The adolescent health indicators

recommended by the Global Action for Measurement of Adolescent health

Guidance for monitoring adolescent health at country, regional and global levels

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ISBN 978-92-4-009219-8 (electronic version)
ISBN 978-92-4-009220-4 (print version)

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Suggested citation. The adolescent health indicators recommended by the Global Action for Measurement of Adolescent health: guidance for monitoring adolescent health at country, regional and global levels. Geneva: World Health Organization; 2024. Licence: CC BY-NC-SA 3.0 IGO.

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

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A snapshot of the adolescent health measurement landscape and why we need a set of priority indicators and harmonized standards.

2 Indicator selection process

The selection process was systematic, participatory and included five steps:

1. Identification of core measurement areas
2. Scoping review of indicators for selected core areas
3. Selection of draft indicators
4. Assessment, harmonization and database review
5. Refinement and finalization of the indicators

3 The indicators

The Global Action for Measurement of Adolescent health (GAMA) Advisory Group has recommended 47 indicators within six domains:

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Forewords

Adolescence is a time of significant physical and emotional change that requires tailored health approaches. Historically, the world has lacked comprehensive indicators for adolescent health, which has hindered the effective development of age-specific policies and interventions.

That's the long-standing gap in global health data that this resource aims to fill. The indicators recommended by the Global Action for Measurement of Adolescent health (GAMA) offer a consensus framework to guide global efforts to improve adolescent health, as one more step on the road towards universal health coverage.

The GAMA indicators represent a unique, multi-year collaboration between the World Health Organization (WHO) and seven United Nations (UN) agencies, aimed at harmonizing the measurement of adolescent health globally. These indicators were selected to be integrated into national health monitoring systems, providing a foundation upon which policies and programmes can be built and evaluated.

The inclusive process to select these indicators has drawn on other previous and current work to measure adolescent health, and has been grounded in both scientific rigour and feasibility, based on real-life assessment in Member States. The indicators fill a critical gap, offering a nuanced lens to assess adolescent health that goes beyond traditional health data. With these indicators, countries can benchmark progress, identify priorities for action and allocate resources effectively, guiding adolescents towards a healthier future.

This work is a powerful tool for policy-makers and partners to promote, provide and protect the health of adolescents, and give them the best chance of a healthy adulthood. It is a commitment not only to track health, but also to transform it. We see these indicators as the keystones in the arch of global adolescent health, bearing the weight of our aspirations and the hopes of future generations.

WHO is committed to supporting countries to implement these indicators, as part of our shared work to enhance the health and well-being of adolescents worldwide.

Dr Tedros Adhanom Ghebreyesus
Director-General
World Health Organization

The Partnership for Maternal, Newborn and Child Health (PMNCH) is delighted to collaborate on The Adolescent Health Indicators recommended by the Global Action for Measurement of Adolescent health: Guidance for monitoring adolescent health at country, regional and global levels.

For a long time, adolescents and their needs have received insufficient attention. Advancing an agenda for adolescent well-being demands timely and robust data for effective advocacy, policy development and programme monitoring. The GAMA-recommended indicators respond decisively to a crucial gap in health data, providing a necessary foundation for measuring improved adolescent health outcomes.

WHO and PMNCH, alongside the other UN H6+ agencies have jointly established an Expert Consultative Group to work towards enhancing adolescent well-being measurement based on the Adolescent Well-being Framework and its five interconnected domains. The aim is to develop a measurement approach applicable at the country, regional and global levels. This collaborative effort marks a significant step in tracking and enhancing the health and well-being of adolescents. Such initiatives, complemented by PMNCH's Agenda for Action for Adolescents under the 1.8 billion Young People for Change campaign, are paramount for a thorough understanding of adolescents' well-being, addressing their specific needs and measuring impact in an efficient and timely manner.

Rt. Hon. Helen Clark
Board Chair
Partnership for Maternal, Newborn and Child Health

To improve the health of our adolescents, we need to understand where prioritization and interventions are needed. I welcome the publication of this guidance, which offers concrete recommendations to help strengthen comprehensive monitoring of adolescent health.

Adolescents face multiple challenges in accessing health services, including age-based discrimination and exclusion from services. By engaging with adolescents themselves in the spirit of equity and inclusion, by working across sectors and by disaggregating data, we can create better, more effective programs that meet the diverse needs of adolescents. This is in line with the commitments made in the 2021 United Nations Political Declaration on HIV and AIDS, which includes the importance of addressing inequalities and structural barriers that limit access to services.

The Joint United Nations Programme on HIV/AIDS (UNAIDS) is committed to supporting countries in their HIV data collection and analysis through the Global AIDS Monitoring process. Evidence-informed investment is key to improving the lives and health of our adolescents and of future generations. This report lights the way forward.

Winnie Byanyima
Executive Director
Joint United Nations Programme on HIV/AIDS

Adolescence is a critical period for acquiring essential life skills, knowledge and competencies, which significantly influence lifelong health and education outcomes. We are therefore delighted to collaborate with WHO and other UN partners in the Global Action for Measurement of Adolescent health (GAMA).

The GAMA-recommended indicators address the knowledge and accountability gap in adolescent health, serving as a foundation for informed policy-making and effective programming. Our joint effort focuses on harmonizing health measurement initiatives at local, national and global levels, recognizing the importance of integrating these indicators into national systems, and thereby reducing data collection burdens and promoting consistency in data comparability.

This collaboration aligns with the commitment of the United Nations Educational, Scientific and Cultural Organization (UNESCO) to promote education for health and well-being, recognizing that informed and healthy adolescents are key to sustainable development and to fully realize their right to education. This joint initiative marks a significant step towards a holistic approach to measuring adolescent health, guiding global efforts to nurture a healthier, better educated, and thriving future generation.

Stefania Giannini
Assistant Director-General for Education
United Nations Educational, Scientific and Cultural Organization

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Globally, 1.3 billion adolescents stand at the threshold of adulthood. Their future is the world's future.

Progress toward sustainable development depends on the investments we make in the health, well-being and empowerment of adolescents today. Targeted investments can yield significant social and economic returns, which is why comprehensive, age-specific health indicators are so important: They can reveal valuable data and information on where to focus interventions so that no one is left behind.

The United Nations Population Fund (UNFPA) welcomes the Global Action for Measurement of Adolescent health (GAMA) indicators because data is essential for designing and investing in effective programmes that fully support the health and well-being of adolescents. The GAMA indicators provide a comprehensive set of measures covering a wide range of adolescent health issues, including physical health, mental health, sexual and reproductive health, and social well-being.

Better data on adolescent health is key to unlocking the promise of the International Conference on Population and Development Programme of Action, as we mark its 30th anniversary this year, and to delivering on the goals enshrined in the 2030 Agenda for Sustainable Development.

We urge stakeholders to embrace the use of the GAMA indicators to improve the health and well-being of adolescents today and the prospects of future generations for a healthier tomorrow.

Natalia Kanem
Executive Director
United Nations Population Fund

Adolescence is a time of transformation, marked by opportunities for growth. But the transitional nature of adolescence also exposes young people to an array of challenges. This generation of adolescents, the largest ever, faces enormous complexities ranging from conflict and climate change to poverty and global pandemics.

Historically, a gap in data on adolescents has impeded our understanding of the dynamic physical and emotional developments that adolescents experience and hindered our ability to tailor policies and interventions effectively.

The United Nations Children's Fund (UNICEF) is a steadfast advocate for the rights and development of adolescents and is committed to ensuring that no adolescent is left behind. At the forefront of this commitment is UNICEF's flagship household survey technical assistance programme, Multiple Indicator Cluster Surveys (MICS), which serves as a cornerstone to support countries on the measurement of adolescent health. Additionally, the measuring mental health among adolescents and young people at the population level (MMAPP) initiative fills voids in reliable data and tools concerning adolescent mental health.

The continuous collaboration between governments, UNICEF, and partner agencies around the MICS implementation and the integration of MMAPP into the broader GAMA framework, ensures the alignment of adolescent health measurement and is a pivotal step towards a healthier future for adolescents worldwide. This guidance serves as a call to action for policy-makers and health systems to prioritize adolescent health, not just in tracking but in transforming outcomes that include mental health and well-being. The comprehensive approach taken in this document acknowledges the complexity of adolescent development and the need for support systems that address mental health challenges. Together, let us ensure that every young person has the opportunity to thrive not just in body but also in mind and spirit.

Catherine Russell
Executive Director
United Nations Children's Fund

The World Bank Group is committed to addressing adolescent health as a critical component of overall public health and development efforts. Adolescence is a pivotal stage of life, characterized by significant physical, emotional and social changes, and holds the key to unlocking a future of well-being and prosperity for generations to come. Investments we make today will produce the dividends of a healthier, more equitable tomorrow with long-term benefits for individuals, communities and societies.

The World Bank Group's multifaceted approach to adolescent health is characterized by a strong commitment to policy and programme support, capacity-building, advocacy and partnerships. It underscores the importance of integrating these efforts with broader development goals to create impact that transcends the health sector. Integral to our strategy is the collaboration with the Global Financing Facility for Women, Children and Adolescents, with its laser focus on reproductive, maternal, newborn, child and adolescent health.

To track progress and inform policy decisions, we place special emphasis on improving data collection and measurement related to adolescent health outcomes. This is best done by advocating for and using standardized indicators, such as those recommended by the Global Action for Measurement of Adolescent health (GAMA).

Using these indicators can ensure greater transparency and accountability, help identify gaps, direct resources to key priorities and support better policy decisions at country level. This will help prioritize adolescent health not only as a moral imperative but as a strategic investment in our collective future.

Together, we can build health systems that are not only responsive but also resilient, ensuring that young people receive the health services they need to thrive.

Dr Juan Pablo Uribe
Global Director, Health, Nutrition and Population
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The World Bank Group

Acknowledgments

The World Health Organization (WHO) is grateful to all those who contributed to this document.

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WHO is grateful to the staff and local collaborators of the WHO country offices in Armenia, Colombia, Côte d'Ivoire, Democratic Republic of the Congo, Guatemala, Guinea, India, Lesotho, Malaysia, Nigeria, Pakistan, Timor-Leste, Togo, the United Republic of Tanzania, and Zimbabwe for their participation in the feasibility study and indicator selection process.

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Howard Friedman (UNFPA), Brendan Hayes (World Bank Group), Gabriel Lara Ibarra (World Bank Group) and Ilaria Schibba (World Food Programme).

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Administrative support

WHO thanks Gersende Moyse for the administrative support.

Financial support

WHO acknowledges the financial support provided by the Bill & Melinda Gates Foundation.

Abbreviations

AA-HA!	Accelerated Action for the Health of Adolescents
BMI	body mass index
CRVS	civil registration and vital statistics
DHS	demographic and health surveys
DSM-5	Diagnostic and Statistical Manual of Mental Disorders, 5th Edition
GAMA	Global Action for Measurement of Adolescent health
G-SHPPS	Global School Health Policies and Practices Survey
GSHS	Global school-based Student Health Survey
HBSC	Health Behaviour in School-aged Children
HMIS	health management information system
HPV	human papillomavirus
HSV-2	herpes simplex virus 2
ICD	International Statistical Classification of Diseases and Related Health Problems
ICD-11	International Classification of Diseases, 11th revision
IRTEC	International Registry for Trauma and Emergency Care
ISCED	International Standard Classification of Education
MICS	Multiple Indicator Cluster Surveys
MICS7	Multiple Indicator Cluster Surveys, 7th round
MMAPP	Measuring Mental Health Among Adolescents and Young People at the Population Level
PPP	purchasing power parity
SD	standard deviation
SDG	Sustainable Development Goal
SRMNCAH	Sexual, Reproductive, Maternal, Newborn, Child and Adolescent Health
STI	sexually transmitted infection
UN	United Nations
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
UN Women	United Nations Entity for Gender Equality and the Empowerment of Women
VACS	Violence Against Children and Youth Surveys
WHO	World Health Organization

Executive summary

Adolescence is a critical stage in life for physical, cognitive and emotional development, shaping future health and well-being. Comprehensive measurement of adolescent health is essential to prioritize health issues, guide interventions and track progress. However, global, regional and national adolescent health measurement has historically been inconsistent and incomplete.

The Global Action for Measurement of Adolescent health (GAMA) Advisory Group has been established by the World Health Organization (WHO) in collaboration with United Nations (UN) partners to support efforts to focus adolescent health measurement on the most important issues and to improve alignment across different measurement initiatives.

This document presents a list of 47 indicators recommended by GAMA for measurement of adolescent health. The systematic, participatory indicator selection process included five steps: identification of core measurement areas; a scoping review of adolescent health indicators for selected core areas; selection of draft indicators; further assessments of the draft indicators for implementation feasibility in countries, alignment with survey programmes and global data availability; and refinement and finalization of the indicators based on these assessments.

These 47 indicators are applicable to all adolescent population subgroups and span six domains: programmes, policies and laws; systems performance and interventions; social, cultural, economic, educational and environmental health determinants; health behaviours and risks; subjective well-being; and health outcomes and conditions. For each indicator, this guidance document provides a rationale for selection and measurement details.

Measurement principles applicable to all indicators, such as involvement of adolescents, ethical considerations and appropriate disaggregation, are also outlined.

The indicators are intended to guide policy and programming for adolescents, and to assist in identifying topics in which more detailed health assessments and additional programming are needed. The last chapter in this guidance document describes how this can be done, based on the approach suggested in the Accelerated Action for the Health of Adolescents (AA-HA!) guidance.

The present document is intended to be used as a reference. Its consistent use will not only ensure better focus of collection efforts for adolescent health data, but also bring uniformity to the way countries, as well as regional and global stakeholders, collect, compile, report and use the most important information to guide action for the improvement of the health of adolescents.

Camp for refugees from Tigray, Ethiopia - August 2022. © WHO/Ala Kheir

1. Introduction

1.1 Background

Importance of adolescent health measurement

About 1.3 billion (16%) of the world's population are adolescents, defined as those aged 10–19 years. The vast majority of this population currently lives in low- and middle-income countries, where the number of adolescents is projected to continue to grow *(1)*.

Investing in the health of adolescents is crucial for their current and lifelong well-being, and will not only benefit individuals but also contribute to building healthier, better-educated and prosperous communities and societies. By prioritizing adolescent health, we empower young people to reach their full potential, positively impacting the future of public health and societal progress *(2)*.

Tracking progress in adolescent health requires consistent measurement of the most important programmes, policies, laws and interventions, as well as determinants, behaviours, risks and outcomes. However, the adolescent health measurement landscape has historically been inconsistent and incomplete, with many different indicators being used across countries and by various measurement groups. This has led to unnecessary duplication of work in some areas and measurement gaps in others *(3)*.

The Global Action for Measurement of Adolescent health (GAMA)

In 2018, the World Health Organization (WHO) established the GAMA Advisory Group to improve global, regional and national adolescent health measurement and focus efforts on the most important issues. This was done with the support of seven other United Nations (UN) agencies: the Joint United Nations Programme on HIV/AIDS (UNAIDS), the United Nations Educational, Scientific and Cultural Organization (UNESCO), the United Nations Population Fund (UNFPA), the United Nations Children's Fund (UNICEF), UN Women, the World Bank Group, and the World Food Programme *(4)*.

The GAMA Advisory Group consists of 16 members, including 4 young experts, from 12 countries across all WHO regions. Following an open call, members were selected through a competitive process based on their technical expertise. The selection ensured sex and geographical balance within the group as well as coverage of knowledge across the main adolescent health issues.

The objectives of GAMA's work are:

- to provide technical guidance to WHO, partner UN agencies and other relevant measurement groups to define a set of priority adolescent health indicators, for the purpose of harmonizing efforts around adolescent health measurement and reporting; and

- to promote harmonized guidance for adolescent health measurement that supports countries and technical organizations in the collection of useful data to track progress in the improvement of adolescent health *(5)*.

GAMA has built a network of partners, including global, regional and national adolescent health measurement stakeholders, to advance the work towards these objectives and exchange recent measurement developments. Additional information is available on the GAMA website.[1]

1.2 Scope and purpose

This guidance document details a list of indicators that are recommended for the measurement of adolescent health in all countries and all adolescent population subgroups. This includes younger (10–14 years) and older (15–19 years) adolescents of all genders, adolescents in and out of school, adolescents in humanitarian settings, adolescents living with disability, ethnic and religious minorities, migrants and institutionalized adolescents.

The indicators included in this document relate to six domains derived from existing frameworks relevant to adolescent health measurement *(6)*:

- **policies, programmes and laws**: includes country-level indicators on policies, programmes and laws relevant to adolescent health *(7, 8)*;

1. https://www.who.int/groups/the-global-action-for-measurement-of-adolescent-health

- **systems performance and interventions**: includes indicators on health service coverage for adolescents *(8)*;
- **social, cultural, economic, educational and environmental health determinants**: includes indicators on factors impacting population health and health equity *(9);*
- **health behaviours and risks**: includes indicators on modifiable behaviours and risks that impact the health of adolescents *(10)*;
- **subjective well-being**: includes indicators pertaining to connectedness *(11)*; and
- **health outcomes and conditions**: includes indicators directly relating to the adolescent mortality and morbidity burden *(12)*.

The number of adolescent health indicators has been purposefully limited to focus on the most important health issues adolescents face, minimize the reporting burden and facilitate the measurement and use of these indicators in countries. The indicators presented here are intended to guide policy and programming for adolescents and to assist in identifying areas where further and more detailed health assessments are needed.

This list of indicators recommended by GAMA will enable countries to get a comprehensive picture of the health of their adolescents and contributing factors. Existing topic-specific indicator lists may be used to complement this list of adolescent health indicators where additional information is required. Notably, the GAMA-recommended indicator list includes at least one indicator from each of the following topic-specific indicator lists:

- *Measuring **mental health** among adolescents and young people at the population level (MMAPP) (13);*
- *Priority list of indicators for girls' **menstrual health and hygiene**: technical guidance for national monitoring (14);*
- *Making every school a **health-promoting school**: global standards and indicators (15);*
- *Adolescent **well-being** indicators* promoted by the Adolescent Well-being Measurement Expert Consultative Group *(16)*;
- *INSPIRE indicator guidance and results framework – ending **violence** against children: how to define and measure change (17); and*
- *Core list of action-oriented indicators for child **unintentional injury** prevention (18)*.

1.3 Main audience and intended use

The target audience of this guidance document is stakeholders involved in collecting, interpreting and using data related to adolescent health. More specifically, this document is intended for:

- governments, in particular adolescent health stakeholders within ministries of health and other relevant ministries, policy-makers, programme managers and statistical offices, including those reporting on the Sustainable Development Goals (SDGs);
- developers, managers and implementers of surveys and studies relevant to adolescent health;
- international and national organizations working with and for adolescents; and
- researchers and academic institutions working on adolescent health.

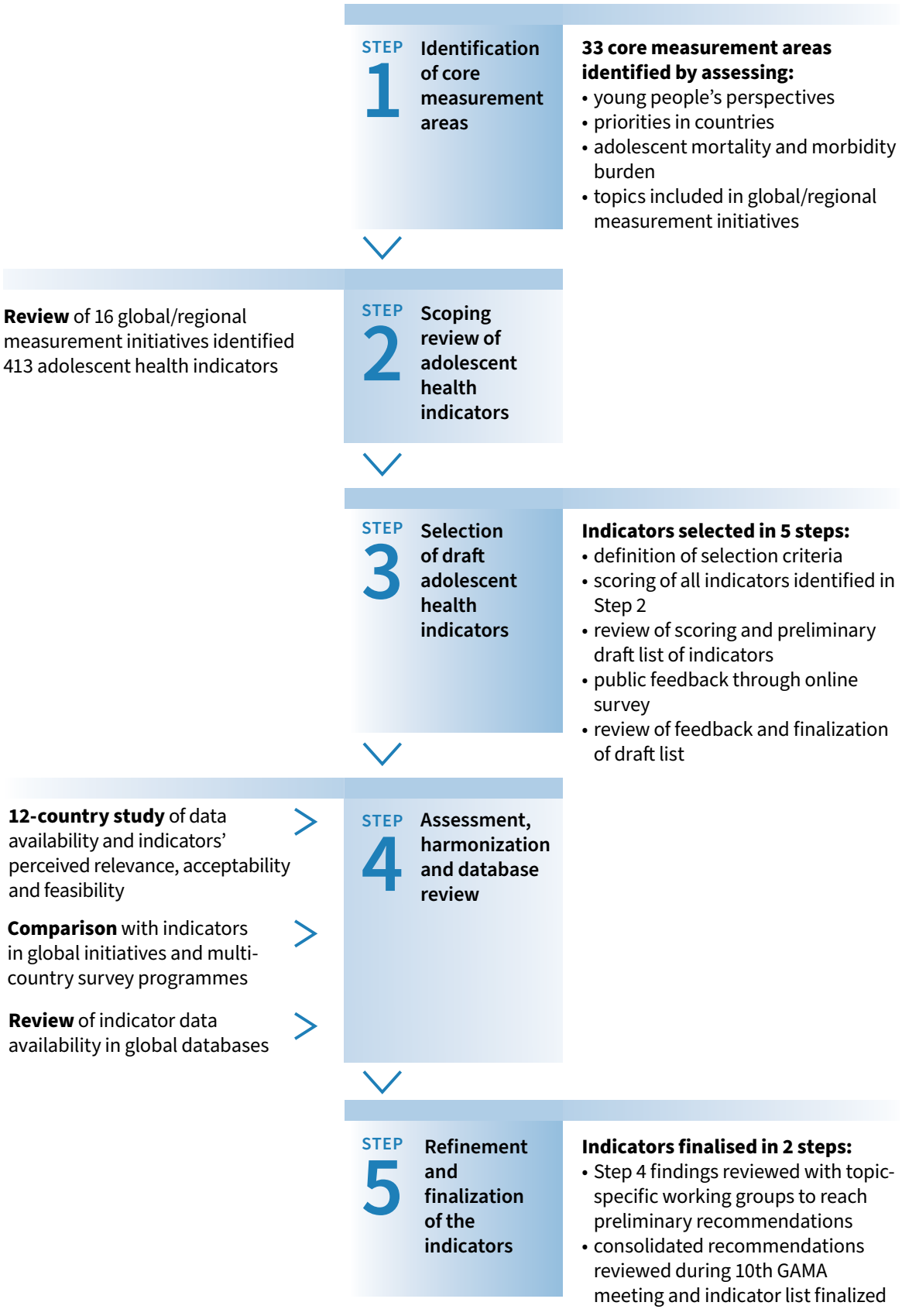
This guidance is intended to be used as a reference document. Its consistent use will ensure better focus and alignment of adolescent health data collection efforts. It will help countries, as well as regional and global stakeholders, to uniformly collect, compile, report and use the most important information to guide action for the improvement of the health of adolescents.

Homa Bay County, Kenya - 28 March, 2018: John, 14 during a exam at Ober Boys Boarding (Secondary). He is a visually impaired student at this educational institution, located near the Victoria Lake, which is pioneer in Kenya supporting kids with visual impairments. © WHO/NOOR /Sebastian Liste

2. Indicator selection process

The set of GAMA-recommended indicators presented in this document were selected through a five-step process (Fig. 1).

Fig. 1. Selection process for the GAMA-recommended indicators



2.1 Step 1: Identification of core measurement areas

A set of 33 core measurement areas for adolescent health were identified through a systematic assessment of four key inputs: young people's perspectives; priorities in countries; the adolescent mortality and morbidity burden; and topics included in 16 identified global or regional adolescent health measurement initiatives *(6)*.

2.2 Step 2: Scoping review of adolescent health indicators

The 16 measurement initiatives mentioned in Step 1 were re-reviewed alongside the resulting 33 core measurement areas. All indicators addressing at least one of the core measurement areas and overlapping with the adolescent age range (10–19 years) were extracted along with their metadata, producing a list of 413 adolescent health indicators *(3)*.

2.3 Step 3: Selection of draft adolescent health indicators

A draft list of adolescent health indicators was compiled according to a structured five-step approach: definition of indicator selection criteria; scoring of the 413 indicators identified by GAMA advisors during Step 2; review of scoring results and development of a draft list of indicators; collection of public feedback on the draft list through an online public stakeholder survey in English, French and Spanish; and review of stakeholder feedback and finalization of the draft indicator list *(19)*.

2.4 Step 4: Assessment, harmonization and database review

The draft list of indicators was assessed through three separate activities undertaken in parallel: a 12-country study of data availability, perceived relevance, acceptability and feasibility of implementing the draft indicators at the country level *(20)*; a comparison of alignment between the draft indicators and similar indicators included in global initiatives and selected multi-country survey programmes *(21)*; and a review of indicator data in global databases.

2.5 Step 5: Refinement and finalization of the indicators

Findings from Step 4 were discussed among topic-specific working groups. Group members provided their inputs through an online survey and these inputs were reviewed during one virtual meeting per working group to arrive at preliminary recommendations. These recommendations were compiled and presented during the 10th GAMA meeting (September 2023, Geneva), during which final recommendations were agreed and the list of indicators was finalized *(22)*.

With new evidence and measurement methodologies becoming available, these indicators will be periodically reviewed and updated.

Students wearing face masks at the Tika Vidyashram government school in Kathmandu. © WHO/Tom Pietrasik

3. The indicators

This chapter provides an overview of the 47 indicators, followed by detailed information about each. Two types of indicators are presented in this document:

- **Core indicators** are the most essential for measuring the health of all adolescents globally.
- **Additional indicators** are those provided for settings[2] where further detail within a subject would add value, and resources for data collection and reporting are available.

Table 1 lists the 47 core and additional indicators, organized into the six domains, and includes the unit of measurement for each indicator.

The indicator tables below start with those in the domain "policies, programmes and laws" as the fundamental building blocks for national action, followed by "systems performance and interventions" and "social, cultural, economic, educational and environmental health determinants", which present the overall context of adolescent health.

"Health behaviours and risks", "subjective well-being" and "health outcomes and conditions" are the domains containing those indicators related to the actual health status of adolescents. Within each domain, indicators are grouped thematically.

Each indicator table provides metadata – the technical information needed to understand each of the indicators. The metadata have been developed to support alignment in data collection and use, and address key inconsistencies identified in the scoping review of adolescent health indicators *(3)*.

Fig. 2 provides an overview of the structure used to organize the metadata in the indicator tables and explains the different elements.

[2] Here, "setting" is defined as a country or regional context, and a "subject" is a health or health-related topic.

CAMBODIA: Disability inclusion in health – October-November 2023. © WHO/Miguel Jeronimo

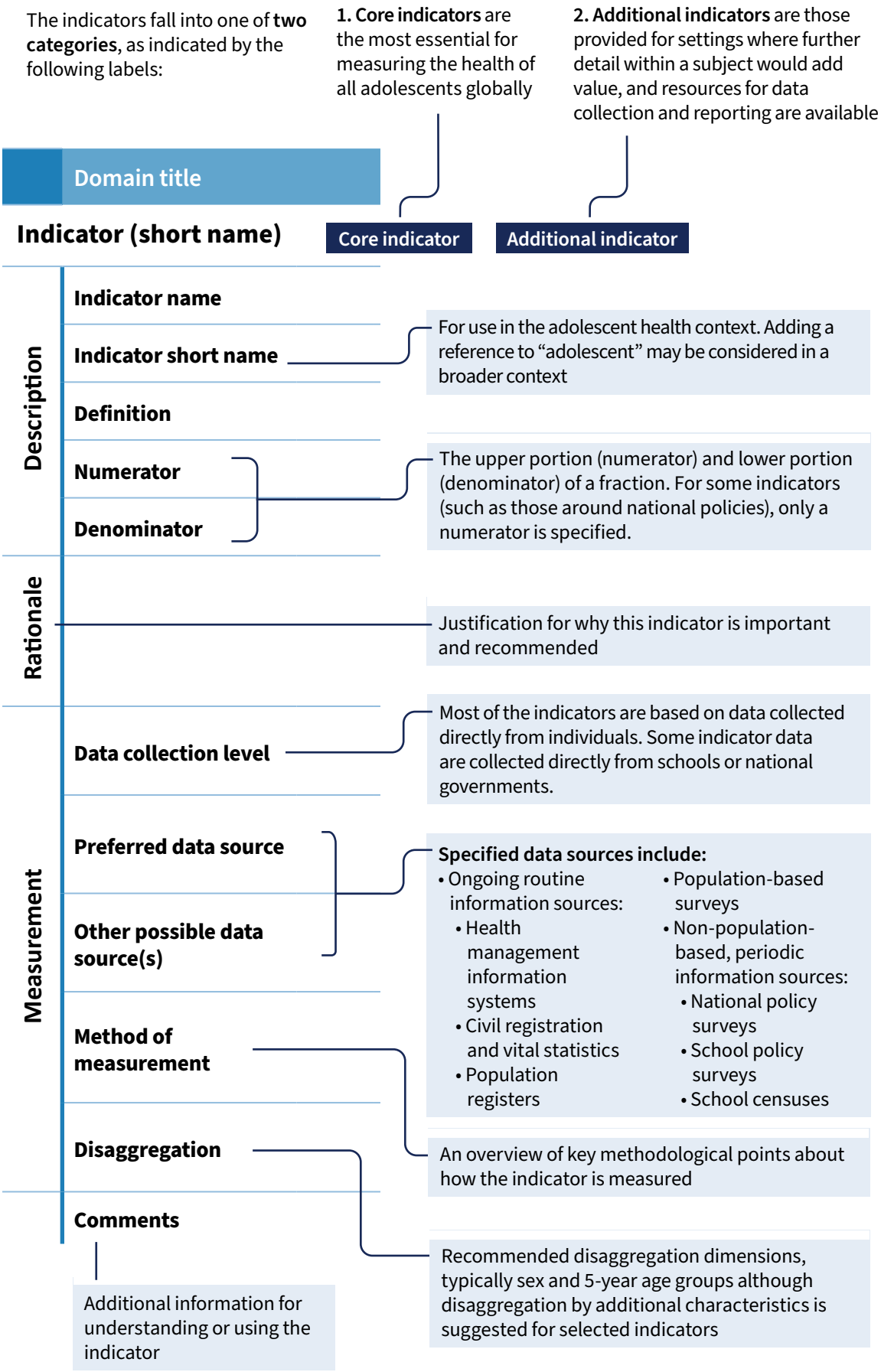
Table 1. Overview of the GAMA indicators

Domain		Indicators	Indicator type
Policies, programmes & laws	Government/ national	National adolescent health programme	
		National standards for adolescent health service delivery	Core
		Health service user fee exemptions for adolescents	Additional
		Legal restrictions for accessing health services	
Systems performance & interventions	Individual	Health services use	
		Human papillomavirus (HPV) vaccine coverage	Core
	School	Comprehensive school health services	Additional
		Schools offering HIV and sexuality education	
Social, cultural, economic, educational & environmental health determinants	Individual	Adolescent population proportion	
		School completion	
		Foundational learning skills	
		Poverty[a]	Core
		Food insecurity	Additional
		Sexual and reproductive health decision-making among older female adolescents	
		Adolescents not in education, employment or training	
Health behaviours & risks	Individual	Overweight and obesity	
		Thinness	
		Vegetable and fruit consumption	
		Sugar-sweetened beverage consumption	
		Physical activity	
		Heavy episodic drinking	
		Alcohol use	
		Tobacco use	
		Electronic cigarette use	
		Cannabis use	Core
		First sex by age 15	Additional
		Pre-menarche menstruation awareness	
		Contraceptive use at last sex (modern method)	
		Condom use at last sex	
		Demand for family planning satisfied (modern method)	
		Skilled birth attendance	
		Bullying	
		Physical violence	
		Contact sexual violence	
		Sexual violence by age 18	
Subjective well-being	Individual	Someone to talk to about problems	Core
		Positive family relationships	Additional
Health outcomes & conditions	Individual	Adolescent mortality rate (all-cause)	
		Adolescent mortality rate (cause-specific)	
		Adolescent birth rate	
		HIV prevalence	
		Sexual transmitted infection (STI) incidence	Core
		Injury hospitalization rate (cause-specific)	Additional
		Anaemia	
		Suicide attempt	
		Depression/anxiety symptoms	
		Care seeking for depression / anxiety	

Note: Core indicators are the most essential for measuring the health of all adolescents globally. Additional indicators are those provided for settings where further detail within a subject would add value, and resources for data collection and reporting are available.

a This indicator is reported at the individual level, using household data on income (or consumption).

Fig. 2. Overview of indicator metadata structure



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3.1 Policies, programmes and laws

Policies, programmes and laws

National adolescent health programme

Core indicator

Description	**Indicator name**	Existence of an operational national adolescent health programme
	Indicator short name	National adolescent health programme
	Definition	The country has a national adolescent health programme with at least one designated full-time person and a regular government budget allocation to support the programme.
	Numerator	The country reports the existence of a national adolescent health programme with at least one designated full-time person and a regular government budget allocation to support the programme.
	Denominator	Not applicable
Rationale	A national programme with sufficient resources is necessary to identify national and subnational priorities and implementation strategies.[a]	
Measurement	**Data collection level**	Government/national
	Preferred data source	Policy survey
	Other possible data source(s)	None recommended
	Method of measurement	Calculating this indicator requires country-reported data on the existence of a national adolescent health programme with follow-up questions probing on staffing and regular budget allocation. At the global level, these data are periodically collected through the WHO Sexual, Reproductive, Maternal, Newborn, Child and Adolescent Health Policy Survey.[b]
	Disaggregation	No standard disaggregation recommended
Comments	An adolescent health programme may be stand-alone or integrated with other programmes. The requirement of a single full-time person may be satisfied by multiple individuals sharing a position.	

[a] Global accelerated action for the health of adolescents (AA-HA!): guidance to support country implementation, second edition. Geneva: World Health Organization; 2023 (https://iris.who.int/handle/10665/373300, accessed 2 February 2024).

[b] Katwan E, Bisoborwa G, Butron-Riveros B, Bychkov S, Dadji K, Fedkina N et al. Creating a global legal and policy database and document repository: challenges and lessons learned from the World Health Organization Sexual, Reproductive, Maternal, Newborn, Child and Adolescent Health Policy Survey. Int J Health Policy Manag. 2022;11(11):2415–21. doi:10.34172/ijhpm.2021.153.

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Policies, programmes and laws

National standards for adolescent health service delivery

Core indicator

Description	**Indicator name**	Existence of national standards for delivery of health services to adolescents
	Indicator short name	National standards for adolescent health service delivery
	Definition	The country has national standards for delivery of health services specifically for adolescents that include a clearly defined, comprehensive package of health services, the implementation of which has been monitored.
	Numerator	The country reports the existence of national standards for delivery of health services to adolescents that include a clearly defined, comprehensive package of health services, the implementation of which has been monitored.
	Denominator	Not applicable
Rationale	National standards for adolescent health service delivery help to ensure the basic health needs of adolescents are met.[a] WHO promotes a standards-driven approach to improve the quality of health services.[b,c] Many countries have moved towards a standards-driven approach to improve the quality of care for adolescents, guided by the WHO/UNAIDS *Global standards for quality of health-care services for adolescents*,[c] yet few regularly monitor them.[b]	
Measurement	**Data collection level**	Government/national
	Preferred data source	Policy survey
	Other possible data source(s)	None recommended
	Method of measurement	Calculating this indicator requires country-reported data on the existence of standards for the delivery of health services to adolescents with follow-up questions on monitoring activities and the inclusion of a comprehensive package of health services. At the global level, these data are periodically collected through the WHO Sexual, Reproductive, Maternal, Newborn, Child and Adolescent Health Policy Survey.[d]
	Disaggregation	No standard disaggregation recommended
Comments	A list of currently recommended adolescent services and interventions is included within *Global accelerated action for the health of adolescents (AA-HA!).*[b]	

[a] Nair M, Baltag V, Bose K, Boschi-Pinto C, Lambrechts T, Mathai M. Improving the quality of health care services for adolescents, globally: a standards-driven approach. J Adolesc Health. 2015;57(3):288–98.

[b] Global accelerated action for the health of adolescents (AA-HA!): guidance to support country implementation, second edition. Geneva: World Health Organization; 2023 (https://iris.who.int/handle/10665/373300, accessed 2 February 2024).

[c] Global standards for quality health-care services for adolescents: a guide to implement a standards-driven approach to improve the quality of health care services for adolescents. Geneva: World Health Organization; 2015 (https://iris.who.int/handle/10665/183935, accessed 2 February 2024).

[d] Katwan E, Bisoborwa G, Butron-Riveros B, Bychkov S, Dadji K, Fedkina N et al. Creating a global legal and policy database and document repository: challenges and lessons learned from the World Health Organization Sexual, Reproductive, Maternal, Newborn, Child and Adolescent Health Policy Survey. Int J Health Policy Manag. 2022;11(11):2415–21. doi:10.34172/ijhpm.2021.153.

Policies, programmes and laws

Health service user fee exemptions for adolescents

Additional indicator

Description	**Indicator name**	Existence of a national policy exempting adolescents from user fees for outpatient care visits in the public sector
	Indicator short name	Health service user fee exemptions for adolescents
	Definition	The existence of a national policy exempting adolescents from user fees for outpatient care visits in the public sector
	Numerator	Yes = All adolescents are exempted from user fees for outpatient care visits. Partial = Selected adolescent population groups are exempted from user fees for outpatient care visits. No = Adolescents are not exempted from user fees for outpatient care visits.
	Denominator	Not applicable
Rationale	Financial barriers can prevent adolescents from accessing health services because adolescents are less likely to be covered by insurance and/or able to pay out-of-pocket costs for health services.[a, b] Health service user fee exemptions can increase access to health services for adolescents seeking care in public-sector facilities.	
Measurement	**Data collection level**	Government/national
	Preferred data source	Policy survey
	Other possible data source(s)	None recommended
	Method of measurement	Calculating this indicator requires country-reported data on the existence of a national policy exempting adolescents from user fees for outpatient care visits with follow-up questions asking whether the exemption applies to all adolescents or only to specific subgroups. At the global level, these data are periodically collected through the WHO Sexual, Reproductive, Maternal, Newborn, Child and Adolescent Health Policy Survey.[c]
	Disaggregation	No standard disaggregation recommended
Comments	No additional comments	

[a] Adolescent health: the missing population in universal health coverage. Geneva: World Health Organization; 2019 (https://pmnch.who.int/resources/publications/m/item/adolescent-health---the-missing-population-in-universal-health-coverage, accessed 8 February 2024).

[b] Global accelerated action for the health of adolescents (AA-HA!): guidance to support country implementation, second edition. Geneva: World Health Organization; 2023 (https://iris.who.int/handle/10665/373300, accessed 2 February 2024).

[c] Katwan E, Bisoborwa G, Butron-Riveros B, Bychkov S, Dadji K, Fedkina N et al. Creating a global legal and policy database and document repository: challenges and lessons learned from the World Health Organization Sexual, Reproductive, Maternal, Newborn, Child and Adolescent Health Policy Survey. Int J Health Policy Manag. 2022;11(11):2415–21. doi:10.34172/ijhpm.2021.153.

Policies, programmes and laws

Legal restrictions for accessing health services

Additional indicator

Description	**Indicator name**	Absence of a legal age limit for adolescents to provide consent for specified adolescent health services without spousal, parental or legal guardian consent.
	Indicator short name	Legal restrictions for accessing health services
	Definition	The absence of a legal age limit to allow married and unmarried adolescents to provide consent for specified adolescent health services (that is, contraceptive services except sterilization, emergency contraception, HIV testing and counselling services, HIV care and treatment, harm reduction interventions for injecting drug users, and mental health services) without spousal, parental or legal guardian consent.
	Numerator	The country reports no legal age limit for married or unmarried adolescents to provide consent to all specified services without spousal and/or parental/legal consent, respectively.
	Denominator	Not applicable
Rationale	Requirements for parental or legal guardian consent can lead to breaches in confidentiality and can be barriers for adolescents to access health services, such as testing and treatment for HIV or obtaining contraception.[a] In measuring the absence of mandatory third-party authorizations for health services, this indicator provides insight into adolescents' autonomy regarding their health.[b, c]	
Measurement	**Data collection level**	Government/national
	Preferred data source	Policy survey
	Other possible data source(s)	None recommended
	Method of measurement	Calculating this indicator requires country-reported data on the existence of a legal age limit for adolescents to obtain specified health services, assessed separately among married and unmarried adolescents. At the global level, these data are periodically collected through the WHO Sexual, Reproductive, Maternal, Newborn, Child and Adolescent Health Policy Survey.[d]
	Disaggregation	Marital status
Comments	No additional comments	

[a] Global accelerated action for the health of adolescents (AA-HA!): guidance to support country implementation, second edition. Geneva: World Health Organization; 2023 (https://iris.who.int/handle/10665/373300, accessed 2 February 2024).

[b] Global standards for quality health-care services for adolescents: a guide to implement a standards-driven approach to improve the quality of health care services for adolescents. Geneva: World Health Organization; 2015 (https://iris.who.int/handle/10665/183935, accessed 2 February 2024).

[c] Assessing and supporting adolescents' capacity for autonomous decision-making in health care settings: a tool for health-care providers. Geneva: World Health Organization; 2021 (https://iris.who.int/handle/10665/350208, accessed 2 February 2024).

[d] Katwan E, Bisoborwa G, Butron-Riveros B, Bychkov S, Dadji K, Fedkina N et al. Creating a global legal and policy database and document repository: challenges and lessons learned from the World Health Organization Sexual, Reproductive, Maternal, Newborn, Child and Adolescent Health Policy Survey. Int J Health Policy Manag. 2022;11(11):2415–21. doi:10.34172/ijhpm.2021.153.

3.2 Systems performance and interventions

Systems performance and interventions

Health services use

Core indicator

Description	**Indicator name**	Proportion of adolescents who received a health service during the past 12 months
	Indicator short name	Health services use
	Definition	Proportion of adolescents (10–19 years) who received a health service from a health provider during the past 12 months
	Numerator	Number of adolescents (10–19 years) who received a health service from a health provider during the past 12 months
	Denominator	Total number of adolescents (10–19 years)
Rationale	This indicator measures the proportion of adolescents that are using health services and receiving care. Adolescence is a critical time for developing healthy behaviours and providing preventive care; therefore, WHO encourages regular use of health services and routine data collection of their use.[a, b]	
Measurement	**Data collection level**	Individual
	Preferred data source	Population-based survey
	Other possible data source(s)	Health management information system (HMIS)
	Method of measurement	Data on both health services received and population are required for this indicator. Surveys can ask a question whether any health service was received during the 12 months preceding the survey and then record the source(s) of the service, which will allow for disaggregation by type of facility. In the case of the use of administrative data, care should be taken to consider the health services that may be excluded, such as private facilities, as well as the source of the population data.
	Disaggregation	Age group (10–14, 15–19 years); sex. Disaggregation by type of facility may be considered.
Comments	For this indicator, a health provider includes a doctor, nurse, midwife, community health worker, or pharmacist. Traditional healers and herbalists are not included. The health service may be provided in a health facility that is either stand-alone or integrated within a school setting (for example, school health clinic) and the facility may be in any health sector (public, private, other). When using administrative data, it may be necessary to obtain data from sectors other than health to reflect the range of facility types and sectors where adolescents' visits occur, for example, through the education sector. Whenever data are combined across multiple sources, care should be taken to avoid double counting. For more information on the delivery of health services to adolescents, see *Global accelerated action for the health of adolescents (AA-HA!)*.[c]	

[a] Global standards for quality health-care services for adolescents: a guide to implement a standards-driven approach to improve the quality of health care services for adolescents. Geneva: World Health Organization; 2015 (https://iris.who.int/handle/10665/183935, accessed 2 February 2024).

[b] Pocket book of primary health care for children and adolescents: guidelines for health promotion, disease prevention and management from the newborn period to adolescence. Copenhagen: World Health Organization. Regional Office for Europe; 2022 (https://iris.who.int/handle/10665/352485, accessed 2 February 2024).

[c] Global accelerated action for the health of adolescents (AA-HA!): guidance to support country implementation, second edition. Geneva: World Health Organization; 2023 (https://iris.who.int/handle/10665/373300, accessed 2 February 2024).

Systems performance and interventions

Human papillomavirus (HPV) vaccine coverage

Core indicator

Description	**Indicator name**	Proportion of target population covered by human papillomavirus (HPV) vaccine (last dose in schedule)
	Indicator short name	Human papillomavirus (HPV) vaccine coverage
	Definition	Proportion of the target population who have received the final dose of HPV vaccine
	Numerator	Number of adolescents in the target population who have received the final dose of HPV vaccine
	Denominator	Total number of adolescents in the target population
Rationale	HPV is a common sexually transmitted infection and can lead to cancer.[a] Vaccination against high-risk strains of HPV can prevent infection and the development of HPV-related cancers.[a] Vaccination is most effective when completed before the initiation of sexual activity; therefore, guidelines focus on younger adolescents.[b]	
Measurement	**Data collection level**	Individual
	Preferred data source	Health management information system (HMIS)
	Other possible data source(s)	Population-based survey
	Method of measurement	Calculation of this indicator from administrative sources requires that vaccination status is reported at the level of the individual adolescent, so that full vaccination coverage can be derived for the numerator, and that an accurate population estimate can be derived from another source. Surveys can ask those adolescents who should have received the final dose in the schedule if they have ever received the HPV vaccination and, if so, how many doses they have received.
	Disaggregation	Sex
Comments	WHO guidelines recommend all girls aged 9–14 years be vaccinated as the primary target population.[c] If feasible, WHO recommends extending vaccination to secondary target populations, including females aged 15 years and older, boys, older males, or men who have sex with men.[c] The target population for this indicator should be defined according to each country's national immunization schedule. WHO estimates of HPV immunization coverage can be found on the interactive immunization dashboard.[d] For guidance on measuring this indicator using health facility data, see *Analysis and use of facility data: guidance for maternal, newborn, child and adolescent health programme managers*.[e]	

[a] Cervical cancer. Geneva: World Health Organization; 2023 (https://www.who.int/news-room/fact-sheets/detail/cervical-cancer, accessed 2 February 2024).

[b] WHO recommendations on adolescent sexual and reproductive health and rights. Geneva: World Health Organization; 2018 (https://iris.who.int/handle/10665/275374, accessed 8 February 2024).

[c] Human papillomavirus vaccines: WHO position paper (2022 update). Geneva: World Health Organization; 2022 (https://iris.who.int/handle/10665/365350, accessed 2 February 2024).

[d] HPV immunization coverage estimates among primary target cohort (9-14 years old girls) (%) [online database]. Geneva: World Health Organization; 2024 (https://www.who.int/data/gho/data/indicators/indicator-details/GHO/girls-aged-15-years-old-that-received-the-recommended-doses-of-hpv-vaccine, accessed 3 April 2024).

[e] Analysis and use of health facility data: guidance for maternal, newborn, child and adolescent health programme managers. Geneva: World Health Organization; 2023 (https://iris.who.int/handle/10665/373826, accessed 2 February 2024).

Systems performance and interventions

Comprehensive school health services

Additional indicator

Description	**Indicator name**	Proportion of schools that offer comprehensive school health services
	Indicator short name	Comprehensive school health services
	Definition	Proportion of schools that offer comprehensive school health services, defined as school health services addressing at least four of the following health areas relevant to their student population: positive health and development; unintentional injury; violence; sexual and reproductive health including HIV; communicable disease; noncommunicable disease, sensory functions, physical disability, oral health, nutrition and physical activity; and mental health, substance use and self-harm.
	Numerator	Number of schools that offer school health services that address at least four of the following health areas: positive health and development; unintentional injury; violence; sexual and reproductive health including HIV; communicable disease; noncommunicable disease, sensory functions, physical disability, oral health, nutrition and physical activity; and mental health, substance use and self-harm.
	Denominator	Total number of schools
Rationale	Most countries have some form of school health services, but many programmes are not comprehensive.[a] Mental health promotion, prevention of substance use, violence and unintentional injury, and addressing chronic conditions are often omitted. Comprehensive school health services increase the accessibility of health services to school-going adolescents by reducing cost, transportation challenges and location barriers.[b, c]	
Measurement	**Data collection level**	School
	Preferred data source	Policy survey
	Other possible data source(s)	None recommended
	Method of measurement	This indicator is calculated using data collected directly from schools, either through a questionnaire and/or key informant interviews, on which health and nutrition services are provided at the school.
	Disaggregation	Disaggregation by schooling level (primary, lower secondary, upper secondary) may be considered.
Comments	Education systems vary across countries. The International Standard Classification of Education (ISCED)[d] can be used to produce internationally comparable estimates by schooling level. *WHO guideline on school health services*[b] provides more information relevant to this indicator.	

[a] Ready to learn and thrive: what you need to know about the global report on school health and nutrition. Paris: United Nations Educational, Scientific and Cultural Organization; 2023 (https://www.unesco.org/en/articles/ready-learn-and-thrive-what-you-need-know-about-global-report-school-health-and-nutrition, accessed 2 February 2024).

[b] WHO guideline on school health services. Geneva: World Health Organization; 2021 (https://iris.who.int/handle/10665/341910, accessed 8 February 2024).

[c] Making every school a health-promoting school: global standards and indicators. World Health Organization and United Nations Educational, Scientific and Cultural Organization; 2021 (https://iris.who.int/handle/10665/341907, accessed 8 February 2024).

[d] International Standard Classification of Education (ISCED) [website] 2011. Paris: United Nations Educational, Scientific and Cultural Organization; 2024 (https://uis.unesco.org/sites/default/files/documents/international-standard-classification-of-education-isced, accessed 2 February 2024).

Systems performance and interventions

Schools offering HIV and sexuality education

Additional indicator

Description	**Indicator name**	Proportion of schools that offer life skills-based HIV and sexuality education
	Indicator short name	Schools offering HIV and sexuality education
	Definition	Proportion of schools that offer life skills-based HIV and sexuality education (that is, education on life skills, sexual and reproductive health/sexuality, and HIV transmission and prevention) or as part of extracurricular activities.
	Numerator	*Annual school census:* Number of schools that teach all three of the following within the formal curriculum or as part of extracurricular activities: generic life skills (for example, decision-making/communications/refusal skills), sexual and reproductive health/sexuality education (for example, teaching on human growth and development, family life, reproductive health, contraception, sexual abuse, sexually transmitted infections (STIs)), and HIV transmission and prevention. *Global School Health Policies and Practices Survey (G-SHPPS).*[a] Number of schools that teach sexual and reproductive health and HIV transmission, prevention and treatment and at least one of the following topics: interpersonal communication, decision-making, problem-solving, goal-setting, refusal, coping or stress management.
	Denominator	Total number of schools
Rationale	Life skills-based education on HIV, STIs and pregnancy can help adolescents to make healthy decisions about their sexual behaviour and relationships.[b] This can have a positive effect on their sexual health, including delayed sexual debut, reduced number of sexual partners and increased condom use.	
Measurement	**Data collection level**	School
	Preferred data source	Policy survey
	Other possible data source(s)	Annual school census
	Method of measurement	This indicator is based on feedback from principals through school-based surveys or annual school censuses. Regardless of the data source, schools need to report the following three topics were covered during the previous or current academic year: generic life skills, sexual reproductive health/sexuality education, and HIV transmission and prevention.
	Disaggregation	Schooling level (primary, lower secondary, upper secondary)
Comments	Education systems vary across countries. The International Standard Classification of Education (ISCED)[c] can be used to produce internationally comparable estimates by schooling level. For more information, refer to the metadata for SDG thematic indicator 4.7.2[d] and the *International technical guidance on sexuality education.*[e]	

[a] Global school health policies and practices survey. Geneva: World Health Organization; 2023 (https://www.who.int/teams/noncommunicable-diseases/surveillance/systems-tools/global-school-health-policies-and-practices-survey, accessed 2 February 2024).

[b] Measuring the education sector response to HIV and AIDS: guidelines for the construction and use of core indicators. Paris: United Nations Educational, Scientific and Cultural Organization; 2013 (https://unesdoc.unesco.org/ark:/48223/pf0000223028, accessed 2 February 2024).

[c] International Standard Classification of Education (ISCED) [website]. Paris: United Nations Educational, Scientific and Cultural Organization; 2024 (https://uis.unesco.org/en/topic/international-standard-classification-education-isced, accessed 2 February 2024).

[d] SDG 4 Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. Paris: United Nations Educational, Scientific and Cultural Organization; 2021 (https://tcg.uis.unesco.org/wp-content/uploads/sites/4/2021/09/Metadata-4.7.2.pdf, accessed 2 February 2024).

[e] International technical guidance on sexuality education: an evidence-informed approach. Paris: United Nations Educational, Scientific and Cultural Organization; 2018 (https://unesdoc.unesco.org/ark:/48223/pf0000260770, accessed 2 February 2024).

3.3 Social, cultural, economic, educational and environmental health determinants

Social, cultural, economic, educational and environmental health determinants

Adolescent population proportion

Core indicator

Description	**Indicator name**	Proportion of total population that are adolescents
	Indicator short name	Adolescent population proportion
	Definition	Proportion of the total population in a country that are adolescents (10–19 years)
	Numerator	Number of adolescents (10–19 years) in a country
	Denominator	Total population in the same country
Rationale	Knowledge of the proportion of adolescents in a country facilitates the prioritization of health resources and adequate allocation to meet adolescents' health needs. The total adolescent population, which provides the numerator for calculating adolescent population proportion, is also useful input in the calculation of indicators where the population size is required, such as 'Adolescent mortality rate' ('all-cause' and 'cause-specific').[a]	
Measurement	**Data collection level**	Individual
	Preferred data source	Population register
	Other possible data source(s)	Population-based survey; census
	Method of measurement	Calculating this indicator requires data on the entire population of a country by age. Countries with a population register obtain these data on an ongoing basis. In the case of surveys or censuses, these data can be based on a direct question on age, a question on date of birth, or a combination of both, which allows for cross-verification.
	Disaggregation	Age group (10–14, 15–19 years); sex
Comments	Official United Nations country- and region-level population estimates and projections are available in the World Population Prospects population estimates and projections.[b]	

[a] Azzopardi P, Kennedy E, Patton G. Data and indicators to measure adolescent health, social development and well-being. Innocenti Research Brief, no. 2017-04. Innocenti, Florence: United Nations Children's Fund Office of Research; 2017 (https://www.unicef-irc.org/publications/876-data-and-indicators-to-measure-adolescent-health-social-development-and-well-being.html, accessed 8 February 2024).

[b] World population prospects 2022. New York: United Nations Department of Economic and Social Affairs Population Division; 2022 (https://population.un.org/wpp, accessed 2 February 2024).

Social, cultural, economic, educational and environmental health determinants

School completion

Core indicator

Description	**Indicator name**	Proportions of adolescents and young people who have completed primary, lower secondary and upper secondary school
	Indicator short name	School completion
	Definition	Proportion of adolescents and young people aged 3–5 years above the intended age for the last grade of each level of education who have completed that grade
	Numerator	Number of adolescents and young people aged 3–5 years above the intended age for the last grade of each level of education who have completed that grade
	Denominator	Total number of adolescents and young people aged 3–5 years above the intended age for the last grade of each level of education
Rationale	Higher educational attainment has been associated with increased cognitive development, improved mental health and lower risk of noncommunicable diseases later in life.[a]	
Measurement	**Data collection level**	Individual
	Preferred data source	Population-based survey
	Other possible data source(s)	None recommended
	Method of measurement	Calculating this indicator requires data on the highest level of education and/or grade completed. The indicator can then be calculated according to the national educational system or, for international comparability, the International Standard Classification of Education (ISCED).[b]
	Disaggregation	Schooling level (primary, lower secondary, upper secondary); sex
Comments	The target population for this indicator is determined based on schooling level and includes both adolescents and young people to account for those who complete schooling after the intended age for the respective level. The SDG indicator metadata define the intended age for the last grade of each education level as, "the age at which pupils would enter the grade if they had started school at the official primary entrance age, had studied full time and had progressed without repeating or skipping a grade". For more information on this indicator, refer to SDG 4 indicator metadata (indicator 4.1.2).[c]	

[a] Patton GC, Sawyer SM, Santelli JS, Ross DA, Afifi R, Allen NB et al. Our future: a Lancet commission on adolescent health and wellbeing. Lancet. 2016;387:2423–78. doi:10.1016/S0140-6736(16)00579-1.

[b] International Standard Classification of Education (ISCED) [website]. Paris: United Nations Educational, Scientific and Cultural Organization; 2024 (https://uis.unesco.org/en/topic/international-standard-classification-education-isced, accessed 2 February 2024).

[c] SDG indicator metadata (Indicator 4.1.2). New York: United Nations; 2022 (https://unstats.un.org/sdgs/metadata/files/Metadata-04-01-02.pdf, accessed 2 February 2024).

Social, cultural, economic, educational and environmental health determinants

Foundational learning skills

Additional indicator

Description	**Indicator name**	Proportion of adolescents and young people at the end of primary and at the end of lower secondary achieving at least a minimum proficiency level in (i) reading and (ii) mathematics.
	Indicator short name	Foundational learning skills
	Definition	Proportion of adolescents and young people at the end of primary education and at the end of lower secondary education who achieve at least a minimum proficiency level in (i) reading and (ii) mathematics.
	Numerator	Number of adolescents and young people at the end of primary education and at the end of lower secondary education achieving at least a minimum proficiency level in (i) reading and (ii) mathematics.
	Denominator	Total number of adolescents and young people at the end of primary education and at the end of lower secondary education
Rationale	Foundational learning skills have been associated with improved economic status, health literacy and behaviours, living in healthier neighbourhoods, and other social and psychological benefits, whereas low literacy has been associated with poorer health outcomes.[a]	
Measurement	**Data collection level**	Individual
	Preferred data source	Population-based survey
	Other possible data source(s)	None recommended
	Method of measurement	Calculating this indicator requires the direct assessment of reading and mathematics skills. Individual results should then be compared to the global minimum proficiency levels established for each subject and schooling level.
	Disaggregation	Schooling level (end of primary, end of lower secondary); subject (reading, mathematics); sex
Comments	Where assessments of learning outcomes are administered within the school system, as is often the case, out-of-school adolescents will be excluded from the calculation of this indicator. For more information on this indicator, refer to SDG indicator metadata (indicator 4.1.1).[b]	

[a] DeWalt DA, Pignone MP. Reading is fundamental: the relationship between literacy and health. Archives of Internal Medicine. 2005;165(17):1943–4. doi:10.1001/archinte.165.17.1943.

[b] SDG indicator metadata (Indicator 4.1.1). New York: United Nations; 2022 (https://unstats.un.org/sdgs/metadata/files/Metadata-04-01-01.pdf, accessed 2 February 2024).

Social, cultural, economic, educational and environmental health determinants

Poverty

Core indicator

Description	**Indicator name**	Proportion of adolescents who live below the poverty line
	Indicator short name	Poverty
	Definition	Proportion of adolescents (10–19 years) who live in households with income below the nationally established poverty line *Alternate: Proportion of adolescents (10–19 years) who live in households with income below the international poverty line*
	Numerator	Number of adolescents (10–19 years) who live in households with income below the nationally established poverty line *Alternate: Number of adolescents (10–19 years) who live in households with income below the international poverty line*
	Denominator	Total number of adolescents (10–19 years)
Rationale	Poverty is a significant contributor to the global burden of disease.[a] Adolescents living below the poverty line are more likely to experience negative health effects, such as food insecurity and poor mental health.[b] Using the national poverty line provides a measure of poverty that is more consistent with country-specific circumstances and is likely to be more informative for country-specific programming.[c] The alternative use of an international poverty line (such as $2.15 per person per day in 2017 purchasing power parity (PPP)[d]) can bring the additional advantage of cross-country comparability.	
Measurement	**Data collection level**	Household
	Preferred data source	Population-based survey
	Other possible data source(s)	None recommended
	Method of measurement	Calculating this indicator requires data on household income (or consumption) and the existence of a national poverty line. Poverty lines are typically expressed in per capita or adult equivalence terms and the proper adjustment should be done for households' income (or consumption). Where no national poverty line has been established, the international poverty line may be used.[e] Household data are then compared with the respective poverty line to determine household poverty status. Further computation is necessary to determine the proportion of adolescents living in households below the respective poverty line.
	Disaggregation	Age group (10–14, 15–19 years); sex
Comments	For more information on the SDG indicators providing the basis for this indicator, see the metadata for SDG indicators 1.2.1 (national poverty line)[c] and 1.1.1 (international poverty line),[f] which assess poverty among the entire population. For additional discussion of measuring poverty among younger ages, see the United Nations Children's Fund Briefing note #2: Child poverty.[g]	

[a] Coates MM, Ezzati M, Robles Aguilar G, Kwan GF, Vigo D, Mocumbi AO et al. Burden of disease among the world's poorest billion people: an expert-informed secondary analysis of Global Burden of Disease estimates. PLoS One. 2021;16(8):e0253073. doi:10.1371/journal.pone.0253073.

[b] Díaz Y, Hessel P, Avendano M, Evans-Lacko S. Multidimensional poverty and adolescent mental health: unpacking the relationship. Social Science & Medicine. 2022;311:115324. doi:10.1016/j.socscimed.2022.115324.

[c] SDG indicator metadata (Indicator 1.2.1). New York: United Nations; 2023 (https://unstats.un.org/sdgs/metadata/files/Metadata-01-02-01.pdf, accessed 2 February 2024).

[d] Fact sheet: An adjustment to global poverty lines. Washington, DC: The World Bank Group; 2022 (https://www.worldbank.org/en/news/factsheet/2022/05/02/fact-sheet-an-adjustment-to-global-poverty-lines, accessed 2 February 2024).

[e] Poverty and inequality platform [dashboard]. Washington, DC: The World Bank Group; 2024 (https://pip.worldbank.org/home, accessed 8 February 2024.)

[f] SDG Indicator metadata (Indicator 1.1.1). New York: United Nations; 2023 (https://unstats.un.org/sdgs/metadata/files/Metadata-01-01-01b.pdf, accessed 2 February 2024).

[g] Using data to achieve the Sustainable Development Goals (SDGs) for children [United Nations Children's Fund (UNICEF) database]. New York: UNICEF; 2023 (https://data.unicef.org/sdgs, accessed 2 February 2024).

Social, cultural, economic, educational and environmental health determinants

Food insecurity

Core indicator

Description	**Indicator name**	Proportion of adolescents who went hungry most of the time or always during the past 30 days because there was not enough food in their home
	Indicator short name	Food insecurity
	Definition	Proportion of adolescents (10–19 years) who went hungry most of the time or always during the past 30 days because there was not enough food in their home
	Numerator	Number of adolescents (10–19 years) who reported going hungry most of the time or always during the past 30 days
	Denominator	Total number of adolescents (10–19 years)
Rationale	Experiencing food insecurity during adolescence is associated with various nutritional deficiencies and negative impacts on health, growth and development.[a] The direct reporting of food insecurity is considered more appropriate for measuring a specific subpopulation, such as adolescents, than a household measure that may not account for intrahousehold differences in experiences of food insecurity.[b] Food insecurity has also been negatively associated with overall adolescent mental health.[c]	
Measurement	**Data collection level**	Individual
	Preferred data source	Population-based survey
	Other possible data source(s)	None recommended
	Method of measurement	The calculation of this indicator is based on self-reported experience of hunger, specifically due to inadequate household food supply, during the 30 days preceding data collection.
	Disaggregation	Age group (10–14, 15–19 years); sex
Comments	No additional comments	

[a] Dush JL. Adolescent food insecurity: a review of contextual and behavioral factors. Public Health Nurs. 2020;37(3):327–38. doi:10.1111/phn.12708.

[b] Fram MS, Nguyen HT, Frongillo EA. Food insecurity among adolescent students from 95 countries is associated with diet, behavior, and health, and associations differ by student age and sex. Current Developments in Nutrition. 2022;6(3):nzac024. doi:10.1093/cdn/nzac024.

[c] Elgar FJ, Sen A, Gariépy G, Pickett W, Davison C, Georgiades K et al. Food insecurity, state fragility and youth mental health: a global perspective. SSM – Population Health. 2021;14:100764. doi:10.1016/j.ssmph.2021.100764.

Social, cultural, economic, educational and environmental health determinants

Sexual and reproductive health decision-making among older female adolescents

Core indicator

Description	**Indicator name**	Proportion of older female adolescents who make their own informed decisions regarding sexual relations, contraceptive use and reproductive health care
	Indicator short name	Sexual and reproductive health decision-making among older female adolescents
	Definition	Proportion of older female adolescents (15–19 years) who are married or in union and who make their own decision on all three selected areas; that is, they can say no to sexual intercourse with their husband or partner, they can decide on their use of contraception, and they can decide on their own health care
	Numerator	Number of older female adolescents (15–19 years) who are married or in union: • who can say "no" to sex; and • for whom the decision on contraception is not mainly made by the husband/partner or someone else; and • for whom the decision on health care for themselves is not usually made by the husband/partner or someone else
	Denominator	Total number of older female adolescents (15–19 years) who are married or in union
Rationale	This indicator reflects the sexual and reproductive health autonomy of older female adolescents who are married or in union. Being able to make their own decisions regarding sexual relations, contraceptive use and reproductive health care rather than under the influence of their partner or in-laws can demonstrate the older female adolescent's empowerment. This can also denote a country's legal framework regarding the empowerment of women and girls.[a]	
Measurement	**Data collection level**	Individual
	Preferred data source	Population-based survey
	Other possible data source(s)	None recommended
	Method of measurement	The calculation of this indicator is based on three separate questions asked of female respondents who are either married or in union: 1. Can the respondent say no to her husband/partner if she does not want to have sexual intercourse? 2. Who usually makes the decision to use contraception? 3. Who usually makes the decision about health care for the respondent? In the case of the last two questions, the respondent is counted in the numerator if she makes the decision either alone or jointly with her husband or partner.
	Disaggregation	No standard disaggregation recommended
Comments	Where relevant, countries may choose to also report on each empowerment question separately. For more information on this indicator, refer to SDG indicator metadata (indicator 5.6.1).[b]	

[a] Ensure universal access to sexual and reproductive health and reproductive rights. New York: United Nations Population Fund; 2020 (https://www.unfpa.org/sdg-5-6, accessed 2 February 2024).

[b] SDG indicator metadata (Indicator 5.6.1). New York: United Nations; 2022 (https://unstats.un.org/sdgs/metadata/files/Metadata-05-06-01.pdf, accessed 2 February 2024).

Social, cultural, economic, educational and environmental health determinants

Adolescents not in education, employment or training

Core indicator

Description	**Indicator name**	Proportion of older adolescents not in education, employment or training
	Indicator short name	Adolescents not in education, employment or training
	Definition	Proportion of older adolescents (15–19 years) not in education, employment or training
	Numerator	Number of older adolescents (15–19 years) not in education, employment or training
	Denominator	Total number of older adolescents (15–19 years)
Rationale	Older adolescents not in education, employment or training are a vulnerable population associated with a higher likelihood of poorer health, smoking and being left out of employment.[a, b]	
Measurement	**Data collection level**	Individual
	Preferred data source	Population-based survey
	Other possible data source(s)	None recommended
	Method of measurement	Calculating this indicator requires data on adolescents' participation in formal or non-formal education; employment status; and involvement in vocational/technical training. Adolescents not participating in any of the above are classified as not in education, employment or training.
	Disaggregation	Sex
Comments	This indicator is an adolescent-specific age disaggregation of SDG indicator 8.6.1, the target population of which also includes ages 20–24 years,[c] and should be interpreted alongside other education indicators. Education systems vary across countries, as do definitions of employment and vocational and technical training. Calculating this indicator in a consistent way across time and countries requires alignment with standardized definitions. The SDG indicator metadata provides definitions of education according to the International Standard Classification of Education (ISCED),[d] as well as definitions of employment and training that can be used across different country settings.[c]	

[a] Chandler RF, Santos Lozada AR. Health status among NEET adolescents and young adults in the United States, 2016–2018. SSM – Population Health. 2021;14:100814. doi:10.1016/j.ssmph.2021.100814.

[b] World report on child labour 2015: paving the way to decent work for young people. Geneva: International Labour Organization; 2015 (https://www.ilo.org/ipec/Informationresources/WCMS_358969/lang--en/index.htm, accessed 2 February 2024).

[c] SDG indicator metadata (Indicator 8.6.1). New York: United Nations; 2023 (https://unstats.un.org/sdgs/metadata/files/Metadata-08-06-01.pdf, accessed 2 February 2024).

[d] International Standard Classification of Education (ISCED) [website]. Paris: United Nations Educational, Scientific and Cultural Organization; 2024 (https://uis.unesco.org/en/topic/international-standard-classification-education-isced, accessed 2 February 2024).

3.4 Health behaviours and risks

Health behaviours and risks

Overweight and obesity

Core indicator

Description	**Indicator name**	Prevalence of overweight and obesity among adolescents
	Indicator short name	Overweight and obesity
	Definition	Proportion of adolescents (10–19 years) whose body mass index (BMI) was ≥ + 1 standard deviation (SD) (overweight) and ≥ +2 SDs (obese) from the median BMI, according to WHO growth reference standards for respective age and sex
	Numerator	Number of adolescents (10–19 years) whose BMI was ≥ +1 SD (overweight) and ≥ +2 SDs (obese) from the median BMI according to WHO growth reference standards for respective age and sex.
	Denominator	Total number of adolescents (10–19 years)
Rationale	Overweight and obesity are risk factors for various noncommunicable diseases, such as cardiovascular diseases, diabetes, musculoskeletal disorders and some cancers.[a] Overweight adolescents are more likely to experience obesity, disability and premature death in adulthood.[b]	
Measurement	**Data collection level**	Individual
	Preferred data source	Population-based survey
	Other possible data source(s)	None recommended
	Method of measurement	The calculation of this indicator requires data on height and weight, together with the age and sex of the corresponding individual. BMI is calculated as a function of an individual's height and weight and is compared to WHO growth reference standards for the respective age and sex to determine weight status.[c]
	Disaggregation	Age group (10–14, 15–19 years); sex; weight status (overweight, obese)
Comments	BMI is calculated by dividing weight in kilograms by height in metres squared (kg/m^2). To obtain valid anthropometric data at the population level, it is necessary to have specially trained staff using standardized equipment and methods. WHO and the United Nations Children's Fund (UNICEF) have produced detailed recommendations for anthropometric data collection, analysis and reporting among children aged under 5 years, much of which is applicable to any age group.[d] For more information on BMI weight status cut-offs, refer to the WHO growth reference standards.[d]	

[a] Lister NB, Baur LA, Felix JF, Hill AJ, Marcus C, Reinehr T et al. Child and adolescent obesity. Nat Rev Dis Primers. 2023;9(1):24. doi:10.1038/s41572-023-00435-4.

[b] Ng M, Fleming T, Robinson M, Thomson B, Graetz N, Margono C et al. Global, regional and national prevalence of overweight and obesity in children and adults during 1980–2013: a systematic analysis for the Global Burden of Disease Study 2013. Lancet. 2014;384:766–81. doi:10.1016/S0140-6736(14)60460-8.

[c] BMI-for-age (5–19 years). Geneva: World Health Organization; 2007 (https://www.who.int/tools/growth-reference-data-for-5to19-years/indicators/bmi-for-age, accessed 2 February 2024).

[d] Recommendations for data collection, analysis and reporting on anthropometric indicators in children under 5 years old. Geneva: World Health Organization and the United Nations Children's Fund; 2019 (https://iris.who.int/handle/10665/324791, accessed 8 February 2024).

Health behaviours and risks

Thinness

Core indicator

Description	**Indicator name**	Prevalence of thinness among adolescents
	Indicator short name	Thinness
	Definition	Proportion of adolescents (10–19 years) whose body mass index (BMI) was < –2 SDs from the median BMI, according to WHO growth reference standards for the respective age and sex
	Numerator	Number of adolescents (10–19 years) whose BMI was < –2 standard deviations (SDs) from the median BMI according to WHO growth reference standards for the respective age and sex
	Denominator	Total number of adolescents (10–19 years)
Rationale	Thinness can have various health consequences for adolescents, such as musculoskeletal growth, the timing of puberty, immunity and neurodevelopment.[a] While thinness can often be attributed to socioeconomic factors, it can also be caused by psychological conditions, such as anorexia nervosa, which can negatively impact mental and physical health and contribute to premature mortality.[b]	
Measurement	**Data collection level**	Individual
	Preferred data source	Population-based survey
	Other possible data source(s)	None recommended
	Method of measurement	The calculation of this indicator requires data on height and weight, together with the age and sex of the corresponding individual. BMI is calculated as a function of an individual's height and weight and is compared to WHO growth reference standards for the respective age and sex to determine weight status.[c]
	Disaggregation	Age group (10–14, 15–19 years); sex
Comments	BMI is calculated by dividing weight in kilograms by height in metres squared (kg/m^2). Beyond the < –2 SDs cut-off in this indicator, there are additional cut-offs for assessment of adolescent nutritional status. For example, < –3 SDs from the median BMI is interpreted as severe thinness.[d] To obtain valid anthropometric data at the population level, it is necessary to have specially trained staff using standardized equipment and methods. WHO and UNICEF have produced detailed recommendations for anthropometric data collection, analysis and reporting among children under age five, much of which is applicable to any age group.[d]	

[a] Norris SA, Frongillo EA, Black MM, Dong Y, Fall C, Lampl M et al. Nutrition in adolescent growth and development. Lancet. 2022;399(10320):172–84. doi:10.1016/S0140-6736(21)01590-7.

[b] Neale J, Hudson LD. Anorexia nervosa in adolescents. Br J Hosp Med (Lond). 2020;81(6):1–8. doi:10.12968/hmed.2020.0099.

[c] BMI-for-age (5–19 years). Geneva: World Health Organization; 2007 (https://www.who.int/tools/growth-reference-data-for-5to19-years/indicators/bmi-for-age, accessed 2 February 2024).

[d] Recommendations for data collection, analysis and reporting on anthropometric indicators in children under 5 years old. Geneva: World Health Organization and the United Nations Children's Fund; 2019 (https://iris.who.int/handle/10665/324791, accessed 8 February 2024).

Health behaviours and risks

Vegetable and fruit consumption

Core indicator

Description	**Indicator name**	Proportion of adolescents who consumed at least 5 servings of vegetables and fruits per day during the past 7 days
	Indicator short name	Vegetable and fruit consumption
	Definition	Proportion of adolescents (10–19 years) who consumed at least 5 servings of vegetables and fruits per day during the past 7 days
	Numerator	Number of adolescents (10–19 years) who consumed at least 5 servings of vegetables and fruits per day during the past 7 days
	Denominator	Total number of adolescents (10–19 years)
Rationale	Adequate nutrition is important for healthy growth during adolescence.[a] Eating a balanced diet with sufficient consumption of fruits and vegetables supports immunity and alertness, as well as the intake of necessary minerals, vitamins and dietary fibre. Furthermore, eating adequate vegetables and fruits can reduce the risk of developing malnutrition, metabolic syndrome, and other noncommunicable diseases.[b, c]	
Measurement	**Data collection level**	Individual
	Preferred data source	Population-based survey
	Other possible data source(s)	None recommended
	Method of measurement	The calculation of this indicator requires data on the recent consumption of vegetables and fruits, typically obtained through respondent self-report. It is recommended to separately measure the consumption of vegetables and fruits, probing for the amount of each consumed by presenting examples, and to then combine the results to calculate this indicator.
	Disaggregation	Age group (10–14, 15–19 years); sex
Comments	WHO recommends consuming at least 5 servings (that is, 400 grams) of vegetables and fruits per day.[d] Vegetable and fruit consumption is highly dependent on the local environment; country-specific examples should be developed with local nutrition experts.	

[a] Das JK, Salam RA, Thornburg KL, Prentice AM, Campisi S, Lassi ZS et al. Nutrition in adolescents: physiology, metabolism, and nutritional needs. Ann N Y Acad Sci. 2017;1393(1):21–33. doi:10.1111/nyas.13330.

[b] Tian Y, Su L, Wang J, Duan X, Jiang X. Fruit and vegetable consumption and risk of the metabolic syndrome: a meta-analysis. Public Health Nutr. 2018;21(4):756–65. doi:10.1017/S136898001700310X.

[c] Vereecken C, Pedersen TP, Ojala K, Krølner R, Dzielska A, Ahluwalia N et al. Fruit and vegetable consumption trends among adolescents from 2002 to 2010 in 33 countries. Eur J Public Health. 2015;25(suppl2):16–9. doi:10.1093/eurpub/ckv012.

[d] Carbohydrate intake for adults and children: WHO guideline. Geneva: World Health Organization; 2023 (https://iris.who.int/handle/10665/370420, accessed 2 February 2024).

Health behaviours and risks

Sugar-sweetened beverage consumption

Additional indicator

Description	**Indicator name**	Proportion of adolescents who consumed sugar-sweetened beverages one or more times per day during the past 7 days
	Indicator short name	Sugar-sweetened beverage consumption
	Definition	Proportion of adolescents (10–19 years) who consumed sugar-sweetened beverages one or more times per day during the past 7 days
	Numerator	Number of adolescents (10–19 years) who consumed sugar-sweetened beverages one or more times per day during the past 7 days
	Denominator	Total number of adolescents (10–19 years)
Rationale	High consumption of sugar-sweetened beverages in adolescence is associated with poor diet quality, obesity, dental caries and metabolic disorders.[a, b] Globally, adolescents have been found to be high consumers of sugar-sweetened beverages.[c]	
Measurement	**Data collection level**	Individual
	Preferred data source	Population-based survey
	Other possible data source(s)	None recommended
	Method of measurement	The calculation of this indicator requires data on the consumption of sugar-sweetened beverages during the past 7 days. Current approaches focus on the self-reported consumption of specific beverage types, such as carbonated soft drinks, which may only partially reflect consumption of the broader category of sugar-sweetened beverages. Further methodological work is required to explore approaches that would assess consumption of the full range of sugar-sweetened beverages.
	Disaggregation	Age group (10–14, 15–19 years), sex
Comments	Sugar-sweetened beverages are defined as all types of non-alcoholic beverages containing free sugars, including carbonated and non-carbonated soft drinks, fruit and vegetable juices and drinks, nectars, liquid and powder concentrates, flavoured waters, vitamin waters, energy and sports drinks, ready-to-drink teas, ready-to-drink coffees, flavoured milks and milk-based drinks, and plant-based milk substitutes.[d] While no guideline specific to sugar-sweetened beverages currently exists, WHO recommends that free sugars account for no more than 10% of daily energy intake.[e]	

[a] Hardy LL, Bell J, Bauman A, Mihrshahi S. Association between adolescents' consumption of total and different types of sugar-sweetened beverages with oral health impacts and weight status. Aust N Z J Public Health. 2018;42(1):22–6. doi:10.1111/1753-6405.12749.

[b] Bleich SN, Vercammen KA. The negative impact of sugar-sweetened beverages on children's health: an update of the literature. BMC Obesity. 2018;(5):6. doi:10.1186/s40608-017-0178-9.

[c] Rosinger A, Herrick K, Gahche J, Park S. Sugar-sweetened beverage consumption among US youth, 2011–2014. NCHS Data Brief. 2017;(271):1–8.

[d] Fiscal policies to promote healthy diets: policy brief. Geneva: World Health Organization; 2022 (https://iris.who.int/handle/10665/355965, accessed 8 February 2024).

[e] Diet, nutrition and the prevention of chronic diseases: report of a joint WHO/FAO expert consultation, Geneva, 28 January – 1 February 2002. Geneva: World Health Organization; 2002 (https://iris.who.int/handle/10665/42665, accessed 8 February 2024).

Health behaviours and risks

Physical activity

Core indicator

Description	**Indicator name**	Proportion of adolescents who accumulated an average of at least 60 minutes of moderate- to vigorous-intensity physical activity per day during the past 7 days
	Indicator short name	Physical activity
	Definition	Proportion of adolescents (10–19 years) who accumulated an average of at least 60 minutes of moderate- to vigorous-intensity physical activity per day during the past 7 days
	Numerator	Number of adolescents (10–19 years) who accumulated an average of at least 60 minutes per day of moderate- to vigorous-intensity physical activity during the past 7 days
	Denominator	Total number of adolescents (10–19 years)
Rationale	Physical activity is associated with various health benefits for adolescents, such as improved fitness, cardiometabolic health, bone health, cognitive outcomes and mental health.[a] However, most adolescents do not achieve adequate physical activity, especially female adolescents, making it difficult to achieve the target of a 15% relative reduction in the global prevalence of physical inactivity by 2030 as stated in the *Global action plan on physical activity 2018–2030*.[b, c]	
Measurement	**Data collection level**	Individual
	Preferred data source	Population-based survey
	Other possible data source(s)	None recommended
	Method of measurement	Calculating this indicator requires information on the accumulation of moderate- to vigorous-intensity physical activity during the reference period. These data may be obtained through device-based measurement (for example, via accelerometer/movement sensor) or through respondent self-report, which may be supported with the use of show cards with country-relevant examples of different types of physical activities.
	Disaggregation	Age group (10–14, 15–19 years); sex
Comments	The WHO guidelines on physical activity and sedentary behaviour provide more detailed information about recommended physical activity.[a]	

[a] WHO guidelines on physical activity and sedentary behaviour. Geneva: World Health Organization; 2020 (https://iris.who.int/handle/10665/336656, accessed 8 February 2024).

[b] Guthold R, Stevens GA, Riley LM, Bull FC. Global trends in insufficient physical activity among adolescents: a pooled analysis of 298 population-based surveys with 1.6 million participants. Lancet Child Adolesc Health. 2020;4(1):23–35. doi:10.1016/S2352-4642(19)30323-2.

[c] Global action plan on physical activity 2018–2030: more active people for a healthier world. Geneva: World Health Organization; 2018 (https://iris.who.int/handle/10665/272722, accessed 8 February 2024).

Health behaviours and risks

Heavy episodic drinking

Core indicator

Description	**Indicator name**	Past 30 day prevalence of heavy episodic drinking among adolescents
	Indicator short name	Heavy episodic drinking
	Definition	Proportion of adolescents (10–19 years) who consumed at least six alcoholic drinks on one or more days during the past 30 days
	Numerator	Number of adolescents (10–19 years) who consumed at least six alcoholic drinks on one or more days during the past 30 days
	Denominator	Total number of adolescents (10–19 years)
Rationale	Heavy episodic drinking among adolescents can have negative effects on attention, memory and central nervous system development, and has been associated with an increased risk of violence (victimization and perpetration), injuries and premature death.[a, b, c]	
Measurement	**Data collection level**	Individual
	Preferred data source	Population-based survey
	Other possible data source(s)	None recommended
	Method of measurement	This indicator is based on self-reported consumption of alcoholic drinks during the 30 days preceding the survey. Questions on alcohol consumption may include examples of alcoholic beverages and what constitutes a drink for each (such as a bottle of beer, a shot of spirits). Respondents who report having consumed at least one alcoholic beverage during the 30 days preceding the survey can be asked the maximum number of drinks they had on a single day. It is recommended that data collection for this indicator obtain the exact number of alcoholic drinks consumed so that alternative thresholds may be considered where relevant.
	Disaggregation	Age group (10–14, 15–19 years); sex
Comments	A standard alcoholic drink is typically a glass of wine, a bottle of beer, a small glass of liquor or a mixed drink. This indicator uses the same threshold of six alcoholic drinks for all adolescents, regardless of sex, age or other characteristic. For guidance on measuring standard alcoholic drinks, see *Brief intervention for hazardous and harmful drinking*.[d]	

[a] White A, Hingson R. The burden of alcohol use: excessive alcohol consumption and related consequences among college students. Alcohol Res. 2014;35(2):201–18 (http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3908712/, accessed 8 February 2024).

[b] Feldstein Ewing SW, Sakhardande A, Blakemore S-J. The effect of alcohol consumption on the adolescent brain: a systematic review of MRI and fMRI studies of alcohol-using youth. Neuroimage Clin. 2014;5:420–37. doi:10.1016/j.nicl.2014.06.011.

[c] Jones RM, Van Den Bree M, Zammit S, Taylor PJ. Change in the relationship between drinking alcohol and risk of violence among adolescents and young adults: a nationally representative longitudinal study. Alcohol and Alcoholism. 2020;55(4):439–47. doi:10.1093/alcalc/agaa020.

[d] Babor TF, Higgins-Biddle JC. Brief intervention for hazardous and harmful drinking: a manual for use in primary care. Geneva: World Health Organization; 2001 (https://iris.who.int/handle/10665/67210, accessed 8 February 2024).

Health behaviours and risks

Alcohol use

Additional indicator

Description	**Indicator name**	Past 30 day prevalence of alcohol use among adolescents
	Indicator short name	Alcohol use
	Definition	Proportion of adolescents (10–19 years) who consumed at least one alcoholic drink during the past 30 days
	Numerator	Number of adolescents (10–19 years) who consumed at least one alcoholic drink during the past 30 days
	Denominator	Total number of adolescents (10–19 years)
Rationale	Alcohol use among adolescents can have negative effects on attention, memory and central nervous system development and has been associated with an increased risk of violence, injuries, premature death.[a, b] Early initiation of alcohol use has been linked to heavy episodic drinking and alcohol misuse in adulthood.[c, d]	
Measurement	**Data collection level**	Individual
	Preferred data source	Population-based survey
	Other possible data source(s)	None recommended
	Method of measurement	This indicator is based on self-reported consumption of any alcoholic drink during the 30 days preceding the survey. Questions on alcohol consumption may include examples of alcoholic beverages and what constitutes a drink for each (such as a bottle of beer, a shot of spirits).
	Disaggregation	Age group (10–14, 15–19 years); sex
Comments	A standard alcoholic drink is typically a glass of wine, a bottle of beer, a small glass of liquor or a mixed drink. For guidance on measuring standard alcoholic drinks, see *Brief Intervention for Hazardous and Harmful Drinking.*[e]	

[a] White A, Hingson R. The burden of alcohol use: excessive alcohol consumption and related consequences among college students. Alcohol Res. 2014;35(2):201–18 (http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3908712/, accessed 8 February 2024).

[b] Feldstein Ewing SW, Sakhardande A, Blakemore S-J. The effect of alcohol consumption on the adolescent brain: a systematic review of MRI and fMRI studies of alcohol-using youth. Neuroimage Clin. 2014;5:420–37. doi:10.1016/j.nicl.2014.06.011.

[c] Conegundes LSO, Valente JY, Martins CB, Andreoni S, Sanchez ZM. Binge drinking and frequent or heavy drinking among adolescents: prevalence and associated factors. J Pediatr (Rio J). 2020;96(2):193–201. doi:10.1016/j.jped.2018.08.005.

[d] Jones RM, Van Den Bree M, Zammit S, Taylor PJ. Change in the relationship between drinking alcohol and risk of violence among adolescents and young adults: a nationally representative longitudinal study. Alcohol and Alcoholism. 2020;55(4):439–47. doi:10.1093/alcalc/agaa020.

[e] Babor TF, Higgins-Biddle JC. Brief intervention for hazardous and harmful drinking: a manual for use in primary care. Geneva: World Health Organization; 2001 (https://iris.who.int/handle/10665/67210, accessed 8 February 2024).

Health behaviours and risks

Tobacco use

Core indicator

Description	**Indicator name**	Past 30 day prevalence of tobacco use among adolescents
	Indicator short name	Tobacco use
	Definition	Proportion of adolescents (10–19 years) who used tobacco on one or more days during the past 30 days
	Numerator	Number of adolescents (10–19 years) who used tobacco on one or more days during the past 30 days
	Denominator	Total number of adolescents (10–19 years)
Rationale	The use of both smoked and smokeless tobacco products has been linked to increased mortality and morbidity, including asthma, bronchitis and other pulmonary conditions.[a] Furthermore, initiation of smoking tobacco use during adolescence is associated with regular tobacco use into adulthood.[b]	
Measurement	**Data collection level**	Individual
	Preferred data source	Population-based survey
	Other possible data source(s)	None recommended
	Method of measurement	The calculation of this indicator is based on self-reported use of both smoked and smokeless tobacco products. To improve recall, specific types of smoked and smokeless tobacco can be asked about individually, including any country-specific examples.
	Disaggregation	Age group (10–14, 15–19 years); sex; type of tobacco used (that is, cigarettes, other smoking tobacco, smokeless tobacco)
Comments	Tobacco use includes use of cigarettes, other smoked tobacco products and smokeless tobacco products, and includes both daily and nondaily use.[c] Current tobacco use does not include use of electronic cigarettes.	

[a] Reitsma MB, Fullman N, Ng M, Salama JS, Abajobir A, Abate KH et al. Smoking prevalence and attributable disease burden in 195 countries and territories, 1990–2015: a systematic analysis from the Global Burden of Disease Study 2015. Lancet. 2017;389:1885–906. doi:10.1016/S0140-6736(17)30819-X.

[b] Forouzanfar MH, Alexander L, Anderson HR, Bachman VF, Biryukov S, Brauer M et al. Global, regional, and national comparative risk assessment of 79 behavioural, environmental and occupational, and metabolic risks or clusters of risks in 188 countries, 1990–2013: a systematic analysis for the Global Burden of Disease Study 2013. Lancet. 2015;386(10010):2287–323. doi:10.1016/S0140-6736(15)00128-2.

[c] WHO global report on trends in prevalence of tobacco use 2000–2025, third edition. Geneva: World Health Organization; 2019 (https://iris.who.int/handle/10665/330221, accessed 2 February 2024).

Health behaviours and risks

Electronic cigarette use

Additional indicator

Description	**Indicator name**	Past 30 day prevalence of electronic cigarette use among adolescents
	Indicator short name	Electronic cigarette use
	Definition	Proportion of adolescents (10–19 years) who used electronic cigarettes on one or more days during the past 30 days
	Numerator	Number of adolescents (10–19 years) who used electronic cigarettes on one or more days during the past 30 days
	Denominator	Total number of adolescents (10–19 years)
Rationale	Electronic cigarettes (e-cigarettes) may or may not include nicotine (but do not contain tobacco) and typically also include additives, flavours, and chemicals with potentially toxic health effects.[a] The use of nicotine-containing e-cigarettes during adolescence is associated with nicotine dependence, respiratory conditions, poor oral health and negative effects on mental health.[b] The use of e-cigarettes may also be associated with tobacco use in adulthood.[c]	
Measurement	**Data collection level**	Individual
	Preferred data source	Population-based survey
	Other possible data source(s)	None recommended
	Method of measurement	The calculation of this indicator is based on self-reported use of e-cigarettes. Given that e-cigarettes are known by many names and are available in different forms, questions should begin with a country-specific description and question wording should reflect the country-specific terminology.
	Disaggregation	Age group (10–14, 15–19 years); sex
Comments	See *WHO report on the global tobacco epidemic, 2019* for more information on e-cigarettes.[a]	

[a] WHO report on the global tobacco epidemic, 2019: offer help to quit tobacco use. Geneva: World Health Organization; 2019 (https://iris.who.int/handle/10665/326043, accessed 2 February 2024).

[b] Livingston JA, Chen C-H, Kwon M, Park E. Physical and mental health outcomes associated with adolescent e-cigarette use. J Pediatr Nurs. 2022;64:1–17. doi:10.1016/j.pedn.2022.01.006.

[c] Quick facts on the risks of e-cigarettes for kids, teens, and young adults [webpage]. Centers for Disease Control and Prevention; 2023 (https://www.cdc.gov/tobacco/basic_information/e-cigarettes/Quick-Facts-on-the-Risks-of-E-cigarettes-for-Kids-Teens-and-Young-Adults.html, accessed 8 February 2024).

Health behaviours and risks

Cannabis use

Core indicator

Description	**Indicator name**	Past 30 day prevalence of cannabis use among adolescents
	Indicator short name	Cannabis use
	Definition	Proportion of adolescents (10–19 years) who used cannabis during the past 30 days
	Numerator	Number of adolescents (10–19 years) who used cannabis on one or more days during the past 30 days
	Denominator	Total number of adolescents (10–19 years)
Rationale	Cannabis is the most widely used psychoactive substance among adolescents.[a] Its use during adolescence has been linked to mental health conditions, such as depression and anxiety,[b] and an increased likelihood of harmful substance use.[c]	
Measurement	**Data collection level**	Individual
	Preferred data source	Population-based survey
	Other possible data source(s)	None recommended
	Method of measurement	This indicator is based on self-reported cannabis use during the 30 days preceding the survey. Any questions on cannabis use should include terms, including slang expressions, commonly used in the country.
	Disaggregation	Age group (10–14, 15–19 years); sex
Comments	There is a risk of underreporting, particularly in contexts where cannabis is illegal and/or there is stigma surrounding its use.	

[a] Johnston LD, O'Malley PM, Bachman JG, Schulenberg JE. Monitoring the future national results on adolescent drug use: overview of key findings, 2011. Ann Arbor: Institute for Social Research, The University of Michigan; 2012 (https://eric.ed.gov/?id=ED529133, accessed 8 February 2024).

[b] Hengartner MP, Angst J, Ajdacic-Gross V, Rössler W. Cannabis use during adolescence and the occurrence of depression, suicidality and anxiety disorder across adulthood: findings from a longitudinal cohort study over 30 years. J Affect Disord. 2020;272:98–103. doi:10.1016/j.jad.2020.03.126.

[c] Taylor M, Collin SM, Munafò MR, MacLeod J, Hickman M, Heron J. Patterns of cannabis use during adolescence and their association with harmful substance use behaviour: findings from a UK birth cohort. J Epidemiol Community Health. 2017;71(8):764–70. doi:10.1136/jech-2016-208503.

Health behaviours and risks

First sex by age 15

Core indicator

Description	**Indicator name**	Proportion of adolescents who had their first sexual intercourse before 15 years of age
	Indicator short name	First sex by age 15
	Definition	Proportion of older adolescents (15–19 years) who had their first sexual intercourse before 15 years of age
	Numerator	Number of older adolescents (15–19 years) who had their first sexual intercourse before 15 years of age
	Denominator	Total number of older adolescents (15–19 years)
Rationale	The early onset of sexual activity is associated with an increased risk of STIs and unintended pregnancy.[a] Adolescents have been found to have a low utilization of contraceptives.[b]	
Measurement	**Data collection level**	Individual
	Preferred data source	Population-based survey
	Other possible data source(s)	None recommended
	Method of measurement	The calculation of this indicator requires data on age at first sexual intercourse. To obtain these data, it is necessary to establish whether the respondent has ever had sex. If so, respondents are asked at what age they had sexual intercourse for the first time.
	Disaggregation	Sex
Comments	Estimates can be biased if a population has a tendency to either overreport or underreport sexual activity.	

[a] Magnusson BM, Crandall A, Evans K. Early sexual debut and risky sex in young adults: the role of low self-control. BMC Public Health. 2019;19(1):1483. doi:10.1186/s12889-019-7734-9.

[b] Kalamar AM, Tunçalp Ö, Hindin MJ. Developing strategies to address contraceptive needs of adolescents: exploring patterns of use among sexually active adolescents in 46 low- and middle-income countries. Contraception. 2018;98(1):36–40. doi:10.1016/j.contraception.2018.03.016.

Health behaviours and risks

Pre-menarche menstruation awareness

Additional indicator

Description	**Indicator name**	Proportion of female adolescents who know about menstruation before menarche
	Indicator short name	Pre-menarche menstruation awareness
	Definition	Proportion of post-menarchal female adolescents (10–19 years) who were aware of menstruation before menarche
	Numerator	Number of post-menarchal female adolescents (10–19 years) who knew about menstruation before their first menstrual period
	Denominator	Total number of post-menarchal female adolescents (10–19 years)
Rationale	Lacking awareness of menstruation before their first menstrual period can negatively affect an individual's attitudes around menstruation, potentially leading to low self-esteem and feelings of shame.[a] Menstruation can affect school attendance and sexual and reproductive health, so it is important for females to be aware and feel prepared before experiencing menarche.[b]	
Measurement	**Data collection level**	Individual
	Preferred data source	Population-based survey
	Other possible data source(s)	None recommended
	Method of measurement	The calculation of this indicator is based on self-reporting of having knowledge about menstruation before having a first period.
	Disaggregation	Age group (10–14, 15–19 years)
Comments	This is intended to assess the lowest level of knowledge regarding menstruation; that is, that respondents knew what was happening to them when they first saw bleeding and/or were aware that this was something that would happen to them. More information on this indicator can be found in the *Priority list of indicators for girls' menstrual health and hygiene: technical guidance for national monitoring*.[c]	

[a] Puberty education & menstrual hygiene management. Paris: United Nations Educational, Scientific and Cultural Organization; 2014 (https://unesdoc.unesco.org/ark:/48223/pf0000226792, accessed 2 February 2024).

[b] Sommer M, Sutherland C, Chandra-Mouli V. Putting menarche and girls into the global population health agenda. Reprod Health. 2015;12(1). doi:10.1186/s12978-015-0009-8.

[c] Priority list of indicators for girls' menstrual health and hygiene: technical guidance for national monitoring. New York: Global MHH Monitoring Group. Columbia University; 2022 (https://www.publichealth.columbia.edu/file/8002/download?token=AViwoc5e, accessed 2 February 2024).

Health behaviours and risks

Contraceptive use at last sex (modern method)

Core indicator

Description	**Indicator name**	Proportion of adolescents who used contraception (modern method) at last sexual intercourse
	Indicator short name	Contraceptive use at last sex (modern method)
	Definition	Proportion of adolescents (10–19 years) who used any modern method of contraception the last time they had sexual intercourse
	Numerator	Number of adolescents (10–19 years) who used a modern method of contraception at last sexual intercourse
	Denominator	Total number of adolescents (10–19 years) who have had sexual intercourse
Rationale	Not using a modern contraceptive method is linked to increased likelihood of unintended pregnancy, and increased likelihood of transmission of sexually transmitted infections (STIs) in the case of condom use.[a]	
Measurement	**Data collection level**	Individual
	Preferred data source	Population-based survey
	Other possible data source(s)	None recommended
	Method of measurement	Respondents who report having had sexual intercourse are asked about contraceptive use at last sex, specifically whether a contraceptive method was used and, if so, which one(s).
	Disaggregation	Age group (10–14, 15–19 years); sex. Additional disaggregation by method used and marital status may be considered.
Comments	Modern methods include female sterilization, male sterilization, oral contraceptive pill, intrauterine device, injectables, implants, male condom, female condom, diaphragm, contraceptive foam, contraceptive jelly, lactational amenorrhea method, standard days method, and emergency contraception. For more information on each of the methods, please refer to *Family planning: a global handbook for providers*.[b]	

[a] Contraception: evidence brief. Geneva: World Health Organization; 2019 (https://iris.who.int/handle/10665/329884, accessed 8 February 2024).

[b] Family planning: a global handbook for providers, 2022 edition. Geneva: World Health Organization; 2022 (https://www.who.int/publications/i/item/9780999203705, accessed 2 February 2024).

Health behaviours and risks

Condom use at last sex

Core indicator

Description	**Indicator name**	Proportion of adolescents who used a condom at last sexual intercourse
	Indicator short name	Condom use at last sex
	Definition	Proportion of adolescents (10–19 years) who used a condom the last time they had sexual intercourse
	Numerator	Number of adolescents (10–19 years) who used a condom at last sexual intercourse
	Denominator	Total number of adolescents (10–19 years) who have had sexual intercourse
Rationale	Condom use is protective against transmission of sexually transmitted infections (STIs) and pregnancy.[a] This indicator measures condom use at the most recent sexual intercourse and can be understood as a proxy measure of current use.	
Measurement	**Data collection level**	Individual
	Preferred data source	Population-based survey
	Other possible data source(s)	None recommended
	Method of measurement	Respondents who report having had sexual intercourse are asked about contraceptive use at last sex, specifically whether a contraceptive method was used and probing for condom use if not spontaneously mentioned.
	Disaggregation	Age group (10–14, 15–19 years); sex
Comments	Estimates can be biased if a population has a tendency to either overreport or underreport sexual activity.	

[a] Condoms. Geneva: World Health Organization; 2023 (https://www.who.int/news-room/fact-sheets/detail/condoms, accessed 2 February 2024).

Health behaviours and risks

Demand for family planning satisfied (modern method)

Core indicator

Description	**Indicator name**	Proportion of older female adolescents who have their demand for family planning satisfied with modern methods
	Indicator short name	Demand for family planning satisfied (modern method)
	Definition	Proportion of older female adolescents (15–19 years) currently using a modern method of contraception among those who desire either to have no (additional) children, or to postpone pregnancy
	Numerator	Number of older female adolescents (15–19 years) currently using, or whose sexual partner is currently using, at least one modern contraceptive method
	Denominator	Total number of older female adolescents (15–19 years) with demand for family planning (the sum of contraceptive prevalence (any method) and the unmet need for family planning)
Rationale	Unintended pregnancies, closely spaced pregnancies and being pregnant at a young age can have various negative health effects as well as socioeconomic consequences.[a]	
Measurement	**Data collection level**	Individual
	Preferred data source	Population-based survey
	Other possible data source(s)	None recommended
	Method of measurement	The calculation of this indicator is based on a series of questions to ascertain modern contraceptive use and fertility intentions, as well as related parameters such as pregnancy status, postpartum amenorrhea and infecundity.
	Disaggregation	Disaggregation by marital status may be considered, together with other disaggregation dimensions.
Comments	Modern methods include female sterilization, male sterilization, oral contraceptive pill, intrauterine device, injectables, implants, male condom, female condom, diaphragm, contraceptive foam, contraceptive jelly, lactational amenorrhea method, standard days method, and emergency contraception. For more information on this indicator, refer to SDG indicator metadata (3.7.1).[a]	

[a] SDG indicator metadata (Indicator 3.7.1). New York: United Nations; 2023 (https://unstats.un.org/sdgs/metadata/files/Metadata-03-07-01.pdf, accessed 8 February 2024).

Health behaviours and risks

Skilled birth attendance

Core indicator

Description	**Indicator name**	Proportion of live births to female adolescents attended by skilled health personnel
	Indicator short name	Skilled birth attendance
	Definition	Proportion of live births to female adolescents (10–19 years) attended by skilled health personnel
	Numerator	Number of live births to female adolescents (10–19 years) attended by skilled health personnel at the time of childbirth
	Denominator	Total number of live births to female adolescents (10–19 years)
Rationale	Skilled birth attendance is linked to the prevention of childbirth complications and reducing maternal and perinatal mortality and morbidity.[a]	
Measurement	**Data collection level**	Individual
	Preferred data source	Population-based survey
	Other possible data source(s)	None recommended
	Method of measurement	This indicator is based on data obtained from female respondents on all their pregnancies resulting in a live birth, with a subsequent question asking who attended the delivery of each live birth in the 2–3 years preceding the survey, which informs the classification of "skilled".
	Disaggregation	Age group (10–14, 15–19 years)
Comments	The standard calculation for this indicator is based on data from the 2–3 years preceding the survey. Some data collection methods also obtain data on stillbirths, allowing for the calculation of this indicator based on all births, both live and stillborn. For more information, refer to the joint statement on skilled health personnel by WHO, UNFPA, UNICEF, ICM, ICN, FIGO and IPA.[b]	

FIGO: International Federation of Gynecology and Obstetrics; ICM: International Confederation of Midwives; ICN: International Council of Nurses; IPA: International Pediatric Association; UNFPA: United Nations Population Fund; UNICEF: United Nations Children's Fund; WHO: World Health Organization.

[a] Budu E, Chattu VK, Ahinkorah BO, Seidu A-A, Mohammed A, Tetteh JK et al. Early age at first childbirth and skilled birth attendance during delivery among young women in sub-Saharan Africa. BMC Pregnancy Childbirth. 2021;21:834. doi:10.1186/s12884-021-04280-9.

[b] Definition of skilled health personnel providing care during childbirth: the 2018 joint statement by WHO, UNFPA, UNICEF, ICM, ICN, FIGO and IPA. Geneva: World Health Organization; 2018 (https://iris.who.int/handle/10665/272818, accessed 8 February 2024).

Health behaviours and risks

Bullying

Core indicator

Description	**Indicator name**	Proportion of adolescents who experienced bullying during the past 12 months
	Indicator short name	Bullying
	Definition	Proportion of adolescents who experienced bullying during the past 12 months
	Numerator	Number of adolescents (10–19 years) who experienced bullying during the past 12 months
	Denominator	Total number of adolescents (10–19 years)
Rationale	Bullying, both in-person and online, is highly prevalent and negatively impacts health, particularly mental health.[a] Experiencing bullying has been linked to depression, anxiety and suicidality, with the potential for these effects to last into adulthood.[b]	
Measurement	**Data collection level**	Individual
	Preferred data source	Population-based survey
	Other possible data source(s)	None recommended
	Method of measurement	The calculation of this indicator is based on self-reported experience of bullying during the year preceding the survey. To improve validity, a description of bullying should be provided, followed by questions specific to different types of bullying, including in-person and cyber-bullying.
	Disaggregation	Age group (10–14, 15–19 years); sex; type of bullying (that is, in-person versus digital bullying/cyber-bullying). Additional disaggregation by perpetrator or whether bullying was physical, sexual or emotional may be considered.
Comments	Bullying may occur in person or online (cyber-bullying) and is defined as unwanted, aggressive behaviour by a peer or a group of peers who are neither siblings nor in a romantic relationship with the victim.[c] Bullying involves a repeated pattern of physical, psychological or social aggression likely to cause harm, and often takes place in schools and other settings where children gather, as well as online.	

[a] Armitage R. Bullying in children: impact on child health. BMJ Paediatr Open. 2021;5(1):e000939. doi:10.1136/bmjpo-2020-000939.

[b] Copeland WE, Wolke D, Angold A, Costello EJ. Adult psychiatric outcomes of bullying and being bullied by peers in childhood and adolescence. JAMA Psychiatry. 2013;70:419–26. doi:10.1001/jamapsychiatry.2013.504.

[c] INSPIRE indicator guidance and results framework – ending violence against children: how to define and measure change. New York: United Nations Children's Fund; 2018 (https://www.who.int/publications/m/item/inspire-indicator-guidance-and-results-framework, accessed 2 February 2024).

Health behaviours and risks

Physical violence

Core indicator

Description	**Indicator name**	Proportion of adolescents who experienced physical violence during the past 12 months
	Indicator short name	Physical violence
	Definition	Proportion of adolescents (10–19 years) who experienced physical violence (excluding sexual violence) during the past 12 months
	Numerator	Number of adolescents (10–19 years) who experienced physical violence (excluding sexual violence) during the past 12 months
	Denominator	Total number of adolescents (10–19 years)
Rationale	Adolescents who experience physical violence are at risk of physical harm, including injury and death. Furthermore, there can be various negative mental health effects of experiencing violence, such as depression, anxiety and suicidality.[a]	
Measurement	**Data collection level**	Individual
	Preferred data source	Population-based survey
	Other possible data source(s)	None recommended
	Method of measurement	This indicator is based on self-reported experience of physical violence. These data may be obtained by asking a single question after describing what constitutes a physical attack. It is possible to obtain more detailed information through a series of questions determining whether specific people (intimate partners, peers, adult relatives, etc.) perpetrated specific types of physical violence against the respondent during the preceding year.
	Disaggregation	Age group (10–14, 15–19 years); sex
Comments	Physical violence includes both physical attacks perpetrated by one or more people and fights between peers. Slapping, hitting, beating and burning are all examples of physical violence, as is using a weapon, such as a knife or a gun. Physical violence is a subset of violence as defined by WHO, which includes both the threatened and actual intentional use of physical force or power.[b]	

[a] Global status report on preventing violence against children 2020. Geneva: World Health Organization; 2020 (https://iris.who.int/handle/10665/332394, accessed 2 February 2024).

[b] International classification of violence against children (ICVAC). New York: United Nations Children's Fund; 2023 (https://data.unicef.org/resources/international-classification-of-violence-against-children, accessed 2 February 2024).

Health behaviours and risks

Contact sexual violence

Core indicator

Description	**Indicator name**	Proportion of adolescents who experienced contact sexual violence during the past 12 months
	Indicator short name	Contact sexual violence
	Definition	Proportion of adolescents (10–19 years) who experienced sexual violence involving physical contact (that is, forced, pressured or coerced (completed) sex; attempted (but not completed) forced, coerced or pressured sex; or unwanted, non-consensual sexual touch during the past 12 months)
	Numerator	Number of adolescents (10–19 years) who experienced contact sexual violence during the past 12 months
	Denominator	Total number of adolescents (10–19 years)
Rationale	Experiencing contact sexual violence can have various negative effects on adolescents' health. There are physical effects, such as injury, disability, sexually transmitted infections (STIs) and unintended pregnancy, as well as a negative impact on mental health and school performance.[a]	
Measurement	**Data collection level**	Individual
	Preferred data source	Population-based survey
	Other possible data source(s)	None recommended
	Method of measurement	This indicator is based on self-reported experience of contact sexual violence during the preceding year. Ideally measurement should be based on a series of questions covering different types of contact sexual violence including forced and pressured sex (whether completed or not) and unwanted touching.
	Disaggregation	Age group (10–14, 15–19 years); sex
Comments	Sexual violence may take many forms. The items included within this indicator represent the subset of sexual violence involving physical contact, which would exclude forms of sexual violence such as, for example, verbal sexual harassment and online sexual abuse. The INSPIRE indicator guidance[b] provides more information on different types of sexual violence. Incidents of contact sexual violence are likely to be underreported due to stigma.	

[a] Clarke V, Goddard A, Wellings K, Hirve R, Casanovas M, Bewley S et al. Medium-term health and social outcomes in adolescents following sexual assault: a prospective mixed-methods cohort study. Soc Psychiatry Psychiatr Epidemiol. 2023;58:1777–933. doi:10.1007/s00127-021-02127-4.

[b] INSPIRE indicator guidance and results framework – ending violence against children: how to define and measure change. New York: United Nations Children's Fund; 2018 (https://www.who.int/publications/m/item/inspire-indicator-guidance-and-results-framework, accessed 2 February 2024).

Health behaviours and risks

Sexual violence by age 18

Additional indicator

Description	**Indicator name**	Proportion of young women and men who experienced sexual violence by age 18
	Indicator short name	Sexual violence by age 18
	Definition	Proportion of young women and men (18–29 years) who experienced sexual violence by age 18
	Numerator	Number of young women and men (18–29 years) who reported experiencing any sexual violence by age 18
	Denominator	Total number of young women and men (18–29 years)
Rationale	Experiencing sexual violence can have various effects on adolescents' health. There are physical effects, such as injury, disability, sexually transmitted infections (STIs) and unintended pregnancy, as well as a negative impact on mental health and school performance.[a]	
Measurement	**Data collection level**	Individual
	Preferred data source	Population-based survey
	Other possible data source(s)	None recommended
	Method of measurement	Ideally, calculation of this indicator is based on a set of questions that specifically ask about different forms of sexual violence including, for example, forced and pressured sex (whether completed or not), unwanted touching, and online sexual abuse and exploitation.
	Disaggregation	Age group at victimization (< 10, 10–14, 15–17 years); sex
Comments	Because "sexual violence" is a broad term encompassing diverse forms of both contact and non-contact sexual victimization, different sets of questions are used by different cross-country survey programmes, some more detailed than others. Until data collection methods become more standardized, it is necessary for survey questions to be based on a specific operational definition and for the resulting data to be interpreted accordingly. For more information on this indicator and a detailed definition of sexual violence, refer to SDG indicator metadata (indicator 16.2.3).[b] This indicator can be used when it is not possible to assess the preferred indicator of contact sexual violence experience during the past 12 months.	

[a] Clarke V, Goddard A, Wellings K, Hirve R, Casanovas M, Bewley S et al. Medium-term health and social outcomes in adolescents following sexual assault: a prospective mixed-methods cohort study. Soc Psychiatry Psychiatr Epidemiol. 2023;58:1777–933. doi:10.1007/s00127-021-02127-4.

[b] SDG indicator metadata (Indicator 16.2.3). New York: United Nations; 2021 (https://unstats.un.org/sdgs/metadata/files/Metadata-16-02-03.pdf, accessed 2 February 2024).

3.5 Subjective well-being

Subjective well-being

Someone to talk to about problems

Core indicator

Description	**Indicator name**	Proportion of adolescents with someone to talk to when they have a worry or problem
	Indicator short name	Someone to talk to about problems
	Definition	Proportion of adolescents (10–19 years) who talked to someone during the past month when they had a problem or worry related to difficult feelings and experiences
	Numerator	Number of adolescents (10–19 years) who reported having talked to someone during the past month when they had a problem or worry related to difficult feelings and experiences
	Denominator	Total number of adolescents (10–19 years)
Rationale	Having someone to talk to about worries or problems can play a supportive role in an adolescent's mental health.[a] Many mental health conditions in adulthood begin during adolescence,[b] so it is important to encourage adolescents to engage in preventive measures.	
Measurement	**Data collection level**	Individual
	Preferred data source	Population-based survey
	Other possible data source(s)	None recommended
	Method of measurement	The GAMA-recommended indicator is based on the specially developed measuring mental health among adolescents and young people at the population level (MMAPP) tool, which has undergone cross-country validation for this age group[c]. Following a series of questions pertaining to challenging feelings and experiences, the respondent is asked if they spoke with anyone about those sorts of problems or worries in the preceding month.
	Disaggregation	Age group (10–14, 15–19 years); sex
Comments	This indicator was developed by the MMAPP initiative[c, d] as part of an indicator package on the mental health of adolescents and young people. MMAPP is available as a module in round 7 of the Multiple Indicator Cluster Surveys (MICS7) but can also be used as a stand-alone tool.[e]	

[a] Guidelines on mental health promotive and preventive interventions for adolescents: helping adolescents thrive. Geneva: World Health Organization; 2020 (https://iris.who.int/handle/10665/336864, accessed 9 February 2024).

[b] Jones PB. Adult mental health disorders and their age at onset. The British Journal of Psychiatry. Supplement. 2013;54:s5–10. doi:10.1192/bjp.bp.112.119164.

[c] Measuring mental health for adolescents and young people at the population level [UNICEF Data topic]. New York: United Nations Children's Fund; 2023 (https://data.unicef.org/topic/child-health/mental-health/mmap, accessed 2 February 2024).

[d] Carvajal-Velez L, Harris Requejo J, Ahs JW, Idele P, Adewuya A, Cappa C et al. Increasing data and understanding of adolescent mental health worldwide: UNICEF's measurement of mental health among adolescents at the population level initiative. J Adolesc Health. 2023;72(1S):S12–4. doi:10.1016/j.jadohealth.2021.03.019.

[e] Multiple Indicator Cluster Surveys (MICS) [website]. New York: United Nations Children's Fund; 2024 (https://mics.unicef.org, accessed 2 February 2024).

Subjective well-being

Positive family relationships

Additional indicator

Description	**Indicator name**	Proportion of adolescents reporting positive family relationships
	Indicator short name	Positive family relationships
	Definition	Proportion of adolescents (10–19 years) reporting positive family relationships
	Numerator	Number of adolescents (10–19 years) reporting positive family relationships
	Denominator	Total number of adolescents (10–19 years)
Rationale	Positive family relationships can play an important role in supporting adolescents' healthy development and mental health.[a] Support through positive family relationships during adolescence are protective for mental and physical health and are associated with better educational outcomes and lower levels of risk behaviours.[a]	
Measurement	**Data collection level**	Individual
	Preferred data source	Population-based survey
	Other possible data source(s)	None recommended
	Method of measurement	There are various validated measures of positive family relationships, but the family support subscale of the Multidimensional Scale of Perceived Social Support[b] is recommended. In this subscale, each of four items is coded on a 7-point Likert scale from 'Very strongly disagree' = 1 to 'Very strongly agree' = 7. A mean score of 5.5 or above on the subscale is classified as 'high family support' reflecting positive family relationships.
	Disaggregation	Age group (10–14, 15–19 years); sex
Comments	Positive family relationships represent the extent to which adolescents feel connected to, and supported by, their parents or other family members. It reflects positive affection in the relationship an adolescent has with their parents/family and the extent to which family members are sensitive and responsive to the adolescent's needs. More information on the Multidimensional Scale of Perceived Social Support is provided in Zimet, Powell, Farley, Werkman & Berkoff.[b]	

[a] Chen P, Harris KM. Association of positive family relationships with mental health trajectories from adolescence to midlife. JAMA Pediatr. 2019;173(12):e193336. doi:10.1001/jamapediatrics.2019.3336.

[b] Zimet GD, Powell SS, Farley GK, Werkman S, Berkoff KA. Psychometric characteristics of the Multidimensional Scale of Perceived Social Support. J Pers Assess. 1990;55(3–4):610–7. doi:10.1080/00223891.1990.9674095

3.6 Health outcomes and conditions

Health outcomes and conditions

Adolescent mortality rate (all-cause)

Core indicator

Description	**Indicator name**	Adolescent mortality rate (all-cause)
	Indicator short name	Adolescent mortality rate (all-cause)
	Definition	Number of deaths among adolescents (10–19 years) per 100 000 adolescent population
	Numerator	Number of deaths among adolescents (10–19 years) during a given year x 100 000
	Denominator	Total number of adolescents (10–19 years) during the same year
Rationale	Adolescent mortality rate is an important measure of population health and can identify informative trends. In the absence of a complete death registration system, data availability on adolescent mortality rates is generally poorer than child mortality rates, so there is a need to improve data availability.[a]	
Measurement	**Data collection level**	Individual
	Preferred data source	Civil registration and vital statistics (CRVS)
	Other possible data source(s)	Population-based survey, population census, sample registration system
	Method of measurement	To calculate this indicator, age-specific data on both deaths and population are needed. In the case of CRVS, the numerator is based on deaths of persons aged 10–19 years during a specified period (for example, the preceding calendar year) and calculated per 100 000 of the estimated/enumerated population aged 10–19 years from a different source, such as a population register or a population projection from a census. In the case of surveys and censuses, data on both deaths and population are available from the same source. Data on deaths are based on retrospective recall.
	Disaggregation	Age group (10–14, 15–19 years); sex
Comments	Population-based surveys and censuses can employ both direct and indirect methods to provide mortality rates. Estimates of mortality can vary by data source and calculation method. WHO's Global Health Estimates present comparable country estimates on an annual basis.[b]	

[a] Levels and trends in child mortality – report 2022: estimates developed by the United Nations Inter-agency Group for Child Mortality Estimation. New York: United Nations Children's Fund; 2022 (https://data.unicef.org/resources/levels-and-trends-in-child-mortality/, accessed 9 February 2024).

[b] Global health estimates [website]. Geneva: World Health Organization; 2020 (https://www.who.int/data/global-health-estimates, accessed 2 February 2024).

Health outcomes and conditions

Adolescent mortality rate (cause-specific)

Core indicator

Description	**Indicator name**	Adolescent mortality rate (cause-specific)
	Indicator short name	Adolescent mortality rate (cause-specific)
	Definition	Number of deaths among adolescents (10–19 years) per 100 000 adolescent population, by specified causes, including priority causes of adolescent death globally (that is, cardiovascular disease, drowning, diarrhoeal diseases, HIV/AIDS, interpersonal violence, lower respiratory infections, malaria, maternal conditions, meningitis, neoplasms, road traffic injury, self-harm and tuberculosis) and other causes determined by the national context
	Numerator	Number of deaths among adolescents (10–19 years) due to specified causes during a given year x 100 000
	Denominator	Total number of adolescents (10–19 years) during the same year
Rationale	Causes of mortality change across the lifespan and adolescents have a specific profile of common causes of mortality, with a generally higher proportion of injury as a cause of death compared to other age groups.[a] This indicator includes age- and sex-specific causes of mortality. Improved data collection on mortality causes can encourage targeted action through national policies and programmes.	
Measurement	**Data collection level**	Individual
	Preferred data source	Civil registration and vital statistics (CRVS)
	Other possible data source(s)	Population-based survey; health management information system (HMIS), sample registration system
	Method of measurement	To calculate this indicator, age-specific data on both cause of death and population are needed. CRVS, surveillance and HMIS can provide cause-specific deaths of persons aged 10–19 years during a specified period (for example, the preceding calendar year), but the estimated/enumerated population aged 10–19 years would come from a different source, such as a population register or a population projection from a census. Cause-specific death data may also be obtained from population-based surveys with verbal autopsies; these surveys also provide the required data for the denominator.
	Disaggregation	Age group (10–14, 15–19 years); sex; cause (cardiovascular disease, drowning, diarrhoeal diseases, HIV/AIDS, interpersonal violence, lower respiratory infections, malaria, maternal conditions, meningitis, neoplasms, road traffic injury, self-harm and tuberculosis)
Comments	Estimates of cause of death can vary by data source and calculation method. WHO's Global Health Estimates present comparable country estimates on an annual basis.[b]	

[a] Strong KL, Pedersen J, Johansson EW, Cao B, Diaz T, Guthold R et al. Patterns and trends in causes of child and adolescent mortality 2000–2016: setting the scene for child health redesign. BMJ Glob Health. 2021 Mar 1;6(3):e004760. doi:10.1136/bmjgh-2020-004760.

[b] Global health estimates [website]. Geneva: World Health Organization; 2020 (https://www.who.int/data/global-health-estimates, accessed 2 February 2024).

Health outcomes and conditions

Adolescent birth rate

Core indicator

Description	**Indicator name**	Adolescent birth rate
	Indicator short name	Adolescent birth rate
	Definition	Number of live births to female adolescents per 1 000 female adolescents
	Numerator	Number of live births to female adolescents (10–19 years) during a given year x 1 000
	Denominator	Total number of female adolescents (10–19 years) during the same year
Rationale	Adolescent pregnancy and birth can negatively affect health outcomes for both the adolescent and baby.[a]	
Measurement	**Data collection level**	Individual
	Preferred data source	Civil registration and vital statistics (CRVS)
	Other possible data source(s)	Population-based survey; population census
	Method of measurement	To calculate this indicator, data on both births and female population are needed. In the case of CRVS, the numerator is based on births that have been registered during a specified period (for example, the preceding calendar year) and calculated over a denominator of estimated/enumerated women from a different source, such as a population projection from a census. In the case of surveys and censuses, data on both births and female population are available from the same source. Data on births are based on retrospective recall.
	Disaggregation	Age group (10–14, 15–19 years)
Comments	Data for this indicator are routinely collected for adolescents aged 15–19 years, but data collection for adolescents aged 10–14 years is also recommended.	

[a] Vobecká J. UNECE monitoring framework for the ICPD programme of action beyond 2014. United Nations Economic Commission for Europe; 2018 (https://eeca.unfpa.org/en/publications/unece-monitoring-framework-icpd-programme-action-beyond-2014, accessed 9 February 2024).

Health outcomes and conditions

HIV prevalence

Core indicator

Description	**Indicator name**	Proportion of adolescents living with HIV
	Indicator short name	HIV prevalence
	Definition	Proportion of adolescents (10–19 years) living with HIV
	Numerator	Number of adolescents (10–19 years) living with HIV
	Denominator	Total number of adolescents (10–19 years)
Rationale	HIV infection can have profoundly negative effects on health if left untreated. Adolescents accounted for 10% of new HIV infections in 2022.[a] While HIV incidence, the rate of new HIV infections over time, is a more sensitive measure of the current state of the epidemic and changes in incidence can be more directly interpreted as reflecting success of interventions, it is difficult and costly to measure. HIV prevalence among adolescents has been used as a proxy for new HIV infections among this age group.[b] Many adolescents living with HIV are less likely to seek out HIV testing, start treatment and continue treatment adherence, as well as having limited access to needed services.[b] Furthermore, adolescents living with HIV commonly experience mental health problems associated with HIV-related stigma and discrimination.[c]	
Measurement	**Data collection level**	Individual
	Preferred data source	Population-based survey
	Other possible data source(s)	Health management information system (HMIS)
	Method of measurement	HIV serology can be included in population-based surveys to obtain estimates of prevalence in the general population. Data from other sources are typically representative of a specific population subgroup, such as people who are pregnant, inject drugs or are sex workers, and should be interpreted accordingly.
	Disaggregation	Age group (10–14, 15–19 years); sex
Comments	Interpretation of this indicator can be facilitated by examining related HIV indicators, including HIV incidence and the proportion of adolescents living with HIV among the total population living with HIV. Modelled estimates of the number of adolescents living with HIV are produced annually at the country and global levels. For more information, see UNAIDS.org.[d]	

[a] HIV estimates with uncertainty bounds 1990–present. UNAIDS; 2023 (https://www.unaids.org/en/resources/documents/2023/HIV_estimates_with_uncertainty_bounds_1990-present, accessed 18 February 2024).

[b] Adolescent friendly health services for adolescents living with HIV: from theory to practice. Geneva: World Health Organization; 2019 (https://iris.who.int/handle/10665/329993, accessed 9 February 2024).

[c] Dessauvagie AS, Jörns-Presentati A, Napp AK, Stein DJ, Jonker D, Breet E et al. The prevalence of mental health problems in sub-Saharan adolescents living with HIV: a systematic review. Global Mental Health. 2020;7:e29. doi:10.1017/gmh.2020.18.

[d] UNAIDS data [website]. Geneva: Joint United Nations Programme on HIV/AIDS; 2024 (https://www.unaids.org/en/topic/data, accessed 2 February 2024).

Health outcomes and conditions

Sexually transmitted infection (STI) incidence

Core indicator

Description	**Indicator name**	Incidence rate of new cases of sexually transmitted infections (STIs) among adolescents
	Indicator short name	Sexually transmitted infection (STI) incidence
	Definition	Number of new cases of specified STIs (that is, syphilis, gonorrhoea, chlamydia and herpes simplex virus 2 (HSV-2)) among adolescents (10–19 years) per 100 000 adolescent population during a year
	Numerator	Number of new cases of specified STIs (that is, syphilis, gonorrhoea, chlamydia, and HSV-2) among adolescents (10–19 years) during a given year x 100 000
	Denominator	Total number of adolescents (10–19 years) during the same year
Rationale	Adolescents are at increased risk of contracting STIs and experiencing negative health effects.[a] Furthermore, there is limited data on STI incidence in adolescents, so it is important to address this data gap for better prevention and treatment programmes. This indicator measures specified STIs based on those that are most common among adolescents.	
Measurement	**Data collection level**	Individual
	Preferred data source	Health management information system (HMIS)
	Other possible data source(s)	Population-based survey
	Method of measurement	Measurement methods differ between STIs, but incidence may be calculated based on case reports
	Disaggregation	Age group (10–14, 15–19 years); sex; type of STI
Comments	This may miss out on asymptomatic infections where health care was not sought. Even countries with strong health systems may have challenges calculating this indicator, because data may be collected routinely only among certain key population groups; for example, pregnant women or sex workers. Thus, available country-level data, regardless of data source, must be interpreted with an understanding of their specific operational definitions as they are most likely not representative of the general population.	

[a] Shannon CL, Klausner JD. The growing epidemic of sexually transmitted infections in adolescents: a neglected population. Curr Opin Pediatr. 2018;30(1):137. doi:10.1097/MOP.0000000000000578.

Health outcomes and conditions

Injury hospitalization rate (cause-specific)

Core indicator

Description	**Indicator name**	Adolescent injury hospitalization rate due to specified causes
	Indicator short name	Injury hospitalization rate (cause-specific)
	Definition	Number of hospitalized cases of specific types of injuries (that is, road traffic injuries, fire-related burns, poisonings, falls, and drowning) among adolescents (10–19 years) per 100 000 adolescent population during a year
	Numerator	Number of hospitalized cases of a specific type of injuries (that is, road traffic injuries, fire-related burns, poisonings, falls, and drowning) among adolescents (10–19 years) during a given year x 100 000
	Denominator	Total number of adolescents (10–19 years) during the same year
Rationale	Injuries are the highest cause of morbidity and mortality among adolescents.[a] Understanding the burden of serious injury resulting in hospitalization can help to inform preventive measures to improve adolescent health.[a] This indicator measures specified types of injuries like road traffic accidents, crashes, fire-related burns and falls, based on what most commonly afflicts adolescents.	
Measurement	**Data collection level**	Individual
	Preferred data source	Health management information system (HMIS)
	Other possible data source(s)	None recommended
	Method of measurement	Calculating this indicator requires information on the final disposition of an injured patient from hospital-based trauma registries (as part of the core minimum dataset), hospital ward admission records or national health information systems. These data are routinely collated centrally and stratified by age and cause groupings (International Statistical Classification of Diseases and Related Health Problems (ICD) coded) for the specified period.
	Disaggregation	Age group (10–14, 15–19 years); sex; injury type (road traffic injuries, fire-related burns, poisoning, falls, and drowning)
Comments	The types of injuries listed here were selected according to their burden of disease, ease of collection and relevance to health system capacity as well as integration with the existing WHO International Registry for Trauma and Emergency Care (IRTEC) initiative.[b] Reporting of additional injury types may be considered based on the national and regional context. For guidance on measuring this indicator using health facility data, see *Analysis and use of facility data: guidance for maternal, newborn, child and adolescent health programme managers*.[c]	

[a] Sleet DA, Ballesteros MF, Borse NN. A review of unintentional injuries in adolescents. Annu Rev Public Health. 2010;31:195–212. doi:10.1146/annurev.publhealth.012809.103616.

[b] WHO International Registry for Trauma and Emergency Care. Geneva: World Health Organization; 2018 (https://www.who.int/news/item/01-11-2018-who-international-registry-for-trauma-and-emergency-care, accessed 2 February 2024).

[c] Analysis and use of health facility data: guidance for maternal, newborn, child and adolescent health programme managers. Geneva: World Health Organization; 2023 (https://iris.who.int/handle/10665/373826, accessed 2 February 2024).

Health outcomes and conditions

Anaemia

Core indicator

Description	**Indicator name**	Prevalence of anaemia among adolescents
	Indicator short name	Anaemia
	Definition	Proportion of adolescents (10–19 years) who have a haemoglobin level below the relevant WHO threshold
	Numerator	Number of adolescents (10–19 years) who have a haemoglobin level less than the relevant WHO threshold
	Denominator	Total number of adolescents (10–19 years)
Rationale	Lacking sufficient iron (anaemia) can have negative health consequences, especially for adolescents, who depend on a variety of vitamins and minerals for healthy growth and development.[a] Furthermore, menstruating adolescents are at higher risk of anaemia due to repeated loss of blood. This indicator measures anaemia according to relevant WHO thresholds and recommendations.	
Measurement	**Data collection level**	Individual
	Preferred data source	Population-based survey
	Other possible data source(s)	Health management information system (HMIS)
	Method of measurement	The calculation of this indicator requires data on capillary or venous blood haemoglobin level recorded in grams per decilitre (g/dL) to one decimal point. Classification of anaemia should be made with respect to the appropriate WHO threshold[b] given an adolescent's age, sex and other relevant characteristics, including pregnancy status, smoking and residential elevation above sea level.
	Disaggregation	Age group (10–14, 15–19 years); sex
Comments	The cut-offs for anaemia diagnosis vary with sex, age and other characteristics (for example, pregnancy, smoking status). See the corresponding WHO guidance for additional information on anaemia and the relevant cut-offs.[b]	

[a] Wiafe MA, Ayenu J, Eli-Cophie D. A review of the risk factors for iron deficiency anaemia among adolescents in developing countries. Anemia. 2023;6406286. doi:10.1155/2023/6406286.

[b] Guideline on haemoglobin cutoffs to define anaemia in individuals and populations. Geneva: World Health Organization; 2024 (https://iris.who.int/handle/10665/376196, accessed 9 February 2024).

Health outcomes and conditions

Suicide attempt

Core indicator

Description	**Indicator name**	Proportion of adolescents who report a suicide attempt during the past 12 months
	Indicator short name	Suicide attempt
	Definition	Proportion of adolescents (10–19 years) who reported a suicide attempt during the past 12 months
	Numerator	Number of adolescents (10–19 years) who reported a suicide attempt during the past 12 months
	Denominator	Total number of adolescents (10–19 years)
Rationale	Suicide is one of the most common causes of mortality in adolescents globally.[a] There are various suicide risk factors, one of which is a previous suicide attempt.[a]	
Measurement	**Data collection level**	Individual
	Preferred data source	Population-based survey
	Other possible data source(s)	None recommended
	Method of measurement	The recommended method to obtain information is to ask whether any actions have been taken with the intention of ending one's life. For example, "In the past 12 months, did you try to harm yourself with the intention or desire to end your life? For example, by taking poison, hanging yourself, jumping off a cliff or bridge, or throwing yourself in front of a moving car?"
	Disaggregation	Age group (10–14, 15–19 years); sex
Comments	A suicide attempt refers to non-fatal suicidal behaviour. For an expanded discussion of terminology and related measurement implications, see *Practice manual for established and maintaining surveillance systems for suicide attempts and self-harm*.[b] Due to stigma and illegality in some countries, suicide attempts may be underreported and data quality may be low.[c]	

[a] Shain B, Braverman PK, Adelman WP, Alderman EM, Breuner CC, Levine DA et al. Suicide and suicide attempts in adolescents. Pediatrics. 2016;138(1):e20161420. doi:10.1542/peds.2016-1420.

[b] Practice manual for establishing and maintaining surveillance systems for suicide attempts and self-harm. World Health Organization; 2016 (https://iris.who.int/handle/10665/208895, accessed 2 February 2024)

[c] Suicide. Geneva: World Health Organization; 2023 (https://www.who.int/news-room/fact-sheets/detail/suicide, accessed 2 February 2024).

Health outcomes and conditions

Depression/anxiety symptoms

Core indicator

Description	**Indicator name**	Proportion of adolescents who report symptoms of depression and/or anxiety during the past 2 weeks
	Indicator short name	Depression/anxiety symptoms
	Definition	Proportion of adolescents (10–19 years) with symptoms of depression and/or anxiety during the past 2 weeks
	Numerator	Number of adolescents (10–19 years) with symptoms of depression and/or anxiety
	Denominator	Total number of adolescents (10–19 years)
Rationale	Symptoms of depression and/or anxiety can have various health and social consequences for adolescents. Many adolescents experience symptoms of depression and/or anxiety but may not receive adequate support.[a] Improved data collection and data quality can help in targeting interventions.	
Measurement	**Data collection level**	Individual
	Preferred data source	Population-based survey
	Other possible data source(s)	None recommended
	Method of measurement	Among the different methodologies for assessing depression and anxiety is the specially developed measuring mental health among adolescents and young people at the population level (MMAPP) tool, which has undergone cross-country validation for this age group.[a] Calculating the indicator is based on a short set of screening questions that do not ask about depression or anxiety directly and instead ask about various symptoms during the previous 2 weeks, followed by additional questions to determine who would meet the threshold of a clinical diagnosis.
	Disaggregation	Age group (10–14, 15–19 years), sex
Comments	This indicator was developed by the MMAPP initiative[a, b] to assess and monitor overall burden of a major depressive episode or anxiety disorder based on a level of symptoms consistent with clinical diagnosis according to the *Diagnostic and statistical manual of mental disorders, fifth edition (DSM-5)* and *International Classification of Diseases 11th Revision* (ICD-11). MMAPP is available as a module in round 7 of the Multiple Indicator Cluster Surveys (MICS7) but can also be used as a stand-alone tool.[c]	

[a] Measuring mental health for adolescents and young people at the population level [UNICEF Data topic]. New York: United Nations Children's Fund; 2023 (https://data.unicef.org/topic/child-health/mental-health/mmap, accessed 2 February 2024).

[b] Carvajal-Velez L, Harris Requejo J, Ahs JW, Idele P, Adewuya A, Cappa C et al. Increasing data and understanding of adolescent mental health worldwide: UNICEF's measurement of mental health among adolescents at the population level initiative. J Adolesc Health. 2023;72(1S):S12–4. doi:10.1016/j.jadohealth.2021.03.019.

[c] Multiple Indicator Cluster Surveys (MICS) [website]. New York: United Nations Children's Fund; 2024 (https://mics.unicef.org, accessed 2 February 2024).

Health outcomes and conditions

Care seeking for depression/anxiety

Additional indicator

Description	**Indicator name**	Proportion of adolescents with symptoms of anxiety and/or depression who report contact with a health professional or counsellor for their mental health symptoms
	Indicator short name	Care seeking for depression/anxiety
	Definition	Proportion of adolescents (10–19 years) with symptoms of anxiety and/or depression who had contact with a health professional or counsellor for their mental health care
	Numerator	Number of adolescents (10–19 years) with symptoms of anxiety and/or depression who had contact with a health professional or counsellor for mental health care
	Denominator	Total number of adolescents (10–19 years) with symptoms of anxiety and/or depression
Rationale	If symptoms of depression and/or anxiety are left untreated, these symptoms can persist and worsen into adulthood.[a] Despite many adolescents experiencing depression and/or anxiety symptoms, few receive treatment and care.[b] This indicator can inform interventions to reach adolescents who are not seeking care and support.	
Measurement	**Data collection level**	Individual
	Preferred data source	Population-based survey
	Other possible data source(s)	None recommended
	Method of measurement	The GAMA-recommended indicator is based on the specially developed measuring mental health among adolescents and young people at the population level (MMAPP) tool, which has undergone cross-country validation for this age group.[c] The tool begins by asking a series of questions to identify those with symptoms of anxiety and/or depression in the 2 weeks preceding the survey. These data are required for the denominator. The numerator is derived from additional questions on whether the respondent talked with anyone about those kinds of problems or worries in the past month and, if so, who, which allows for a health professional or counsellor.
	Disaggregation	Age group (10–14, 15–19 years); sex
Comments	This indicator was developed by the MMAPP initiative[c, d] as part of an indicator package on the mental health of adolescents and young people. MMAPP is available as a module in round 7 of the Multiple Indicator Cluster Surveys (MICS7) but can also be used as a stand-alone tool.[e] The month time range for the numerator is to give a longer time frame for care seeking for adolescents who report recent symptoms.	

[a] Siegel RS, Dickstein DP. Anxiety in adolescents: update on its diagnosis and treatment for primary care providers. Adolescent Health, Medicine and Therapeutics. 2012;3:1–16. doi:10.2147/AHMT.S7597.

[b] Merikangas KR, He J, Burstein M, Swendsen J, Avenevoli S, Case B et al. Service utilization for lifetime mental disorders in US adolescents: results of the National Comorbidity Survey–Adolescent Supplement (NCS–A). J Am Acad Child Adolesc Psychiatry. 2011;50(1):32–45. doi:10.1016/j.jaac.2010.10.006.

[c] Measuring mental health for adolescents and young people at the population level [UNICEF Data topic]. New York: United Nations Children's Fund; 2023 (https://data.unicef.org/topic/child-health/mental-health/mmap, accessed 2 February 2024).

[d] Carvajal-Velez L, Harris Requejo J, Ahs JW, Idele P, Adewuya A, Cappa C et al. Increasing data and understanding of adolescent mental health worldwide: UNICEF's measurement of mental health among adolescents at the population level initiative. J Adolesc Health. 2023;72(1S):S12–4. doi:10.1016/j.jadohealth.2021.03.019.

[e] Multiple Indicator Cluster Surveys (MICS) [website]. New York: United Nations Children's Fund; 2024 (https://mics.unicef.org, accessed 2 February 2024).

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4. Measurement principles

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4.1 Holistic approach and interdisciplinary collaboration

Adolescent health measurement should encompass a comprehensive view, rather than focusing solely on one aspect. It should consider physical, mental, emotional, social and developmental aspects. Collaboration between various disciplines, such as medicine, psychology, sociology, education and public health, is crucial for a holistic understanding and a broader perspective of adolescent health *(7)*.

4.2 Adolescent engagement

Adolescents' active engagement in health measurement, interpretation and use of results is paramount because of their unique perspectives and experiences and evolving health needs. Involving adolescents in these processes not only acknowledges their agency and autonomy, but also facilitates the accurate capture of their diverse realities and concerns. By actively participating, adolescents can offer invaluable insights into their health priorities, behaviours and challenges, enabling a more comprehensive understanding of their well-being. Moreover, their involvement fosters a sense of ownership and empowerment, encouraging greater honesty, trust and openness in sharing sensitive health information, thereby facilitating the development of more effective and adolescent-centred health interventions and policies *(23)*.

4.3 Consideration of context

Adolescent health measurement must consider the broader social, environmental and cultural context young people live in because these elements profoundly shape beliefs, behaviours and perceptions surrounding health and well-being *(24)*. The context a person lives in significantly influences their attitudes towards health practices, health care utilization and responses to health interventions. Failing to account for cultural diversity and social and environmental factors can result in inadequate assessments that disregard crucial nuances, leading to ineffective or inaccessible health care solutions. Only by integrating contextual considerations into health measurement does it become possible to craft relevant, sensitive and tailored interventions that resonate with diverse adolescent populations, ultimately fostering better health outcomes and reducing disparities. In practical terms, while the indicators presented in this document are relevant to adolescents in all contexts, the application of the recommended measurement guidance may vary in different contexts. For instance, when measuring physical activity, examples of typical local and culturally appropriate activities embedded in the question text or included in show cards can be different in different contexts.

4.4 Ethical considerations

Privacy and confidentiality

Maintaining privacy and confidentiality in adolescent health measurement is crucial to foster trust, honesty and openness in communication. Adolescents often face sensitive health issues that they may be hesitant to discuss openly, especially if confidentiality is not assured. Respecting their privacy ensures a safe space for adolescents to share personal health information without fear of judgement or repercussions. Upholding confidentiality encourages candour, allowing for a more accurate assessment of the adolescent's health needs and behaviours. It also promotes a sense of respect for their autonomy and rights, ultimately strengthening the integrity of health measurement and the effectiveness of subsequent interventions tailored to their specific needs *(25)*.

Informed consent and assent

Obtaining informed consent from legal guardians as appropriate as well as assent from adolescents is a fundamental requirement for ethical health measurement, ensuring adolescents and their guardians understand the purpose, risks and benefits. Obtaining informed consent and assent involves providing clear and understandable information, allowing adolescents (and their legal guardians as appropriate) to make voluntary and informed decisions about participating in health measurement *(25)*.

Respect for autonomy

Recognizing adolescents' autonomy involves acknowledging their right to make decisions about their health when they have the capacity to do so. Respecting their choices fosters a sense of empowerment and dignity *(25)*.

Minimizing harm

Ethical measurement ensures that the benefits of the assessment outweigh potential risks and that any potential physical, emotional or psychological harm to adolescents is minimized. This includes avoiding invasive procedures as much as possible and providing support for any distress resulting from the measurement process *(24, 26)*.

4.5 Equity, inclusivity and representativeness

In practice, it is not always easy to ensure complete representativeness of samples in adolescent health measurement. For example, while school surveys provide an opportunity to sample many adolescents efficiently, their representativeness of the adolescent population depends on school enrolment and attendance. Similarly, household surveys may also fail to capture marginalized adolescents, including migrants, institutionalized or homeless adolescents, or adolescents in conflict settings.

As much as possible, adolescent health measurement must prioritize equity and inclusivity to ensure fair, representative and comprehensive assessments for all young individuals. Achieving health equity means acknowledging and addressing disparities, providing equal opportunities for participation, and accounting for diverse needs among adolescents, irrespective of their backgrounds, abilities or geographical locations. Making health measurements accessible and inclusive involves removing barriers – be they financial, cultural, or geographical – that might hinder some groups or individuals from participating fully. By promoting equity and inclusivity, health measurement can better capture the diverse health experiences and challenges faced by adolescents, leading to more tailored and effective interventions that address the specific needs of all individuals within this population group *(26)*.

4.6 Disaggregation

Disaggregation is a powerful way to enhance the insight that data can provide. While averages for the entire adolescent population are useful summary measures and can be easy to track and communicate, they may also obscure patterns that are relevant to programming and equity considerations.

For all applicable indicators, standard disaggregation by sex and by 5-year age groups (specifically, 10–14 and 15–19 years) is proposed *(27)*. This is considered the minimum disaggregation useful for programming and advocacy. Disaggregation by additional characteristics is recommended for selected indicators as described in the relevant indicator tables in Chapter 3.

Further disaggregation may be both beneficial and necessary in some contexts; however, it is important to select disaggregation dimensions carefully. It is not possible to disaggregate all data by all the dimensions that might be of interest – each disaggregation dimension has implications in terms of time, effort and money, for both generation and use of the data. Furthermore, certain disaggregation dimensions (for example, ethnicity, migration status, sexual orientation) may be socially or politically sensitive. Consequently, thoughtful consideration is required when planning disaggregation in data collection and use *(28, 29)*.

Reflecting that both the availability of disaggregated data and the specific measurement methodologies can vary by data source, the following non-exhaustive list describes additional characteristics that are commonly available for general disaggregation.

- Age: Data are often collected by single year of age, which means that beyond the recommended 5-year age groups, data may additionally be disaggregated by other age groupings; for example, those corresponding to levels of schooling.

- Sex: While collecting data on binary sex (male/female) is a common practice of most large-scale data collection efforts, collecting data on gender identity is still relatively uncommon and is lacking international standards *(30)*.

- Residence: Urban/rural residence and subnational regional residence are commonly used to disaggregate data; other residential classifications may be available depending on the context (for example, peri-urban, urban slum, refugee camp; lower subnational administrative levels).

- Marital status: Disaggregation of data by marital status can be particularly meaningful for some topics; for example, sexual and reproductive health. It is often possible to determine marital status, whereas data on cohabitation may be less commonly available, depending on the context.

Depending on the data source, additional disaggregation dimensions may be available in some contexts, including:

- schooling status, such as current schooling status (in-school, out-of-school) and level of education;

- household wealth/poverty or a proxy such as household food security;

- vulnerable population status, including adolescent with disability, specific ethnic group, migrant (but, as noted above, the desire to have more information should be balanced against potential harms); and

- living situation, such as living on own versus living with family (including family characteristics such as family size and nuclear versus extended family households, and potentially orphanhood status and foster care arrangements).

Notably, in some cases multiple levels of disaggregation may be both relevant and feasible.

Jilda Mazira receiving her Pfizer COVID-19 vaccination, Palorinya Refugee Settlement, Uganda.
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5. From indicators to action

Introduction

Process

Domains:

Policies

Systems

Determinants

Behaviours

Well-being

Outcomes

Principles

Action

References

The GAMA-recommended adolescent health indicators provide a foundation for identifying priorities, allocating adequate resources, monitoring and evaluating programmes, and advocating for this critical population. These 47 indicators reflect universal aspects of adolescent health and are a basis for comprehensive measurement, even as countries may need to consider additional topics relevant to their own contexts. Translating a list of indicators into action requires a collaborative effort that includes identifying existing data, filling identified gaps and leveraging opportunities to use the data to effect change.

5.1 Data mapping

All countries have data related to adolescent health, even if those data are limited or vary from GAMA recommendations (for example, by not covering the entire age range of 10–19 years). The starting point for implementing the GAMA-recommended indicators is understanding what data are already available at the country level and where gaps exist.

Step 1: Identify all relevant data sources

Multiple data sources are needed to populate the set of GAMA-recommended indicators. It is important to identify which data sources exist in a country and understand the basic characteristics of each source, including the target population, the method of data collection, and the timing and frequency of data collection and tabulation.

Understanding the coverage of the adolescent population in the data sources is critically important. Are all adolescents of all ages (that is, 10–19 years) included? Do subpopulations exist that might be systematically excluded from the data source, such as those who are out of school or who are not legal residents of the country? Can the data be disaggregated by age and sex at a minimum? In the case of a survey, has the sample been scientifically selected and is it large enough to produce accurate and representative estimates?

Table 2 provides an overview of the coverage of GAMA-recommended indicators by selected global survey programmes.

Step 2: Compile data for the GAMA-recommended indicators

Once data sources have been identified, the corresponding GAMA-recommended indicators can be populated. Care should be taken to identify any differences between the details (for example, numerator, denominator) of the available data and the details specified in the corresponding GAMA-recommended indicator (as described in the indicator tables in Chapter 3 of this document). Even subtle differences can affect how the data should be interpreted and used. Where a GAMA-recommended indicator cannot be calculated as specified from the source data, but a similar indicator exists, it may be possible, especially in the short term, to use it as a proxy for the GAMA-recommended indicator.

Beyond age and sex disaggregation, which should be a routine component of the GAMA-recommended indicators whenever possible, it is important to take note of other possible disaggregation dimensions to better understand variation across specific subgroups of the adolescent population (see Section 4.6).

Step 3: Determine data gaps

After existing data for the GAMA-recommended indicators have been compiled, indicators with no data can be identified and steps taken to fill the data gaps. Importantly, although it is recommended that all 47 adolescent health indicators be measured, countries may need to prioritize filling those data gaps that relate to national priorities and that are the most feasible to implement because, for example, they can be easily incorporated into existing data collection systems.

Notably, population-based surveys are the most common data source across the set of GAMA-recommended indicators, representing the preferred data source for 34 indicators and providing another possible source of data for 7 indicators. This means routinely implemented population-based surveys that include adolescents are critically important for understanding their health.

Table 2. Current measurement of the GAMA adolescent health indicators among selected global survey programmes

Domain	SRMNCAH Policy Survey					Indicator type
Policies, programmes & laws	National adolescent health programme		Health service user fee exemptions for adolescents			Core
	National standards for adolescent health service delivery		Legal restrictions for accessing health services			Additional
	DHS	MICS	VACS	GSHS	HBSC	
Systems performance & interventions	Human papillomavirus (HPV) vaccine coverage	Human papillomavirus (HPV) vaccine coverage		Human papillomavirus (HPV) vaccine coverage		Core
						Additional
Social, cultural, economic, educational & environmental health determinants	Adolescent population proportion	Adolescent population proportion		Food insecurity		Core
	School completion	School completion				Additional
	Sexual and reproductive health decision-making among older female adolescents	Sexual and reproductive health decision-making among older female adolescents				
		Adolescents not in education, employment or training				
Health behaviours & risks	Overweight and obesity	Alcohol use	Condom use at last sex	Overweight and obesity	Overweight and obesity	Core
	Thinness	Tobacco use	Physical violence	Thinness	Thinness	Additional
	Alcohol use	First sex by age 15	Contact sexual violence	Heavy episodic drinking	Cannabis use	
	First sex by age 15	Pre-menarche menstruation awareness		Alcohol use	Condom use at last sex	
	Contraceptive use at last sex (modern method)	Condom use at last sex		Tobacco use		
	Condom use at last sex	Demand for family planning satisfied (modern method)		Electronic cigarette use		
	Demand for family planning satisfied (modern method)	Skilled birth attendance		Cannabis use		
	Skilled birth attendance			First sex by age 15		
	Physical violence			Condom use at last sex		
	Contact sexual violence			Bullying		
	Sexual violence by age 18			Physical violence		
Subjective well-being		Someone to talk to about problems		Someone to talk to about problems	Positive family relationships	Core
						Additional
Health outcomes and conditions	Adolescent birth rate	Adolescent birth rate		Suicide attempt		Core
	HIV prevalence	Suicide attempt				Additional
	Anaemia	Depression/anxiety symptoms				
		Care seeking for depression / anxiety				

DHS: The Demographic and Health Surveys Program; GSHS: Global school-based Student Health Survey; HBSC: Health Behaviour in School-aged Children study; MICS: Multiple Indicator Cluster Surveys programme; SRMNCAH: Sexual, reproductive, maternal, newborn, child and adolescent health; VACS: Violence Against Children and Youth Surveys.

Notes: For each of the six selected survey programmes, the table presents the indicators from the GAMA-recommended indicator set for which a similar indicator is measured by the survey programme.
Core indicators are the most essential for measuring the health of all adolescents globally. Additional indicators are those provided for settings where further detail within a subject would add value, and resources for data collection and reporting are available.
Source: Marsh AD et al 2024 *(22)*

5.2 Data use

Mapping the GAMA-recommended indicators is just the starting point. The indicators can only support advances in adolescent health and well-being if they are used. Embedding the GAMA-recommended indicators into key national processes and country efforts to advance adolescent programming will ensure ongoing and consistent use. While monitoring all indicators presented in this document is recommended to comprehensively assess adolescent health, a country may choose to initially elevate a subset of indicators depending on the national context and priorities.

Setting adolescent health programming priorities

The Global Accelerated Action for the Health of Adolescents (AA-HA!) guidance lays out good practices for governments to systematically plan and implement adolescent health and well-being programmes, the foundation of which is the evidence-based identification of priorities *(7)*. Fig. 3 presents AA-HA!'s structured approach to national priority-setting through a three-step process.

Due to their broad topical scope, the GAMA-recommended indicators are an ideal resource to inform the prioritization process. Beyond the minimum disaggregation dimensions specified in the indicator tables in this document, further disaggregation of data, if feasible, can provide an evidence base for equity-conscious programming. Notably, using the GAMA-recommended indicators will provide consistency in measurement over time, enabling countries to monitor trends and periodically reassess their priorities.

Fig. 3. Three-step process for setting priorities for adolescent health programming

Source: Adapted from WHO 2023 *(7)*

Informing strategic plans

Incorporating the GAMA-recommended indicators into national health strategies, plans and actions, and into the mechanisms to monitor and evaluate them, will support consistent tracking of progress. To do this will involve reviewing national priorities to understand which GAMA-recommended indicators can be most useful, as well as identifying indicators that have been used in the past. If a plan or strategic document already has indicators that are similar but not identical to the GAMA-recommended indicators, examination of the data will be needed to understand the differences and work towards alignment. Going through this review process will also facilitate appropriate target-setting using the GAMA-recommended indicators.

Strengthening advocacy

The adolescent health indicators recommended by GAMA provide a common framework for assembling key evidence on adolescent health. Using a shared set of indicators ensures comparability across time and across different parts of a country. This means that messaging can be clearer and more focused, especially for political leaders, administrators of adolescent services (such as schools) and other non-technical audiences. It is also easier for all champions of adolescent well-being, regardless of their level of data expertise, to become familiar with a few important indicators and consistently refer to them. Notably, a common set of indicators facilitates intercountry comparisons, a powerful tool for political advocacy and experience sharing.

5.3 Critical success factors

Adolescent engagement

Adolescents and their advocates have an important role in implementing the GAMA-recommended indicators. Although data collection and analysis are highly technical and require advanced training, the participation of adolescents and their advocates in setting programming and measurement priorities is crucial and they can be both champions for and users of data. Steps should be taken to ensure inclusive participation so the diversity of all adolescents is represented.

"Countries should ensure that adolescents' expectations and perspectives are heard in national programming processes. Adolescent leadership and participation should be institutionalized and actively supported during the design, implementation and [monitoring and evaluation] of programmes for adolescent health and well-being."

WHO 2023 (7)

Stakeholder involvement

Multisectoral collaboration is vital to the measurement of adolescent health and well-being. Adolescent programming needs to include different sectors; for example, health, education and employment need to work together. The data for GAMA-recommended indicators may come from a variety of different national data producers, such as the national statistical office, the ministry of health or the ministry of education. This means that identifying, convening and collaborating with the relevant stakeholders is essential. It is also important to consider the role of donors; ensuring they are a part of discussions around data production and use can facilitate their own adoption of the indicators.

"The most powerful gains for adolescent well-being result from multisectoral action."

WHO 2023 (7)

Sufficient data infrastructure

Beyond the indicator mapping outlined in Section 5.1, all countries should review their current adolescent health data infrastructure, including shortfalls in data-related processes. Considering the larger system supporting data collection and use – including how different parts of the system interact and how data are (or are not) being used – can help clarify areas that require strengthening. All countries should identify areas for improvement and determine the steps to address them. A part of this process will be clarifying what, if any, additional financial, technical or organizational resources are needed in working towards full availability of comprehensive adolescent health data.

5.4 Call to action

Our current understanding of adolescent health is limited by the lack of comprehensive data. This chapter describes how countries can address this by using the GAMA-recommended indicators to identify and subsequently fill important data gaps. It also outlines the importance of using readily available information for these indicators to drive action to improve adolescent health. The process to do so is based on the well-established approach outlined in the AA-HA! guidance and requires bold engagement of a broad range of national stakeholders, including adolescents themselves. International actors, including WHO, other UN agencies and measurement groups, must support countries with these endeavours.

This includes providing technical assistance for the implementation and use of the indicators and related data and promoting further alignment of regional and global measurement efforts with the recommendations presented in this document.

Faced with multiple complex challenges, like the reemergence of global pandemics and intensifying humanitarian crises, adolescents have shown themselves as effective mobilizers and agents of change within their communities and beyond. As they continue rising to meet the challenges of this generation and the next, our collective resilience depends on their ability to be and stay healthy. We call on partners to invest now in adolescent health and its measurement – there will be no better time.

Khun Nid is one of the Diabetes Ambassadors of Thailand, she is using a pump system. She is studying biology at the Kasetart University in Bangkok. © WHO/Patrick Brown

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