is a mental health indicator for SDG target 3.4. Estimated suicide rates in SIDS in 2019 are more in line with suicide rates in other countries, with a median of 8 suicide deaths per 100 000 population in SIDS versus a global rate of 9 per 100 000 (**Table 1**; (2)). Yet suicide rates vary widely across SIDS, with Guyana having one of the highest suicide rates in the world (17 per 100 000 for women and 63 per 100 000 for men). At the other extreme, four SIDS in the region of the Americas are estimated to have more encouraging numbers, with suicide rates below 1 per 100 000.

Box 1. Data limitation: An underestimated burden?

The concern with these estimates of both NCD and suicide mortality is that they are only as reliable as the underlying data on mortality by cause collected in each country. The preferred data source for data on mortality by cause is death registration data including medical certification of cause of death. Suicide mortality in particular may be under-recorded due to stigma or context-specific legal reasons.³

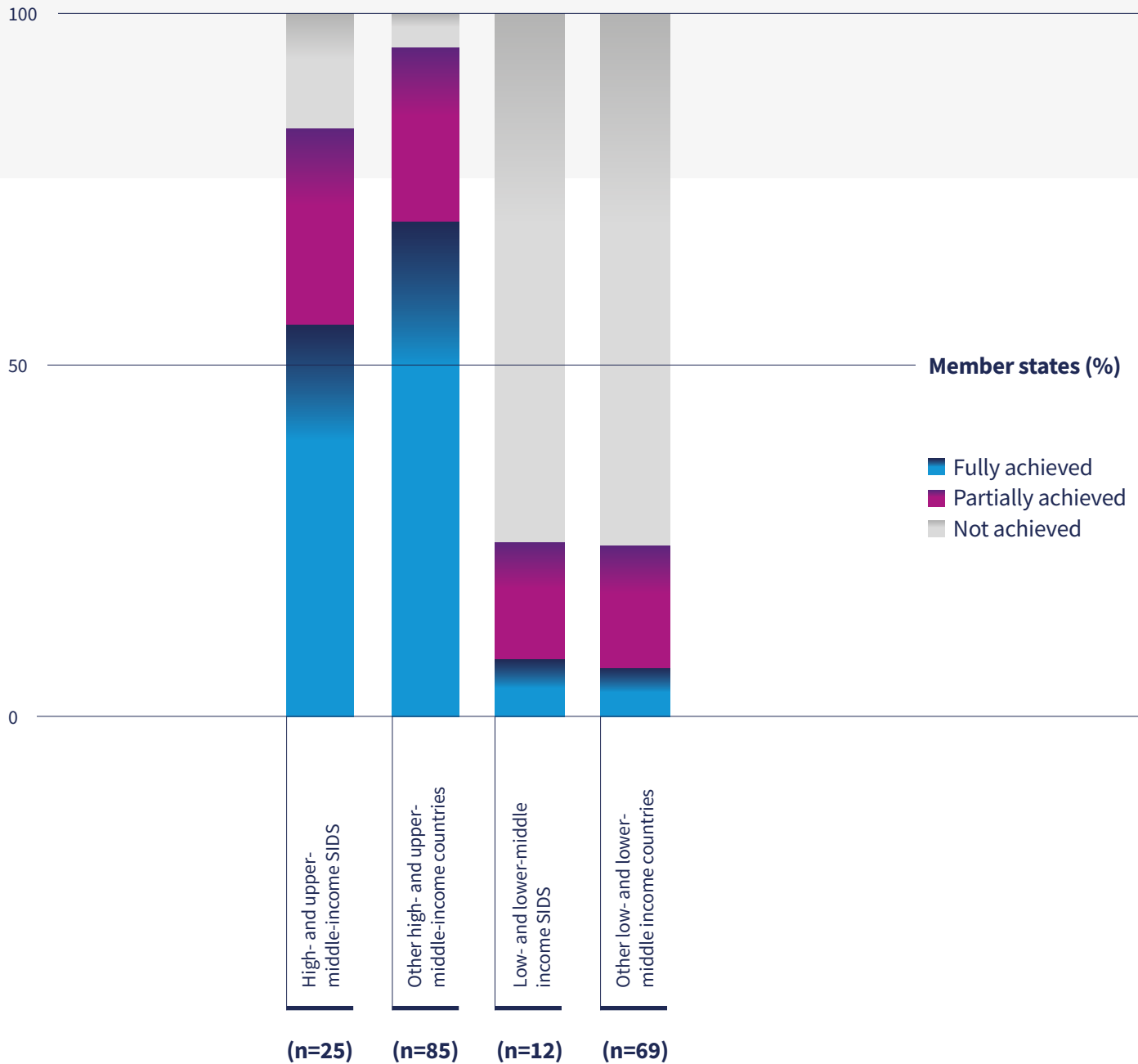
SIDS face unique advantages and challenges in registering deaths. In some SIDS, populations are dispersed across multiple isolated islands, leading to challenges registering deaths; in others, the population is concentrated in a single island and the health care system is centralized, which facilitates data collection. SIDS with small populations are constrained by limited national staff to compile and analyze death registration data and transmit them to international organizations such as the WHO.

***Figure 2** shows whether reliable death registration data, including cause-of-death classification, are reported to the WHO, by country income classification for SIDS and other countries. Whilst low- and lower-middle-income SIDS data reporting is consistent with other countries in the same income bracket, the rate of fully functioning data collection is lower in upper-middle and high-income SIDS compared to their peers.*

3. Similarly, changes in suicide rates should be interpreted with caution as they may be caused by changes in accuracy of cause-of-death assignment.

Fig. 2. Presence of a functioning system for generating reliable cause-specific mortality data on a routine basis in SIDS and other member states in 2019, stratified by country income classification.⁴ Data are for 37 SIDS and 154 other WHO Member States.

Source: *Noncommunicable diseases progress monitor 2022*. Geneva: World Health Organization; 2022 (<https://www.who.int/publications/i/item/9789240047761>, accessed 16 December 2022).



4. Data are considered to generate reliable cause-specific mortality data on a routine basis if: (1) Data from the five most recent reporting years are, on average, at least 70% usable. Usability is calculated as: (Completeness (%)) * (1 - Proportion Garbage); (2) at least five years of cause-of-death data have been reported to the WHO in the last 10 years; and (3) the most recent year of data reported to the WHO is no more than five years old. This indicator is considered fully achieved if the country meets all three criteria. This indicator is considered partially achieved if the country does not meet all of the above criteria but has submitted some vital registration data to WHO.

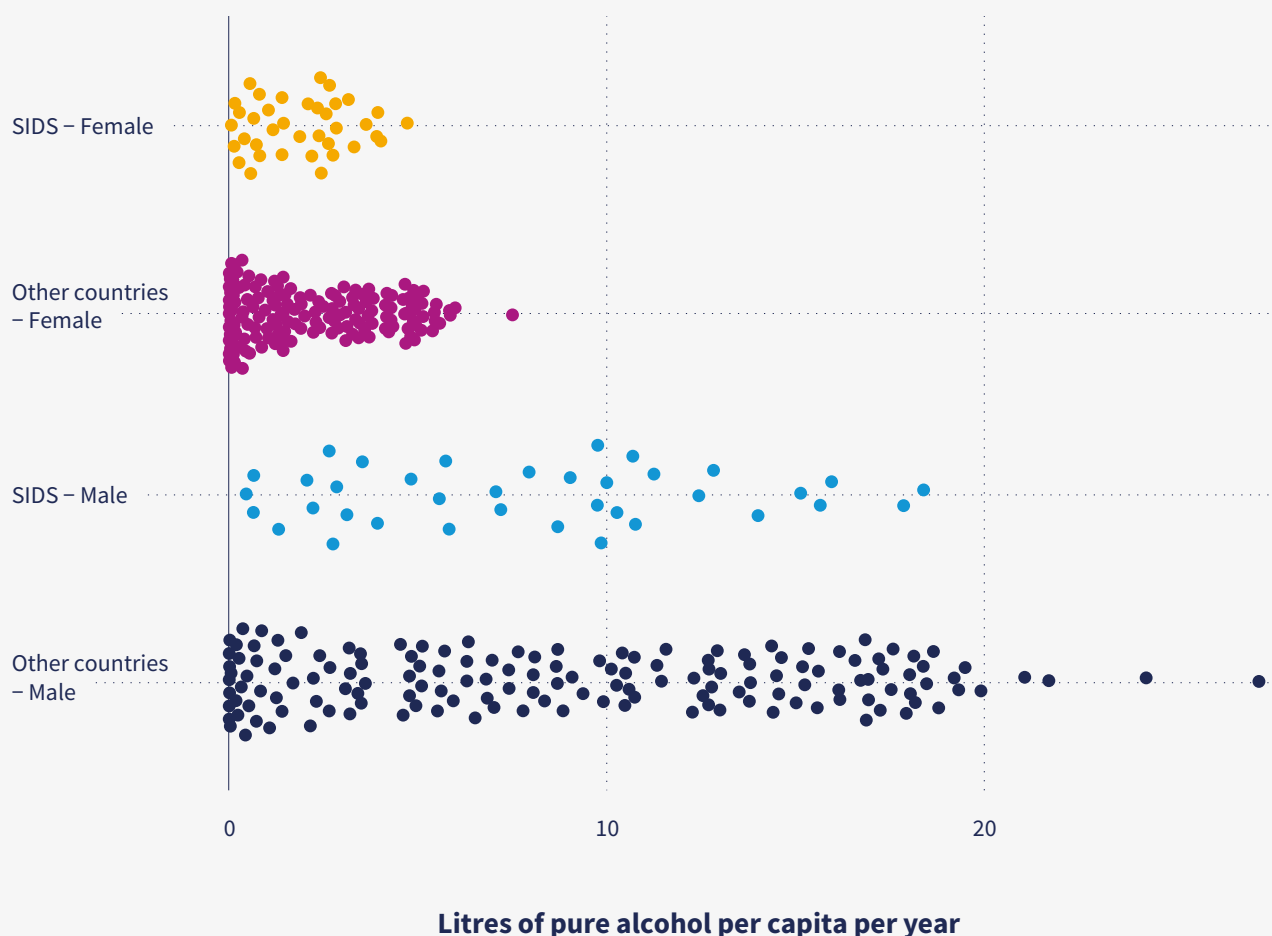


Risk Factors

Many NCDs share five major risk factors: tobacco use, unhealthy diet, harmful use of alcohol, physical inactivity, and air pollution. Two of these – harmful use of alcohol and physical inactivity – are also risk factors for mental health conditions.

Data on tobacco use, alcohol use, physical inactivity, and population relying on clean fuels for cooking (often a proxy indicator for household air pollution) show that prevalence of these vary widely across SIDS, but that this range is similar to the range in other countries (**Table 1**). For example, in 2019 total annual pure **alcohol consumption** by each sex is broadly similar to the ranges for other countries (**Figure 3**).

Fig. 3. Total per capita alcohol consumption in litres of pure alcohol, adults aged 15 years and above, in SIDS and in other countries in 2019, by sex. Estimates are for 37 SIDS and 152 other WHO Member States.



Source: *Noncommunicable diseases: Risk factors [online database]*, Global Health Observatory (GHO) data. Geneva: World Health Organization (<https://www.who.int/data/gho/data/themes/topics/topic-details/GHO/ncd-risk-factors>, accessed 19 May 2023).

In the case of **air pollution**, the remote location of many SIDS becomes an advantage for ambient air quality: median annual mean concentration of fine particulate matter was estimated to be $9 \mu\text{g}/\text{m}^3$ in 2019, less than half the median annual mean concentration in other countries ($20 \mu\text{g}/\text{m}^3$), but nevertheless exceeding the WHO guidelines (annual mean of $5 \mu\text{g}/\text{m}^3$ or less) (3). However, only 9 of 39 SIDS (23%) monitor air quality, compared to 108 of 155 other countries (70%).

Healthy diet, however, is another story. SIDS commonly face problems in ensuring that healthy diets are available and affordable. Many SIDS are constrained by dependence on imported food, with some countries already importing upwards of 90% of their available food and others increasing their reliance on them (4). These imported foods are more likely to be processed foods that are high in fats, salt and

sugar. These dietary constraints are a cause of high rates of obesity and diabetes in some SIDS (**Figure 4** and **Figure 5**). The top 10 countries with the highest obesity prevalence worldwide are all SIDS in the Western Pacific region, with obesity prevalence exceeding 45% of the adult population in 2016 (both sexes combined; **Table 1**).

Concerningly, this is a trend that looks set to worsen. In all 10 of these countries, adolescent obesity rates are also already over 20% (**Table 1**). In addition, as the impacts of climate change intensify, SIDS' reliance on imported foods may continue to increase through adverse effects on local agriculture and coastal fisheries (**Box 2**).

Box 2. Climate change and NCDs in SIDS

As a result of their coastal geography, SIDS are particularly vulnerable to climate change. Climate change is expected to negatively impact NCDs and mental health in SIDS in a number of ways, including the following:

A. Extreme weather events are more likely to affect SIDS due to their geography. They can also affect NCDs and mental health:

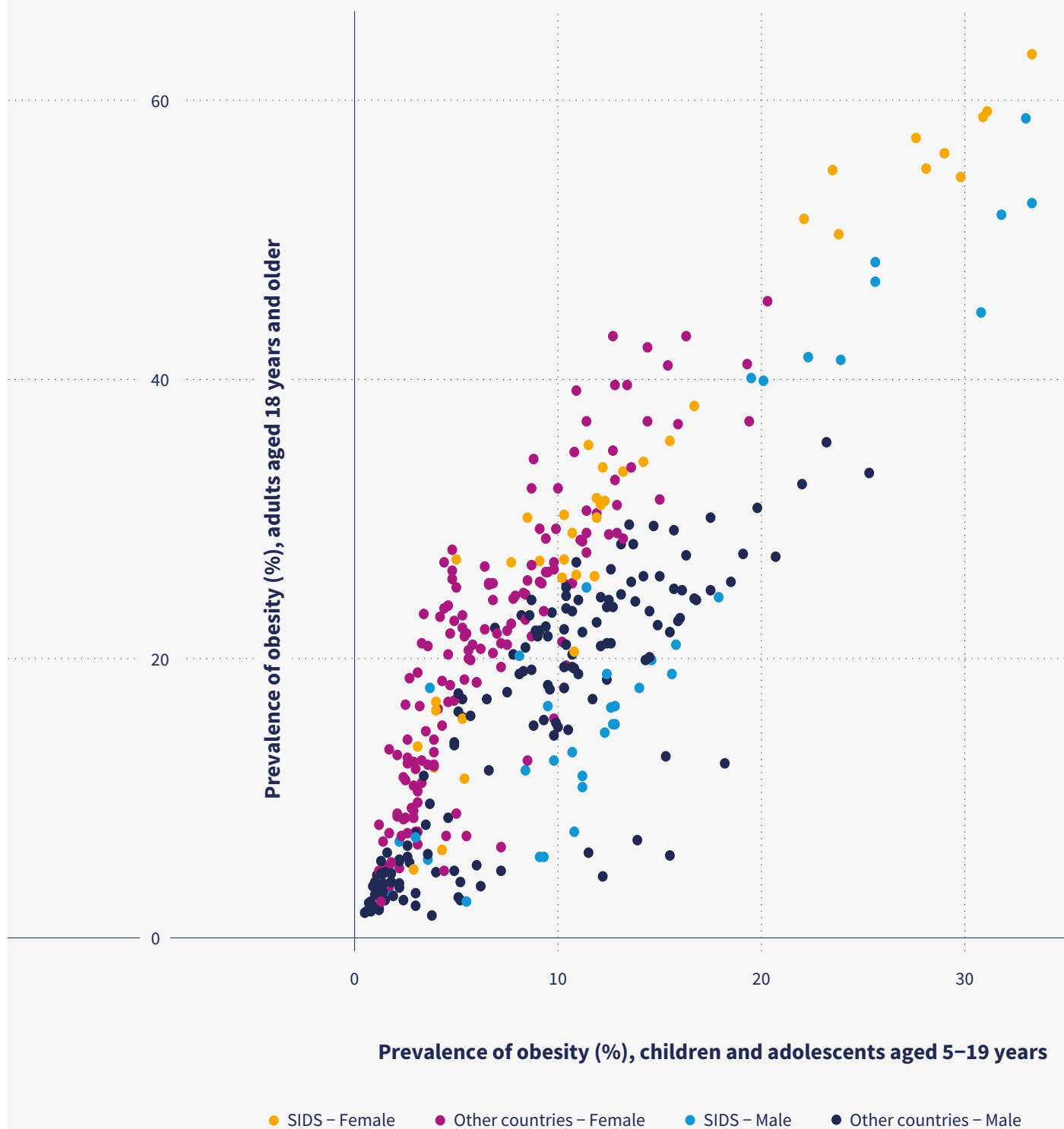
- Routine NCD and mental health care can be disrupted if the health care system is not climate-resilient (5)
- Short-term food aid may be of low nutritional value, and can disrupt long-term food security (6)
- Stress and trauma may have long-term mental health consequences (5).

B. Food security can be affected by long-term impacts of climate change, including by the effects of higher temperatures, altered rainfall patterns, droughts, sea-level rise, and freshwater shortages on locally grown foods (5,6). Further, sea level rise, changes in sea temperature and changes in ocean chemistry are expected to disrupt coastal fisheries, which are a significant source of livelihoods. Together, these changes are expected to increase stress and compound reliance on imported foods, which are more likely to be high-calorie processed foods.

Unhealthy diets and being overweight or obese also increases the risk of **diabetes**. Diabetes is a direct cause of death and of kidney disease, and increases the risk of cardiovascular disease. Although the prevalence of diabetes in some SIDS is similar to other countries, the highest prevalence of diabetes among adults in the world is projected to be in 10 SIDS in the Western Pacific region – all over 20% (**Figure 5**).⁵

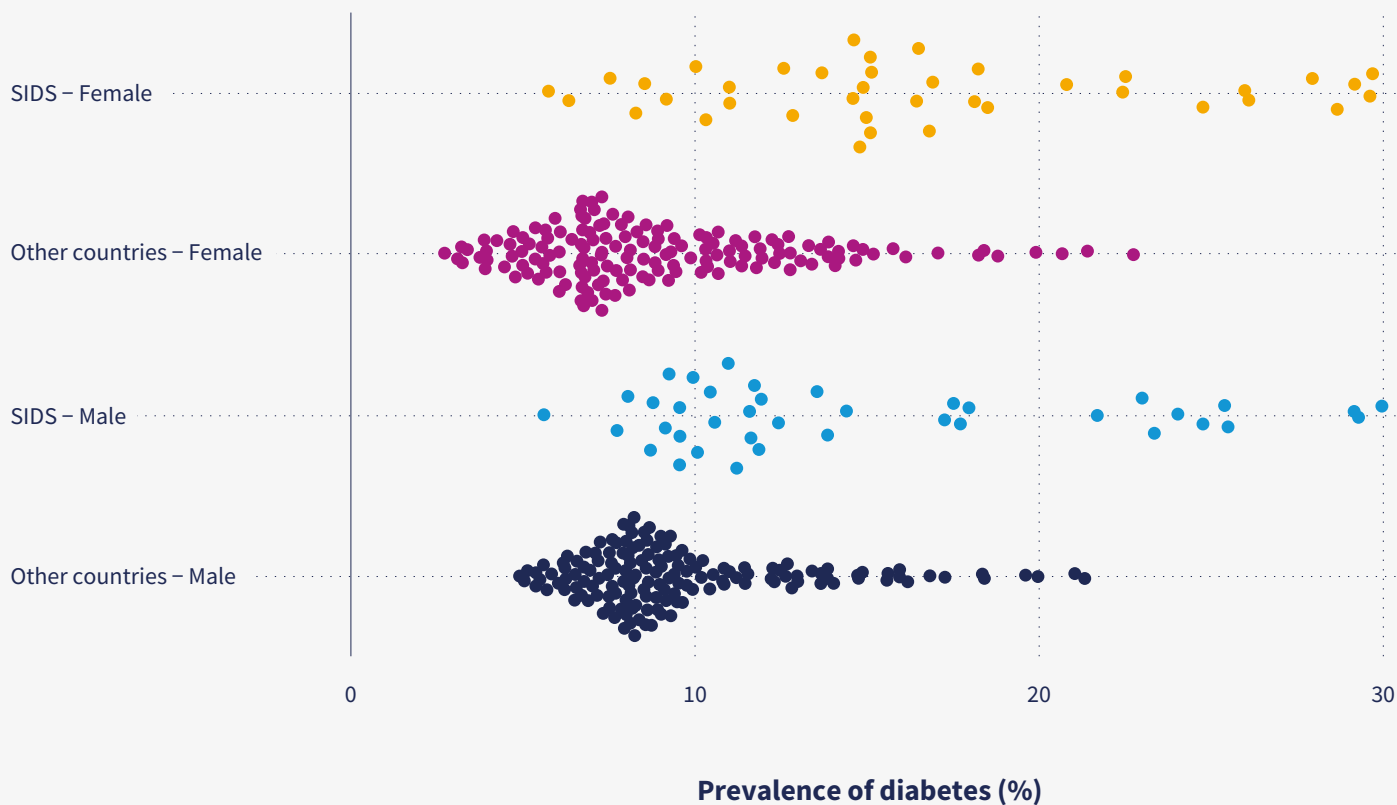
5. In line with the standard WHO definition, adults refers to individuals aged 18 years and older

Fig. 4. Age-standardized prevalence of obesity, adults aged 18 years and above, against child and adolescent (5-19 years of age) prevalence of obesity in SIDS and in other countries in 2016, by sex. Each point represents one country and gender. Estimates are for 39 SIDS and 151 other WHO Member States.



Source: Noncommunicable diseases: Risk factors [online database], Global Health Observatory (GHO) data. Geneva: World Health Organization (<https://www.who.int/data/gho/data/themes/topics/topic-details/GHO/ncd-risk-factors>, accessed 19 May 2023).

Fig. 5. Projected age-standardized prevalence of diabetes for 2019, adults aged 18 years and above, in SIDS and in other countries, by sex. Diabetes is defined as raised fasting blood glucose (≥ 7.0 mmol/L) or previous diagnosis of diabetes or use of insulin or oral hypoglycemic drugs. Estimates are for 39 SIDS and 152 other WHO Member States.



Source: Noncommunicable diseases: Risk factors [online database], Global Health Observatory (GHO) data. Geneva: World Health Organization (<https://www.who.int/data/gho/data/themes/topics/topic-details/GHO/ncd-risk-factors>, accessed 19 May 2023). WHO estimates were projected to 2019 as described here: WHO NCD Accountability Framework, including Global Monitoring Framework for NCD prevention and control (2021 update) in alignment with the extension of the NCD Global Action Plan to 2030 (<https://cdn.who.int/media/docs/default-source/ncds/ncd-surveillance/who-ncd-accountability-framework-for-ncd-implementation-roadmap.pdf>).

Box 3. Data limitations: Irregular data collection

Due to factors including capacity and resources, few SIDS carry out regular, comprehensive health examination surveys that provide the data which underpin estimates of behavioral and biological NCD and mental health risk factors. Only Saint Lucia and Tonga report carrying out these surveys regularly. In addition, some health examination surveys planned for 2020 and 2021 were disrupted by the COVID-19 pandemic. In the future, it is essential to reboot monitoring of NCD and mental health risk factors, whilst acknowledging the smaller human and financial resource base that SIDS with small populations may face.



Health System Response

Health systems comprise both health care provision and health promotion. They can be monitored by the availability of key inputs (such as staff or essential medicines) and by performance (including health care coverage, enforcement of policies, and health outcomes).

In SIDS, common challenges for health systems include climate change resilience and a limited resource base for coordination and planning functions. They also share some issues for certain diseases some of which are outlined below.

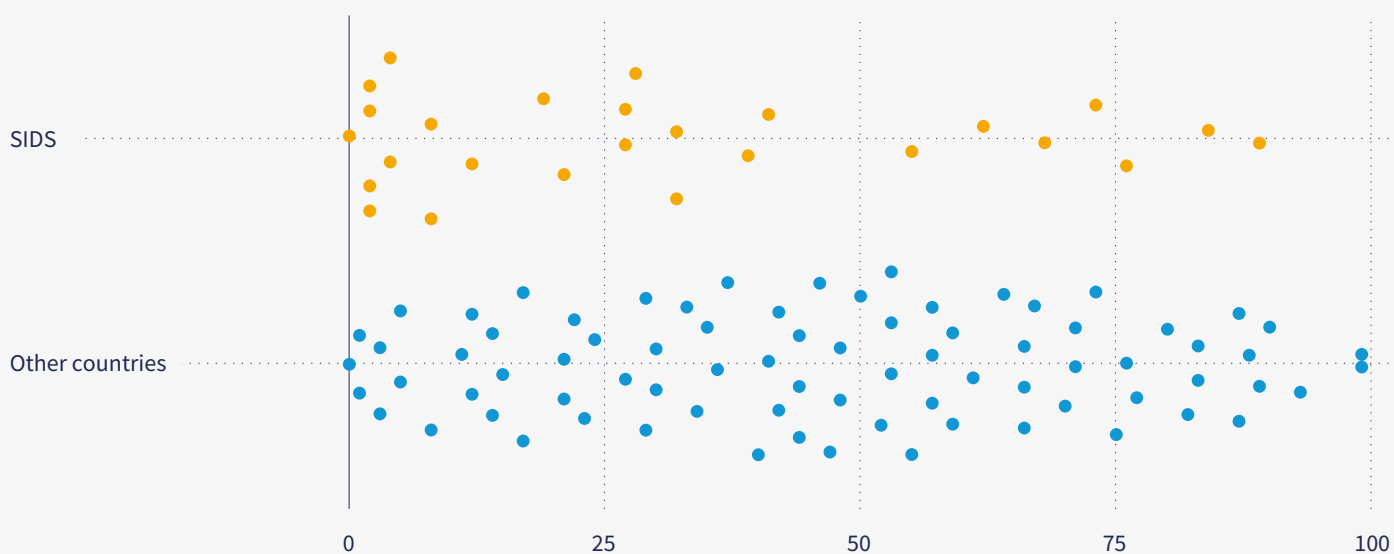
In terms of health promotion, limiting **marketing of unhealthy foods to children** is particularly important due to the prevalence of obesity and diabetes in some SIDS. Yet in 2021 only 5 of 39 SIDS (13%) reported having such a policy, compared to 68 of 155 other countries (44%) (7).

A challenge for **mental health** service provision in the majority of SIDS is ensuring sufficient staff. Of the 32 SIDS with reported data (from 2017-2020), the median number of mental health workers was 16 per 100 000 and in some countries less than 5 per 100 000 (**Table 1**). There are also challenges around a central component of mental health service transformation: the integration of mental health into primary health care and other non-specialized settings (8). Based on self-assessment, less than a third of 32 SIDS who reported data consider themselves to have functionally integrated mental health into primary health care (**Table 1**).⁶

Human papillomavirus (HPV) immunization coverage is a low-cost intervention with large long-term benefits preventing cervical cancer in women. It is also an SDG indicator (a component of indicator 3.b.1 on vaccination). Yet vaccination coverage varies widely in SIDS. Fiji boasts the highest rate of protecting girls against cervical cancer (89% coverage among 15-year-old girls) but one third of the 26 SIDS with data on vaccination have estimated coverage rates below 10% (**Figure 6**). The median vaccination coverage rate for SIDS is only 27%. In contrast, the median HPV vaccination rate among other countries is 47%, and only eight of 78 other countries have estimated vaccination rates below 10%.

6. Countries have reported on the functional integration of mental health into primary health care. Criteria include presence of national guidelines on mental health integration, pharmacological and psychosocial interventions provided at the primary care level, and primary health care workers receiving training on mental health conditions that involves mental health specialists.

Fig. 6. Percentage of girls aged 15 years that received the recommended doses of HPV vaccine, in SIDS and in other countries. Latest data are shown; data are from 2018-2021. Estimates are for 26 SIDS and 78 other WHO Member States.



Girls aged 15 years old that received the recommended doses of HPV vaccine (%)

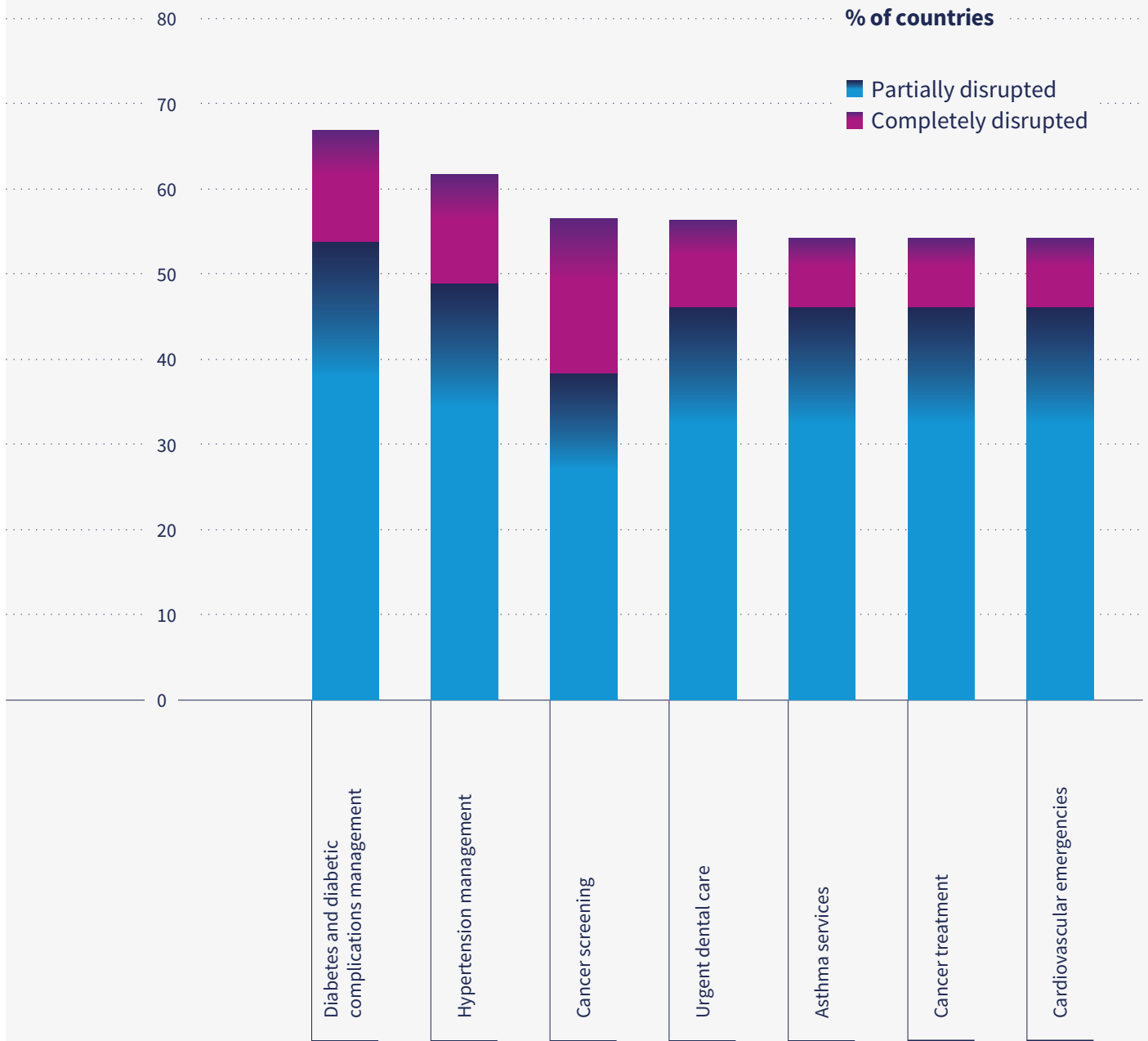
Source: WHO/UNICEF Joint Estimates of National Immunization Coverage (WUENIC), 2022 revision. (<https://immunizationdata.who.int/listing.html?topic=coverage&location=>, accessed 19 May 2023).

Coverage of **drug therapy and counseling to prevent heart attacks and strokes** reflects a health system’s ability to identify adults with NCDs and to provide acceptable and appropriate care. In 2013 a voluntary global target of 50% coverage by 2025 was set (9). Of the 12 SIDS with a recent STEPS survey (between 2013-2020), only two were meeting that 50% coverage target: Saint Vincent and the Grenadines and Guyana. The overall percentage of eligible adults aged 40-69 receiving drug therapy and counseling ranged from 14% to 56% (**Table 1**).⁷

Estimates of the percentage of adults 30-79 years of age with hypertension who are taking medicine for their hypertension are available for all 39 SIDS (**Table 1**). **Hypertension coverage** showed a similar range in SIDS and in other countries, with a median coverage of 42% in SIDS and 42% in other countries in 2019. In most countries worldwide, female hypertension coverage is estimated to be higher than male hypertension coverage: this plays out in SIDS data, with median coverage 13 percentage points higher amongst women.

7. Data note: In all surveys, the number of adults eligible for drug therapy and counseling based on cardiovascular risk or past diagnosis was small, leading to wide confidence intervals for this indicator

Fig. 7. NCD services were disrupted by COVID-19 response in SIDS (data reported by 39 SIDS from June-Sept, 2021).



Source: Noncommunicable diseases: National capacity [online database], Global Health Observatory (GHO) data. Geneva: World Health Organization (<https://www.who.int/data/gho/data/themes/topics/noncommunicable-disease-s-national-capacity>, accessed 19 December 2022).

As with almost all countries, health services in SIDS were **disrupted by the COVID-19 pandemic** and response (**Figure 7**). In addition to the pandemic, health services in SIDS are also increasingly disrupted by other emergencies. These typically include extreme weather events, floods, and sea level rise which may damage critical public health infrastructure. In SIDS in the WHO Western Pacific and American regions, the majority of health care facilities are located in vulnerable low-lying coastal areas (5,10). Damage to these buildings, essential supplies and transportation infrastructure during adverse weather or climate events affects their capacity to provide NCD and mental health services in emergency situations.

Conclusion

SIDS are particularly and especially affected by NCDs, with unacceptably high rates of morbidity and mortality. Mental health is also an important but still often neglected issue. Whilst their population constitutes less than 1% of the global total, a key element of the SDG agenda is to leave no one behind. Thus, SIDS must be included in global efforts to meet the SDG targets for NCDs. The increasing threat posed by climate change will have a detrimental impact on many of the challenges facing health and development for SIDS, making timely action even more urgent.

Table 1. WHO statistics for selected indicators from the NCD Global Monitoring Framework and other indicators related to mental health burden, risk factors and health system capacity, by small island developing state.^a

SDG indicator	Total population (000s) ^b	HEALTH STATUS		RISK FACTORS				
		Probability of dying from any of CVD, cancer, diabetes, CRD between age 30 and exact age 70 ^c (%)	Suicide mortality rate ^c (per 100 000 population)	Age-standardized prevalence of hypertension among adults aged 30-79 years ^d (%)	Total alcohol per capita (≥ 15 years of age) consumption ^d (litres of pure alcohol)	Age-standardized prevalence of tobacco use among persons 15 years and older ^d (%)	Age-standardized prevalence of physical inactivity among adults aged 18 and older ^d (%)	Prevalence of obesity among children and adolescents (5-19 years) ^d (%)
		3.4.1	3.4.2	3.5.2	3.a.1			
Data type ^k	Comparable estimates	Comparable estimates	Comparable estimates	Comparable estimates	Comparable estimates	Comparable estimates	Comparable estimates	Comparable estimates
Member State	2021	2019	2019	2019	2019	2019	2016	2016
Antigua and Barbuda	93	17.5	0.4	42.6	8.5			11.5
Bahamas	408	19.9	3.5	44.5	4.4	10.7	43.3	17.3
Barbados	281	16	0.6	41.8	9.5	8.5	42.9	12.3
Belize	400	16.5	7.1	38.0	5.7	8.8		12.2
Cabo Verde	588	17.4	12.9	44.1	6.3	11.7	19.7	3.1
Comoros	822	20.6	5.4	33.2	0.3	20.8	14.3	2.8
Cook Islands	17			42.6	10.6	24.6	18.5	32.2
Cuba	11256	16.6	14.5	39.9	6.0	18.7	36.9	11.4
Dominica	72			47.7	6.1		21.6	15.0
Dominican Republic	11118	19.1	4.9	49.1	6.8	10.9	39.0	15.0
Fiji	925	37.7	9	38.6	3.5	23.4	17.4	11.5
Grenada	125	23.3	0.7	46.6	8.1		28.7	10.7
Guinea-Bissau	2061	24.9	7	38.0	4.1	9.3		2.4
Guyana	805	29.2	40.3	40.0	5.3	12.6		10.0
Haiti	11448	31.3	9.6	42.9	3.5	7.9		10.9
Jamaica	2828	16.9	2.4	46.3	3.6	9.7	32.6	13.0
Kiribati	129	50.8	28.3	42.3	0.8	41.7	40.4	23.0
Maldives	521	11.6	2.7	34.1	1.4	25.9	30.3	7.4
Marshall Islands	42			31.9		28.4	43.5	26.6
Mauritius	1299	23.2	9.5	33.1	7.5	20.5	29.8	4.4
Micronesia (Federated States of)	113	46.3	28.2	32.9	2.1		36.6	20.7
Nauru	13			41.8	2.9	49.2	42.1	33.2
Niue	2			39.5	9.4		6.9	29.5
Palau	18			44.2		17.9	40.9	31.4
Papua New Guinea	9949	36	2.9	27.8	1.7	39.9	14.8	9.8
Saint Kitts and Nevis	48			45.1	6.3		32.2	12.3
Saint Lucia	180	17.7	7.9	39.8	9.5		39.8	8.8
Saint Vincent and the Grenadines	104	20.6	1	39.3	7.2			12.4
Samoa	219	31.2	12.6	38.3	2.4	25.9	12.6	21.7
Sao Tome and Principe	223	21	1.5	45.1	5.0	5.8	15.5	3.5
Seychelles	107	21.1	8.1	44.3	12.0	20.6	18.8	10.8
Singapore	5941	9.5	11.2	31.5	1.9	16.6	36.5	6.8
Solomon Islands	708	39.2	14.7	29.8	1.6	36.8	18.2	4.3
Suriname	613	22.7	25.4	42.9	6.6		44.4	13.9
Timor-Leste	1321	19.9	3.7	35.3	0.4	39.8	17.8	4.2
Tonga	106	24.8	3.8	43.3	0.4	31.1	17.4	26.7
Trinidad and Tobago	1526	17.1	8.7	42.4	6.1		38.2	11.1
Tuvalu	11			50.4	1.3	36.0	27.3	27.2
Vanuatu	319	39.7	18	39.5	1.9	18.2	8.0	8.3

RISK FACTORS		HEALTH SYSTEM RESPONSE					SURVEILLANCE	
Age-standardized prevalence of obesity among adults (18+ years) ^d (%)	Proportion of population with primary reliance on clean fuels and technology ^e (%)	Human papillomavirus (HPV) immunization coverage estimates among 15 year-old girls ^f (%)	Age-standardized prevalence of treatment for hypertension among adults aged 30-79 years with hypertension ^d (%)	Percentage of adults aged 40-69 receiving drug therapy and counselling to prevent heart attacks and strokes ^g (%)	Total number of mental health workers (per 100 000 population) ^h	Functional integration of mental health at PHC ^{h,i}	Has a functioning system for generating reliable cause-specific mortality data on a routine basis ^j	
7.1.2		3.b.1						
Comparable estimates	Comparable estimates	Comparable estimates	Comparable estimates	Primary data	Primary data	Other data	Primary data	
2016	2021	2018-2021	2019	2013-2020	2017-2020	2017-2020	2022	Member State
18.9	100.0	2	49.5		65.9	2	fully achieved	Antigua and Barbuda
31.6	100.0	4	53.0	41 (18. 68)	21.8	3	fully achieved	Bahamas
23.1	100.0	28	60.5		103.8	0	partially achieved	Barbados
24.1	83.0	4	45.2		5.4	5	fully achieved	Belize
11.8	81.8		36.0	49 (30. 69)	13.8	3	partially achieved	Cabo Verde
7.8	11.3		24.8				not achieved	Comoros
55.9	78.7	73	41.8		57.0	4	fully achieved	Cook Islands
24.6	94.3		60.6		86.0	5	fully achieved	Cuba
27.9	89.4	68	45.6				fully achieved	Dominica
27.6	91.5	8	53.4		10.6	3	partially achieved	Dominican Republic
30.2	51.4	89	34.8		6.1	2	partially achieved	Fiji
21.3	88.3	32	47.2				fully achieved	Grenada
9.5	1.0		26.7		1.4	0	not achieved	Guinea-Bissau
20.2	82.0	2	47.1	54 (38. 69)	5.2	3	fully achieved	Guyana
22.7	4.3		28.2		2.1	1	not achieved	Haiti
24.7	82.5	2	51.4		20.4	3	fully achieved	Jamaica
46.0	12.4		15.2	31 (16. 52)	35.7	4	fully achieved	Kiribati
8.6	99.5	41	30.6		6.2	1	partially achieved	Maldives
52.9	66.7	27	30.3		13.6	4	not achieved	Marshall Islands
10.8	98.9	55	60.2		19.3	3	fully achieved	Mauritius
45.8	13.3	32	27.8	28 (20. 39)	8.8	2	not achieved	Micronesia (Federated States of)
61.0	100.0		28.6	36 (25. 48)			partially achieved	Nauru
50.0	98.4	76	41.7		123.9	4	not achieved	Niue
55.3	43.0	21	36.2		127.8	3	not achieved	Palau
21.3	9.7		19.2		1.4	3	not achieved	Papua New Guinea
22.9	100.0	84	49.1		20.8	5	fully achieved	Saint Kitts and Nevis
19.7	94.4	62	52.3	48 (39. 58)	8.8	2	fully achieved	Saint Lucia
23.7	92.9	12	45.4	56 (42. 69)	5.4	5	fully achieved	Saint Vincent and the Grenadines
47.3	37.2		20.3				not achieved	Samoa
12.4	3.7		28.6	35 (19. 54)			not achieved	Sao Tome and Principe
14.0	100.0	39	55.2		12.3	2	fully achieved	Seychelles
6.1	100.0	0	60.6		26.1	5	fully achieved	Singapore
22.5	8.9	19	14.5	14 (9. 22)	2.1	3	partially achieved	Solomon Islands
26.4	94.8	2	49.5		50.1	3	partially achieved	Suriname
3.8	15.2		24.2	40 (22. 60)			not achieved	Timor-Leste
48.2	86.8		26.4		17.2	3	not achieved	Tonga
18.6	100.0	8	46.7		58.5	3	partially achieved	Trinidad and Tobago
51.6	74.6	27	19.8	31 (20. 44)	34.3	1	not achieved	Tuvalu
25.2	6.9		13.6		4.3	3	not achieved	Vanuatu

Table 1 notes:

- a. The data presented here may also differ from and should not be regarded as the official national statistics of individual WHO Member States. Uncertainty intervals and other details on the indicators and statistics presented here can be found at the WHO Global Health Observatory (<https://www.who.int/data/gho>).
- b. Source: World population prospects: 2022 revision. New York: United Nations, Department of Economic and Social Affairs, Population Division; 2022 (<https://population.un.org/wpp/>, accessed 6 June 2022).
- c. Source: Global health estimates 2019: deaths by cause, age, sex, by country and by region, 2000–2019. Geneva: World Health Organization; 2020 (<https://www.who.int/data/gho/data/themes/mortality-and-global-health-estimates/>, accessed 16 December 2022). WHO Member States with a population of less than 90 000 in 2019 were not included in the analysis.
- d. Source: Noncommunicable diseases: Risk factors [online database], Global Health Observatory (GHO) data. Geneva: World Health Organization (<https://www.who.int/data/gho/data/themes/topics/topic-details/GHO/ncd-risk-factors>, accessed 19 May 2023).
- e. Source: Environment and health: Air pollution [online database], Global Health Observatory (GHO) data. Geneva: World Health Organization (<https://www.who.int/data/gho/data/themes/air-pollution/household-air-pollution>, accessed 19 May 2023).
- f. Source: WHO/UNICEF Joint Estimates of National Immunization Coverage (WUENIC), 2022 revision. (<https://immunizationdata.who.int/listing.html?topic=coverage&location=>, accessed 19 May 2023).
- g. Data are from recent (2013–2020) nationally representative STEPwise approach to NCD risk factor surveillance (STEPS) surveys. Source: NCD Microdata Repository [online database]. Geneva: World Health Organization. 95% confidence interval in parentheses.
- h. Source: World Health Organization. World mental health report: transforming mental health for all. Geneva: World Health Organization; 2022 (<https://www.who.int/teams/mental-health-and-substance-use/world-mental-health-report>, accessed 6 June 2023).
- i. The number of the following five criteria that member states report meeting is given: 1) guidelines for mental health integration into primary health care are available and adopted at the national level; 2) pharmacological interventions for mental health conditions are available and provided at the primary care level; 3) psychosocial interventions for mental health conditions are available and provided at the primary care level; 4) health workers at primary care level receive training on the management of mental health conditions; 5) mental health specialists are involved in the training and supervision of primary care professionals. Mental health is considered functionally integrated in primary care if at least four of these criteria are met.
- j. The WHO collects mortality data, including cause of death, from civil registration systems in the WHO mortality database through a routine annual call for data. Data are considered to generate reliable cause-specific mortality data on a routine basis if: (1) Data from the five most recent reporting years are, on average, at least 70% usable. Usability is calculated as: $(\text{Completeness (\%)} * (1 - \text{Proportion Garbage}))$; (2) at least five years of cause-of-death data have been reported to the WHO in the last 10 years; and (3) the most recent year of data reported to the WHO is no more than five years old. This indicator is considered fully achieved if the country meets all three criteria. This indicator is considered partially achieved if the country does not meet all of the above criteria but has submitted some vital registration data to WHO. Source: Noncommunicable diseases progress monitor 2022. Geneva: World Health Organization; 2022 (<https://www.who.int/publications/i/item/9789240047761>, accessed 16 December 2022).
- k. For more information on types of health statistics, please see: World health statistics 2018: Monitoring health for the SDGs. Geneva: World Health Organization; 2018 (<https://apps.who.int/iris/rest/bitstreams/1137482/retrieve>, accessed 16 December 2022).

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