Global Accelerated Action for the Health of Adolescents (AA-HA!)

Guidance to Support Country Implementation

Second edition (DRAFT 27 Sep 2022)

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Introduction

Aim of the guidance.

The AA-HA! guidance aims to assist governments in identifying national and subnational priorities and implementation strategies as they respond to the health and well-being challenges, opportunities and needs of adolescents in their countries. It is intended as a reference document for national and subnational level policymakers and programme managers to assist them in planning, implementing, monitoring and evaluating adolescent health programmes.

The first edition.

The first edition of the AA-HA! guidance was published in 2017 [1] building on the momentum created by the 2030 Agenda for Sustainable Development and the United Nations Secretary-General Global Strategy for Women's, Children's and Adolescents' Health (2016–2030) (the Global Strategy) in support of the 2030 Agenda [2], and in response to the request by the 68th World Health Assembly to develop global guidance on how to take accelerated action for the health of adolescents (AA-HA!).

The second edition.

The second edition uses the same systematic approach to planning and implementing adolescent health and well-being programmes as in the first edition (Figure XYZ). The overall structure of the document also has not changed from the first to the second edition.

After a brief introduction which summarizes the main arguments for investing in adolescent health and well-being , as well as opportunities and global threats, the document describes the current status of adolescent health and well-being worldwide, evidence-based interventions to improve it, and then details the key steps in priority setting, planning, implementing, monitoring and evaluating adolescent health programmes. The national level programming process starts with understanding the country's epidemiological and development profile (needs assessment), analysis of what is already being done and by whom (landscape analysis), and then undertaking a consultative process for setting national priorities for adolescent health and well-being. For the agreed priorities, the guidance describes options for programming, and provides an inventory of key implementation strategies for intersectoral and single-sector actions. Finally, the guidance supports policy makers with tools for designing robust monitoring and evaluation frameworks to enhance accountability and improve programmes. Throughout the document, case studies are provided to demonstrate that what is being recommended can be done, and in some cases has already been implemented.

123 Figure A. A systematic approach to accelerate action for the health and well-being of adolescents (AA-HA!)

Section 1	Section 2	Section 3	Section 4	Section 5	Section
Building an investment case. This section provides key arguments about what is special about adolescents and why investing in them results in long-term societal benefits	**Understanding the status of adolescent health and well-being worldwide.** This section helps to understand main causes of ill health in adolescents globally and regionally, and the determinants of health and well-being	**Identifying evidence-based interventions for adolescent health and well-being.** This section provides a menu of evidence-based interventions across 6 areas of adolescent health (unintentional injury; violence prevention; SRH and HIV; communicable diseases; non-communicable diseases, nutrition and physical activity; mental health, substance use and self-harm; interventions in humanitarian and fragile settings), and across well-being domains	**Setting national priorities for adolescent health and well-being programmes.** This section guides policy makers in the process of needs assessment, landscape analysis and priority setting to inform the focus of national adolescent health and well-being programmes.	**Conceptualizing and implementing national adolescent health and well-being programmes.** This section describes pathways for programming for adolescent well-being, approaches to multisectoral action, and key implementation strategies for intersectoral and single sector actions in key sectors (health, education, social protection, criminal justice, labour, telecommunications, road and transportation, housing and urban planning, energy, environment).	**Strengthening accountability for adolescent health and well-being.** This section guides policy makers in principles of monitoring and evaluation of adolescent health and well-being programmes, and priorities for research
Meaningful youth engagement in programming for adolescent well-being					
Addressing adolescent health and well-being in humanitarian and fragile settings					

124 ## What is new in the second edition?

125 Building on the first edition launched in 2017, this publication seeks to strengthen the understanding of the
126 interplay between health and its determinants that contribute to adolescent health and well-being. Whereas
127 the second edition of the AA-HA! guidance features the same systematic approach to programming for
128 adolescents as in the first edition, it provides an improved, evidence-based foundation for programming for
129 adolescent health and well-being by undertaking multisectoral action. The main changes in the second edition
130 are summarized below:

New data

The revised edition provides updated data on health, mortality, morbidity, and well-being determinants (section 2), and features the recent consensus of core indicators for adolescent health and well-being (section 6) [3].

Building on significant political and scientific advances since 2017. In the last 5 years major initiatives were launched [4-6], new insights became available from research [6-9] and guidelines [10-13], and new guidance in support of UHC became available on quality of care [14-16], providers' competencies , how to advocate for investing in adolescent health within discussions about basic benefit packages [6, 17, 18], and the trade-off between specific programmes and overall system strengthening [19, 20]. (See section XYZ gaining momentum). New evidence synthesis from UN agencies [4, 14, 15, 21-23] has helped to better inform actions by sectors other than health in becoming adolescent-responsive [4, 16, 24-29].

All this wealth of up-to-date resources underpin the contents of the second edition, including the menu of evidence-based interventions (section 3), and the approaches to programming (section 5).

Integrating learnings from the application of the first edition of the AA-HA! guidance. Since its launch in May 2017, many countries have used the AA-HA! guidance to update and develop comprehensive adolescent health strategies and plans. The learning from these processes is integrated in the second edition including as new case studies, and up to date reference documents.

Defining and integrating well-being into programmes. The first edition of the AA-HA! promoted a positive development approach to programming, which integrated the knowledge about the importance of protective factors such as agency and resilience in designing programmes. Since 2017, the thinking has evolved with a consensus about adolescent well-being domains reached by UN H6+ agencies and the Partnership for Maternal, Newborn & Child Health (PMNCH) (see section XYZ) [30]. Therefore, the second edition makes one step further in moving from a largely health-centric perspective to a more holistic understanding of adolescent well-being (see Figure XYZ), and its implication for programming.

Integrating learnings from COVID-19. Years, or even decades, of development progress have been halted or reversed, due to the multiple and widespread impacts of COVID-19 [31]. The unprecedented global school closures during the COVID-19 pandemic, and other responses to the pandemic, have affected the learning, development and well-being of adolescents worldwide. These, and other learnings from the pandemic are brought into the second edition of the guidance to inform building resilient education and other systems critical to adolescent health and well-being.

How was the second edition developed?

Regional consultations to clarify the extent of the revision

Technical Working Group

Peer review

Public consultation

Youth involvement

Section 1: AA-HA! – advancing the case for investment in adolescent health and well-being

What is new in this section?

- ✓ Summary of lessons learned from the first edition of the AA-HA! guidance included
- ✓ The key scientific, political developments and programmatic advances since 2017 described
- ✓ The adolescent well-being framework integrated
- ✓ The investment case updated
- ✓ COVID-19, other contemporary threats to adolescent well-being, and opportunities described

Key messages

- Adolescence is one of the most rapid and formative phases of human development. The distinctive physical, cognitive, social, emotional and sexual development that takes place during adolescence demands special attention in national development policies, programmes and plans.
- The global consensus on adolescent well-being sets the agenda for a new generation of adolescent programmes that consider the interconnectedness of protective and risk factors for adolescent well-being at multiple levels from the macro policies that shape safe and supportive environments, through to good health and optimum nutrition; education, life-skills and employability; connectedness, positive values, and contribution to society; and agency and resilience.

- Investments in adolescent well-being bring a triple dividend of health and economic benefits in the adolescent now, during their future life and into the next generation, and thus enhance human capital. The smartest of all are the coordinated investments in health and education that bring mutually reinforcing benefits.
- The 2030 Agenda for Sustainable Development cannot be achieved without investment in adolescent health and well-being, including fulfilment of its goals related to poverty, hunger, education, gender equality, water and sanitation, economic growth, human settlement, climate change and peaceful and inclusive societies.
- The COVID-19 pandemic has brought to the spotlight the power of the global community to make investments in health a global priority. It has also brought highlighted the fact that the role of schools goes well beyond education to ensure critical nutrition, social protection, mental health and other services. This offers a unique opportunity to reinvigorate global commitments to adolescent health, well-being, and children's rights, and to increase investments.

***AA-HA! guidance was instrumental to accelerate action in regions and countries*.** Since its launch in May 2017, the WHO/HQ Interdepartmental Technical Working Group on Adolescent Health and Well-being, and UN agencies from the H6 Partnership have been working closely with countries to support them in updating and developing comprehensive adolescent health strategies and plans. By the end of 2022, most of the countries in the African region (AFR), the South-East Asia region (SEAR), and the region of the Americas (AMR), and selected countries in the Eastern Mediterranean region (EMR) and Western Pacific (WPRO), have used the AA-HA! Guidance to inform their national plans [32, 33]. Moreover, the Guidance was an influential framework to inform regional initiatives and political commitments such as the AFRO Adolescent Health Flagship Programme [33, 34], the PAHO Plan of Action for Women's, Children's and Adolescents' Health 2018-2030 [35], the EMRO Regional Framework of Joint Strategic Actions for Young People and the European adaptation of AA-HA [36, 37].The wide application of the guidance in diverse contexts has demonstrated that:

- The AA-HA! systematic approach to plan adolescent health programmes is suitable for countries with different epidemiological profile and diverse socio-political situations and developmental stages
- The AA-HA! approach to provide menus of interventions and implementation strategies that countries can chose from rather than a core package of interventions and strategies for all countries, is highly acceptable. The explicit process of national priority setting described in the guidance and the manual for facilitators [38] is conducive for country teams to arrive at national priorities through a transparent process of priority setting, own by all key stakeholders
- Although the AA-HA! guidance was aiming to support primarily national programming, its application for district level planning in a number of countries has proven that the approach can be successfully applied for subnational level planning

- The emphasis that AA_HA! has put on involving adolescents in the process of planning adolescent health and well-being programmes has facilitated an increased awareness of policy makers of the importance of doing so, and resulted that in most if not all countries that have used the guidance, adolescents were involved in decisions regarding national and subnational priorities.
- The emphasis that AA_HA! has put on inter-sectoral and multisectoral action has resulted that in all or most countries the process of national programming has involved sectors other than health
- Although the guidance is dense in content, the level of details is useful for practical application
- The accompanying manual [38] is a useful tool to enable country teams to steer the process of national priority setting and programming without or minimal external assistance

Advances made in promoting well-being as a positive vision of health. In the last five years major initiatives were launched that advanced the positive vision of health that integrates physical, mental, spiritual and social well-being [31]. The Global Conference on Health Promotion, and its resulting Geneva Charter for Well-being, stressed that well-being societies provide the foundations for all members of current and future generations to thrive on a healthy planet, no matter where they live [31]. The meaning of well-being for adolescents was articulated by the UN H6+ agencies´ Adolescent Well-being Initiative [30] that launched a multi-stakeholder call to action to prioritize adolescent well-being before the Global Forum for Adolescents in 2023 that will review progress and aim to increase political and financial investment in this population group. As part of the initiative, a consensus conceptual framework for adolescent well-being was agreed in 2020 by WHO, the Partnership for Maternal, Newborn and Child Health and other global partners [1]. (See Figure XYZ).

Progress made in promoting a focus on adolescents in reaching UHC targets. Adolescents were in the spotlight in the lead up to the United Nations High-level Meeting on Universal Health Coverage in 2019 that mobilized the highest political support for the entire health agenda under universal health coverage [39]. Its resulting political declaration called for increased investment in health promotion and disease prevention, education, health communication and health literacy, as well as safe, healthy and resilient environments enabling adolescents to have increased skills and knowledge to take informed health decisions and improve health-seeking behaviour [40].

There is a renewed and unprecedented attention to school health. Today there is an unparalleled attention to school health as exemplified by the Inter-Agency partnership for stepping up school health and nutrition. the well-coordinated joint response to the needs of learners during the COVID-19 pandemic, the uptake of the global initiative to Make Every School a Health Promoting School [6, 18], the recognition by the Transforming Education Summit of learners' health and well-being as key to transforming education , and other global and regional initiatives to strengthen school health [41]. An alliance , between WHO, UNESCO, UNICEF, the Food and Agriculture Organization of the United Nations, the World Food Programme, UNFPA, UNAIDS and the United Nations Environment Programme was built to support school health and health-promoting school programmes and initiatives towards Making Every School a Health Promoting School [42].

Global and regional declarations have since called for more investments in school health [43-45], and a renewed resolve to restore, improve and scale sustainable school meals programmes came through a new Global School Meals Coalition [46].

The investment case is stronger. Building the investment case for adolescents has advanced with new insights on the benefits of investing in adolescent health [8], the need to restructure health and social systems to deliver better for adolescent well-being [6-9], and how to better plan and fund intersectoral action [47, 48].

United Nations' has strengthened its work for youth. The United Nations has strengthened its engagement with and for young people, and formulated the United Nations Youth Strategy *Youth 2030*), an ambitious system-wide strategy to guide work with and for young people around the world [49]. The first progress report on the implementation of Youth 2030 was published in 2021 and highlighted the UN system's response to the needs of youth in COVID-19, and the impact of the ambitious UN reform process on youth programming by UN Country Teams [50]. The second report, published in 2022, highlights progress achieved in 2021 across the UN system, including by UN agencies and UN Country Teams, working *for* and *with* youth [51]. The UNFPA new strategy "My Body, My Life, My World!", that encapsulates the latest learning and evidence on adolescent and youth programming, is one example of how UN agencies focus on adolescents and youth, and support the implementation of the UN system-wide agenda Youth2030 [52].

Meaningful youth engagement gets global consensus. The movement for meaningful youth engagement has accelerated. The Global Consensus Statement on Meaningful Adolescent and Youth Engagement that has proposed the definition, key principles and recommendations, was co-signed by organizations within and outside the United Nations system [53], and its implementation is being monitored [54]. WHO has established the first WHO Youth Council, which will provide advice on health and development issues that affect young people within a comprehensive, inclusive youth engagement strategy [42]. From youth movements for accelerating action to end TB, to engaging youth against AIDS to disseminate research and consultations on the environment and NCDs, WHO has used appropriate platforms and networks – digital, in-person, audio-visual, media, publications – to reach out to young people, solicit their views and ideas and draw on and learn from their experiences (see for example Box XYZ) [42]

Box XYZ

WHO mobilizes youth to end TB

in 2019, WHO launched a special youth initiative titled 1+1- to call for youth mobilization to boost the fight to end TB. The initiative aims at advancing engagement with young people and amplifying their voices to end TB. Youth can have a multiplier effect in the fight to end TB, to accelerate progress towards reaching the ambitious 2022 targets of the UN high-level meeting on ending TB, as well as the larger goal of ending TB by 2030, as included in the WHO End TB Strategy and the SDGs. This was followed by a Global Youth

Townhall to end TB that culminated in a Youth Declaration to End TB. WHO is working with young people around the world to strengthen their engagement and implement the declaration.

Source: https://www.who.int/activities/mobilizing-youth-to-end-tb.

Adolescents are visible in many topic-specific agendas' and progress continues to improve adolescent health and well-being outcomes and their monitoring. Other developments took place to accelerate action related to specific domains of health and well-being:

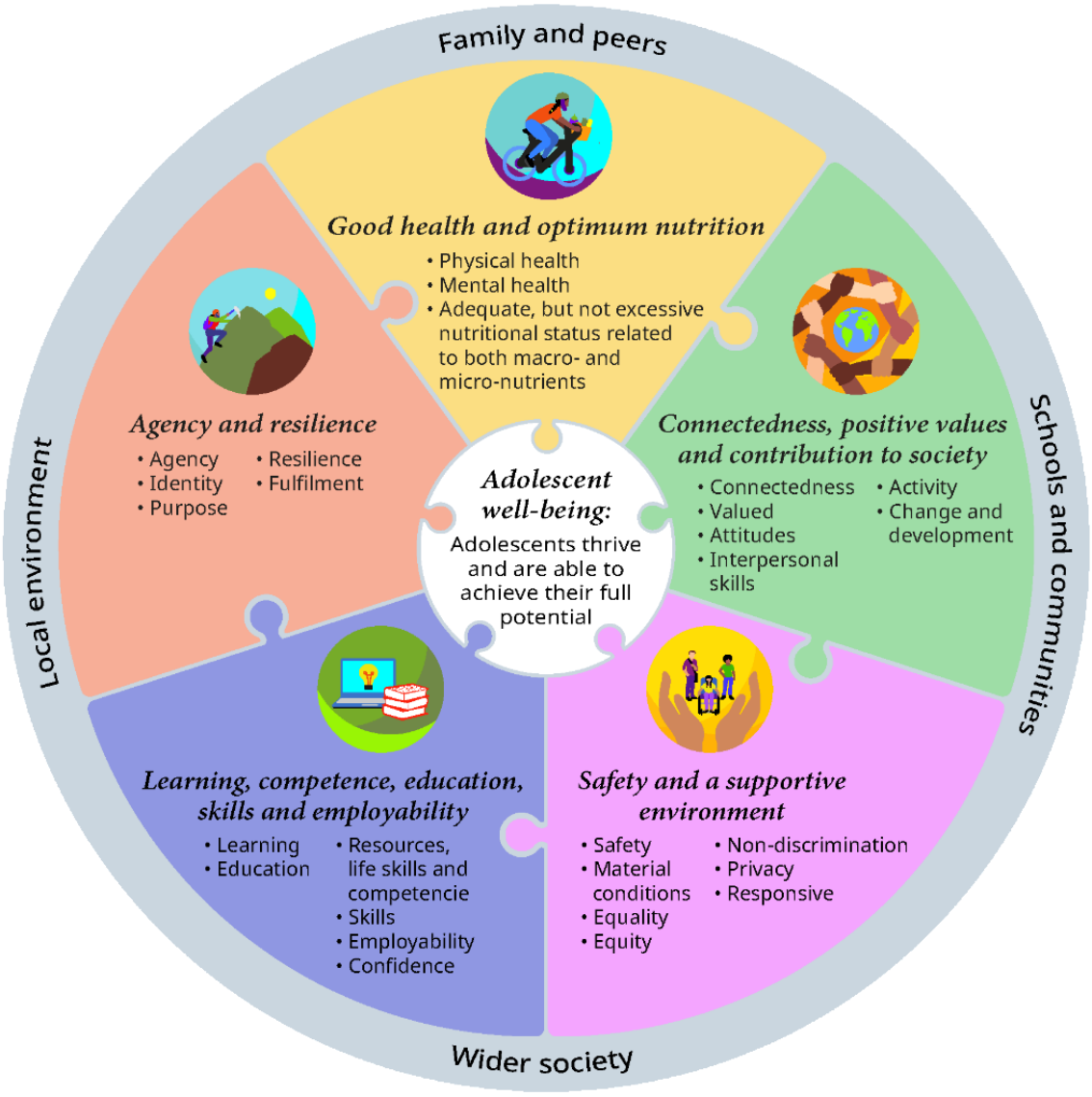
- In 2019, the International Conference on Population and Development +25 celebrated and took stock of progress made in adolescent sexual and reproductive health (SRH) and rights in the 25 years since the original Conference in Cairo in 1994. While celebrating achievements, such as substantive reduction in child marriage and HIV infections, it identified the work that remains to be done to meet SRH needs and fulfil the SRH rights of adolescents [55].
- A renewed attention to adolescent mental health has resulted in new partnerships, such as the Joint Programme on Mental Health and Psychosocial Well-being and Development of Children and Adolescents, launched by WHO and UNICEF in 2020 [56]. The programme establishes mutual commitments, a shared framework and a coordinated strategy to change laws, policies, services and family and community environments for better mental health and psychosocial well-being for the next generations [42].
- Experiences from implementing rights-based and gender transformative approaches in programmes have been documented, and informed new guidance [21][15, 16, 22, 23, 57-60].
- For the first time, a comprehensive overview of the scale and consequences of children and adolescents' exposure to e-waste was documented in a report that summarized the latest scientific knowledge on the links between informal e-waste recycling activities and health outcomes in children, adolescents and pregnant women – the three most at-risk groups for adverse health outcomes, including impaired neurological and behavioural development, negative birth outcomes and immune system impacts.
- Political declarations have been made to protect adolescents from the harmful impact of marketing, advertising and promotional activities related to alcoholic beverages [61], and attention to adolescents and young people is given in the substance use prevention, management and treatment guidance [62, 63].
- In 2018, WHO announced the WHO Global Initiative for Childhood Cancer that brings together stakeholders from around the world and across sectors with the joint goal of increasing the childhood cancer survival rate by at least 60% by 2030 while reducing suffering and improving quality of life for children and adolescents with cancer globally [64].

- A global consensus was reached about adolescent health measurement globally, facilitated by the Global Action for the Measurement of Adolescent health (GAMA) Advisory Group - a collaborative effort between WHO, UNAIDS, UNESCO, UNFPA, UNICEF, UN Women, the World Bank Group, and the World Food Programme (WFP) (see section 6.X) [3] .

1.1 Understanding adolescent well-being

The UN H6+ Technical Working Group on Adolescent Health and Well-being stated that adolescent well-being is achieved when "*Adolescents have the support, confidence and resources to thrive in contexts of secure and healthy relationships, realising their full potential and rights.*" REF #2. It includes five interrelated domains (Figure XYZ).

Figure XYZ: The domains of adolescent well-being



The adolescent well-being framework sets the agenda for what matters for adolescents focusing not only on their survival, but in addition support for them to thrive , and to empower them with the tools to transform themselves and society at large [30]. The framework recognizes that health and nutrition is one of five important domains of adolescent well-being. This definition and conceptual framework of adolescent well-being was developed by the UN H6+ Technical Working Group on Adolescent Health and Well-being and was validated by eight regional-level workshops with adolescents and young people. It has implications for programmes that should aim to increase adolescents' resilience and protective factors across domains (e.g. a positive school environment and parents who provide structure and boundaries), rather than focusing mostly on reduction of risk factors (e.g. tobacco and alcohol use). A further eight multi-stakeholder consultations were held in 2021 to consider the framework´s implications for programming across the multiple domains of adolescent well-being [5, 65]. As we have shown in the logical framework for programming, the definition of programme' impacts therefore should be extended to include all the dimensions of well-being (Figure XYZ).

1.2 Why invest in adolescent health and well-being?

There are at least five arguments why investing in adolescent health and well-being is critical:

1. **Adolescents have the fundamental right to health yet bear a substantial proportion of the global disease and injury burden**

Adolescents, like all people, have fundamental rights to life, development, the highest achievable standards of health and access to health services. There rights are enshrined in global human rights instruments, to which almost all countries are signatories [66-68].

Yet adolescents suffer a high burden of disease from preventable causes, mainly related to unintentional injuries; violence; sexual and reproductive health, including HIV; communicable diseases such as acute respiratory infections and diarrhoeal diseases; non-communicable diseases, poor nutrition and lack of physical activity; mental health, substance use and self-harm [69-71]. Moreover, inequalities in the abilities of adolescents to achieve their full potential were exacerbated during the COVID-19 pandemic and global, regional and national stakeholders feel that a rights-based approach to programmes should be reinforced to mitigate the impact of the pandemic on the life of adolescents and young people and towards ensuring that the most vulnerable and disadvantaged are not left further behind [5].

2. **Investments in adolescent health bring a triple dividend of health and well-being benefits [72]:**

• *For adolescents now* – adolescent health is immediately benefited by promotion of health literacy [73] and positive behaviours (e.g. good sleep habits and constructive forms of risk-taking, such as sport) and by prevention, early detection, treatment and rehabilitation of problems (e.g. substance use disorders, mental disorders, injuries and sexually transmitted infections) [74]. For example, investing in preventing NCDs among adolescents has been estimated to reduce mortality by almost 10% even within the short-term [74].

• *For adolescents' future lives* – to help set a pattern of healthy lifestyles and reduce morbidity and premature mortality later in adulthood, support is needed to establish healthy behaviours in adolescence (e.g. diet, physical activity and, if sexually active, use of condoms and other contraceptives) and reduce harmful exposures, conditions and behaviours (e.g. air pollution, obesity, alcohol, drug and tobacco use). For example, investing in preventing NCDs among adolescents has been estimated to translate into 21 million avoided premature deaths from NCDs over the next 50 years [74].

• *For the next generation* – the health of future offspring can be protected by promoting emotional well-being and healthy practices in adolescence (e.g. managing and resolving conflicts, appropriate vaccinations and good nutrition) and preventing risk factors and burdens (e.g. lead or mercury exposure, interpersonal violence, female genital mutilation, substance use, early pregnancy and pregnancies in close succession).

3. Investments in adolescent well-being bring substantial economic benefits and enhance human and social capital [8, 72].

Sustaining earlier investments: Human development occurs intensively throughout the first two decades of life, and for a person to achieve his or her full potential, early investments in maternal and child health programmes, including rehabilitation, need to be sustained and amplified through investing in adolescent health and well-being [8, 75]. Investing in adolescent health maintains and reinforces successful health interventions that children benefited from in early childhood, and rectifies earlier health deficits [8, 76].

High cost-effectiveness and benefit-cost ratios from investing in adolescent health and well-being: Many programmes to improve adolescent well-being have a cost–benefit ratio of 5–10 (i.e. an investment of US$ 1 yields a return of US$ 5–10), with some having a cost–benefit ratio of well over 10 [77]. Addressing the needs in early adolescence through a school-based approach, and addressing the needs of older adolescents through a mixed community and media and health systems approach offer high cost-effectiveness and benefit-cost ratios [8, 78].

The smartest of all are the coordinated investments in health and education that bring mutually reinforcing benefits [8].

Additional benefits from greater productivity and enhanced human and social capital. The returns on investments in nutrition, health care, quality education, and skills are enhanced through greater productivity and enhanced human capital [79, 80], not least because adolescents comprise a substantial proportion of a country's population (16% of the world´s population and 23% of the population of low income countries) and, if empowered, offer opportunities for economic growth and social development [5]. For example, investing in a comprehensive package of interventions to prevent NCDs during adolescents will translate into about US$400 billion in cumulative economic benefits [74]. (REF) Investing in adolescents' connectedness and agency further potentiate the effects and increase social capital.

In low- and middle-income countries (LMICs), investment in adolescent health and well-being is likely to result in declines in fertility rates, which can contribute to accelerated economic growth. With fewer births each

year, a country's young dependent population grows smaller in relation to the working-age population (aged 15–64 years), creating a window of opportunity for rapid economic growth [81, 82]. In high-income countries (HICs) as well, investment in the health and well-being of low-income adolescents, including those who have high birth rates and are more exposed to risk factors for ill-health, can help to break the transmission of poverty and disadvantage across generations [83, 84].

4. Adolescents are not simply old children or young adults; they have particular needs

Simply investing in population health without accounting for adolescents' special needs is not sufficient. Adolescence is one of the most rapidly changing, formative phases of human development [85]. Health and well-being determinants take particular forms and have unique impacts in adolescence (Figure 2), therefore the solutions need to be adolescent sensitive.

5. The 2030 Agenda for Sustainable Development cannot be achieved without investment in adolescent health and well-being.

Investment in adolescent health and well-being is essential to achieve the 17 SDGs and their 169 targets. Some SDGs, such as those addressing health and food security, broadly encompass the health and well-being of adolescents within their targets for broader populations. Others specifically address adolescents, as summarized in Box 1.1.

Box 1.1. **Sustainable Development Goal targets that specifically address adolescents**

Sustainable Development Goal targets that specifically address adolescents

- Reduce by at least half the proportion of children living in poverty in all its dimensions according to national definitions (Target 1.2).
- Address the nutritional needs of adolescent girls (Target 2.2).
- Ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes (Target 4.1).
- Substantially increase the number of youths who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship (Target 4.4).
- Eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for children in vulnerable situations (Target 4.5).
- Ensure that all youth achieve literacy and numeracy (Target 4.6).
- Build and upgrade education facilities that are child sensitive and provide safe, non-violent, inclusive and effective learning environments for all (Target 4.a).
- End all forms of discrimination against all girls everywhere (Target 5.1).
- Eliminate all forms of violence against all girls in the public and private spheres, including trafficking and sexual and other types of exploitation (Target 5.2).

- Eliminate all harmful practices, such as child, early and forced marriage and female genital mutilation (Target 5.3).
- Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of girls at all levels (Target 5.c).
- Achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of girls (Target 6.2).
- Achieve full and productive employment and decent work for all young people, and equal pay for work of equal value (Target 8.5).
- By 2020, substantially reduce the proportion of youth not in employment, education or training (Target 8.6).
- Take immediate and effective measures to eradicate forced labour, end modern slavery and human trafficking and secure the prohibition and elimination of the worst forms of child labour, including recruitment and use of child soldiers, and by 2025 end child labour in all its forms (Target 8.7).
- By 2020, develop and operationalize a global strategy for youth employment and implement the Global Jobs Pact of the International Labour Organization (Target 8.b)
- Provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of children (Target 11.2).
- Provide universal access to safe, inclusive and accessible green and public spaces, in particular for children (Target 11.7).
- Promote mechanisms for raising capacity for effective climate change-related planning and management in least-developed countries and small island developing states, including focusing on youth (Target 13.b).
- End abuse, exploitation, trafficking and all forms of violence against and torture of children (Target 16.2).

1.3 COVID-19, other contemporary threats to adolescent well-being, and opportunities

Adolescents today are healthier than decades ago and have more opportunities to develop their full potential. However, the scale and scope of the global threats to their well-being, including conflicts, climate crises, and other humanitarian emergencies, all compounded by COVID-19, now put decades of progress at grave risk [86].

1.3.1 The COVID-19 pandemic

The COVID-19 pandemic has exposed social inequalities and highlighted the ecological, political, commercial, digital and social determinants of health and health inequities, within and between social groups and nations. Adolescents have experienced lower COVID-19 morbidity and mortality than adults [87], but have been disproportionately affected by public health and social measures as described below [88].

- **School closures have severly dispupted education and the digital divide put at further disadvantage millions of adolescents** with limited access to remote learning opportunities such as those living in rural areas, those with disabilities, those in conflict and post-conflict settings, refugees, the displaced, those from minority communities, and from poor families. Millions of learners are at risk of not ever catching up on months of education disrupted or even of not returning to school, and those affected have been estimated to incur a US$10 trillion loss in lifetime earnings [89]. See case study XYZ from Colombia on the disruption of education for most vulnerable during the lock-down.

- **Loss of school related safety nets, benefits and services.** Adolescents have been missing health and well-being activities offered as part of routine education programs such as physical activity, school meals, school-based or school-linked health services, deworming, water, sanitation and hygiene (WASH) and other services targeted to children with disabilities or those with specific needs such as learning support, speech therapy, counselling, behavioral support and social skills training [90, 91]. See case study XYZ from South Africa on efforts to restore school meals and nutrition services during the pandemic.
- **The risk of violence against children in their homes, communities and online has increased**, exacerbated by the compromised ability of child protection systems to promptly detect and respond to cases of violence during lockdowns [92].
- **An increase in mental health problems and addictive behaviours** (gaming) was also reported during COVID-19 [93]. Estimates have shown that in the first year of the COVID-19 pandemic the proportion of youth experiencing clinically elevated depression and anxiety symptoms have doubled comparing to prepandemic levels [94].
- **The risk of poor sexual and reproductive health increased.** Mediated by an increased risk of sexual violence during social isolation, and lost of livelihoods, adolescent pregnancy and child marriage increased during the pandemic [92, 95], all of which increase the probability of missing further education and of poor pregnancy outcomes. The domestic abuse and poor sexual and reproductive health outcomes disproportionately affected females than males exacerbating the gender divide [96].
- **Declining immunization coverage and TB testing.** Routine immunization services have also been negatively affected as a result of the pandemic response, thereby exacerbating the potential resurgence of vaccine-preventable diseases such as measles, tetanus, yellow fever, HPV, and others [97] . Add related to TB

- **Decline in physical exercise, food security and nutrition.** Implementation of lockdowns and other public health and social measures led to decreases in physical activity and increases in sedentary behaviours due to changes in work patterns and reduced opportunities for general mobility, and access to fitness facilities. The measures affected food security and nutrition by decreasing affordability of quality food, limiting supply of quality food, and increasing consumption of processed food.
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Case study 1

COVID-19 and the right to education in Colombia

On March 16, 2020, the Colombian government suspended in-person classes due to the national emergency of the COVID-19 pandemic. Later in June, the government provided guidelines for remote classes and sanitary measures within the classrooms.

Public authorities had provided the necessary means for remote classes. However, many parents felt that the public authorities did not uphold their duty to guarantee the access to education of their children during the COVID-19 pandemic, and failed to take adequate measures, such as providing access to internet and computers. They argued that they did not have the financial resources to buy the necessary means for remote classes and that their children were discriminated.

The case against public authorities was brought by parents to Court, on behalf of their children, alleging a violation to their right to education. The Court found that the COVID-19 pandemic had created a serious disruption for the education of children regarding teaching techniques and access, especially in impoverished communities. Likewise, it found that, due to the emergency, authorities had a special duty to reinforce the protection of the right to education in regards to its economic burdens. Since there was no internet connection in many towns and no cellphones nor computers, among other things, authorities had to adapt to the emergency and ensure the right to remote education for children, always considering the best interests of the children.

The Court ordered authorities to devise a plan to correct the shortcomings the pandemic had created in terms of education.

Source: COVID-19 litigation, Open access case law database. https://www.covid19litigation.org/case-index/colombia-constitutional-court-su-0322022-2022-02-03. Accessed December 1st, 2022

1.3.2 Climate change

Effects of climate change such as rising temperatures, severe storms, floods, and droughts are becoming more frequent, posing a serious barrier to the realization of adolescent health, well-being, and human rights [98-100]. Evidence is emerging that climate change is associated in multiple ways with adverse health and well-being outcomes in adolescence [99]:

- Rising temperatures increase the risk of heat-related mortality, adverse birth outcomes, infectious diseases, and respiratory disorders.
- Excessive rainfall, extreme temperatures, and drought are associated with under-nutrition, particularly among young children.
- Higher temperatures, rainfall variability, and air pollution are associated with poorer cognitive ability, lower school enrollment, and reduced grade completion.
- Family functioning worsens (i.e., hostile and anxious parenting, child neglect and violence, low connectedness, parent-child or family conflict) in disaster-affected families.
- Gender-based violence increases during or after extreme climate events.

1.3.3 Armed conflicts and displacements

At least 415 million children under the age of 18 years worldwide were living in conflict-affected areas in 2018 [101], with the number expected to have increased further following recent escalation of conflicts in Afghanistan, Ethiopia, and Ukraine, all exposing millions more families and children to enormous additional physical and mental health risks [102]. By May 2022, more than 100 million people were forcibly displaced worldwide by persecution, conflict, violence, human rights violations or events seriously disturbing public order [103]. This represents a more than 100% increase compared to 2012 when there were 42.7 million forcibly displaced people. At least 40% of the displaced people are children (<18 years) [103]. Children and adolescents are exposed to family separation, physical violence and other violations of their human rights, including sexual abuse and exploitation, military or armed attacks, trafficking, limited access to education, health services, and food [104, 105]. Many suffer from neglect and violence due to parental substance use in humanitarian settings [106]. Section 2 provides more details on the state of health and well-being in humanitarian and fragile settings and section 5 describes corresponding effective national programming options.

1.3.4 Opportunities

The Covid-19 pandemic has increased awareness of adolescent mental health and the importance of school-linked safety nets. It also offered a glimpse of what is possible when the global community comes together in solidarity and makes investments in health a global political priority [86]. This offers an opportunity to invest long-term in strengthening the resilience to shocks of systems upon which adolescents´ health and well-being depend:

- reinvigorate global commitments to adolescent health, wellbeing, and children's rights,
- equitably scale up evidence-based interventions delivered through resilient primary health care to achieve universal health coverage [86].
- establish resilient, flexible, and easily adaptable systems for delivering adequate nutrition, social protection, and education [75, 102].

- ensure equitable distribution of the systems and interventions supporting learning, development, health and well-being targeting the digital divide, the gender divide, disability, marginalized and hard-to-reach adolescents in diverse settings [75, 102].

Broad multisectoral anti-poverty policies and programmes should be the foundation of strengthening such resilience, and need to be urgently strengthened to offset the impact of COVID-19 on poverty and to promote the health and development of adolescents, both in the short-and long-term [107].

1.4 What is special about adolescence?

The 1.3 billion adolescents in the world today represent more than one sixth (16%) of the global population [108]. They are extremely diverse, differing age and developmental stage, in culture, nationality, wealth, education, family, geography and many other ways, which can have a great impact on their health and well-being. Nonetheless, across all societies and settings, adolescents share key developmental experiences as they transition from childhood to adulthood which makes adolescence a unique, formative stage of human development. This stage is characterized by rapid physical growth, hormonal changes, sexual development, new and complex emotions, an increase in cognitive and intellectual capacities, moral development and evolving relationships with peers and families [85, 109].

Critically, adolescents are not simply old children or young adults. The range of determinants that influence human health take particular forms and have unique impacts in adolescence [110]. Figure XYZ illustrates how such determinants can influence adolescent health at the individual, interpersonal, community, organizational, environmental, structural and macro levels of an ecological model. Determinants at different levels may come together to cause intersectional discrimination. For example, children with disabilities (individual level determinant) are 27-33% more likely to not attend secondary school (organizational level determinant when schools are not inclusive) [111].

Figure XYZ. Examples of factors at different ecological levels that have unique impacts in adolescence

Individual	Rapid, physical, neurocognitive and psychosocial changes, e.g., hormonal changes and puberty; new and complex sensations and emotions; sexual awareness and gender identity; burst of electrical and physiological brain development; enhanced and evolving cognitive ability; context influenced emotional and impulse control
Interpersonal	Evolving social competence; increased engagement beyond the family; questioning of authority; increasingly autonomous decision-making; heightened significance of peer relationships; formation of romantic relationships
Community	Increasing interest in fairness and justice; influence of community values and norms, e.g., related to gender and age

Organizational	More years in education and training due to the expansion of primary and secondary education; later onset of employment and family formation; more independent involvement in health services while still having limited confidence in navigating health systems which may be ill prepared to serve adolescents' special needs
Environmental	Water and sanitation facilities (e.g., menstruating girls); road infrastructure (e.g., as pedestrians without adult accompaniment); air quality and fire safety (e.g., girls cooking using unsafe stoves); increased vulnerability to lead exposure and e-waste; inadequate legal and policy environment (e.g. in the context of increasingly sophisticated advertising and promotion techniques of unhealthy products)
Macroeconomic and other structural factors [112, 113]	Limited access to practical resources (e.g., finances, transportation); limited representation in decision-making bodies and few opportunities for lobbying; laws and policies to protect health and rights, e.g., sexual and reproductive health Increased vulnerability in humanitarian and fragile settings; Increased vulnerability to some aspects of globalization (e.g., gaming addiction and online bullying due to internet and social media exposure; the transmission of alcohol marketing messages across national borders and jurisdictions, exacerbated by the difficulty to target young adult consumers without exposing cohorts of adolescents under the legal age to the same marketing); Increased vulnerability to the consequences of poverty and food insecurity, climate change, unemployment or precarious employment conditions

1.4.1 Determinants at the individual level

Puberty is one of the most powerful biological determinants of physical, neurological, sexual and emotional well-being during adolescence. It also sets the trajectories for mental health, some forms of cancers, and cardiovascular and metabolic risks over the life course [85]. Therefore, its importance as a window of opportunity for interventions that may affect health throughout life cannot be overestimated [85].

Starting earlier than most recognize, between the ages of six and eight years, it begins with activating the adrenal glands that contribute to the structural and functional development of the brain and associated behaviors in adolescence, and affects the risks for mental health problems and a range of cardio metabolic issues [85]. Followed by the growth spurt, the process of sexual maturation and achievement of reproductive

capacity marks a major change for both boys and girls. However, there is a marked gender dimension to how boys and girls experience puberty. For boys, the shift of puberty is much more explicitly linked to sexual feelings in a positive way, whereas for girls this moment often marks the beginning of conflicting messages about sexuality, virginity, fertility and womanhood [114]. Other differences, such as an increased girls' risk of anxiety and depression, especially in relation to menstrual problems, and increased social aggression and risk-taking in boys, are common [59]. Socially constructed gender differences in how boys and girls experience puberty are also related to cultural taboos and stigma that force girls to sleep or eat away from their families or to miss school while they are menstruating. In many countries, schools do not have toilets that facilitate privacy, cleanliness or proper disposal of menstruation-related products [114].

Early adolescence is also a period when the brain undergoes a tremendous burst of neuro-physiological development [109, 115], with two key processes: significant growth and change in regions of the prefrontal cortex, and improved connectivity between regions of the prefrontal cortex and regions of the limbic system [85, 109]. Changes occur more rapidly in the limbic system (responsible for pleasure seeking, reward processing, emotional response and sleep regulation), with somewhat slower rate in the pre-frontal cortex (responsible for decision-making, organization, impulse control and planning for the future) [109, 115]. This developmentally normal mismatch between intense affective and behavioral reactions and less automatic cognitive ability to integrate executive control, may explain some of the adolescent propensity for exploration, experimentation and risk-taking, resulting in greater vulnerability especially when performing tasks under high demands [85, 116]. However, this also enables adolescents to respond in novel and adaptive ways [85] and increase adolescents' ability to adjust to changing social contexts [115]. It is important to recognize adolescence as a window of opportunity for programmes and policies to design strategies for constructive and positive risk taking, such as engagement in extreme sports, art and other activities that answer adolescents' desire for sensations seeking. Specific learning or training experiences during adolescence (e.g., mindfulness, see BOX XYZ) may support building self-control and other cognitive, affective and social capacities [117, 118].

As adolescents develop, cognitive domains, including learning, reasoning, information processing, and memory, improve [85, 109, 115]. Executive functioning capabilities, which facilitate self-regulation of thoughts, actions, and emotions, continue to develop in parallel with changes in the prefrontal cortex [85]. The evolving nature of the emotional, social and cognitive capacity during adolescence has profound implications for how the policy goals of protection and autonomy are balanced (see section XYZ, Box XYZ on adolescent capacity for autonomous decision making) [119, 120].

"I think getting older is kind of fun, because you get to do new things, and you get to learn new things." Young adolescent boy in the USA

Box **XYZ Mindfulness meditation impacts on the adolescent brain**

Mindfulness meditation impacts on the adolescent brain

Mindfulness meditation often refers to non-judgmental attention to experiences in the present moment such as thoughts, emotions and sensations. Mindfulness involves training attention and self-control, capacities that are crucial for adolescents in school, in future work and in relationships. It has been suggested that mindfulness meditation includes at least three components that interact closely to constitute a process of enhanced self-regulation:

- enhanced attention control,
- improved emotion regulation and
- altered self-awareness.

The latest neuroscientific findings on mindfulness meditation suggest that mindfulness meditation is a low-cost and effective intervention which could induce neuroplasticity that supports building self-control and other cognitive, affective and social capacities in adolescents. These skills can support positive changes in school, work and relationships over the lifespan. One form of mindfulness training called integrative body–mind training (IBMT) has shown positive effects in attention, learning performance, emotion and behaviour. Since IBMT only needs a few hours of practice to benefit students, including adolescents, it is relatively easy to implement within a school system and to fit into a daily curriculum.

While Mindfulness-Based Programmes (MBPs) in children and adolescents show promising results for some outcomes, to realise the potential of MBPs in supporting adolescent mental health a new generation of research is necessary that is designed and adequately powered to answer questions of
what works, for whom and how, as well as considering key contextual and implementation factors for sustained benefits.

Sources: adapted from [121-123]

All of these changes mean that young adolescent girls and boys should have timely access to information, advice, support and protection, and be enabled to make safe, healthy and informed choices as they transition through puberty. Healthy and positive choices should be made available and easy, and health-compromising choices difficult or inaccessible.

1.4.2 Determinants at interpersonal and community levels

At interpersonal and community levels, new social skills and competencies develop during adolescence and family and peer relationships are transformed. Adolescents assign greater weight than adults to social outcomes such as peer acceptance, are less resistant to peer pressure, and peer and family values increasingly diverge [85]. They seek greater independence and responsibility and wish to disengage from parental control while asserting more autonomy over their decisions, emotions and actions. At the same time family remains

an important determinant for a number of outcomes in adolescents including obesity [124], mental health [125], school engagement [126], problematic internet use [127] and other outcomes [128]. As adolescents increasingly move outside of the confines of their families and start taking independent decisions – ranging from whom they spend time with to what food they eat – it is important to build around them safe and supportive environments, so they can explore their creativity and individuality without harms, and by taking constructive forms of risks [115]. Therefore, the immediate environments of families, schools and communities become a powerful determinant of adolescent health and well-being.

In older adolescence, the importance of peer group influence starts to diminish, and more complex and philosophical understandings of ethics, social issues and human rights are developed. Consistent with a growing development of values and concern for their communities, youth are often involved in social and political movements [23, 26, 129-131]. However, opportunities for youth to engage in governance and participate in local and national decision-making processes depend largely on the political, socioeconomic, and cultural contexts where social norms in many parts of the world result in multiple forms of discrimination against youth in general and young women in particular [131].

With the rapid expansion of digital media, interpersonal and social interactions, and the ability of adolescents and youth to unite around a common cause have undergone and continue to undergo profound changes. This has raised questions about the safe and health-promoting way of using internet, social media, mobile phones and other new communication technologies, and how to ensure a safe, inclusive, and empowering digital environment [132].

1.4.3 Determinants at organizational, environmental and structural level

At the organizational level, schools – including primary, secondary, tertiary and vocational institutions – play a vitally important role in promoting and protecting adolescent health. Schools are essential for adolescents to acquire knowledge, socioemotional skills including self-regulation and resilience, and critical thinking skills that provide the foundation for a healthy future. Access to education and safe and supportive school environments have been linked to better health outcomes [6]. School social–emotional environment which fosters equity, including gender equity, by promoting inclusiveness and welcoming diversity, no tolerance of discrimination, bullying, corporal punishment or harassment, is linked to better health and well-being outcomes [133]. Conversely, education systems that do not address discrimination, leave behind vulnerable learners such as those with disabilities who are more likely to have never attended school, or be out of primary or upper-secondary school [111].

The education system is particularly well situated to promoting health and well-being among children and adolescents in poor communities without effective health systems who otherwise might not receive health interventions. There are typically more schools than health facilities in all income settings, and rural and poor areas are significantly more likely to have schools than health centers [134]. In turn, good health is linked to

reduced drop-out rates and greater educational attainment, educational performance, employment and productivity [41].

Health systems also have a crucial influence on adolescent well-being. Adolescents have different healthcare needs than younger children and adults, due to their unique and rapidly evolving physical, sexual, cognitive and emotional development, and these needs should be addressed in a developmentally sensitive manner [135]. Nonetheless, historically most health systems have been focused on services for mothers, younger children and the elderly, and in many countries health systems performance for adolescents is poorer than for other population groups [7].

Determinants functioning at the environmental level can also profoundly affect adolescent health and development [136]. For example, during adolescence, nutrition has a formative role in the timing and pattern of puberty, with consequences for cardiorespiratory fitness, neurodevelopment, immunity, adult height, muscle, and fat mass accrual, as well as risk of non-communicable diseases in later life [137-139]. Much of the environmental burden of disease on adolescents is completely preventable, for example, by improving water and sanitation, limiting pollution and safely disposing of chemical waste [137-139]. The biological environment (e.g., prevalence of malaria or HIV), the food environment, chemical environment (e.g. pollutants such as lead, mercury or other endocrine disruptors) and the physical environment (e.g., roads or water and sanitation infrastructure) can have profound effects on adolescent girls and boys [76, 136, 140]. For instance, the most sensitive window of exposure to endocrine disruptors is during critical periods of human development, such as puberty [136, 140, 141].

The legal and policy environment affects adolescent well-being in many ways, e.g., through taxation, health warnings and restrictions to limit or prohibit harmful exposure to marketing by the tobacco, alcohol, food and beverage and fashion industries [61, 62, 75, 133, 142-144]. Even though adolescents are intensively consuming media, it is not the same as participating in the digital economy, and adolescents and youth growing up in poverty are the least likely of all cohorts to use technology or develop digital skills. The odds worsen for girls or people with a disability [52], and for forcibly displaced [145].

At the macroeconomic level, global economic policies and trade agreements can have impacts on adolescent health [107, 144]. For example, in places with limited availability of low-cost nutrient-dense foods, the diets of adolescent girls are more expensive when compared to boys of the same age, demonstrating their vulnerability [146]. Macroeconomic policies can incentivize adolescents to stay in school, and influence whether there are fulfilling jobs for them to strive for after they leave school. Early-life poverty can have a lasting effect on health and development of adolescents and human capital [61, 107, 142], therefore, anti-poverty policies and programmes should complement specific health and nutrition interventions delivered at an individual level, particularly at a time when COVID-19 continues to disrupt economic, health, and educational gains achieved in the recent past [107].

Youth participation in political processes can be constrained by structural barriers. People under the age of 35 are rarely found in formal political leadership positions. In a third of countries, eligibility for the national parliament starts at 25 years or higher and it is common practice to refer to politicians as 'young' if they are below 35-40 years of age. Youth is not represented adequately in formal political institutions and processes such as parliaments, political parties, elections, and public administrations. The situation is even more difficult for both young women as well as women at mid-level and decision-making/leadership positions [131].

Notably, some determinants affect adolescent health and well-being across multiple ecological levels [11]. For example, gender norms affect adolescents' expectations and their sense of what is acceptable and appropriate at the individual level. At the interpersonal level, they may also influence family decisions about allocation of resources and the relative importance of education for boys and girls. At organizational and structural levels, these norms are reflected in inequalities and restrictions in jobs and education [16, 21, 23, 147]. Health literacy is another example. Although representing the personal knowledge and competencies thus operating at the individual level, health literacy is accumulated through daily activities, social interactions and across generations (thus influenced by interpersonal level factors), and is mediated by the organizational structures and availability of resources that enable adolescents to access, understand, appraise and use information and services in ways that promote and maintain good health and well-being for themselves and those around them [148].

Section 2: The status of health and well-being of the world's adolescents

Key messages

- At least 1.2 billion (over 15%) of the global population are adolescents between the ages of 10 and 19 years.
- Over the last 20 years, mortality rates from all causes have declined among adolescents globally in all regions, with the largest decline in older (15-19 years) adolescent girls. However, progress has been uneven across different regions and adolescent population groups.
- Globally, road injury was the most important cause of death for both younger (10–14-year-olds) and older (15–19-year-olds) adolescent males in 2019. Among younger and older adolescent females this was diarrheal diseases and tuberculosis, respectively. While some of the main causes of death (e.g. maternal conditions) vary by region, other causes including road traffic injury, self-harm and drowning are consistently high across regions.
- Reductions in the non-fatal disease burden among adolescents have been limited over the past 20 years, with some increases in some regions and age groups. The main conditions causing this burden include mental health conditions (depressive and anxiety disorders, childhood behavioral disorders), iron-deficiency anemia, skin diseases and migraine across regions. Conditions such as malaria or drug use disorders are more specific to some regions.
- Globally in 2019, across adolescent sex and age groups, the most important risk factors for mortality and morbidity included iron deficiency, unsafe water source, low birth weight and short gestation, and unsafe sanitation.
- Evidence of the role of protective factors at individual, family and societal levels on adolescents' health and well-being is growing.

Section overview

This section describes the situation of adolescent health and well-being. Sections 2.1, 2.2 and 2.3 begin with an overview of the adolescent mortality and morbidity burden. Sections 2.4 and 2.5 present an overview of risk and protective factors for adolescent health and well-being. Section 2.6 then gives more details about selected outcomes and determinants for adolescent health and well-being. Finally, Section 2.7 details the particular nature of adolescent burdens in humanitarian and fragile settings.

The mortality and morbidity data displayed here are from the WHO Global Health Estimates (GHE) 2019 [149]. Similar to previous reports, mortality and morbidity estimates were generated globally and by WHO regions that were modified to only include low and middle-income countries (LMICs) [150, 151]. A separate group was created for all high-income WHO member states (HICs) globally. The income classifications were based on a country's gross national income per capita in the year 2019 [152]. The relative rankings of cause of death and burden of disease reflect the best of our knowledge at this time given the availability and quality of data on cause of death, and the prevalence and incidence of diseases worldwide. As data quality improves, the estimates will become more robust, and the picture may change for certain regions. In addition to the GHE, other data sources have been used in this section for selected outcomes and determinants for adolescent health and well-being.

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

WHO Region of the Americas, LMICs: Argentina, Belize, Bolivia (Plurinational State of), Brazil, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Saint Lucia, Saint Vincent and the Grenadines, Suriname, Venezuela (Bolivarian Republic of).

WHO Eastern Mediterranean Region, LMICS: Afghanistan, Djibouti, Egypt, Iran (Islamic Republic of), Iraq, Jordan, Lebanon, Libya, Morocco, Pakistan, Somalia, Sudan, Syrian Arabi Republic, Tunisia, Yemen.

WHO European Region, LMICs: Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Georgia, Kazakhstan, Kyrgyzstan, Montenegro, Republic of Moldova, Romania, Russian Federation, Serbia, Tajikistan, The former Yugoslav Republic of Macedonia, Turkey, Turkmenistan, Ukraine, Uzbekistan.

WHO South-East Asia Region, LMICs: Bangladesh, Bhutan, Democratic People's Republic of Korea, India, Indonesia, Maldives, Myanmar, Nepal, Sri Lanka, Thailand, Timor-Leste.

WHO Western Pacific Region, LMICs: Cambodia, China, Fiji, Kiribati, Lao People's Democratic Republic, Malaysia, Micronesia (Federated States of), Mongolia, Papua New Guinea, Philippines, Samoa, Solomon Islands, Tonga, Vanuatu, Viet Nam.

High-income countries: Antigua and Barbuda, Australia, Austria, Bahamas, Bahrain, Barbados, Belgium, Brunei Darussalam, Canada, Chile, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Kuwait, Latvia, Lithuania, Luxembourg, Malta, Netherlands, New Zealand, Norway, Oman, Poland, Portugal, Qatar, Republic of Korea, Saudi Arabia, Seychelles, Singapore, Slovakia, Slovenia, Spain, Sweden, Switzerland, Trinidad and Tobago, United Arabi Emirates, United Kingdom, Unites States of America, Uruguay.

2.1 Overview of the adolescent population, mortality and morbidity burdens

Over 1.2 billion of the global population are adolescents aged 10-19 years. Only about 11% of the world's adolescents live in HICs (Table 1), while about two thirds live in LMICs of the WHO African, South-East Asian and Western Pacific regions.

In 2019, an estimated 0.9 million adolescents died. Approximately two thirds of these deaths happened in LMICs of the WHO African and South-East Asian region. This is reflected in the highest mortality rates (deaths per 100,000 adolescent population) in these regions.

The global non-fatal disease burden among adolescents was 69 million years of healthy life lost due to disability (YLDs) in 2019. YLDs capture morbidity as the amount of time lived in states of less than good health. For example, a YLD rate of 544 per 100,000 adolescent population for a specific condition means that among 100,000 adolescents in a given year, 544 years of healthy life have been lost due to poor health related to this condition. YLD rates from all causes were highest in African LMICs (6,120) and lowest in Western Pacific LMICs (4,211) in 2019 (Table 1).

Table 1. Overview of the adolescent population, mortality and morbidity globally and by modified WHO region, United Nations Population Division 2019 and WHO Global Health Estimates 2019.

	Global	African LMICs	American LMICs	Eastern Mediterranean LMICs	European LMICs	South-East Asian LMICs	Western Pacific LMICs	High-income countries
Adolescent population in millions % of global total)	1,240 (100)	249 (20)	103 (8)	129 (10)	53 (4)	362 (29)	214 (17)	131 (11)
Number of adolescent deaths in thousands (% of global total)	857 (100)	321 (38)	67 (8)	104 (12)	19 (2)	244 (28)	73 (8)	29 (3)
Mortality rate (deaths per 100,000 adolescents)	69	129	65	81	36	67	34	22
Number of adolescent YLDs in millions (% of global total)	69 (100)	15 (22)	6 (8)	8 (11)	3 (4)	21 (30)	9 (13)	8 (11)
YLD rate (YLDs per 100,000 adolescents)	5,538	6,120	5,637	5,919	4,871	5,776	4,211	5,762

2.1.1 Mortality burden

An estimated 0.9 million adolescents aged 10 to 19 years died in 2019. Figure 1 shows estimates of global and regional trends of adolescent all-cause mortality by sex and age from 2000 to 2019. Global adolescent

death rates are estimated to have fallen by approximately 34% since 2000. Older adolescents registered an approximately 10% greater decline than younger adolescents. The largest decline was among the female 15- to 19-year-old age group (38%). The decline in death rates has been mirrored in most of the modified WHO regions with the highest being 51% in European LMICs, and lowest decline being 11% for American LMICs.

Table 2 lists the five leading causes of adolescent death in 2019, at global and regional levels, and by sex and age group. Road injury is the leading cause of death in males of both age groups (9/100 000 population among 10-14-year-old males and 18/100 000 population among 15–19-year-old males), but for females the leading cause of death changes from diarrheal diseases in younger adolescents to tuberculosis for older adolescents. Some causes have a particularly high ranking only among males (e.g., drowning) or females (e.g., maternal conditions), or among younger (e.g., lower respiratory infections) or older adolescents (e.g., interpersonal violence and self-harm).

Some conditions are major causes of death in most regions, e.g., road injury, self-harm and drowning. Some conditions are high-ranking causes of death only in specific modified WHO regions, i.e., meningitis and AIDS in African LMICs; diarrheal diseases and tuberculosis in South-East Asian LMICs; interpersonal violence in HICs and Americas LMICs; diarrheal diseases in Eastern Mediterranean LMICs; congenital anomalies in European LMICs, HICs and Western Pacific LMICs; and leukemia in Western Pacific LMICs.

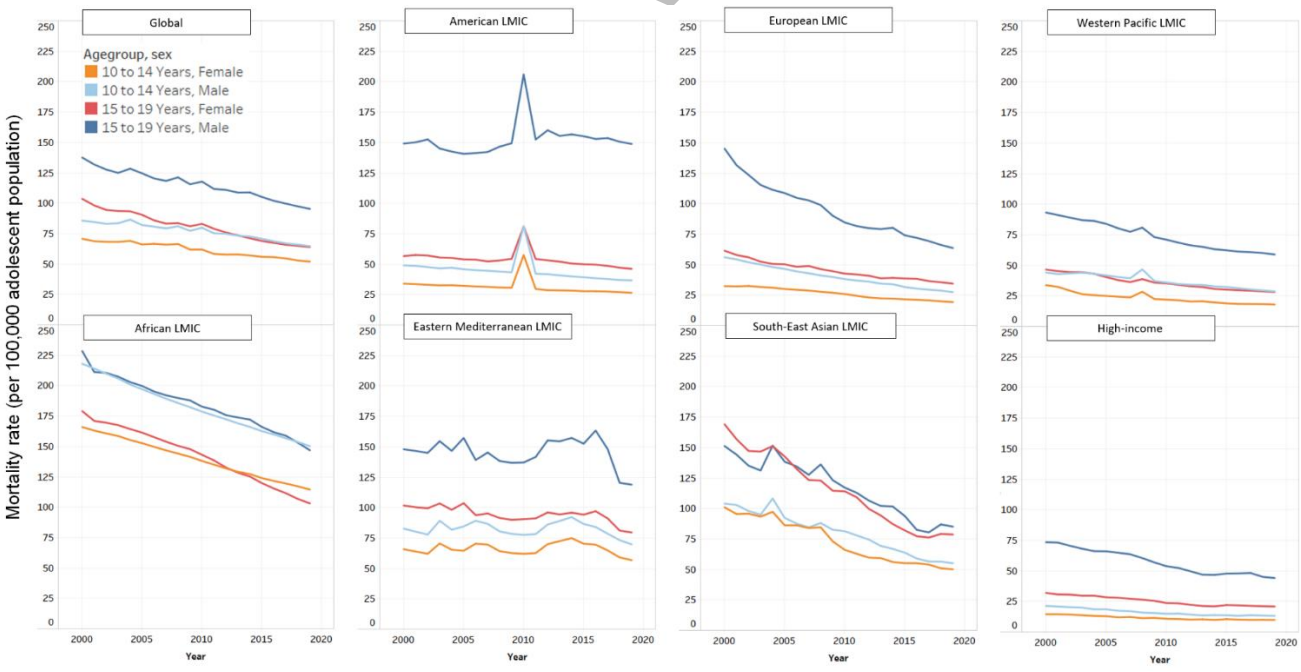


Figure 1. Adolescent all-cause mortality by sex and age, global and by modified WHO region, 2000-2019. WHO Global Health Estimates 2019.

Table 2. Main causes of adolescent mortality by sex, age, and modified WHO region, 2019. WHO Global Health Estimates 2019.

2.1.2 Morbidity burden

The morbidity burden here is expressed in years of healthy life lost due to disability (YLDs), a measure capturing the non-fatal disease burden as the amount of time lived in states of less than good health. For example, a YLD rate of 544 per 100,000 adolescent population for a specific condition means that among 100,000 adolescents in a given year, 544 years of healthy life have been lost due to poor health related to this condition.

Figure 2 shows estimates of global and regional trends of adolescent morbidity presented as YLDs, by sex and age, from 2000 to 2019. Since 2000, global adolescent morbidity rates showed minimal changes across age groups, gender and regions. Morbidity decline was highest in African LMICs and lowest in HICs, where an upward trend was registered. Morbidity is consistently higher in older female adolescents (6,902 per 100,000 in 2019) than all other categories (5,405 per 100,000 for older adolescent males), both at global and regional levels. In 2000, the YLD rate for older female adolescents was 7,078 per 100,000 while that of older male adolescents was 5634 per 100,000. Adolescent morbidity is consistently lowest among the 10 -14-year-old males (4,818 per 100,000 in 2000, and 4,730 per 100000 in 2019).

Table 3 lists the five leading causes of adolescent morbidity at global and regional levels, and by sex and age group. Apart from iron-deficiency anemia, non-communicable diseases account for all YLDs in both age groups

at the global level. The regional picture is similar with HICs, Western pacific LMICs, and American LMICs having only non-communicable diseases as the top 5 causes of morbidity. The only communicable, maternal, perinatal and nutritional conditions -appearing in the top 5 causes of morbidity are iron-deficiency anemia in Africa LMICs, South East Asia LMICs, Eastern Mediterranean LMICs; malaria in Africa LMICs; and diarrheal diseases in European LMICs.

Among the non-communicable diseases, mental and substance use disorders are the most common across all regions, in both age groups and regardless of sex. The most common mental and substance use disorders are depressive disorders, anxiety disorders, childhood behavioural disorders, and idiopathic intellectual disability.

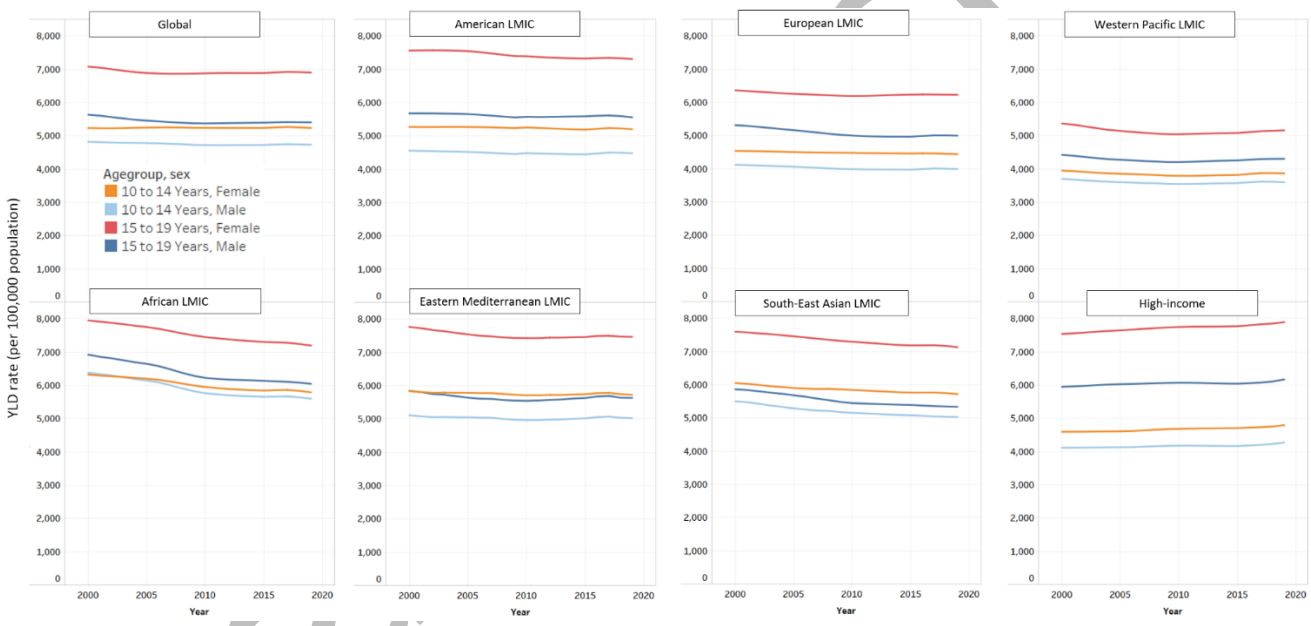


Figure 2. Adolescent morbidity from all causes (expressed as YLDs), by sex and age, global and by modified WHO region, 2000-2019. WHO Global Health Estimates 2019.

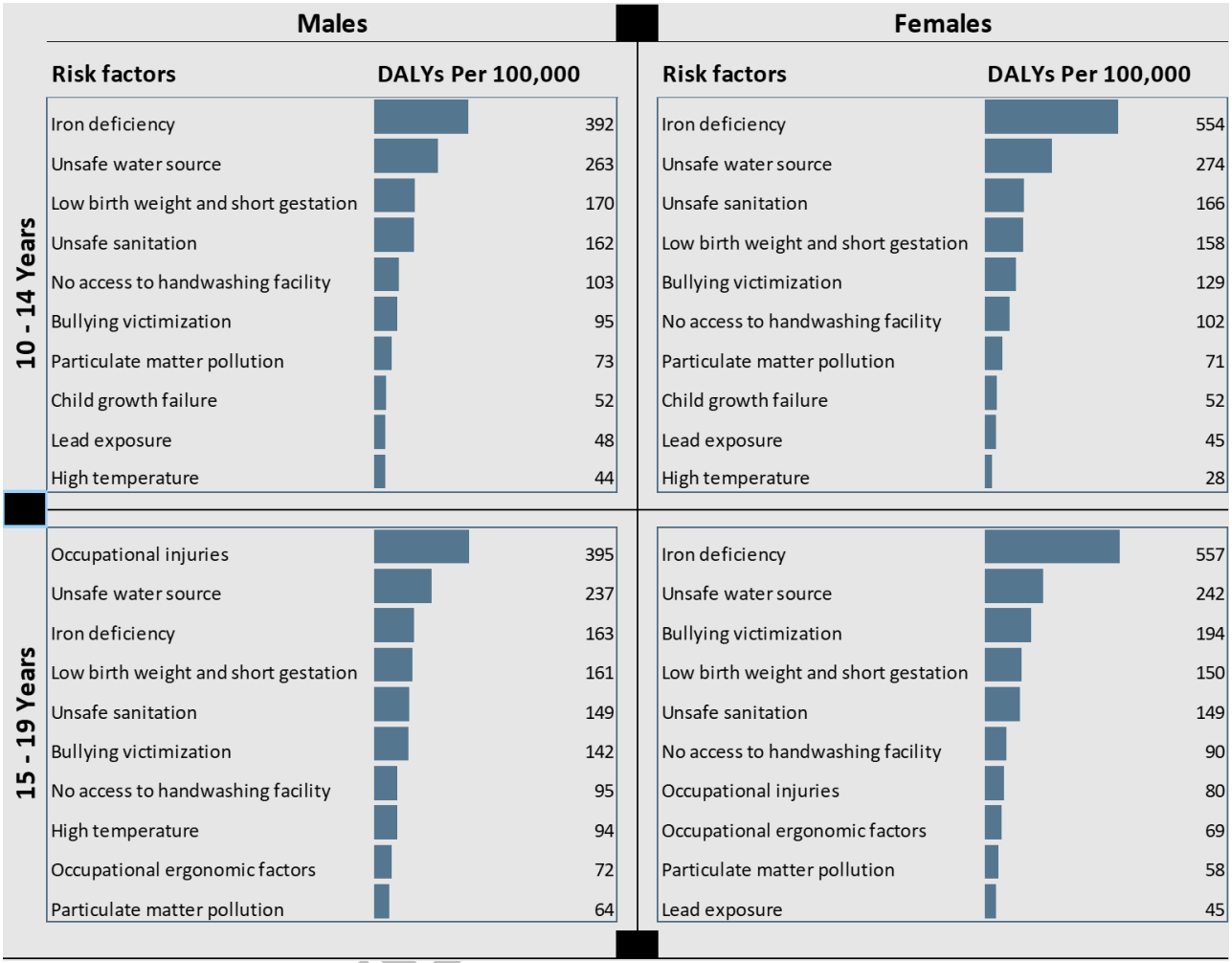
Table 3. Main causes of adolescent morbidity (expressed as YLDs), by sex, age, and modified WHO region, 2019. WHO Global Health Estimates 2019.

Overview of risk factors for adolescent health and well-being

Most of the published literature on the global adolescent health burden focuses on mortality and morbidity [149, 153-156]. Systematic global assessments of risk factors – such as those done for adults – are lacking for adolescents [157].

The Global Burden of Disease (GBD), an effort to measure epidemiological levels and trends worldwide, provides an opportunity to extract global risk factors for different population groups [158]. Table 4 presents results of the 2019 GBD study showing the top ten risk factors associated with adolescent Disability Adjusted Live Years (DALYs). DALYs are a measure of the overall health burden combining mortality and morbidity.

Table 4: Top 10 Global risk factors associated with adolescent DALYs, by sex and age, 2019.



The GBD results show that in 2019, the global leading risk factors for adolescent morbidity and mortality showed little variation by age group or by sex. Iron deficiency, unsafe water source, unsafe sanitation, no access to hand washing facility, low birth weight and short gestation (less than 38 weeks), bullying victimization, and particulate matter pollution were among the top 10 in both age groups and sexes. Some risk factors were in the top 10 list only among younger adolescents such as child growth failure and lead exposure, while others were key among the older age group such as occupational ergonomic factors.

2.2 Overview of protective factors for adolescent health and well-being

Protective factors are conditions, characteristics or behaviors that increase the probability of good health and well-being, minimize effects of stressful life events, increase an individual's ability to avoid hazards, and promote social and emotional competence. Adolescent health and well-being can be improved by enhancing protective factors that build agency and resilience, and that promote other dimensions of positive health and well-being.

Evidence of the role of protective factors at individual, family and societal levels on adolescents' health and well-being is growing. For example, a survey administered to young people from nine Caribbean countries found that connectedness with parents and school and attendance at religious services were associated with fewer health risk behaviors [159]. A review of South African literature identified factors associated with adolescent well-being in relation to family relationships, social resources, religiosity and conservatism, and socio-economic conditions [160]. An analysis of indicators of youth–adult connectedness in two groups of adolescents at high risk for poor health outcomes found that strong, positive relationships with parents and other caring adults protected adolescents from a range of poor health-related outcomes and promoted positive development [161, 162]. Results from the Global Early Adolescent Study showed that school safety was associated with emotional and behavioural outcomes across countries [161].

There is also growing evidence around health literacy being considered an asset for health and well-being with which adolescents can pursue their full health potential and act as informed participants in decision-making about health and development. According to WHO, health literacy represents the personal knowledge and competencies that accumulate through daily activities, social interactions and across generations. Personal knowledge and competencies are mediated by the organizational structures and availability of resources that enable people to access, understand, appraise and use information and services in ways that promote and maintain good health and well-being for themselves and those around them.

In spite of the importance of health literacy, its level among adolescents is considerably low. For example, as a part of the WHO collaborative Health Behaviour in School aged Children (HBSC) survey of 2017/2018, a study on adolescent health literacy levels provided findings from 10 countries in Europe. Data revealed a wide range of variation between countries and within the same country. On the average, low health literacy has been found in about 13.3 % of adolescents (aged 13 and 15 years), while high health literacy was found in about 19.5 % of the same age group. [163] [73].

Finally, there is increasing recognition that sleep has an important role in maintaining health and well-being of adolescents. This includes, for example, the positive impact of good sleep on weight control, mental health, pain, and illness [164, 165]. Although the association between sleep and good health has been well demonstrated [164, 166], and effective treatment is possible [167], epidemiological data on nationally or regional disease burden, risk factors and distribution is limited.

There has been recent progress in defining and measuring positive and protective factors in adolescent development. A new definition and conceptual framework on adolescent well-being has been proposed by the United Nations H6+ Technical Working Group on Adolescent Health and Well-being and partners [30] (Figure XYZ). The conceptual framework consists of five domains: 1. Good health and optimal nutrition; 2. Connectedness, positive values and contribution to society; 3. Safety and a support environment; 4. Learning, competence, education, skills and employability; and 5. Agency and resilience. However, current measurement to track progress in adolescent well-being at national and global levels is inconsistent, and global data, particularly on protective factors for adolescent health and well-being, are lacking [168]. Where data exist,

they often only cover a few countries or are not consistently tracked over time, or only cover limited, specific aspects of adolescent well-being [169]. Work is currently underway to propose a set of priority indicators for adolescent well-being and to develop guidance on how they should be measured and monitored [170].

2.3 Selected outcomes and determinants for adolescent health and well-being

2.3.1 Unintentional injury

Unintentional injuries are injuries that occur without purposeful intent, and the main categories include road injuries, poisonings, falls, drowning, exposure to mechanical forces, natural disasters, and fire, heat and hot substances [149]. Unintentional injuries are the leading cause of death among adolescents.

Road injuries. In 2019, over 100,000 adolescents (10–19 years) died as a result of road injuries [149]. All sex, age and regional adolescent subgroups were affected, but older adolescent boys and young men experienced the greatest burden. Road injury was the leading or second leading cause of adolescent death in all the seven modified WHO regions. Many of those who died were vulnerable road users, namely pedestrians, cyclists or users of motorized two-wheelers.

Drowning is also among the top causes of death among adolescents, in particular younger adolescent boys. More than 30,000 adolescents, over three quarters of them boys, are estimated to have drowned in 2019. South East Asia and Western Pacific LMICs contributed 60% of the global number of adolescent deaths due to drowning. Drowning was among the top five causes of death in all regions except in African LMICs. Of note however is that African LMICs ranked third after South East Asia and Western Pacific LMICs in absolute numbers of adolescent deaths due to drowning, but this was outranked by other disease burdens within the region [171].

Fire, heat and hot substances also make a substantial contribution to the global adolescent disease burden with approximately 6000 deaths reported in 2019. Approximately 50% of the global total number of deaths from fire, heat and hot substances were from African and South-East Asian LMICs [172], often due to open fire cooking or inherently unsafe cookstoves.

2.3.2 Violence

884 Interpersonal violence is the intentional use of physical force or power against another person with a high
885 likelihood of its resulting in injury, death, psychological harm, mal-development or deprivation [173]. Violence
886 during adolescence can have severe short- and long-term physical, sexual and mental health consequences.
887 It increases the risks of injury, disabilities and gastro-intestinal disorders, HIV and other sexually transmitted
888 infections, post-traumatic stress, anxiety, depression, externalizing symptoms, eating disorders, problems with
889 relationships, sleep disorders, self-harm, and suicidal thoughts, poor school performance and dropout, early
890 pregnancy, reproductive health problems, and communicable and non-communicable diseases.

891 Interpersonal violence is among the leading causes of death in adolescents and young people globally. Its
892 prominence varies substantially by world region with 40% of reported deaths in American LMICs and 30% in
893 African LMICs. It causes nearly a third of all adolescent male deaths in LMICs in the WHO Region of the
894 Americas.

895 Child and adolescent maltreatment as one form of violence is widespread but often hidden. Nearly a quarter
896 of adults suffered physical abuse as a child or adolescent, 36% experienced emotional abuse and 16%
897 experienced neglect. Overall, 18% of girls and 8% of boys have experienced some form of sexual abuse [174-
898 177]. Child and adolescent maltreatment can also overlap with other forms of violence against children and
899 intimate partner violence, for example in the context of child marriage.

900 A 2019 UNESCO report found that 32% of students reported having been bullied by their peers at school at
901 least once in the last month. The proportion of bullying varies by region ranging from 22.8% of children being
902 victimised in Central America, through 25.0% and 31.7% in Europe and North America, respectively, to 48.2%
903 in sub-Saharan Africa [178].

904 Young persons with disabilities under the age of 18 are almost four times more likely than are their peers
905 without disabilities to be victims of abuse, with young persons with intellectual disabilities, especially girls, at
906 greatest risk [179]. Children and adolescents with disabilities are 32% more likely to experience severe
907 physical punishment at home, compared to those without disabilities [111].Children and adolescents with
908 disabilities also experience significantly higher rates of bullying than children without disabilities, with evidence
909 that 37% of poorer mental health among adolescents with disabilities is explained by exposure to peer-bullying
910 [111, 180].

911 Collective violence refers to the instrumental use of violence by members of a group against another group,
912 to achieve political, economic or social objectives [173]. It includes coups, rebellions, revolutions, terrorism,
913 and war. Legal intervention refers to injuries inflicted by law-enforcing agents while arresting lawbreakers,
914 suppressing disturbances, maintaining order, and taking other legal action. Collective violence and legal
915 intervention are major concerns in specific regions and in localized humanitarian and fragile settings. In 2019,
916 collective violence and legal intervention combined were among the top 5 causes of adolescent death in
917 Eastern Mediterranean LMICs which recorded 4,600 deaths accounting for 62% of the global cause specific

mortality (Table 2). The overall global burden has declined compared to 2015 when the Eastern Mediterranean LMICs recorded 27,000 adolescent deaths due to collective violence and legal intervention.

2.3.3 Sexual and reproductive health, HIV and other sexually transmitted infections

HIV

In 2021, at least 1.7 million adolescents aged 10-19 years were living with HIV, with adolescent girls constituting 57% of the total estimate. Further a total of 160,000 of adolescents were newly infected with HIV, with girls constituting approximately 75% of the total newly infected cases. Multiple factors, including age-disparate sex, low condom use, sexual violence and coercion, gender norms and early sexual debut, contribute to the disproportionate risk of females acquiring HIV. In the same year, the estimated number of aids-related deaths was 29,000. East and Southern Africa recorded the highest number of aids-related deaths among adolescents aged 10-19 years in 2021 (17,000 cases) [181]. Stigma, discrimination, punitive laws and policies, violence and entrenched societal and gender inequalities continue to hinder access to care for adolescents living with and at risk of HIV.

Other sexually transmitted infections

The incidence of other sexually transmitted infections (STIs) among adolescents was 7,089 per 100,000 population in 2019, with the largest age group-specific incidence being among young adolescents aged 10-14 years [182]. For multiple reasons, sexually active adolescents have a particularly high risk of acquiring an STI compared to other age groups. These include increased exposure, biological susceptibility to infection and relatively poor access to and/or use of health services [183]. For example, the peak time for acquiring infection with either human papillomavirus (HPV) or herpes simplex virus-2 (HSV-2) for both males and females is shortly after a person first becomes sexually active, which generally happens in adolescence [184-186]. Based on a 2010 meta-analysis, the global HPV prevalence (all types) among adult women with normal cytological findings was estimated to be 12% detected in *cervical specimens*. The highest prevalence was in sub-Saharan Africa (24%); Latin America and the Caribbean (16%), Eastern Europe (14%), and South-Eastern Asia (14%) [187].

Adolescent birth rate

Globally, adolescent birth rates (ABR) have decreased from 65 births per 1,000 women in 2000 to 43 births per 1,000 women in 2021. However, rates of change have been uneven in different regions of the world with the sharpest decline in Southern Asia, and slower declines in Latin America and the Caribbean, and sub-Saharan Africa. This decrease is reflected in a similar decline in maternal mortality rates among girls aged 15–19 years [185].

While the estimated global ABR has declined, the actual number of childbirths to adolescents continues to be high. Approximately 12 million girls aged 15–19 years and at least 777 000 girls under 15 years give birth each year in LMICs. The largest numbers of estimated births in 2021 occurred in sub-Saharan Africa, with 6,114,000 births among 15-19 year olds, and 332,000 births among adolescents aged 10-14 years [185].

Child marriage

Child marriage places girls at increased risk of pregnancy because girls who are married very early typically have limited autonomy to influence decision-making about delaying child-bearing and contraceptive use [188]. In 2021, the estimated global number of child brides was 650 million [189]. In many places girls choose to become pregnant because they have limited educational and employment prospects. Often in such societies, motherhood – within or outside marriage/union - is valued, and marriage or union and childbearing may be the best of the limited options available to adolescent girls [189].

Contraception, unintended pregnancies and abortion

Contraceptives are not easily accessible to adolescents in many places. Even when adolescents can obtain contraceptives, they may lack the agency or the resources to pay for them, knowledge on where to obtain them and how to correctly use them. They may face stigma when trying to obtain contraceptives. Further, they are often at higher risk of discontinuing use due to side effects, and due to changing life circumstances and reproductive intentions [190]. Restrictive laws and policies regarding the provision of contraceptives based on age or marital status pose an important barrier to the provision and uptake of contraceptives among adolescents. This is often combined with health worker bias and/or lack of willingness to acknowledge adolescents' sexual health needs.

In 2019, an estimated 21 million adolescents aged 15-19 years in LMICs had pregnancies, of which approximately 50% were unintended. Between 2.2 – 4 million (at least 55%) of these unintended pregnancies ended in abortions, which are often unsafe in LMICs [191]. This results in adolescent girls from LMICs suffering from a significant and disproportionate share of deaths and morbidity from unsafe abortion practices, when compared to adult women. Estimates suggest that 14% of all unsafe abortions in developing countries involve adolescent girls aged 15–19 years [192], while globally 11% of all births take place in this age group [193]. Of these unsafe adolescent abortions in developing countries, Africa accounts for 26%, while Latin America and the Caribbean combined account for a further 15% [192].

Complications from pregnancy and childbirth

Complications from pregnancy and childbirth are among the leading causes of death for girls aged 15–19 years globally. Maternal conditions include haemorrhage, sepsis, hypertensive disorders, obstructed labour, complications of abortion, indirect maternal deaths, late maternal deaths, and maternal deaths aggravated by AIDS, tuberculosis and other infections or non-communicable diseases. Maternal conditions were the second leading cause of death in this group in 2019, causing 7 deaths per 100,000 (Table 1). The rate of maternal mortality among 15- to 19-year-old girls was very high among African LMICs (20 per 100,000), followed by

the Eastern Mediterranean, South-East Asian and Americas LMICs (9, 4, and 3 deaths per 100,000 population respectively). [192] [193-195]

Gender-based violence

Many adolescent girls experience gender-based violence, i.e., violence by an intimate partner or family member; sexual violence; trafficking; acid throwing; female genital mutilation; child, early and forced marriage; and sexual harassment in schools, workplaces, public places and, increasingly, online through the internet or social media [196]. Child sexual abuse increases the risk of unintended pregnancies and the consequences of gender-based violence can last a lifetime. Sexual violence can occur at any age, but is believed to have highest prevalence soon after the onset of puberty [197]. One in 10 girls (120 million) under age 20 has been a victim of sexual violence [2]. Estimates suggest that in 2020, at least 1 in 8 of the world's children had been sexually abused before reaching the age of 18, and 1 in 20 girls aged 15-19 years had experienced forced sex during their lifetime. Both sexual violence and intimate partner violence are mainly perpetrated by men and boys against girls and women, but boys and men may, though less commonly, also be victims [198]. Globally, the lifetime prevalence of sexual abuse of girls in childhood is estimated to be 18%, while for boys it is estimated to be 8% [199]. Evidence also indicates that children with disabilities have a nearly three-fold increased risk of sexual violence compared to non-disabled peers [200], with heightened risk among girls with disabilities during adolescence [201]. Adolescent girls with disabilities may also be subjected to forced sterilization, contraception and abortion at the request of family members and health professionals. These procedures are often legitimized through claims of "medical necessity" or "best interests", but are considered acts of violence in human rights frameworks. Girls with intellectual disabilities, psychosocial disabilities and / or living in residential institutions are most risk of this form of violence [201-206].

Female genital mutilation

Female genital mutilation (FGM) comprises procedures to remove external genitalia partially or totally, or otherwise to injure the female genital organs for nonmedical reasons [207]. No form of FGM has health benefits. On the contrary, the removal of or damage to healthy genital tissue interferes with the natural functioning of the body and may cause several immediate and long-term health consequences [208]. FGM is mostly carried out on girls between the ages of 0 and 15 years. The practice is prevalent in 30 countries in Africa and in several countries in Asia and the Middle East, but now is also present across the globe due to international migration. In Africa, it is estimated that 12 million girls between the ages of 10 and 14 years have experienced health complications related to FGM, most notably in Ethiopia, Kenya, Nigeria and Uganda [208, 209].

2.3.4 Communicable diseases

Five of the top 10 leading causes of death among adolescents are communicable diseases (Figure 3). Apart from HIV, the other five are diarrheal diseases, tuberculosis, lower respiratory infections, and meningitis. These four diseases accounted for 200,000 deaths among adolescents in 2019 with individual disease death rate ranging from 2 per 100,000 for meningitis, to 6 per 100,000 for diarrheal diseases.

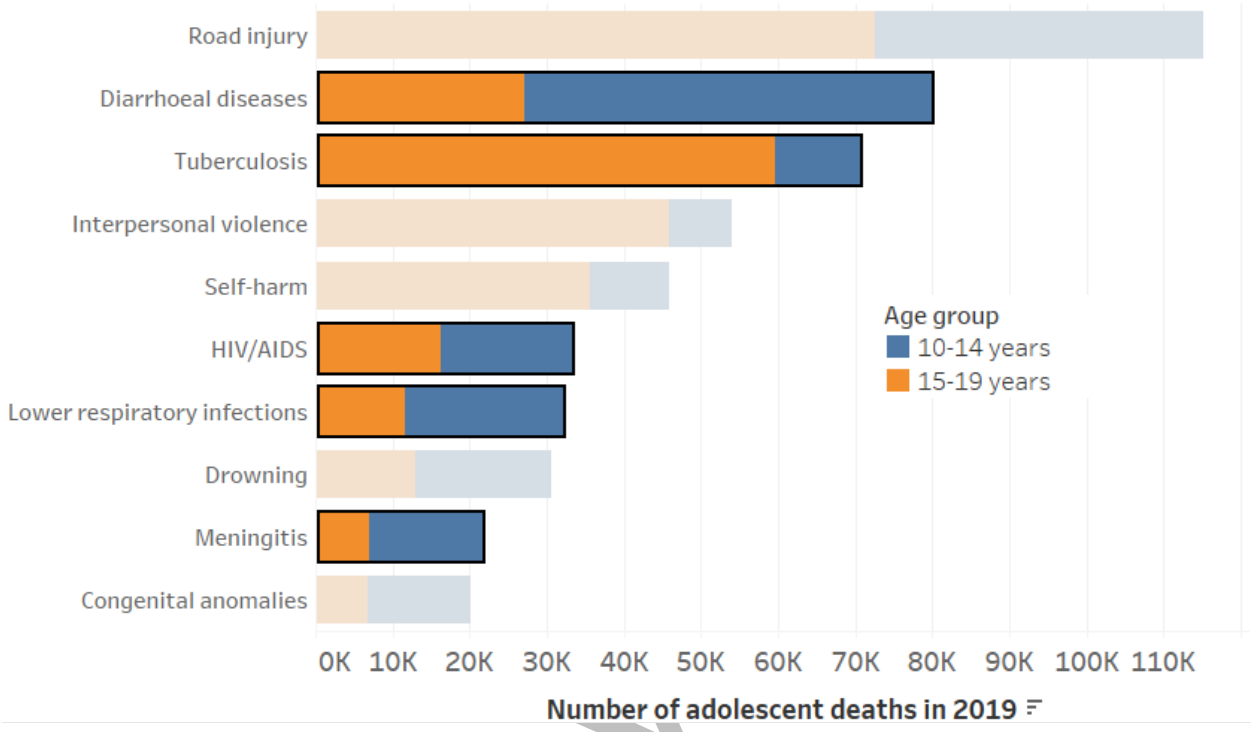


Figure 3: Communicable diseases among the top 10 causes of adolescent deaths in 2019

Diarrheal diseases

Diarrheal diseases are mainly caused by infections which have a fecal-oral transmission route – the disease organisms are commonly ingested through contaminated food or water. They are a particularly important cause of death in young adolescents. Globally, diarrheal diseases ranked first and second in 2019 as a cause of death among young adolescent girls and boys respectively, and ranked fifth among both sexes for the 15- to 19-year-old group. In 2019, diarrheal diseases had the greatest impact on adolescent health in African, South-East Asian, and Western Pacific LMICs than all other regions.

Lower respiratory infections

Lower respiratory infections, such as influenza, pneumococcal pneumonia and Haemophilus influenza type B, were a major cause of adolescent death both globally and in most of the modified WHO regions in 2019. Lower respiratory infections were estimated to be a particularly high cause of death in young adolescents who accounted for two thirds of the approximately 32,000 associated deaths recorded globally in 2019.

Tuberculosis

Each year, approximately 1.8 million adolescents and young adults (10-24 years) develop TB. An estimated 71,000 adolescents (aged 10-19) without HIV infection died of TB in 2019 [210]. TB was the third leading cause of death in adolescents with overall rate of 6 per 100,000 population. The death rate was higher among older adolescents than younger adolescents. It was the top cause of deaths among adolescent girls aged 15 to 19 and the third leading cause among boys of the same age group. At regional level, TB was in the top five cause of death for at least one age group in African, South-East Asian, Western Pacific, and Eastern Mediterranean LMICs corresponding to the high incidence and prevalence in these areas.

Risk factors to develop TB include undernutrition, HIV infection, alcohol use, smoking and diabetes. However, there is considerable variation among countries in the relative contribution of the five factors, and thus also variation in which of these factors need to be prioritized as part of national efforts to reduce the burden of TB. Addressing broader determinants of the TB epidemic requires multisectoral action and accountability [211].

Meningitis

Meningitis was the eighth leading cause of global adolescent death among adolescents in 2019, with an overall burden of 22,000 deaths. Younger adolescents accounted for approximately 70% of all the deaths due to meningitis but there was no difference by sex. Approximately 70% of all meningitis deaths among adolescents in 2019 occurred in African LMICs, the remaining 30% was mainly from South East Asian, Western Pacific and East Mediterranean LMICs. Meningococcal meningitis cases occur throughout the world. However, large recurring epidemics constitute an enormous public health burden in the 26 African countries within the so-called Meningitis Belt that spans Africa from Mauritania, Senegal, Gambia and Guinea-Bissau in the west to Sudan, Eritrea, Ethiopia, Kenya and the United Republic of Tanzania in the east.

COVID-19

Although experiencing much lower direct morbidity or mortality from COVID-19 [212], adolescents have been severely affected by the pandemic response measures including school closures, lockdowns, mobility limitations and widespread service disruptions [213]. As described in section 1, the pandemic has widened existing gender and age inequalities among adolescents, and has led to increases in age- and gender-based violence . The inequalities, the violence, and economic challenges faced by adolescents due to COVID-19 and associated pandemic management measures have affected their physical and mental wellbeing [88, 214].

2.3.5 Non-communicable diseases (NCDs)

Non-communicable diseases (NCDs) are non-transmissible diseases of often long duration, such as mental health conditions (described separately below), cancers, skin disease, migraine, asthma, stroke, heart disease, diabetes, uncorrected refractive error, hearing loss and oral diseases. Many of the top 10 causes of YLDs among the adolescent sex- and age groups are NCDs, namely: anxiety disorders, childhood behavioral

disorders, depressive disorders, migraine, back and neck pain, uncorrected refractive errors, hearing loss, and idiopathic intellectual impairments. Most of these NCDs are related to mental health, which is discussed in the next subsection.

Cancers

Leukemia caused 15,000 adolescents' deaths globally in 2019 and was the 13th leading cause of death among adolescents. Leukemia was among the top five causes of death in sex and age disaggregated data presented in Table 1 for High Income countries and in the LMICs of the Western Pacific, American, and European regions.

Skin diseases

Skin diseases, including dermatitis, psoriasis, scabies, fungal and viral skin diseases and acne vulgaris, were estimated to be the sixth leading cause of YLD among adolescents globally. Skin diseases were the top five causes of YLD for both younger and older adolescents, of both sexes in almost all LMIC modified WHO regions. Acne is the most prevalent skin disease in adolescent populations and is nearly universal; it can range from mild to severe forms and can result in emotional distress and physical scarring [215, 216].

Migraine

Migraine is a neurological disorder characterized by recurrent headaches caused by the activation of a mechanism deep in the brain that leads to release of pain-producing inflammatory substances around the nerves and blood vessels of the head [217]. In 2019, migraine was the fifth leading cause of morbidity among adolescents (338 YLD rate per 100,000 population). At regional level, migraine was consistently within the top five causes of YLDs among the age and sex disaggregated data in Table 2. Females had a YLD rate twice that of males.

Asthma

Asthma is a chronic respiratory disease, commonly affecting children and adolescents. Asthma ranked 12th for YLDs among adolescents globally in 2019. Among young adolescent boys, asthma was the second leading cause of YLDs in high-income countries and the third in American LMICs. The Global Asthma Network recently reported that worldwide, one in twenty school-aged children have severe asthma symptoms. Asthma diagnosis and treatment can be challenging, in countries of all income classes. In LMICs, under diagnosis and inappropriate treatment frequently lead to uncontrolled asthma symptoms [218]. Access to diagnostic tools and inhaled medicines, particularly inhaled corticosteroids, remains a challenge in many countries [218-220] In the years to come, the global climate crisis will likely contribute to asthma among adolescents becoming an even greater problem, including through higher pollen levels, longer pollen seasons, worsening air quality and increasing thunderstorms all increasing the risk of actue asthma attacks [99].

Congenital anomalies

Congenital anomalies such as neural tube defects (e.g., spina bifida, orofacial clefts), heart anomalies, and Down's syndrome generally have their largest effects in infants and younger children, but they also have a major impact on adolescent health [221]. In 2019, congenital anomalies caused 20,000 deaths among adolescents and were the tenth leading cause of death, with an average rate of 2 deaths per 100,000 adolescents. Congenital anomalies are also associated with significant morbidity among adolescents. In 2019, congenital anomalies ranked 16th on the list of top causes of morbidity accounting for 1.1 million YLDs. The morbidity and mortality were distributed across all regions but the highest burden was in African and South East Asian LMICs.

Sensory impairments

Sensory impairments, especially impairments in vision or hearing [222-225], if unaddressed, have a significant impact on children and adolescents, including difficulties in communication, classroom learning, social functioning, cognitive abilities, and quality of life [226-228]. Myopia affects an estimated 312 million children and adolescents under 19 years globally [229], making uncorrected myopia the leading cause of vision impairment and blindness among child populations. The prevalence of hearing loss in school-age children and adolescents ranges from 0.88%-46.7% [230]. Exposure to loud sounds and noises, especially in recreational settings, is a common cause for hearing loss in this age group. In the United States, for example, an estimated 12.5% population between 6-19 years old have permanent hearing damage due to noise exposure [231]. WHO estimates that globally, over one billion young people are at risk of avoidable hearing loss due to unsafe listening through headphones/earphones and in entertainment venues such as discos and clubs [232].

Oral health

It is also important to note that many risk factors common to NCDs are experienced by adolescents and may not translate into high morbidity until later in life [233, 234]. In the context of oral diseases high sugar intake, insufficient oral hygiene and the high likelihood of oral injuries and trauma through contact sports or risk-taking behaviours are leading risk factors in adolescence that can set individuals on a course for poor oral health throughout their lifetime. For example, untreated dental caries has many negative impacts in different phases of life. Repeated episodes of pain as well as chewing and sleeping difficulties reduce quality of life and productivity. Other common NCD risk factors include unhealthy diet and the consumption of tobacco and alcohol which increases an individual's lifetime risk of cancer, cardiovascular disease and type 2 diabetes [233, 234].

2.3.6 Mental health

Mental health disorders among adolescents cause both a large fatal as well as non-fatal disease burden. Approximately 14% of adolescents globally experience a mental health condition [125]. Many factors have an impact on the mental health of adolescents. Violence, poverty, stigma, exclusion, and living in humanitarian and fragile settings can increase the risk of developing mental health problems. The consequences of not

addressing adolescent mental health conditions extend to adulthood, impairing both physical and mental health and limiting opportunities to lead fulfilling lives as adults [235].

Self-harm was the fifth-ranked cause of adolescent death in 2019, resulting in an estimated 46,000 adolescent deaths. This figure encompasses both suicide and accidental death resulting from self-harm without suicidal intent. The South-East Asian LMICs accounted for at least 40% of all adolescent deaths due to self-harm. Self-harm was within the top five causes of death among adolescents in at least one age and sex category for each region except African LMICs where it led to in similarly high death rates but was outranked by other disease burdens. Self-harm largely occurred among older adolescents.

The overall leading cause of morbidity among adolescents in 2019 was **anxiety disorders** with 4.7 million YLDs. The third and fourth leading causes of morbidity were childhood behavioural disorders and depressive disorders. These three mental health disorders dominated the global, regional, age and sex specific morbidity burden.

Anxiety disorders may involve panic or excessive worry and are slightly more common among older than among younger adolescents. An estimated 3.6% of 10–14-year-olds and 4.6% of 15–19-year-olds experience an anxiety disorder [125]. In 2019, anxiety disorders were a key cause of YLDs in all WHO regions with YLD rates per 100,000 population ranging from 246 in South East Asian LMICs to 517 in East Mediterranean LMICs.

Childhood behavioural disorders is an umbrella term that includes conduct disorders, which are characterized by repeated aggressive, disobedient or defiant behaviour that is persistent, severe and inappropriate for the adolescent's developmental level [236]. Childhood behavioural disorders were in the top five causes of adolescent morbidity in all modified WHO regions in 2019, regardless of sex or age group. The burden of childhood behavioural disorders is particularly high amongst 10–14-year-old males where in 2019 they ranked as the leading cause of YLDs.

The classification of **depressive disorders** includes major depressive disorder and dysthymia, which are characterized by pervasive sadness, irritability, or anhedonia [237]. Depressive disorders accounted for 4.1 million YLDs among adolescents in 2019, and a global average of 376 per 100,000 population. The regional morbidity rates ranged from 211 per 100,000 population in Western Pacific LMIC to 590 in HICs. Among older adolescents, depressive disorders were the global leading cause of morbidity, and were in the top five in most modified WHO regions.

2.3.7 Alcohol and drug use

Alcohol and drug use among adolescents is a major concern in countries of all income groups [238-240]. In high income countries, drug use disorders were among the top five ranked causes of adolescent morbidity and mortality in 2019. Alcohol and drug use contribute to about 3.5 million deaths each year as well as to disabilities and poor health of millions of people. Substance use most commonly begins in adolescence, with about 37.5% of adolescents (15-19 years) consuming alcohol globally (current of former drinkers).

Alcohol and drug use among adolescents is associated with a wide range of negative health and social consequences. This ranges from injuries, accidents, violence and risky behaviours (such as unsafe sex or dangerous driving) [241], and are an underlying cause of injuries (including those due to road traffic accidents), violence and premature deaths.

Worldwide, more than a quarter of all people aged 15–19 years are current drinkers, amounting to 155 million adolescents. Prevalence of heavy episodic drinking among adolescents aged 15–19 years was 13.6% and 45.7% among drinking adolescents in 2016, with males most at risk [242].

Cannabis is the most widely used psychoactive drug among young people with about 4.7% of people aged 15–16 years using it at least once in 2018 [243, 244]. Alcohol and drug use in children and adolescents is associated with neurocognitive alterations which can lead to behavioural, emotional, social and academic problems in later life [241, 245, 246].

2.3.8 Tobacco use

The vast majority of people using tobacco today began doing so when they were adolescents. Prohibiting the sale of tobacco products to minors (under 18 years) and increasing the price of tobacco products through higher taxes, banning tobacco advertising and ensuring smoke-free environments are crucial. A global survey including adolescents aged 13 to 15 from 143 countries found that 11·3% (95% CI 10·3–12·3) of boys and 6·1% (5·6–6·6) of girls reported cigarette smoking on at least 1 day during the past 30 days [247]. The survey also found that 11·2% (9·9–12·6) of boys and 7·0% (6·4–7·7) of girls reported use of tobacco products other than cigarettes (eg, chewing tobacco, snuff, dip, cigars, cigarillos, pipe, electronic cigarettes) on at least 1 day during the past 30 days [247].

2.3.9 Physical activity and sedentary behaviour

Physical activity provides fundamental health benefits for adolescents, including improved cardiorespiratory and muscular fitness, bone health, maintenance of a healthy body weight, and psychosocial benefits [248]. WHO recommends for adolescents to accumulate at least 60 minutes of moderate to vigorous intensity

physical activity on average per day across the week, which may include play, games, sports, but also activity for transportation (such as cycling and walking), or physical education [248]. Globally, in 2016, only 1 in 5 adolescents were estimated to meet these guidelines [249].

Prevalence of physical inactivity is high across all WHO regions, and higher in female adolescents as compared to male adolescents [249, 250]. An analysis of data from 298 school-based surveys including 1·6 million students aged 11-17 years from 146 countries and territories showed that in 2016, 81% were insufficiently physically active (78% boys and 85% girls) [249]. This pattern was similar in 2001, demonstrating the longstanding nature of the problem. The high prevalence of insufficient physical activity was widespread with no significant differences identified by region or country income group [249].

WHO guidelines for physical activity and sedentary behaviour recommend that school-age children and adolescents limit their sedentary time, particularly their recreational screen time [248]. Recreational screen time is one of the contributing factors to the high prevalence of both physical inactivity and disturbed sleep [251, 252]. Recreational screen time is defined as time spent watching screens (television (TV), computer, mobile devices) for purposes other than those related to education/study or work [248]. Recreational screen time is very common among adolescents, most of whom use smartphones, tablets, games consoles, computers and televisions [251]. Growing evidence amongst child populations strongly implicates lifestyle risk factors, including intensive near vision activity (as a risk factor) and longer time spent outdoors (as a protective factor), in the onset and progression of myopia.

2.3.10 Nutrition

Some of the key nutrition challenges during adolescence are malnutrition by deficit or excess (undernutrition and obesity), and micronutrient deficiencies, all which may relate to socio-economic circumstances, lifestyle, eating behaviours, underlying psychosocial factors, and constitute important threats to adequate nutrition [164]. Many boys and girls in lower income countries enter adolescence undernourished, making them more vulnerable to disease and early death. Most habits detrimental to health are acquired during adolescence and youth and manifest themselves as health problems in adulthood [253].

Iron deficiency anemia is the leading nutritional deficiency associated with adolescent morbidity. Iron-deficiency anaemia was ranked as one of the leading causes of adolescent YLDs in 2019. Except in older male adolescents, it was the leading cause of morbidity in both sexes and age groups. South East Asian and African

LMICs showed the highest and second highest morbidity rates secondary to iron deficiency anaemia in 2019 and contributed 50% and 30% of all associated YLDs.

Overweight and obesity are defined as "abnormal or excessive fat accumulation that presents a risk to health" and pose what the WHO describes as one of the most serious public health challenges of the 21st century [254]. Globally, in 2016, over 1 in 6 adolescents were overweight. Prevalence varied across WHO regions, from lower than 10% in the WHO South-East Asia Region to over 30% in the WHO Region of the Americas [255]. The wide variation of overweight and obesity among adolescents across countries may be due to differences in food quality and other health risk factors [256]. Adolescents with intellectual disabilities are 1.5 and 1.8 times more at risk of overweight-obesity and obesity than adolescents without intellectual disabilities [257].

Nutrition has a profound impact on the current and future health of adolescents (ages 10–19 years). A sustainable healthy diet and healthy eating practices during adolescence have the potential to limit any nutritional deficits and linear-growth faltering generated during the first decade of life and may limit harmful behaviours contributing to the epidemic of noncommunicable diseases in adulthood. Investing in adolescent health brings triple dividends: better health for adolescents now, improved well-being and productivity in their future adult life and reduced health risks for their children. Assuring optimal nutrition among adolescents requires coordinated actions across multiple sectors.

2.3.11 Humanitarian and fragile settings

Humanitarian and fragile settings include areas affected by armed conflicts, natural disasters, and other emergencies. In 2018, at least 415 million children and adolescents under the age of 18 years worldwide were living in conflict-affected areas [101]. The number of displaced adolescents increased from 13 million in 2009 to 19 million in 2017 [258]. Globally, the worst rates of preventable mortality and morbidity among adolescents occur in humanitarian and fragile settings [259]. Many health burdens increase in such contexts because governance and health infrastructures break down, and protective social and health services become much less accessible [259].

While often still children themselves, adolescents take on adult responsibilities in emergencies, including caring for siblings or generating revenue to support their families [258, 260]. Those who are separated from their families during an emergency lack the livelihood, security and protection afforded by family structures. They may be compelled to drop out of school, marry early or engage in transactional sex in order to meet their

basic survival needs. Adolescents who are especially vulnerable in humanitarian and fragile settings include those who are: young (10–14 years); have a disability; members of ethnic or religious minorities; child soldiers; other children associated with fighting forces; girl mothers; orphans; heads of households; survivors of sexual violence, trafficking and other forms of gender-based violence; engaged in transactional sex; in same-sex sexual relationships; or HIV-positive [261].

In such crises, key concerns for adolescent health and well-being include the following [260]:

- malnutrition, e.g. wasting, underweight or micronutrient deficiencies;
- inadequate assistance, treatment and care of adolescents with disability or injury;
- violence, e.g. as experienced by child soldiers who are primarily boys, and survivors of sexual exploitation and abuse (including early or forced marriage, and FGM), who are primarily girls and women;
- HIV and other STIs, early pregnancy, maternal conditions, unsafe abortion and general SRH needs, e.g. access to condoms and other forms of contraception;
- water, sanitation and hygiene (WASH) needs, e.g. materials and facilities for menstrual hygiene management;
- mental health problems, e.g. anxiety or trauma;
- interrupted supply of medicines for chronic conditions (such as asthma and type 1 diabetes);
- interrupted education;
- Separation from protective familial or peer networks, which adds to risk of violence, abuse and exploitation.

Some of these conditions are closely interrelated. For example, sexual violence may result in multiple burdens, including physical injury, STIs, unintended pregnancy, non-pathological distress (e.g. fear, anger, self-blame, shame, sadness or guilt), anxiety disorders (e.g. posttraumatic stress disorder), depression, medically unexplained somatic complaints, alcohol and other substance-use disorders, and suicidal ideation and self-harm. Social trauma can include stigma, which can lead to social exclusion, discrimination and rejection by family and community [262].

Adolescent girls have a particularly heightened risk of abuse and exploitation during humanitarian crises, increasing their vulnerability to early sexual initiation, unwanted pregnancy and STIs, including HIV. They are readily targeted for abuse because they have limited life experience, options and skills to negotiate their rights. In many conflict-affected contexts, sexual and gen- der-based violence, including forced marriage, is a weapon of war used against girls [263].

Even within a relatively protected family setting, resource scarcity, limited employment opportunities for caregivers and a lack of protection mechanisms during humanitarian crises may contribute to families arranging marriages for their daughters, in order to ease the household burden and secure dowry payments. Families may perceive having their daughters marry as a way to protect the girls and to preserve their honour in the face of external violations and vulnerabilities, such as sexual violence and harassment. In Jordan, for example, the proportion of registered marriages among the Syrian refugee community where the bride was under 18 rose from 12% in 2011 (roughly the same as the figure in pre-war Syria) to 18% in 2012, and as high as 25% by 2013 [207, 264]. The number of Syrian boys registered as married in 2011 and 2012 in Jordan was 1%, suggesting that girls are being married to older males [207]. Child marriage among Syrian refugees has also reportedly increased in Iraq and Lebanon [265].

An important way that adolescent boys may be affected by violence in conflict settings is as child soldiers who may experience combat-related injuries, such as the loss of hearing, sight or limbs [197]. These injuries partly reflect the greater sensitivity of children's bodies and partly the ways in which they may be involved in conflicts – such as being forced to undertake particularly dangerous tasks (e.g. laying and detecting landmines). Child recruits are also prone to health hazards not directly related to combat, including injuries caused by carrying weapons and other heavy loads, malnutrition, skin and respiratory infections and infectious diseases, such as malaria. Girl recruits and, less commonly, young boys are often forced to have sex as well as to fight. In addition, child recruits are sometimes given drugs or alcohol to encourage them to fight, creating problems of substance dependency. Adolescents recruited into regular government armies are usually subjected to the same military discipline as adult soldiers, including initiation rites, harsh exercises, punishments and denigration designed to break their will. The impact of such discipline on adolescents can be highly damaging mentally, emotionally and physically.

Finally, children and adolescents in emergency settings have oftentimes no access to education, and thereby risk losing their futures. In addition, these young people do not have the protection from physical dangers around them that schools usually offer – including protection from abuse, exploitation and recruitment into armed groups. They also don't have access through schools to food, water, and health care, nor the psychosocial support that schools may offer [266].

Section 3: Understanding what works – the AA-HA! package of evidence-based interventions

What's new in section 3?

- ✓ Updated with the most recent evidence on proven adolescent health and wellbeing interventions.
- ✓ Guidelines published since the last version of the AA-HA are now incorporated.
- ✓ A more substantial treatment of positive development interventions is included

Key messages

Today we know more about how to support adolescent health and wellbeing than ever before. Many interventions have a substantial evidence base, and when implemented with fidelity can have significant positive impacts on the wellbeing of adolescents. Countries can take effective action now to promote and protect adolescent health.

Interventions for adolescents should operate at all levels of the ecological framework, from the individual level to the structural level. To reduce major burdens and risk factors, it is important to ensure that interventions – even those aimed ad wider population groups - are tailored to adolescents' specific needs and circumstances, such as the provision of adolescent-responsive health services. Interventions should be delivered with quality and universal coverage, such as the enforcement of road traffic laws and policies or the implementation of policies and legislation that reduce the affordability of tobacco, alcohol, and unhealthy foods and beverages.

Given the multi-dimensionality of adolescent wellbeing, collaboration across sectors through multisectoral or integrated programming is crucial. The education sector can be particularly important for influencing adolescent behaviour, health and well-being through intensive, long-term, large-scale initiatives implemented by professionals.

There are important gaps in the evidence base of interventions to promote and protect adolescent development, health and well-being, including limited knowledge of what works in humanitarian crises, gender transformative programs and digital interventions.

Section overview

This section describes evidence-based adolescent health interventions. Interventions are presented by areas of adolescent health and development with greatest disease burdens and risk factors, as described in Section 2. The interventions are primarily selected from most recent relevant guidelines from all WHO departments. Interventions were also drawn from recommendations of other UN agencies with the relevant mandate (e.g. from UNAIDS on HIV prevention interventions) , and if needed from other major international agency publications and/or review articles in established academic journals. Importantly, the intervention examples provided here are not exhaustive.

The COVID-19 pandemic shed a light on several important domains of adolescent wellbeing including the importance of adolescent mental health, connections and supportive family and peer environments as well as the need for access to reproductive health and other services. Section 3.7 discusses responses to COVID-19 in adolescents.

3.1 Conceptualizing adolescent health interventions

Evidence-based interventions for adolescent well-being take many forms, depending on the determinants or conditions of interest (e.g., interventions to promote mental health or better hygiene practices), the target population (e.g., general population or adolescents only), the context in which they are implemented (e.g. humanitarian or high income contexts), the ecological level it addresses (e.g., interventions that target individuals or interventions designed for implementation at the institutional level), and lead sector (e.g., health sector or education sector).

In this section we describe interventions that fall into several categories.

Adolescent-specific interventions. Many effective interventions to address major adolescent conditions are adolescent-specific, i.e., they are directed exclusively, or mostly, to adolescents. Examples include human papillomavirus (HPV) immunization, provision of school health services and comprehensive sexuality education [114].

Interventions with wider impacts but particular benefits for adolescents. It is important to recognize that adolescents will benefit substantially from many interventions that are targeted to wider age groups or the population as a whole. For example, reducing urban air pollution contributes significantly to healthier urban environments from which all will benefit. However, because of children and adolescents' greater vulnerability to air pollution, the impacts in them will be particularly powerful.

Interventions with wider impacts in need for age-appropriate design to be effective in adolescents. Many organizational (e.g., improving the quality of care in primary care facilities) and structural interventions (e.g., limiting the promotion and availability of alcohol) need to be designed with adolescent needs in mind, otherwise, while being effective for adults or other population groups, they will be less effective for adolescents. For example, limiting access to alcohol and protecting against its marketing is an intervention

that should take into account the locations where adolescents convene and their susceptibility to online marketing relative to older members of society. Similarly, if efforts to improve the quality of care in facilities are to benefit adolescents, they should include investing in providers' education and training in adolescent-responsive care [269, 270]. Many individual-level interventions also need age-appropriate adaptation (e.g., providing additional, adolescent-friendly adherence and disclosure support to adolescents living with HIV).

This section summarizes all three types of interventions. It aims to make the adolescent-specific aspects of the interventions clear and highlights the importance of addressing the special needs of adolescents in the design and implementation of interventions at any level of the ecological framework – from structural or environmental to individual. At the structural and environmental levels, we describe interventions that operate in the macro- environment, and largely include policies or legislation. At the organizational level, we share interventions that describe systems level responses, in health, but also other sectors. At the community or interpersonal environment, we describe interventions that operate in communities, families, peers or with partners. At the individual level we share interventions directed at the adolescent themselves, recognizing that they may require support to access and benefit from that intervention. Some interventions operate across multiple ecological levels (e.g., adolescent participation). In each intervention area, example interventions are provided..

3.2 Positive health and development interventions

Positive development approaches are based on the fact that young people possess resources that can be developed, nurtured and cultivated. Positive health and development interventions aredeveloped to enable young people to develop these positive assets to deliver broad behavioural, developmental and wellbeing benefits. Interventions to promote and ensure positive adolescent development span many sectors and target different physical and psychosocial aspects of adolescent development. The main determinants of adolescent health are largely outside of the health system, for example family and community norms, education, labour markets, economic policies, legislative and political systems, food systems and the built environment [194].

Working with parents, families and communities is especially important because of their great potential to positively influence adolescent behaviour and health. The education sector also provides a critically important opportunity for intensive, long-term and large-scale initiatives implemented by professionals.

Table 1 provides examples of key positive development interventions within health sector, the education sector and the broader community.

Table 1: Interventions to promote positive development [271-273]

Ecological Level	Intervention	Further Comment
Structural and environmental	Gender responsive policies and programs	To achieve the goal of gender equality, policies should respond to structural factors that perpetuate gender inequalities, and programmes need to apply the process and strategy of gender mainstreaming. Gender responsive programs encompass both gender specific (which intentionally targets a specific group of girls or boys for a specific purpose; doesn't challenge gender roles and norms) _ and gender transformative (which address the causes of gender inequality; transforms harmful gender roles, norms and relations; promotes gender equality.) More information and good practice examples are provided in Section 5.
	Online protection for adolescents	Develop and implement a national strategy for child online protection, including a legal framework, law enforcement resources and reporting mechanisms, and education and awareness resources.
Organizational	Adolescent-responsive services and systems	Healthcare should be accessible and acceptable, promote health literacy and provide an appropriate package of services, including routine, age-appropriate appointments (e.g., vaccinations). Adolescent-friendly sexual and reproductive health (SRH) services are especially important, as stigma and discrimination prohibit

		adolescents from accessing them in many settings. Eight standards for quality-of-care services for adolescents have been developed and are described in Section 5 [274].
	Positive Youth Development Interventions [275]	Interventions to promote the 5Cs including adolescent competence, confidence, connection, character and caring include resilience building programs, as well as character development programs.
	Making every school a health promoting school [18]	A health-promoting school is "a school that is constantly strengthening its capacity as a healthy setting for living, learning and working". The concept of health-promoting schools embodies a whole-school approach to promoting health and educational attainment in school communities by using the organizational potential of schools to foster the physical, social–emotional, and psychological conditions for health as well as for positive education outcomes. Examples of interventions include school feeding programs, hygiene and sanitation programs in schools. WHO and UNESCO have established 8 standards for health promoting schools: (1) Government policies and resources, (2) School policies and resources, (3) School governance and leadership, (4) school and community partnerships, (5) school curriculum, (6) school social -emotional environment, (7) school physical environment and (8) school health services. Embedding in policy and institutions and a strong, interconnected system of governance by the education and health sectors are key elements for the successful implementation of sustainable HPS initiatives.
	Digital health interventions for health education and	Explore the potential of effective adolescent digital health interventions focused on improving quality and access to health interventions (e.g.,

	adolescent involvement in their own care	chronic illness management; SRH education, such as STI prevention), and employing a variety of digital approaches (e.g., web-based on-demand information services , active video games, targeted-client communication via text messaging, and mobile phone or tablet software applications), consistent with WHO guidelines recommendations on digital health interventions.
Community and interpersonal	Civic engagement programs	Meaningfully engaging and supporting youth in their communities can promote their sense of empowerment and promote self-efficacy, thereby leading to improved health and wellbeing. This may involve creating demand for youth participation, including among the most vulnerable adolescents. Interventions include strengthening platforms for adolescent civic engagement, community support to create solutions and lead change, develop skills and voice their opinions. UNICEF's guidelines Engaged and Heard! Support the design of meaningful and equitable Adolescent participation and civic engagement.

	Parenting or caregiver interventions	Work with parents to promote positive, stable emotional connections with their adolescent children, promoting connection, regulation, psychological autonomy, modelling and provision/protection. Parenting programs can have multiple benefits for adolescents including their mental health, communication skills, cyberbullying risk and onset of eating disorders among others. Parents can also be supported to communicate with their children about SRH, as a complement to school based CSE. UNICEF program guidance presents core content topics as well as key delivery strategies including how to improve parent-adolescent communications, managing behavioral difficulties, positive discipline techniques and creating a safe environment [276].
Individual	Adolescent participation initiatives	Facilitation of adolescent participation includes involving them in programme design, implementation, governance and monitoring and evaluation.

3.3 Unintentional injury interventions

Even though road traffic injury is a leading cause of adolescent death across the globe, the interventions most likely to reduce it effectively may differ greatly depending on the setting. For example, in countries where the main adolescent victims of road traffic accidents are adolescent drivers and their passengers, adolescent-specific interventions e.g. low blood alcohol limits, limiting the availability of alcohol, and other restrictions on

young drivers, see case study 2- Success in Zero Tolerance Approach for Alcohol Consumption among Young Drivers in Germany) may be the most effective interventions to reduce the adolescent burden. However, in countries where few adolescents are drivers – but the rates of road traffic injury among adolescent pedestrians, cyclists and public transport passengers are very high – better implementation of population-level interventions e.g. legal disincentives to drive unsafely and speed limits to reduce road traffic injuries among adolescents. Such conditions are most likely to occur in middle-income countries (MICs) and especially low-income countries (LICs), where road traffic injury deaths largely involve vulnerable road users, i.e. motorcyclists, pedestrians and cyclists. In practice, a mix of multiple interventions of both types, tailored to the specific setting, is likely to maximize positive impact.

Case Study 2

Success in Zero Tolerance Approach for Alcohol Consumption among Young Drivers in Germany

In 2007, Germany implemented a law targeting young/novice drivers and their drinking behaviors with the aim of reducing alcohol-related driving incidents. Existing evidence has linked high risk behaviors such as alcohol consumption with increased collisions. The new law implemented zero tolerance for alcohol consumption among new drivers, those within their first 2 years and drivers under the age of 21. Young/novice drivers who are caught drinking and driving could have their license suspended or, depending on the circumstances, could be fined between 125-1000 euros. Assessments conducted after the implementation of the law reported reduced traffic related incidents among the first cohort of young/novice drivers when compared to a reference group or young/novice drivers before the implementation of the law. This was confirmed in a follow-up evaluation.

Source: https://etsc.eu/wp-content/uploads/PIN-Flash-41_web_FINAL.pdf

Table 2: Interventions to prevent and mitigate road traffic injuries among adolescents [277-279][280]

Ecological Level	Intervention	Further Comment
Structural and environmental	Drinking age laws	Raising the legal drinking age to 21 years reduces drinking, driving after drinking and alcohol-related accidents and injuries among youth.
	Blood alcohol concentration laws	Set a lower permitted blood alcohol concentration limit (0.02 g/dl) for young drivers than recommended for older drivers (0.05 g/dl). Enforce blood alcohol concentration limits, e.g.

		random breath testing of all drivers at a certain point, or only those who appear to be alcohol-impaired.
	Protection against alcohol marketing	Limits on easy access to alcohol and its marketing, including school policies on zero tolerance
	Seat-belt laws	When laws requiring seat-belt use are enforced, rates of use increase, and fatality rates decrease. Although most countries now have such laws, half or more of all vehicles in LICs lack properly functioning seat-belts.
	Helmet laws	Create mandatory helmet laws for two-wheeled vehicles and enforce them. Establish a required safety standard for helmets that are effective in reducing head injuries.
	Mobile phone laws	While the evidence on the effects of penalising mobile phone use on road traffic fatalities is still developing, emerging evidence suggests a potential decrease in the prevalence of mobile phone use and fatalities for all-driver primary enforcement hand-held bans and texting bans.
	Speed limits	Roads with high pedestrian, child or cyclist activity should allow speeds no higher than 30 km/h. Limits should be enforced in such a way that drivers believe there is a high chance of being caught if they speed.
	Restriction of young or inexperienced drivers	A graduated licensing system phases in young driver privileges over time, such as first an extended learner period involving training and low-risk, supervised driving; then a licence with temporary restrictions; and ultimately a full licence.
	Restriction of availability of alcohol to young drivers	Reducing hours, days or locations where alcohol can be sold, and reducing demand through appropriate taxation and pricing mechanisms, are a cost-effective way to reduce drink driving among young people.
	Legal disincentives to drive unsafely	Make unsafe behaviour less attractive, e.g. give penalty points or take away licences if people drive while impaired.
	Traffic calming and safety measures	Examples include infrastructural engineering measures (e.g. speed humps, mini-roundabouts or designated pedestrian crossings); visual changes (e.g. road lighting or surface

		treatment); redistribution of traffic (e.g. one-way streets); and promotion of safe public transport.
Organizational	Pre-hospital care	Standardize formal emergency medical services, including equipping vehicles with supplies and devices for children as well as adults. Where no pre-hospital trauma care system exists: teach interested community members basic first aid techniques; build on existing, informal systems of pre-hospital care and transport; and initiate emergency services on busy roads with high-frequency crash sites.
	Hospital care	Improve the organization and planning of trauma care services in an affordable and sustainable way to raise the quality and outcome of care
	Rehabilitation	Improve services in health-care facilities and community-based rehabilitation to minimize the extent of disability after injury and help adolescents with disability to achieve their highest potential.
Community	Alcohol campaigns	Make drinking and driving less publicly acceptable; alert people to risk of detection, arrest and its consequences; and raise public support for enforcement.
	Designated driver campaigns	Designated drivers choose not to drink alcohol so they may safely drive others who have drunk alcohol. Such initiatives should only be targeted at young people over the minimum drinking age, so as not to promote underage drinking.
	Seat-belt campaigns	Public campaigns about seat-belt laws can target adolescents to increase awareness and change risk-taking social norms.
	Helmet campaigns	Educate adolescents about the benefits of wearing helmets on two-wheeled vehicles, using peer pressure to change youth norms regarding helmet acceptability and to reinforce helmet-wearing laws.
	Community-based projects	Community projects can employ parents and peers to encourage adolescents to wear seat-belts.
Individual	Helmet distribution	Programmes that provide helmets at reduced or no cost enable adolescents with little disposable income to use

		them. Distribution can be taken to scale through the school system.
	Motorized two-wheeler interventions	Promote use of daytime running lights; reflective or fluorescent clothing; light-coloured clothing and helmets; and reflectors on the back of vehicles to reduce injury.
	Cyclist interventions	Promote front, rear and wheel reflectors; bicycle lamps; reflective jackets or vests; and helmets to reduce injury.
	Pedestrian interventions	Promote white or light-coloured clothing for visibility; reflective strips on clothing or articles like backpacks; walking in good lighting; and walking facing oncoming traffic to reduce injury.

Drowning: Adolescent drowning can be prevented through strategies targeting the general population, as well as communities at risk. Many of these have been successfully implemented in low income settings, and settings that are prone to flood risks [281] [282] (See Table 3).

Table 3: Interventions to prevent drowning

Ecological Level	Intervention	Further comment
Structural and environmental	Appropriate policies and legislation	Setting and enforcing safe boating, shipping and ferry regulations; Building resilience and managing flood risks locally and nationally; Coordinating drowning-prevention efforts with those of other sectors and agendas; Developing a national water safety plan.
Community and interpersonal	Infrastructure improvements	Improved community infrastructure (e.g. Barriers to water supply, bridges and levees) Installing barriers controlling access to water
	Training	Training community members in safe rescue and resuscitation
	Public awareness	Strengthening public awareness of adolescent vulnerability to drowning (because they tend to be less supervised than small children and are more likely to consume alcohol and engage in other risky behaviour around water).
Individual	Public swimming programs	Make teaching school-aged children basic swimming, water safety and safe rescue skills free of charge

Burns [172]: Burns are one the few forms of injury that have a higher burden in adolescent females than males, because worldwide approximately 2 billion people in LMICs – the vast majority female – cook on unsafe, fires or very basic traditional stoves in their own homes or as domestic workers [283, 284]. Due to their youth, they are on average less skillful and more prone to burns than adult women [285].

Burns are preventable. High-income countries have made considerable progress in lowering rates of burn deaths, using a combination of prevention strategies and improvements in the care of people affected by burns. Most of these advances in prevention and care have been incompletely applied in low- and middle-income countries. Increased efforts to do so would likely lead to significant reductions in rates of burn-related death and disability **[172]**.

Prevention strategies should address the hazards for specific burn injuries, education for vulnerable populations and training of communities in first aid. An effective burn prevention plan should be multisectoral and include broad efforts to:

- improve awareness
- develop and enforce effective policy
- describe burden and identify risk factors
- set research priorities with promotion of promising interventions
- provide burn prevention programmes
- strengthen burn care
- strengthen capacities to carry out all of the above.

Careful assessment of the cause of adolescent injury is also important because some adolescents or their guardians may falsely state that an injury was due to an accident when in fact it was due to self-harm or interpersonal violence. In some countries, for example, so-called honour killings and death by fire account for a significant number of reported cases of familial or intimate partner violence against adolescent girls, and survivors of such assaults may be compelled by the perpetrators to claim the injuries were accidental [197, 283]. Similarly, alcohol/drug use is a major risk factor for many forms of injury, both when an adolescent is the drinker and when the drinker (e.g. a parent or an intimate partner) causes harm to an adolescent [112, 286]. In these instances, additional interventions related to mental health and substance use disorder, and/or legal interventions may be warranted. Some examples are discussed later in this section.

3.4 Violence interventions

Violence against adolescents can have strong, long-lasting effects on brain function, mental health, health risk behaviours, noncommunicable diseases, infectious diseases such as HIV and sexually transmitted diseases, and social functioning.

1486 Table 4. Interventions to address youth violence [287-294][287]

Ecological Level	Intervention	Further Comment
Structural and environmental	Laws banning violent punishment and criminalizing sexual abuse and exploitation	Institute laws banning violent punishment of children by parents, teachers or other caregivers Legislation that criminalizes sexual abuse and exploitation of children and adolescents, including laws criminalizing child marriage, forced labour, trafficking, child pornography, harmful practices and online harms.
	Reduce access to and misuse of firearms	Programmes may require new legislation, additional police to supervise implementation, public awareness campaigns and more elaborate monitoring systems.
	Reduce access to and the harmful use of alcohol	Regulate the marketing of alcohol to adolescents; institute laws that prevent alcohol misuse; restrict alcohol availability; reduce demand through taxation and pricing; raise awareness and support for policies; and implement interventions for the harmful use of alcohol.
	Income and economic strengthening, including to attend school	Cash transfers, group saving and loans and/or microfinance programs combined with gender equity training can reduce violence through a number of pathways, including lowering household stress, improved parental monitoring, or delaying sexual debut. Grants to cover school costs (e.g. school fees and supplies) as well as opportunity costs (e.g. when families lose income from child labour), have been successful at keeping adolescents in school.
	Spatial modifications and urban upgrading	For areas with high levels of violence, situational crime prevention includes a security assessment, a stakeholder analysis, and a planning process involving communities, local government, and housing, transport and other sectors.
	Poverty de-concentration	These strategies offer vouchers or other incentives for residents of economically impoverished public housing complexes to move to less impoverished neighbourhoods.
	Hotspot policing	Police resources are deployed in areas where crime is prevalent. Mapping technology and geographic analysis

		help identify hotspots based on combined crime statistics, hospital emergency records, vandalism and shoplifting data and other sources.
	Addressing restrictive and harmful gender and social norms	Community mobilization programmes and programmes that increase bystander intention to intervene can prevent violence particularly against dating partners and acquaintances
Organizational	Demand- and supply-side interventions for drug control	Drug control may focus on reducing drug demand, drug supply or both. Most interventions require substantial technical capacity within health services and the police force.
	School-based violence prevention	Work with teachers on values and beliefs, and train them in positive discipline and classroom management, including in pre-service training. Prevent violence through curriculum-based activities. Train teachers to recognize and explain bullying to students, what to do when it occurs, effective relationship skills and skills for bystanders. Establish school policies and coordination procedures to support a whole school approach. Review and adapt school buildings and grounds, including ensuring the annual budget includes funding for improving school infrastructure to student child safety. Address online abuse in school safety programs (bullying prevention, dating abuse prevention, sexual education) [290] Please see case study 3, which illustrates a Peer Violence Program to reduce bullying and victimization in schools
	Health facility responses to child maltreatment	Health-care providers should seek explanations for injuries or symptoms that may be caused by physical, sexual, emotional abuse or neglect from parents and carers, and the adolescent in an open and non-judgmental manner, seeking their informed consent for all decisions and actions taken and appropriate with their age, evolving capacity and the legal age of consent for obtaining clinical care. To do so, health facilities may require additional

		training and on-going support enabling staff to adequately care maltreated adolescents, have access to safe, private, and properly resourced locations for exams, and document and report crimes as needed [295].
Community	Gang and street violence prevention interventions	This may focus on reducing gang enrolment, helping members leave gangs and/or suppressing gang activities. Community leaders are engaged to convey a strong message that gang violence is unacceptable. Police involvement, vocational training, and personal development activities may also be included.
	Community- and problem-orientated policing	The systematic use of police-community partnerships and problem-solving techniques identifies and targets underlying problems to alleviate violence. Necessary preconditions are a legitimate, accountable, non-repressive, non-corrupt and professional policing system, and good relations between police, local government and the public.
Interpersonal	Parenting programmes and home visiting	Goals are to promote parental understanding of adolescent development and to strengthen parents' ability to assist their adolescents in regulating their behaviour. These can be delivered through home visits or in community settings. Home visiting programmes can monitor and support families where there is a high risk of maltreatment.
	Peer mediation	Peer mediators may be nominated by a class and receive 20–25 hours of training on how to mitigate peer conflicts and seek help if needed. Other students may also be trained in conflict resolution skills.
	Dating violence prevention	School-based or after-school participatory activities address the characteristics of caring and abusive relationships; how to develop a support structure of friends; communication skills; and where and how to seek help in case of sexual assault.
Individual	Life-skills development and social and emotional learning	These age-specific programmes help adolescents to understand and manage anger and other emotions, show empathy for others and establish relationships. They

		involve 20–150 classroom sessions over several years [296].
	After-school and other structured leisure time activities	Structured leisure time activities can include cognitive and academic skills development; arts, crafts, cooking, sport, music, dance and theatre; activities related to health and nutrition; and community and parental engagement.
	Academic enrichment	Adolescents are targeted through mass media, after-school lessons or private tutoring to help them keep up with school requirements and prevent them from dropping out of school.
	Vocational training	Vocational training for at-risk youth can have a meaningful impact on violence prevention if integrated with economic development and job creation. Ensure the capacity of training institutions, available technical equipment, existing cooperation with businesses and sustainable financing models.
	Mentoring	Volunteer mentors receive training in adolescent development, relationship-building, problem-solving, communicating and specific concerns (e.g., alcohol and drug use). A mentor shares knowledge, skills and perspective to promote an at-risk adolescent's positive development.
	Therapeutic approaches	Qualified mental health specialists or social workers work with individual adolescents on social skills and behavioural training, anger- and self-control techniques and cognitive elements (e.g. moral reasoning and perspective-taking to appreciate the negative impacts of violence on victims). Families and social networks of at-risk adolescents may also be targeted.

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Case Study 3

Roots Indonesia Peer Violence Program reduces bullying and victimization in schools

In line with Indonesian Ministry of Women Empowerment and Child Protection's goal of preventing and reducing violence and bullying among youth, UNICEF and partners implemented an adapted version of the

anti-bullying intervention program Roots. The Roots program is geared towards improving anti-bullying efforts through student led activities. In Indonesia, the Root intervention included a teacher training program meant to increase teachers' knowledge of positive discipline practices. The program draws from evidence based effective anti-violence and anti-bullying intervention tools that have been used successfully in other parts of the world. The intervention recruited students who served as Change Agents after being voted by their peers to serve in that role. The Change Agents hold regular sessions to identify violence and bullying related problems in their schools and went on to work on solutions with young facilitators. Schools that took part in the program successfully developed anti-bullying agreements and observed a reduction in bullying and victimization related incidents. However, in certain areas where the program was implemented, the number of anti-bullying related incidents also increased due to improved mechanisms for reporting bullying. Overall, in all regions of Indonesia, notable improvements were observed in students, Change Agents and teachers on their responses towards bullying.

Source:
https://www.unicef.org/indonesia/media/7021/file/Roots%20Indonesia%20Programme%20Evaluation.pdf

Table 5: Prevention and response to sexual and other forms of gender-based violence

Ecological Level	Intervention	Further Comment [297-300]
Structural and environmental	Systems strengthening and integration	Strengthen the system response by integrating services for GBV into existing primary health care programmes including dedicated adolescent services, and SRH and HIV services reaching adolescents.
Organizational	Health services for adolescent survivors of sexual and/or intimate partner violence	Health care providers should consider exposure to child maltreatment when assessing adolescents with conditions that may be caused or complicated by maltreatment, in order to improve diagnosis/identification and subsequent care, without putting the child at increased risk [295]. Based on signs and symptoms, train and support health workers to empathically provide first-line support that is survivor-centered and uses the LIVES-CC approach which involves **L**istening, **I**nquiring about their needs, **V**alidating, **E**nhancing their safety and facilitating social **S**upport; creating a **C**hild and adolescent friendly environment including training providers and

		providing support to non-offending **C**aregivers to support the adolescent [293]. Mental health care in accordance with WHO guidelines; and referral for other legal, psychosocial and shelter needs
	Interventions to reduce and respond to interpersonal violence	School-based programmes to prevent dating violence; Multicomponent violence-prevention programmes; School-based training to help children recognize and potentially avoid sexually abusive situations; School-based social and emotional skills development initiatives; counselling services
Community and interpersonal	Interventions to reduce and respond to interpersonal violence	Interventions based on social norms theory and focused on changing social and cultural gender norms; Media-awareness campaigns; Targeted work with men and boys [293, 295]
	Support for survivors	Involve parents or caregivers only where the adolescent specifically wants or agrees to it, or their safety or life is at risk
Individual	Support to survivors	Interventions specifically for children exposed to such violence, such as psychological treatment to improve cognitive, emotional, and behavioural outcomes Identify and treat conduct and emotional disorders

WHO recommends that child abuse interventions should be multifaceted to address the specific needs of adolescents more effectively, including enhancement of professional training and education about the nature and impact of adolescent maltreatment; development and extension of prevention and treatment services for adolescent victims and their families; and systems that better assess and intervene with maltreated adolescents [301]. Furthermore, these interventions should consider intersectional factors which add to the risk of violence and abuse among specific groups of adolescents, such as those with disabilities, and affects their access to appropriate services and support. Comprehensive activities that help to prevent violence and which involve all stakeholders who are important in a young person's life have been proven to be more effective in preventing violence than activities that just focus on one particular target group. This approach works towards making sure that whole schools and communities shares the same vision towards reducing violence, and that teachers, healthcare workers, parents and the community work together with adolescents towards this common goal.

Box 1: Strategies to reduce online violence against children and adolescents [302]

Technology is now a regular part of growing up in adolescence. Access to digital technologies provide many benefits, but such platforms can also manifest harm. Violence against children online, also called technology-facilitated violence, is the use of computers, mobile phones or other forms of digital communication to access, threaten and/or harm children or adolescents. It can result in short and long term physical, sexual or emotional suffering and takes many forms. Sometimes adolescents meet future perpetrators for the first time online. Sexual abuse is happening in the physical world can be filmed and shared online. Unsolicited sexting and sexual extortion can include sending unwanted sexual messages or images to children or pressuring children to send explicit messages or images, or using these without consent. Solicitation and grooming can occur by asking a child to provide sexual images or luring a child into meeting for sexual contact. In other instances, bullying in school can continue through social media at home, exposing young people to online threats or hate speech (including racist, homophobic and sexist messages.)

WHO suggests the following strategies to counteract online violence against adolescents:

- Strengthen laws and improve enforcement. This can be achieved by enacting comprehensive national legislation to protect young people from violence online and offline. Training law enforcement to recognize and respond to online abuse, and creating safe and accessible reporting mechanisms are important parts of the structural response.
- Address risk factors that make children vulnerable to recruitment by sex offenders. Poverty, drug use and neglect are known determinants of children recruitment. Address these risks by improving economic opportunities, preventing drug use and stabilizing families.
- Provide technological oversight. Working with digital providers, embed safety features in the design of online services, reduce production and dissemination of child sexual abuse imagery, and prevent abusers from using digital platform to access young people.
- Engage parents, caregivers and teachers. Providing parents with the skills to talk to their children can be achieved by building online safety into parenting programs. Digital safety should be integrated into school curricula, and teachers trained to respond to threats of online abuse.

END BOX

3.5 Sexual and reproductive health (SRH) interventions, including HIV interventions

Adolescent SRH knowledge and access to SRH services are limited in many low- to middle-income countries. Despite efforts to improve uptake, unmet needs remain high and many adolescents suffer from undesirable outcome such as unintended pregnancy, unsafe abortions, sexual violence, STI and HIV. Girls remain particularly vulnerable, and disproportionately affected by poor SRH services and inadequate SRH education.

Table 6: Sexual and reproductive health interventions, including HIV [114, 303-311]

Ecological Level	Intervention	Further Comment
Structural and environmental	Policies and funded implementation plans	Develop and implement laws and policies, that clearly state that all adolescents can obtain accurate, comprehensive sexual and reproductive health information, support in decision-making from a qualified health professional, respectful treatment, and voluntary choice of a full range of contraceptive methods regardless of age, marital status or parity. Include adolescent contraception in universal health coverage (UHC) and national insurance schemes and/or use other approaches such as offering vouchers or offering subsidized services through social marketing, social franchising, and cost-recovery schemes; Implement interventions to reduce the financial cost of contraceptives or make them free for adolescents.
Organizational	Peer education programs	Peer education should not be used in isolation, but rather in combination with other effective approaches as part of a package of actions to provide information, build positive attitudes and promote behaviour change and increased service use. Peer education programmes must also be accessible to and inclusive of marginalized groups of adolescents, such as those with disabilities,

		not only increasing their access to health information, but also to strengthen their protective peer networks.
	Providing Comprehensive Sexuality Education (CSE)	In all countries CSE should be integrated into school curricula and should include the promotion of gender equality and respect for human rights. Training and information should be provided to relevant health sector workers, including at the policy level. To reach adolescents who are out of school, include focus on both school-based and out-of-school CSE, and build synergies between the two. Identify and address barriers to accessing CSE programmes faced by some groups of adolescents, such as those with disabilities [312]. Begin CSE programmes begin in childhood and continue through adolescence, taking care to follow the International Technical Guidance on and age- and developmentally-appropriate SE (ITGSE). Attitude and norm formation is incremental and important to begin early. A good example of this is gender attitudes and norms which form early in life.
	Provide contraceptive counselling and services	Contraceptive care should be accessible and acceptable, age-appropriate, not stigmatize, discriminate or prohibit adolescents from accessing them. Adolescent friendly health services that take a client centered approach can help health care workers to understand and respond to the differing and changing needs of different groups of adolescents. Implement interventions at scale that provide accurate information and education about contraceptives, in particular curriculum-based sexuality education, to increase contraceptive use among adolescents. The full range of methods, including emergency contraception should be provided where legally available. Health workers should be trained and informed about what circumstances they are permitted to provide safe

		abortion care, within the context of their country's laws and policies.
	Provide STI and HIV prevention and care services	STI and HIV testing and care services should be provided in a way that protects privacy and confidentiality; Monitor adolescents receiving anti-retroviral medication carefully and provide them with support to help them stay on their medication, even if they face challenges e.g. side effects.
	Leverage digital decision-support and patient management systems to strengthen care coordination and quality of service delivery [313-315]	Software systems that reinforce WHO recommended clinical care guidelines with decision-support and patient management, strengthen health providers capacity to support, screen, refer, and manage adolescents in relation to their sexual and reproductive health needs.
Community and interpersonal	Offer a range of channels for young people to access contraception and reach them where they are	Expand community-based distribution and supply, including mobile outreach services, pharmacies and drug shops, and school- or workplace-based services
	Care of adolescents living with HIV	Comprehensive care of children (including adolescents) living with, or exposed to, HIV
Individual	Adolescent participation	Engage a diversity of young people as dedicated advocates to create momentum for scale up. Invest in youth leadership who reflect different groups including indigenous and gender minorities, or persons with disabilities.
	Adolescent HIV prevention	Voluntary medical male circumcision (VMMC) in countries with generalized HIV epidemics; Access to condoms and other contraceptive methods; Behavioural interventions which commonly address knowledge, attitudes, risk perception, norms, HIV service demand and skills. These include interpersonal

		and media communication, financial and other incentives, as part of a comprehensive package
	Adolescent HIV treatment	ART should be initiated in all adolescents with severe or advanced HIV clinical disease (WHO clinical stage 3 or 4) and adolescents with CD4 count ≤350 cells/ mm3. Also, all pregnant and breastfeeding adolescents living with HIV should initiate ART, and this should be maintained at least for the duration of mother-to-child transmission risk.

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1547 Box 2: Integration of HIV and STIs in contraceptive services [316]

Integration of HIV and STIs in contraceptive services

Integrated services can expand the reach, quality and care to better serve adolescent girls and women at high risk of acquiring HIV or STIs and who are accessing contraception.

- Adolescent girls and young women should have more contraceptive choices available in all types of service delivery settings, including family planning clinics and primary healthcare clinics. This should include free male and female condoms, which are the only available multipurpose tools for preventing HIV, STIs and unintended pregnancy.
- Adolescent girls and young women accessing contraceptive services — especially in high HIV burden countries — should have easy and affordable access to quality integrated HIV and STI testing, prevention and treatment services that are responsive to the rights and preferences of adolescent girls and women.
- The rights of adolescent girls and women to full and unbiased information should be guaranteed in all healthcare settings and in the community. This includes basic information on STI and HIV risk factors, advantages, disadvantages and risks of different contraceptive methods, including the message that methods other than condoms do not prevent STIs or HIV and all relevant regulatory changes and requirements.
- Contraceptive, HIV and STI services need to be part of a broader health response that includes both SRH and primary healthcare services in the context of universal health coverage.

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1549 **Table 7: Interventions to prevent Female Genital Mutilation**

Ecological Level	Intervention	Further Comment

Structural and environmental	Introduction and enforcement of anti-FGM laws and enforcement	For more information see [317, 318]
	Mass media initiatives	This can take the form of radio, music, storytelling and poems [319]
Organizational	Health sector support to victims	Recommendations include deinfibulation, mental health and female sexual health. For girls and women living with any form of FGM, cognitive behavioural therapy should be considered if they are experiencing symptoms consistent with anxiety disorders, depression or post-traumatic stress disorder, and sexual counselling is recommended for preventing or treating female sexual dysfunction [320]
	Health workers can act as opinion leaders	Person- centered communication for FGM prevention using the 'ABCD approach' has been shown to be effective in changing knowledge and attitudes of women attending antenatal care in FGM prevalent settings [321]
Community and Interpersonal	Communication for change	For more information see [317]
	Alternative right of passage rituals	For more information see [317]

Table 8: Interventions to prevent early child marriage [322] [263]

Ecological Level	Intervention	Further Comment
Structural and environmental	Political leadership, planners and community leaders to formulate and enforce laws and policies to prohibit it	A multisectoral, multipronged approach is likely to be more effective in ending child marriage than changing laws and policies alone
	Social protection	This can include transfers, insurance and services to improve resilience and prevent negative household coping strategies

Organizational	Increasing educational opportunities for girls through formal and non-formal channels	
	Investing in girls' education and vocational skills	
	Invest time in identifying the key drivers of child marriage in local settings	Although gender-discrimination is a central determinant of child marriage, the precipitating factors vary from place to place. They include poverty, lack of opportunities to study and work, restrictive social and cultural norms, and insecurity resulting from war or civil strife. The mix of these and other factors will need to determine the package of actions used in each setting [323].
	Improve access to services for married adolescents	This could take the form of psychological support or reproductive health services. With limited agency and power in marital relationships and, in some cases, little mobility, adolescent girls may require special outreach of youth-friendly services where appropriate.
Community and Interpersonal	Implementing interventions to inform and empower girls	

Table 9: Promotion of preconception, antenatal and pregnancy care in adolescents [324, 325]

Ecological level	Intervention	Further comments
Organizational	Leverage digital decision-support and patient management systems to strengthen care coordination and quality of service delivery	Software systems that reinforce WHO recommended clinical care guidelines with decision-support and patient management, strengthen health providers capacity to support, screen, refer, and manage adolescents in relation to their antenatal health needs, in an adolescent-friendly manner [313]
Community and interpersonal	Ensure access to adolescent-friendly antenatal, childbirth and postnatal services Address delays in seeking and receiving appropriate maternal health care Ensure the availability of adolescent-friendly antenatal health	Antenatal care including birth preparedness and complication readiness. Interventions are recommended to increase the use of skilled care at birth and to increase the timely use postnatal y care for both the adolescent girl, newborn and the family. Interventions to promote the involvement of men during pregnancy, childbirth and after birth are recommended to facilitate and support improved self-care of women, improved home care practices for women and newborns, improved use of skilled care during pregnancy, childbirth and the postnatal period for women and newborns, and increase the timely use of facility care for obstetric and newborn complications. These interventions are recommended provided that they are implemented in a way that respects, promotes and facilitates women's choices and their autonomy in decision-making and supports women in taking care of themselves and their newborns. In order to ensure this, rigorous monitoring and evaluation of implementation is recommended. Where traditional birth attendants remain the main providers of care at birth, dialogue with traditional birth attendants, women, families, communities and

	services that are accessible, acceptable and appropriate for adolescents Expand availability of antenatal, childbirth and postnatal care to adolescents	service providers is recommended in order to define and agree on alternative roles for traditional birth attendants, recognizing the important role they can play in supporting the health of women and newborns. Use of lay health workers, including trained traditional birth attendants, is recommended for promoting the uptake of a number of maternal- and newborn-related health-care behaviours and services, providing continuous social support during labour in the presence of a skilled birth attendant, and administering misoprostol to prevent postpartum haemorrhage. Use of lay health workers, including trained traditional birth attendants, to deliver the following interventions is recommended, with targeted monitoring and evaluation: distribution of certain oral supplement-type interventions to pregnant women (calcium supplementation in women living in areas with known low levels of calcium intake; routine iron and folate supplementation in pregnant women; intermittent presumptive therapy in malaria in pregnant women living in endemic areas; vitamin A supplementation in pregnant women living in areas where severe vitamin A deficiency is a serious public health problem); and the initiation and maintenance of injectable contraceptives using a standard syringe. Ongoing dialogue with communities is recommended as an essential component in defining the characteristics of culturally appropriate, quality maternity care services that address the needs of women and newborns and incorporate their cultural preferences. Mechanisms that ensure women's voices are meaningfully included in these dialogues are also recommended.

		Continuous companionship during labour and birth is recommended for improving women's satisfaction with services. Continuous companionship during labour and birth is recommended for improving labour outcomes. Implementation of community mobilization through facilitated participatory learning and action cycles with women's groups is recommended to improve maternal and newborn health, particularly in rural settings with low access to health services. Implementation of facilitated participatory learning and action cycles with women's groups should focus on creating a space for discussion where women are able to identify priority problems and advocate for local solutions for maternal and newborn health. Community participation in quality-improvement processes for maternity care services is recommended to improve quality of care from the perspectives of women, communities and health-care providers. Communities should be involved in jointly defining and assessing quality. Mechanisms that ensure women's voices are meaningfully included are also recommended. Community participation in programme planning, implementation and monitoring is recommended to improve use of skilled care during pregnancy, childbirth and the postnatal period for women and newborns, increase the timely use of facility care for obstetric and newborn complications and improve maternal and newborn health. Mechanisms that ensure women's voices are meaningfully included are also recommended.

		Maternity waiting homes are recommended to be established close to a health facility where essential childbirth care and/or care for obstetric and newborn complications is provided to increase access to skilled care for populations living in remote areas or with limited access to services. Community-organized transport schemes are recommended in settings where other sources of transport are less sustainable and not reliable. However, measures should be taken to ensure the sustainability, efficacy and reliability of these schemes while seeking long-term solutions to transport.
Individual	Improve the use of antenatal, childbirth and postnatal care of pregnant adolescents Provide nutritional support during pregnancy	Maternity waiting homes are recommended to be established close to a health facility where essential childbirth care and/or care for obstetric and newborn complications is provided to increase access to skilled care for populations living in remote areas or with limited access to services.

Community-organized transport schemes are recommended in settings where other sources of transport are less sustainable and not reliable. However, measures should be taken to ensure the sustainability, efficacy and reliability of these schemes while seeking long-term solutions to transport.

Broad maternal health interventions that reduce delays in seeking and receiving appropriate health-care can reduce adolescent maternal disorders, including those detailed in the 2015 WHO Recommendations on Health Promotion Interventions for Maternal and Newborn Health and the 2013 Guidelines on Maternal, Newborn, Child and Adolescent Health: Recommendations on Maternal and Perinatal Health [324].

Actions can be taken to improve the use of antenatal, childbirth and postnatal care by adolescents through: expanding availability of such services and emergency obstetric care; reinforcing recommended care practices for adolescent friendly services through the use of health provider-facing digital decision-support and client management software systems [313]; informing adolescents and community members about their importance; and following up to ensure that adolescents, their families and communities are well prepared for birth and related emergencies [322]. Care for a pregnant adolescent should include: counselling about the option to abort during the first visit (where this is legal); social support (including home visits); nutritional support (including counselling and supplementation); advice to avoid household air pollution; systematic assessment of violence; screening and brief intervention on alcohol and drug use among pregnant women; a plan for birth; management of anaemia and malaria where it is endemic; and counselling for breastfeeding and postpartum contraception [192][325]. Postpartum contraceptive services are especially important to support healthy child spacing and to prevent rapid, repeat pregnancies [326, 327].

3.6 Communicable disease interventions

As described in Section 2, infectious diseases (such as tuberculosis and respiratory infections) remain the leading cause of mortality and morbidity in low- and middle-income countries. Interventions for improved case detection and management of high burden diseases in this age group are crucially needed to reduce morbidity and mortality. In some cases, for example WASH interventions to prevent diarrheal disease, these can be easily expanded along the lines of those being implemented for younger children. In other cases, such as for vaccinations, further attention may be needed during implementation to ensure the unique needs and vulnerabilities of adolescents are being addressed.

Box 3: Recommended responses for COVID-19 in adolescents [87, 97].

Recommended responses for COVID-19 in adolescents

The SARS-CoV-2 typically causes less severe illness and fewer deaths in children and adolescents compared to adults. Milder symptoms and asymptomatic presentations may mean less frequent care seeking in these groups, thus adolescents may tend to be tested less and cases may go unreported. Children and adolescents can experience prolonged clinical symptoms (known as "long COVID-19", post COVID-19 condition, or post-acute sequelae of SARS-CoV-2 infection), however the frequency and characteristics of these conditions are still under investigation, and to date they appear to be less frequent compared to adults.

Several risk factors for severe COVID-19 in children and adolescents have been reported, including older age, obesity, and preexisting conditions. The preexisting conditions associated with higher risk of severe COVID-19 include type 2 diabetes, severe asthma, heart and pulmonary diseases, seizure disorders and

other neurologic disorders, neurodevelopmental (e.g. Down Syndrome) and neuromuscular conditions, and moderate to severe immunocompromising conditions.

Despite their lower risk of severe COVID-19 disease, children and adolescents have been disproportionately affected by COVID-19 control measures. The most important indirect effects are related to school closures which have disrupted the provision of educational services and increased emotional distress and mental health problems. When unable to attend school and socially isolated, children are more prone to maltreatment, sexual violence, adolescent pregnancy, and child marriage, all of which increase the probability of missing further education and of poor pregnancy outcomes.

Currently, WHO considers vaccination to be a viable prevention strategy for COVID-19 disease in children and adolescents. In phase 2/3 trials for both mRNA vaccines, safety profiles in adolescents were similar to young adults. There are risks of rare, though serious, side effects of mycocarditis/pericarditis occurring in younger men (16-24 years old), and after a second dose of vaccine, which are higher than risks seen in children and older adults. After weighing risks and benefits, the Global Advisory Committee on Vaccine Safety (GACVS) concluded that in all age groups the benefits of mRNA COVID-19 vaccines in reducing hospitalizations and deaths due to COVID-19 outweigh the risks.

- COVID-19 vaccines with WHO Emergency Use Listing that have undergone clinical trials in children and adolescent are safe and effective in preventing disease in children and adolescents.
- Children with comorbidities and severe immunocompromising conditions should be offered vaccination.
- As children and adolescents tend to have milder disease compared to adults, unless they are in a group at higher risk of severe COVID-19, it is less urgent to vaccinate them than older people, and those with chronic health conditions and health workers.
- UNICEF and WHO have developed guidance on how to minimize transmission in schools and keep schools open, regardless of vaccination of school-aged children. Teachers, family members, and other adult contacts of children and adolescents should ideally all be vaccinated for direct protection.
- Countries should consider the individual and population benefits of immunizing children and adolescents in their specific epidemiological and social context when developing their COVID-19 immunization policies and programs.
- Countries' strategies related to COVID-19 control should facilitate children's participation in education and other aspects of social life, and minimize school closures, even without vaccinating children and adolescents
- Throughout the roll out of COVID-19 vaccinations, it is of utmost importance for children to continue to receive the recommended childhood vaccines for other infectious diseases.
- Country response plans should ensure adequate responses to the socio-economic impacts of COVID-19. In addition to ensuring uninterrupted access to health services and support, response

measures can focus on school reintegration, prioritizing mental health and food security, online, physical and emotional safety, reducing child marriage, and ensuring productive livelihoods.

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1584 **Table 10: Prevention, detection and treatment of communicable diseases [328, 329]**

Disease	Ecological Level	Intervention	Further Comment
Tuberculosis	Structural and environmental	Develop clear national child and adolescent TB targets. Implement policies for the transition of adolescents from paediatric to adult TB services.	WHO TB estimates provide a good starting point in the development of national targets. The global targets include the SDG target on ending TB by 2030 Services need to be made adolescent-friendly. They need to respect privacy and confidentiality to avoid stigma. They need to have flexible opening hours so that adolescents can stay as much as possible in education. Adolescents should have access to shorter treatment options (for treatment of TB infection and treatment of TB disease) which are known to increase adherence and treatment completion. As much as possible services need to be offered for TB and co-morbidities at the same time and place [330].
	Organizational	Expand the provision of services to cover the full cascade of care. Systematically implement TB screening for children and adolescents at public and private in- and outpatient settings	The full cascade of care includes TB prevention, screening, diagnosis, treatment of drug-susceptible TB, treatment of TB meningitis, treatment of multidrug resistant and rifampicin resistant TB, treatment of extrapulmonary TB, post TB, and rehabilitation of TB related functional impairments. This should occur in facilities focusing on adult and paediatric chest and TB; nutrition; HIV; adolescent health; ANC; immunization clinics; and dedicated screening events, followed by appropriate management or referral to TB

			preventive, treatment and rehabilitative care services. Symptom screening, chest X-ray or molecular WHO-recommended rapid diagnostic tests should be used alone or in combination Consider bi-directional screening for COVID-19 and TB in settings with a high burden of TB.
	Community and interpersonal	If adolescents younger than 15 years are in close contacts of someone with TB, systematic screening for TB disease should be conducted. Empower communities and implement peer programs to strengthen the TB response and social accountability mechanisms	Symptom screening includes any one of cough, fever or poor weight gain; or chest radiography; or both. This can include working with community health and outreach workers and primary care providers to scale up active contact tracing, provide family-integrated TB treatment and preventive therapy, and engaging adolescents in their care. Peer counselling has shown a significantly higher treatment completion rate when compared with usual care [331][330].
	Individual	Limiting exposure to household environmental risks	This can include reducing exposure to alcohol, tobacco smoke, or indoor air pollution
Respiratory tract infections	Structural and environmental	Improve standards and introduce public policies to reduce adolescent harmful exposure to air pollution [332]	Ambient air pollution has been shown to have an impact on mortality from respiratory infections, and is especially exacerbated in contexts of undernutrition and poor health care [333].
	Organizational	Integrate environmental health to health	All health professionals should consider air pollution a major risk factor for their patients

		professional training programs	and understand the sources of environmental exposure in the communities they serve
	Community and interpersonal	Educate families and communities	This can include information regarding the causes and consequences of exposure to indoor air pollution, and household mitigation measures
	Individual	Reduce adolescent and general population exposure to indoor air pollution while meeting household energy needs and decreasing the amount of fuel needed.	Measures include: switching from wood, dung or charcoal to more efficient, modern and less polluting fuels; locating a stove outside of a home or in a well-ventilated area; ventilating cooking areas using eaves and smoke hoods; and changing behaviours, such as keeping children away from the smoking hearths, drying fuel wood before use, using lids on pots to shorten cooking time and improving ventilation by opening windows and doors.
Diarrheal diseases	Structural and environmental	Policies and programs to promote safe water, sanitation and handwashing	This can include: Implement water safety plans and guidelines for drinking-water quality at a national level; implementation of sanitation safety plans and guidelines for safe use and disposal of wastewater, greywater and excreta; policies and programmes to promote the widespread adoption of appropriate hand washing practices.
	Organizational	Ensure schools and health facilities are equipped with proper water and sanitation infrastructure	Building such infrastructure in schools led to a significant reduction in odds of school absence due to diarrhea Expanded handwashing programs in schools (including soap for school sinks, peer hygiene

		Promote handwashing programs in schools	monitors) can lead to reduced absenteeism [334].
	Community and interpersonal	Scale up water treatment programs Educate communities about water safety and improved sanitation measures they can take	Evidence suggests that water treatment probably reduces diarrhea by almost 40%. This can include: lifestraw filter treated water, ceramic water purifier, iron-rich ceramic purifier, and water treatment with concrete BioSand filter. This can include safe storage of household water; increased access to basic sanitation at the household level; improved sanitation in households (e.g. flushing to a pit or septic tank; dry pit latrine with slab; or composting toilet.
	Individual	Maintain good hand washing practices, washing hands before eating, after using the toilet and with soap.	Hand-washing with soap is an effective preventive intervention against infectious diseases, including reducing diarrheal disease by 23-48% [335].
Meningitis [336]	Structural and environmental	Strengthen primary health care and health systems and increase immunization coverage	This includes introducing and expanding licensed/WHO prequalified vaccines in countries in line with WHO recommendations, and implementing locally appropriate tailored immunization strategies to achieve and maintain high vaccination coverage
	Organizational	Develop, update and implement strategies on surveillance, preparedness and response to meningitis epidemics. Fight antimicrobial resistance by expanding	This should pay attention to spatial units, including consideration of mass gathering issues, and enhancement of infection prevention and control programmes Antibiotics for close contacts of those with meningococcal disease, when given promptly, decreases the risk of transmission. However

		vaccination. Use schools as platform to share information on detection, monitoring and management of meningitis sequelae	high usage of antibiotics in the treatment of suspected meningitis can lead to the development of antimicrobial resistance.
	Community and interpersonal	Create community awareness of meningitis, including dispelling myths and addressing vaccine hesitancy	This can involve integrated communication programmes and activities that increase population awareness of the risk, symptoms, signs and consequences of meningitis and sepsis and of the recommended health-seeking response.
	Individual	Increase the availability of appropriate rehabilitative care for adolescents with functioning difficulties resulting from meningitis	Meningitis can cause severe long term complications including neurological problems, such as hearing loss, visual impairment, seizures, and learning impairments. Adolescents can also suffer from depressive symptoms and fatigue that can contribute to lower educational attainment and greater reduction in quality of life [337].

3.7 Non-communicable diseases

As shown in Section 2, some of the major causes of adolescent death and disease are NCDs such as cancer, migraines, skin diseases and asthma. Congenital anomalies and iron-deficiency anaemia also contribute to adolescent disease burden. NCDs can manifest during adolescence, or later in life as a result of risk factors experienced during adolescence (such as tobacco use which may be a strong contributing factor to developing chronic obstructive pulmonary disease (COPD) or cancer during adulthood). Indeed, many of the NCD risk factors and burdens seen in adults first begin as risk behaviours in adolescence, underscoring the importance of intervening with adolescents to protect their health in both the short-term and the long-term. This section will focus on experiences of NCDs during adolescence, while subsequent sections will focus on adolescent risk factors for NCDs later in life.

Box 4: Leukemia and other cancers during adolescence [338-345]

Leukemia and other cancers during adolescence

WHO provides detailed guidance on leukaemia and other cancers in the Cancer Control series, which consists of six publications on planning, prevention, early detection, diagnosis and treatment, palliative care and policy and advocacy. Each of these documents provides examples of priority interventions, and categorizes them according to the available level of resources, i.e. core (with existing resources), expanded (with a projected increase in, or reallocation of, resources) and desirable (when more resources become available). Taking the example of a low-resource country in which less than 20% of children with acute lymphocytic leukaemia have access to full treatment and over 80% die within five years, these guides recommend to:

- Include palliative care medication, chemotherapy drugs and antibiotics used for treating paediatric acute lymphatic leukaemia in the national essential medicines list (core)
- Improve quality and coverage of diagnostic, treatment and palliative care services for acute lymphatic leukaemia in children, and mobilize further social support for patients and their families (expanded)
- Develop special strategies for increasing the adherence of children to treatment for acute lymphatic leukaemia (desirable)

Recent evidence supports the efficacy of motor and exercise intervention for adolescents with acute lymphoblastic leukemia. While evidence is still growing, there is also support for interventions using various digital modalities to improve health behaviours and reduce cancer-related symptoms among adolescent survivors.

Box 5: Management of Asthma

Management of Asthma

Asthma symptoms include cough, wheeze and difficulty in breathing. These symptoms typically vary from day to day and can be made worse by exposure to triggers including dust, fumes, smoke and viral infections. Effective long-term management with inhaled medicines, including an inhaled corticosteroid, can improve daily symptoms and reduce asthma attacks. This is important to avoid school absence and emergency health care use, and the associated costs for the family and health system. For resource-limited settings, the WHO package of essential noncommunicable (PEN) disease interventions for primary health care includes guidance for the acute and long-term management of asthma, using core medicines included in the WHO Essential Medicines List [346, 347]. Effective long-term management with inhaled medications can control the disease and enable people with asthma to enjoy a normal, active life.

Box 6: Skin diseases [348-350]

Skin diseases

Several skin diseases are associated with long-term disfigurement, disability and stigma. Among adolescents, they are known to contribute to psychological burden, anxiety and depression [351]. In 2018, WHO developed a pictorial training guide to combine control, treatment and care activities for skin-related diseases to maximize the use of limited resources and expand treatment coverage. The training guide is designed for front-line health workers who do not have thorough knowledge of common skin disease, particularly those manifesting as a result of neglected tropical diseases.

In general populations, patient education has been found to be effective in improving quality of life and decreasing the severity of skin diseases, even in the long-term management of chronic skin diseases. Detailed guidance to clinicians on how to diagnose, treat and manage acne, different kinds of eczema and other skin conditions – including key clinical features and treatment for severe, moderate and mild forms of these conditions – can be found in the WHO 2011 IMAI District Clinician Manual.

Box 7: HPV vaccination to reduce cervical cancer risk [352]

HPV vaccination to reduce cervical cancer risk

Worldwide, cervical cancer is the fourth most frequent cancer in women with an estimated 604 000 new cases in 2020. In high-income countries, programmes are in place which enable girls to be vaccinated against HPV and women to get screened regularly and treated adequately. Screening allows pre-cancerous lesions to be identified at stages when they can easily be treated. In low-and middle-income countries, there is limited access to these preventative measures and cervical cancer is often not identified until it has further advanced and symptoms develop. In addition, access to treatment of cancerous lesions (for example, cancer surgery, radiotherapy and chemotherapy) may be limited, resulting in a higher rate of death from cervical cancer in these countries. A large majority of cervical cancer (more than 95%) is due to the human papillomavirus (HPV). HPV is the most common viral infection of the reproductive tract. Most sexually active women and men will be infected at some point in their lives, and some may be repeatedly infected. More than 90% of the infected populations eventually clear the infection, but when infection becomes chronic it can lead to precancerous lesions and invasive cancer.

WHO recommends:

- HPV vaccination in girls 9-14 years old. HPV vaccine can be an important pillar of adolescent health programmes
- Girls and boys should be offered health information regarding sex education, tailored to age
- Condom promotion and provision for those engaged in sexual activity
- Male circumcision

There are currently 6 vaccines licensed, and 4 that have been prequalified by WHO, all protecting against HPV types 16 and 18, which are known to cause at least 70% of cervical cancers. The 9-valent vaccine protects against 5 additional oncogenic HPV types, which cause a further 20% of cervical cancers. Two of the vaccines also protect against HPV types 6 and 11, which cause anogenital warts.

HPV vaccines have been shown to be safe and effective in preventing infections with HPV infections, high grade precancerous lesions and invasive cancer. The vaccines work best if administered prior to exposure to HPV. Therefore, to prevent cervical cancer WHO recommends vaccinating girls aged 9 to 14 years, when most have not started sexual activity. Some countries have started to vaccinate boys as the vaccination prevents HPV related diseases and cancers in males as well as.

Box 8: Prevention and management of unaddressed sensory (vision or hearing) impairments in adolescents

Most common causes of vision loss and many common causes of hearing loss in adolescents can be prevented or treated.

To prevent and address vision loss in adolescents, WHO recommends [353]:

- Increasing the accessibility and availability of spectacles or contact lenses, both of which can fully correct reduced vision from myopia and other refractive errors. Spectacles are among the most practical and cost–effective of all health-care interventions to implement.
- Regular screening for refractive errors for preschool- and school-aged children in order to avoid the negative impact of uncorrected refractive errors on academic performance.
- Implementation of public health campaigns to modify population behavior toward limited near vision activities and longer time spent outdoors to reduce onset and progression of myopia.

To prevent and address hearing loss in adolescents, WHO recommends [232, 354-356]:

- Raising awareness among the adolescents, parents and teachers about healthy ear care practices and safe listening (for prevention of noise-induced hearing loss).
- Adoption of the WHO-ITU global standard for safe listening for safe listening devices by private sector entities. When implemented in devices such as smartphones and headphones, this can help adolescents to moderate their sound exposure and protect hearing.

- Implementation by governments of the WHO global standard for safe listening entertainment venues, which intends to protect the hearing of young people frequenting concerts and clubs.
- Regular school-based screening for ear and hearing problems, that can facilitate their early identification and timely management.

3.8 Interventions for the prevention and treatment of mental health conditions

As section 2 describes the prevalence of mental health conditions among adolescents is unacceptably high. Up to 50% of all mental health conditions start before the age of 14 years and up to one in five adolescents experience a mental disorder each year. Suicide is one of the leading causes of death among older adolescents. Poor adolescent mental health is associated with a range of high-risk behaviours, including selfharm, tobacco, alcohol and substance use, risky sexual behaviours and exposure to violence, the effects of which persist throughout the life-course and have serious implications. The COVID-19 pandemic has severely impacted the well-being of young people and has put them at an increased risk of suicide, substance use and other mental health problems [357]. Additionally, adolescents living in challenging contexts such as protracted conflicts may need more attention. Box 4 provides as case study of youth mentoring and counselling during the protracted crisis in West Bank and Gaza Strip.

Table 11: Common mental health conditions in adolescence, including anxiety, depression, post-traumatic stress disorder and developmental delays [357, 358]

Ecological level		Further comment
Structural and environmental	Expand capacity of mental health and psychosocial support frontline workers, including those with advanced degrees through appropriate education, recruitment and retention programs to develop a diverse pipeline of mental health practitioners.	The number and diversity of mental health practitioners varies across context. Bolstering this capacity is an important national strategy to increase coverage of services, in addition to exploring telehealth and peer-based strategies.

Organizational	Universal interventions to promote positive mental health and reduce mental health conditions Strengthening mental health using a HPS and systems approach	Universal interventions should include the prevention and reduction of suicidal behaviour, mental disorders such as depression and anxiety, aggressive, disruptive and oppositional behaviours and substance use. These can include: Supporting training and professional development in whole-school approaches to mental health for pre-service and in-service school staff including the mental health and leadership team (e.g., online bullying, identifying signs of distress and need for health services, crisis management, suicide prevention, protocol for referring learners/families to mental health services where relevant). Establishing a HPS committee to plan, implement and evaluate mental health initiatives made up of education sector staff, learners, parents and carers, community and religious leaders, health staff, civil society organisations. Involving all teachers, school health staff, student representatives, and parents and carers in decision-making to promote HPS and mental health. Developing and communicating relevant school policies and standards in all local languages (e.g., anti-bullying, respectful relationships, child protection policies). School-based programmes focused on cognitive, problem-solving and social skills Community-based interventions to reduce child abuse, neglect and bullying

	Selective interventions with adolescents who are at relatively high risk of depression	Interventions to help coping with major life events (e.g. parental death or divorce), or those seeking to block the transgenerational transfer of depression and related problems (e.g. adolescents with depressed parents)
	Indicated interventions for adolescents with elevated levels of depressive symptoms, and adolescents with emotional symptoms	This can include: Group work with at-risk adolescents to promote positive thinking, challenge negative thinking styles and improve problem-solving skills Anxiety prevention programmes Group-based CBT may be considered for adolescents with emotional symptoms
	Provide psychosocial interventions to adolescents affected by humanitarian crises.	These interventions are particularly beneficial for preventing mental disorders (depression, anxiety and disorders related specifically to stress) and may be considered for reducing substance use in these populations.
	Consider psychosocial interventions for pregnant adolescents and adolescent parents.	Cognitive behavioural skills-building programs are an example that could be considered for this group.
Community and interpersonal	Parenting skills	Supporting parents and families. This can include promoting positive, stable emotional connections between parents and adolescents (e.g. to enhance adolescent self-esteem and social competence); assisting parents to establish rules, communicate expectations and learn to exercise consistent and effective monitoring of adolescent behaviours (e.g. to reduce adolescent risk-related sexual behaviour, substance use and delinquency);

		assisting parents to respect the individuality of adolescents and to avoid intrusive, manipulative and unduly controlling behaviours (e.g. to reduce adolescent antisocial behaviours); encouraging parents to adopt attitudes and behaviours that are supportive of health (e.g. not smoking) while also reflecting supportive prevailing social norms (e.g. positively to influence adolescent behaviour). Parental psychoeducation for an adolescent with developmental delay or disorder Care for children with developmental delays
Individual	Treatment options and services for adolescents	Psychosocial support and rehabilitation services for adolescent mental health and well-being Treatment of emotional disorders such as depression and anxiety through: Psychological interventions such as cognitive behavioural therapy, Interpersonal psychotherapy Strengthening adolescents' emotional resilience and cognitive skills to avoid or to manage anxiety disorders Cognitive-behavioural therapy as an early intervention method to prevent post-traumatic stress disorder, short-term cognitive workshops for those who have experienced a first panic attack

Table 12: Preventing adolescent suicide [112, 358-360]

Ecological Level	Intervention	Further Comment

Structural and environmental	Adoption of national mental health policies	Related to suicide, these should focus on: strengthening effective leadership and governance; providing comprehensive, integrated and responsive services in community-based settings; implementing strategies for prevention; and strengthening information systems, evidence and research.
	Policies to reduce harmful use of alcohol	Policy options include policies related to drink-driving and the marketing and availability of alcohol
	Restriction of access to means	Restriction includes legislation to limit access to pesticides, firearms and medications commonly used in suicide and safer storage and disposal of each, as well as environmental interventions to prevent suicide by jumping.
	Responsible media reporting	Media guidelines should stress avoidance of detailed descriptions of suicidal acts; sensationalism; glamorization and oversimplification; use of responsible language; minimizing the prominence of suicide reports; and educating the public about suicide and available treatments.
Organizational	Improved access to health-care	Adequate, prompt and accessible treatment for mental and substance use disorders can reduce the risk of suicidal behaviour. Implementing health-literacy policies and practices throughout health systems and institutions is also key.
	Surveillance of suicide and suicide attempts	Sustainable and long-term surveillance of suicide cases, and hospital presentations due to suicide attempts and self-harm, provide critical information for prevention, intervention and treatment.
	Electronic media strategies for service delivery	Online suicide prevention strategies include self-help programmes and professionals engaging in chats or therapy with suicidal individuals. Text messaging is an alternative, particularly when the internet is not accessible.

	Raising awareness about mental health, substance use disorders and suicide	Awareness-raising campaigns aim to reduce stigma and promote help-seeking and access to care. Different types of exposure (e.g. television, print media, the internet, social media and posters) can reinforce key messages. At the local level, awareness raising can target specific vulnerable populations.
Community and interpersonal	Interventions for vulnerable groups with a higher risk of suicide	These interventions should be tailored and targeted toward groups that are most at risk of suicide in particular settings. For example, interventions targeting lesbian, gay, bisexual, transgender and intersex (LGBTI) adolescents should focus on addressing risk factors such as mental disorders, substance abuse, stigma, prejudice and individual and institutional discrimination.
	Gatekeeper training	For people in a position to identify whether someone may be contemplating suicide (e.g. clinicians or teachers), gatekeeper training develops knowledge, attitudes and skills for identifying adolescents at risk, determining the level of risk and referring at-risk adolescents for treatment.
	Crisis helplines	Crisis helplines are public call centres that people can turn to when other social support or professional care is unavailable or not preferred. Helplines can be in place for the wider population or may target certain vulnerable groups, e.g. with peer assistance.
Individual	Assessment and management of suicidal behaviours	The WHO mhGAP intervention guide recommends assessing comprehensively everyone presenting with thoughts, plans or acts of self-harm. The guide recommends asking any person over 10 years of age who is experiencing a priority mental, neurological or substance-use disorder – or chronic pain or acute emotional distress – about his or her thoughts, plans or acts related to self-harm and suicide.
	Assessment and management of mental &	This involves training primary health-care workers to recognize depression and other mental and substance use disorders, and to perform detailed evaluations of suicide

	substance use disorders	risk. Training should take place repeatedly over years and should involve the majority of health workers in a country.
	Follow-up and community support	Repeated follow-up by health workers for patients discharged after suicide attempts, and community support, are low-cost, effective interventions that are easy to implement. Follow-up can include postcards, telephone calls or brief in-person visits.

Case Study 4

West Bank' and Gaza Strip' youth mentoring and counselling during a protracted crisis

The West Bank and Gaza Strip area has experienced a pro-tracted crisis for decades, which contributed to 1.9 million of its 4.5 million population being in need of humanitarian assistance in 2015 (269). Violence, closures, restrictions and economic hardship are part of Palestinian adolescents' daily lives (270). For some adolescents this has resulted in acute psychological problems, such as apathy, self-doubt, withdrawal and a sense of hopelessness. Palestinian youth have very few opportunities for recreation or constructive participation in community development, which might help improve their mental health.

In response to this situation, the United Nations Children's Fund (UNICEF) and the Palestinian Youth Association for Leadership and Rights Activation developed a youth mentoring and counselling programme. University student volunteers were trained to provide psychosocial support, mentoring and recreational activities for adolescents in schools and community centres. Following the eight-day training course, the volunteers conducted a series of school-based psychosocial support sessions, working most closely with adolescents in violence-affected areas. The school-based sessions provided a peaceful and reassuring outlet for participants to express their views, opinions, hopes and fears, and to find ways to deal with their stress.

After the sessions were concluded, adolescents were given the opportunity to express themselves in constructive and creative ways. For example, adolescents planned their own small-scale projects to improve their schools and neighborhoods with the support of the volunteers. A telephone hotline operated by university students was also established to provide one-on-one psychosocial support to adolescents, especially during times of restricted mobility and curfews. The adolescents and university students also produced a Youth Times newspaper with a circulation of 100 000 and a weekly youth TV programme. Qualitative evaluation of the first years of the programme suggested it had a positive impact on both the volunteers and the participants.

Source: UNICEF. Adolescent programming experiences during conflict and post-conflict: case studies; 2004. (https://www.unicef. org/adolescent_conflict.pdf)

END OF BOX

3.9 Interventions to address alcohol and drug use

Use of psychoactive substances usually starts in adolescence (10–19 years old) and even childhood. The earlier substance use starts, the greater the risks for more rapid progression to heavy use and substance use disorders. It is important to remember though that the highest proportion of adolescents typically fall into a low use group, which at times includes experimental or low levels of alcohol or drug use. However, alcohol and drug use can affect normal development and result in a range of negative health and social outcomes and lead towards the development of substance use disorders [359]. Special difficulty might be associated with multiple substance use with those in lower socioeconomic status and older age being at higher risk [360]. Appropriate attention should be given to the prevention of the initiation of alcohol and drug use among children and adolescents and providing support with quitting substance use and reducing its negative consequences, while addressing special needs of this group.

Table 13: Interventions to prevent alcohol and drug use and address substance use disorders among adolescents [361, 362]

Ecological level	Intervention	Further comments
Structural and environmental	Strengthen restrictions on alcohol and drug availability	Enacting and enforcing restrictions on commercial or public availability of alcohol through laws, policies, and programmes are important ways to reduce harmful use of alcohol. Such strategies provide essential measures to prevent easy access to alcohol by young people and other vulnerable and high-risk groups. This includes reduction of density of alcohol outlets and hours or days when alcohol beverages can be sold and establishing an appropriate minimum age for purchase or consumption of alcoholic beverages and other policies to prevent sales to, and consumption of, alcoholic beverages by those below the legal age and introduce mechanisms for placing liability on sellers and servers.

	Advance and enforce drink driving counter measures	Road users who are impaired by alcohol have a significantly higher risk of being involved in a crash. Enacting and enforcing strong drink-driving laws and low blood alcohol concentration limits via sobriety checkpoints and random breath testing will help to turn the tide.
	Enforce bans or comprehensive restrictions on alcohol advertising, sponsorship, and promotion	Bans and comprehensive restrictions on alcohol advertising, sponsorship and promotion are impactful and cost-effective measures. Enacting and enforcing bans or comprehensive restrictions on exposure to them in the digital world will bring public health benefits and help protect children, adolescents and abstainers from the pressure to start consuming alcohol.
	Raise prices on alcohol through excise taxes and pricing policies	Alcohol taxation and pricing policies are among the most effective and cost-effective alcohol control measures. An increase in excise taxes on alcoholic beverages is a proven measure to reduce harmful use of alcohol and it provides governments revenue to offset the economic costs of harmful use of alcohol.
	Facilitate access to screening, brief interventions and treatment for drug and alcohol abuse	Health professionals have an important role in helping people to reduce or stop their drinking to reduce health risks, and health services have to provide effective interventions for those in need of help and their families.

	Population-based interventions in accordance with drug conventions (1961, 1971 and 1988), as well as implementation of recommendations of the UNGASS on World Drug Problem (2016)	Documents include range of actions including restriction of availability, distribution, production, export and import of psychoactive drugs and other actions on preventing the initiation and continuation of drug use by children, adolescents and young people as well as on increasing access on need to address specific needs of adolescents in treatment of drug use disorders.
Organization	Retaining children in schools, school policies on substance use and other interventions in educational settings	School policies on substance use mandate that substances should not be used on school premises and during school functions and activities by both students and staff. Policies also create transparent and non-punitive mechanisms to address incidents of use transforming it into an educational and health promoting opportunity. Other interventions may include prevention based on individual psychological vulnerabilities, wider programmes to increase access to education and enhance school attachment
	Addressing special needs of children and adolescents in treatment programmes for substance use disorders	To treat children with substance use disorders, it is necessary to design psychosocial treatments to fit their needs, level of cognitive development, life experiences, legal status. This includes psychosocial and pharmacological interventions, e.g. for management of withdrawal, continued treatment and relapse prevention

Community and Interpersonal	Community-based multi-component initiatives	At the community level, mobilization efforts to create partnerships, task forces, coalitions, action groups, etc. bring together different actors in a community to address substance use. Some community partnerships are spontaneous. However, the existence of community partnerships on a large scale is normally the product of a special programme providing financial and technical support to communities to deliver and sustain evidence based prevention interventions and policies over time. Community-based initiatives are normally multicomponent, taking action in different settings (e.g. schools, families, media, enforcement etc.). This also includes mobilization of communities to prevent the selling of alcohol to, and consumption of alcohol by, underage drinkers.
	Develop and support alcohol-free environments, especially for youth and other at-risk groups.	Communities can be supported and empowered by governments and other stakeholders to use their local knowledge and expertise in adopting effective approaches to prevent and reduce the harmful use of alcohol by changing collective rather than individual behaviour while being sensitive to cultural norms, beliefs and value systems.
	Family-based and parenting skills programmes	Parenting skills programmes support parents in being better parents, in very simple ways. A warm child-rearing style, where parents set rules for

		acceptable behaviours, closely monitor free time and friendship patterns, help to acquire personal and social skills, and are role models is one of the most powerful protective factors against substance use and other risky behaviours.
Individual	Addressing individual psychological vulnerabilities, personal and social skills education	Some personality traits such as sensation-seeking, impulsivity, anxiety sensitivity or hopelessness, are associated with increased risk of substance use. These indicated prevention programmes help these adolescents that are particularly at-risk deal constructively with emotions arising from their personalities, instead of using negative coping strategies including alcohol use. The programmes provide opportunities to learn skills to be able to cope with difficult situations in the daily life in a safe and healthy way.
	Addressing mental health disorders	Mental disorders (e.g. anxiety, depression) and behavioural disorders (e.g. ADHD, conduct disorder) are associated with higher risk of substance use later in adolescence and in life. In both childhood and adolescence, supporting children, adolescents and parents to address emotional and behavioural disorders as early as possible is an important prevention strategy.

	Prevention education based on social competence and influence	During skills based prevention programs, trained teachers engage students in interactive activities to give them the opportunity to learn and practice a range of personal and social skills (social competence). These programs focus on fostering substance and peer refusal abilities that allow young people to counter social pressures to use substances and in general cope with challenging life situations in a healthy way
	Mentoring	"Natural" mentoring refers to the relationships and interactions between children/adolescents and non-related adults such as teachers, coaches and community leaders and it has been found to be linked to reduced rates of substance use and violence. These programmes match youth, especially from marginalised circumstances (selective prevention), with adults who commit to arrange for activities and spend some of their free time with the youth on a regular basis.

3.10 Interventions to address Tobacco use

Tobacco kills up to half its users and is considered one of the biggest public health threats killing smokers directly, and many others through exposure to second-hand smoke [363]. When tobacco users become aware of the dangers of tobacco, most want to quit. However, nicotine contained on tobacco products is highly addictive and without cessation support only 4% of users who attempt to quit tobacco use will succeed. Professional support and proven cessation medications can more than double a tobacco user's chance of successful quitting.

Increasingly, young people are being exposed to Electronic Nicotine Delivery Systems (ENDS) also knowns as vaping or electronic cigarettes (e-cigarette). E-cigarettes are particularly risky when used by adolescents. Nicotine is highly addictive and young people's brains develop up to their mid-twenties. ENDS use increases the risk of heart disease and lung disorders.

ENDS use increases the risk of heart disease and lung disorders. There is some evidence between adolescent vaping and smoking initiation [364, 365]. However, it is too early to provide a clear answer on the long-term impacts of using them or being exposed to them.

Advertising, marketing and promotion of ENDS has grown rapidly, through internet and social media channels in particular. In many cases, this marketing gives rise to concern about deceptive health claims, deceptive claims on cessation efficacy, and targeting towards youth (especially with the use of flavours).

Table 14: Interventions to reduce tobacco use and exposure

Ecological level	Intervention	Further explanation
Structural and environmental	Reduce the affordability of tobacco	Reduce affordability of tobacco products by increasing tobacco excise taxes.
	Ban tobacco advertising	Enforce comprehensive bans on tobacco advertising, promotion and sponsorship, including cross-border advertising, internet and social media. Also actively promote the entertainment media, cinema and drama as smoke-free.
	Smoke-free environments	Create bylaws ensuring completely smoke-free environments in all schools, recreational areas, indoor workplaces, public places and public transport.
Organizational and community	Campaigns to raise awareness of the dangers of tobacco	Conduct regular and effective mass-media campaigns to raise awareness of the dangers of tobacco. Include pictorial health warnings on packaging and in mass media campaigns
	Tobacco prevention within school programmes	Integrate tobacco prevention within school policies, skills-based health education and health services. See Tobacco Use: An Important Entry Point for the Development of Health-Promoting Schools for age-appropriate knowledge, attitude and skills-building targets. In no circumstances should these

		programmes be implemented in collaboration with or funded by the tobacco industry.
Interpersonal and individual	Guidance on stopping tobacco use	Clinicians should encourage all non-smokers not to start smoking; strongly advise all smokers to stop smoking, and support them in their efforts; and advise individuals who use other forms of tobacco to quit. See Toolkit for Delivering the 5A's and 5R's Brief Tobacco Interventions in Primary Care for more specific guidance.

3.11 Physical activity and sedentary behaviour

Regular physical activity is proven to help prevent and manage noncommunicable diseases such as heart disease, stroke, diabetes and several cancers. It also helps prevent hypertension, maintain healthy body weight and can improve mental health, quality of life and well-being. Despite these benefits, more than 80% of the world's adolescent population is insufficiently physically active.

WHO guidelines recommend adolescents should:

- do at least an average of 60 minutes per day of moderate-to-vigorous intensity, mostly aerobic, physical activity, across the week.
- incorporate vigorous-intensity aerobic activities, as well as those that strengthen muscle and bone, at least 3 days a week.
- limit the amount of time spent being sedentary, particularly the amount of recreational screen time.

Table 15: Interventions to promote adolescent physical activity [366, 367][368]

Ecological level	Intervention	Further comment
Structural and environmental	Urban planning policies	Governments should partner with communities, the private sector and NGOs to develop inclusive safe spaces for physical activity and accessible facilities for sports, recreation and leisure. Active transport policies should ensure that walking, cycling and other non-motorized transport are accessible and safe for all. Provide free or subsidized transportation to accessible fitness and sports centers (e.g.; for adolescents with disabilities).

	School and public facilities	Adequate facilities should be available on school premises, youth workplaces and in public spaces for physical activity during recreational time for all adolescents (including those with disabilities), with the provision of gender-friendly spaces where appropriate.
Organizational and community	Public awareness programmes on physical activity	Provide guidance to children and adolescents, their parents, caregivers, teachers and health professionals on healthy body size, physical activity, sleep behaviours and appropriate use of screen-based entertainment.
	Physical education curricula in schools	A good physical education curriculum develops abilities and conditioning; provides activity for specific needs and to all children; encourages continued sports and physical activity into later life; and provides recreation and relaxation. Implement best practice communication campaigns, linked with community-based programmes, to heighten awareness, knowledge and understanding of, and appreciation for, the multiple health benefits of regular physical activity and less sedentary behaviour, according to ability, for individual, family and community well-being
	Regular, structured sports activities	Regular, structured sports activities among adolescents strengthens the link between physical activity, sports and health, and reduces sedentary behaviours.
Interpersonal and individual	Guidance on physical activity for adolescents	Physical activity for health for adolescents is at least 60 minutes of moderate to vigorous-intensity activity per day on average. • incorporate vigorous-intensity aerobic activities, as well as those that strengthen muscle and bone, at least 3 days a week. • limit the amount of time spent being sedentary, particularly the amount of recreational screen time.

		Implement regular mass participation initiatives in public spaces, engaging entire communities, to provide free access to enjoyable and affordable, socially- and culturally-appropriate experiences of physical activity.

3.12 Adolescent nutrition

Optimal nutrition practices can have a profound impact on the current and future health of adolescents [369]. During this second intense growth window, nutritional deficiencies that persisted from childhood can be addressed and catch-up growth may be possible. Additionally, adolescence provides an opportunity to adopt changes in diet that can have life-long impacts. The nutritional challenges experienced by adolescents include micronutrient deficiencies, food insecurity, sub-optimal diet quality and rising obesity.

Achieving optimal nutrition among adolescents requires coordinated actions that ideally include health, education, social protection, media and other systems. Schools provide an important platform for delivery of interventions targeted to high-risk groups, for example iron and folic acid supplementation for adolescent girls. At the same time, health professionals are a trusted source of information and implementation of screening and treatment programs.

Table 16: Interventions to promote adolescents having healthy diets [144, 370][371]

Ecological level	Intervention	Further comment
Structural and environmental	Nutrient profiles	Develop and use nutrient profiles to identify unhealthy foods and beverages.
	Nutrient labelling system	Implement a standardized global nutrient labelling system; control the use of misleading health and nutrition claims; and implement mandatory front-of-pack labelling.
	Reduce access and affordability of unhealthy foods and beverages	Tax and increase the pricing of energy-dense, nutrient-poor foods and sugar-sweetened beverages. Government policy action is required to restrict the availability of highly processed foods.
	Reduce the impact of marketing of	Reduce the impact of marketing of foods and beverages high in sugar, salt and fat. Establish cooperation between

	unhealthy foods and beverages	Member States related to cross-border marketing. Implement the Set of Recommendations on the Marketing of Foods and Non-alcoholic Beverages to Children.
	Food policies and standards	These should have clear definitions for the key components of food policies, thereby allowing for a standard implementation process
	Social protection	Cash transfers to increase uptake of healthy meals and micronutrient supplementation. See Case study 5 on Preventing teen pregnancies and supporting pregnant teenagers in Ecuador
Organizational	Healthy food environments in schools and other public institutions	Require settings frequented by adolescents (e.g. schools, childcare settings, children's sports facilities and events and youth workplaces) to create healthy food environments
	Improved access to healthy food	Improve the availability and affordability of healthy foods in public institutions and settings, particularly in disadvantaged communities.
	Nutrition education	Nutrition education such as growing school gardens, knowledge of dietary diversity, food environment, and practical skills; use opportunity of school curricula to support nutrition and food preparation
Community and interpersonal	Nutrition literacy campaigns	Ensure that appropriate and context-specific nutrition information and guidelines are developed and disseminated in a simple, understandable and accessible manner to all. Use social media to promote healthy behaviour or influence social norms and provide overweight and obesity control interventions

	Campaigns to raise awareness of adolescent obesity	Campaigns should target policymakers, medical staff and adults, adolescents and children in general, promoting capacity building related to adolescent obesity and its risk factors.
	Community ownership of interventions	Increasing community ownership of interventions, inclusive of culturally relevant information; include mentoring from community members to increase impact of interventions
Individual	Guidance on a healthy diet	For example, clinical dietary guidance for adolescents includes: Restrict sodium intake to less than 2 g per day, reduce it when cooking, and limit processed and fast foods. Restrict free sugars to less than 10% of total energy intake. A further reduction to below 5% or roughly 25 g (six teaspoons) per day would provide additional health benefits. Have five servings (400–500 g) of fruit and vegetables per day. One serving is equivalent to one orange, apple, mango or banana or three tablespoons of cooked vegetables. Limit fatty meat, dairy fat and cooking oil (less than two tablespoons per day); replace palm and coconut oil with olive, soya, corn, rapeseed or safflower oil; replace other meat with chicken (without skin). All food-grade salt, used in household and food processing, should be fortified with iodine as a safe and effective strategy for the prevention and control of iodine deficiency disorders. Daily iron supplementation is recommended as a public health intervention in menstruating adult women and

		adolescent girls living in settings where anaemia is highly prevalent (40% or higher prevalence of anaemia), for the prevention of anaemia and iron deficiency. Intermittent iron and folic acid supplementation is recommended as a public health intervention in menstruating women living in settings where anaemia is highly prevalent, to improve haemoglobin concentration and iron status and reduce the risk of anaemia in populations where the prevalence of anaemia among non-pregnant women of reproductive age is 20% or higher.
	Weight management interventions for obese adolescents	Develop and support family-based, multicomponent, lifestyle weight management services for adolescents who are overweight (including nutrition, physical activity and psychosocial support). These should be delivered by multi-professional teams as part of universal health coverage.

1709

Case Study 5

Cash Transfers improves outcomes for Pregnant Teenage Girls in Ecuador

A pilot cash transfer program jointly implemented by three Government ministries, WFP and Plan International was launched on the northern Ecuadorian border between July and December 2019. The goal of the program was to prevent early pregnancies and improve the diet of pregnant adolescent girls. Areas targeted by the pilot included communities at high risk of gender-based violence and teenage pregnancy. Girls residing in mostly rural and peri-urban settings who were considered poor or extremely poor were included in the intervention. The project provided cash transfers of USD 50 to cover costs of recommended diets that they could otherwise not afford. Recipients used funds to purchase food, sanitation products and costs to access health services. In addition to the cash transfer, they also received site visits from implementers to encourage compliance, and sessions on food security and healthy sexual behaviours. Despite the short program implementation duration, recipients of the cash transfers increased their food consumption and mean daily diets by over 20%. In addition to direct benefits, girls reported increased annual visits as well as knowledge of sexual behaviours.

Source: https://www.ennonline.net/fex/66/preventingteenpregnancies

Box 8: WHO recommendations for healthy diets in adolescence [372-374]

Sugars intake for adults and children (2015)

WHO recommends a reduced intake of free sugars throughout the life course.

In both adults and children, WHO recommends reducing the intake of free sugars to less than 10% of total energy intake.

WHO suggests a further reduction of the intake of free sugars to below 5% of total energy intake.

Potassium intake for adults and children (2012)

WHO suggests an increase in potassium intake from food to control blood pressure in children aged 2–15 years. The recommended potassium intake of at least 90 mmol/day in adults should be adjusted downward for children, based on the energy requirements of children relative to those of adults.

Sodium intake for adults and children (2012)

WHO recommends a reduction in sodium intake to control blood pressure in children aged 2–15 years. The recommended maximum level of intake of 2 g/day sodium in adults should be adjusted downward based on the energy requirements of children relative to those of adults.

Table 17: Management of acute malnutrition among TB infected adolescents [375]

Ecological level	Intervention	Further comment
Individual level	Adolescents presenting with weight loss assessed for underlying causes and managed accordingly Offer nutritional counselling and information on optimal, healthy weight	Management of severe acute malnutrition School-age children and adolescents (5–19 years), and adults, including pregnant and lactating women, with active tuberculosis and severe acute malnutrition should be treated in accordance with the WHO recommendations for management of severe acute malnutrition. Management of moderate undernutrition

	If available, enrol adolescents at risk of malnutrition in programmes where nutritional assessment, counselling and support are available All people with active tuberculosis should receive tuberculosis diagnosis, treatment and care according to WHO guidelines and international standards of care	School-age children and adolescents (5–19 years), and adults, including lactating women, with active tuberculosis and moderate undernutrition, who fail to regain normal body mass index after 2 months' tuberculosis treatment, as well as those who are losing weight during tuberculosis treatment, should be evaluated for adherence and comorbid conditions. They should also receive nutrition assessment and counselling and, if indicated, be provided with locally available nutrient-rich or fortified supplementary foods, as necessary to restore normal nutritional status. Pregnant women with active tuberculosis and moderate undernutrition or with inadequate weight gain should be provided with locally available nutrient-rich or fortified supplementary foods, as necessary to achieve an average weekly minimum weight gain of approximately 300 g in the second and third trimesters. Patients with active multidrug-resistant tuberculosis and moderate undernutrition should be provided with locally available nutrient-rich or fortified supplementary foods, as necessary to restore normal nutritional status. An adequate diet, containing all essential macro- and micronutrients, is necessary for the well-being and health of all people, including those with tuberculosis or other infections.

1715

1716 **Table 18: Micronutrients including fortification and supplementation in adolescents [376-380]**

Ecological level	Intervention	Further comment
Structural and environmental level	Prevent and control iron deficiency and iron deficiency anaemia Prevent and control iodine deficiency disorders	Fortification of maize flour and corn meal with iron is recommended to prevent iron deficiency in populations, particularly vulnerable groups such as children and women.

	Reduce the risk of folic acid deficiencies and occurrence of births with neural tube defects Fortify staple foods such as flour with micronutrients Fortify condiments such as salt with appropriate fortificants	Fortification of maize flour and corn meal with folic acid is recommended to reduce the risk of occurrence of births with neural tube defects.
		All food-grade salt, used in household and food processing, should be fortified with iodine as a safe and effective strategy for the prevention and control of iodine deficiency disorders in populations living in stable and emergency settings.
		At the population level, red blood cell folate concentrations should be above 400 ng/ mL (906 nmol/L) in women of reproductive age, to achieve the greatest reduction of NTDs. The above red blood cell folate threshold can be used as an indicator of folate insufficiency in women of reproductive age. Because low folate concentrations cannot explain all cases of NTDs, this threshold cannot predict the individual risk of having a NTD-affected pregnancy, and thus it is only useful at the population level. No serum folate threshold is recommended for prevention of NTDs in women of reproductive age at the population level. Countries interested in using this indicator may consider first establishing the relationship between both serum and red blood cell folate and use the threshold value for red blood cell folate to establish the corresponding threshold in serum. Microbiological assay is recommended as the most reliable choice to obtain comparable results for red blood cell folate across countries.
		Daily iron supplementation is recommended as a public health intervention in menstruating adult women and adolescent girls, living in settings where

Community and interpersonal	Prevent and control micronutrient deficiency among vulnerable groups	anaemia is highly prevalent (40% or higher prevalence of anaemia), for the prevention of anaemia and iron deficiency.
	Set distribution mechanisms to reach menstruating adolescent girls in areas where anaemia is a significant public health problem	Intermittent iron and folic acid supplementation is recommended as a public health intervention in menstruating women living in settings where anaemia is highly prevalent, to improve haemoglobin concentration and iron status and reduce the risk of anaemia in populations where the prevalence of anaemia among non-pregnant women of reproductive age is 20% or higher
		Daily iron supplementation is recommended as a public health intervention in school-age children aged 60 months and older living in settings where anaemia is highly prevalent, for preventing iron deficiency and anaemia. In malaria-endemic areas, the provision of iron supplementation in infants and children should be done in conjunction with public health measures to prevent, diagnose and treat malaria.
		Intermittent iron supplementation is recommended as a public health intervention in preschool and school-age children to improve iron status and reduce the risk of anaemia in settings where the prevalence of anaemia in preschool or school-age children is 20% or higher.
		Oral iron supplementation, either alone or in combination with folic acid supplementation, may be provided to postpartum women for 6–12 weeks following delivery for reducing the risk of anaemia in settings where gestational anaemia is of public health concern.
		Routine use of multiple micronutrient powders during pregnancy is not recommended as an alternative to

		standard iron and folic supplementation during pregnancy for improving maternal and infant health outcomes.
		Vitamin A supplementation in postpartum women is not recommended for the prevention of maternal and infant morbidity and mortality.
Individual	Treat anaemia among those diagnosed	Follow national guidelines for the treatment of anaemia

3.13 Interventions in humanitarian and fragile settings

Humanitarian emergencies increase risks to and exacerbate the vulnerabilities of young people. Protective familty and social ties can be disrupted, and risks to abuse and exploitation increase as security systems are rendered unfunctional. Increasingly, forced displacements and humanitarian crises unfold over longer periods of time, such as months or years, sometimes affecting young people for large portions of their adolescence.

Launched at the World Humanitarian Summit (2016), the Compact for Young People in Humanitarian Action is a collective commitment of 60+ humanitarian actors working to ensure that the priorities of young people are addressed and informed, consulted, and meaningfully engaged throughout all stages of humanitarian action. Five key actions were identified [381]:

- Action 1: Promote and increase age- and gender responsive and inclusive programmes that contribute to the protection, health and development of young women, young men, girls and boys within humanitarian settings;
- Action 2: Support systematic inclusion of engagement and partnership with youth, in all phases of humanitarian action through sharing of information and involvement in decision-making processes at all levels, including budget allocations
- Action 3: Recognize and strengthen young people's capacities and capabilities to be effective humanitarian actors in prevention, preparedness, response and recovery, and empower and support local youth-led initiatives and organizations in humanitarian response, such as those targeting affected youth, including young refugees and internally displaced persons living in informal urban settlements and slums;
- Action 4: Increase resources intended to address the needs and priorities of adolescents and youth affected by humanitarian crises, including disasters, conflict and displacement, and identify ways to more accurately track and report on the resources allocated to young people in humanitarian contexts; and

- Action 5: Ensure the generation and use of age and sex- disaggregated data pertaining to adolescents and youth in humanitarian settings

Table 19: Adolescent interventions in humanitarian and fragile settings [12, 261, 273, 288, 382-395][396]

Intervention	Further comment
Nutrition	Assess conditions and ensure adequate rations for adolescent population groups according to age, gender, weight, physical activity levels and other key factors, considering both energy and micronutrient requirements
Disability and injury	Ensure core health services are accessible to adolescents with disabilities and adolescents with functioning difficulties resulting from injury in an emergency, including rehabilitation services and essential medicines in the appropriate dosages and formulations
Violence	Provide medical screening of former child soldiers, clinical management and community-based psychosocial support for survivors of sexual and/or gender-based violence and support their reintegration into families and communities. Implement virtual and safe spaces including in schools,
Sexual and reproductive health	Several evidence-based SRH interventions may be effective for young people in humanitarian and LMIC settings, in particular contraceptive and condom use skills and STI and HIV prevention. Consider implementing a minimal initial SRH service package and build a more comprehensive response, including psychosocial support, a protection system that addresses sexual violence and child marriage, and family planning and STI programmes for adolescents
Water, sanitation and hygiene	Ensure safe access to and use and maintenance of toilets; materials and facilities for menstrual hygiene management; water and soap or ash for hand -washing; the hygienic collection and storage of water for consumption and use; hygienic food storage and preparation; and efficient waste management.
Peacebuilding	Promote peacebuilding by creating safe spaces, enhancing knowledge and skills through education, building trust between youth and governments, promoting intergenerational exchange, and supporting youth to contribute to their communities. The Youth for Peace Portal (Homepage | Youth4Peace Portal) provides a knowledge hub to share the positive contributions of youth to peace processes and conflict resolution.
Mental health	Promote inclusive recreational activities for adolescents, re-start of formal or informal education, and involvement in concrete, purposeful common interest

	activities. Employ Psychological First Aid techniques to provide general support for adolescents and their parents. For first-line management of adolescent mental, neurological and substance-use conditions by non-specialist health-care providers, follow the mhGAP Humanitarian Intervention Guide. Play-based programming, using sport and play, is showing increasing promise. Consider these in refugee centers and adolescent-friendly spaces

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Section 4: Setting national priorities

Key messages:

- National and sub-national governments need to identify and address adolescent health and well-being programming priorities, because:
  - the scope for adolescent health and well-being programmes is very broad
  - the nature, scale and impact of adolescent health and well-being needs are unique in each country;
  - all governments face resource constraints, so they must make difficult choices to ensure their adolescent health resources are used most effectively;
- The process of national prioritization should be explicit, transparent, and involve all relevant stakeholders, across key sectors. This process should include:
  - a needs assessment to identify which conditions have the greatest impact on adolescent health and development, both among adolescents, by age, sex and part of the country, and among those most vulnerable;
  - a landscape analysis of existing adolescent health programmes, policies, legislation, capacity and resources within the country, as well as a review of current global and local guidance on evidence-based interventions; and
  - priority setting by applying explicit criteria such as the magnitude and public health importance of the issue; the potential to address the needs of vulnerable populations/underserved groups; the existence of effective, appropriate and acceptable interventions to reduce priority burdens; and the feasibility of delivering the intervention(s) and potential to go to scale.
- Over time, countries should reassess their adolescent health priorities and programming to ensure that they still meet changing adolescent needs. New trends in health and health services, economic development, education, employment, migration, urbanization, conflict, environmental degradation and technological innovation should all be considered.
- While national and sub-national priorities will guide local action, local level data should help adjust national and sub-national recommendations to local contexts, by identifying priority groups of adolescents and best ways of reaching them with interventions and services, and by making the best use of local resources.

Section's overview

Adolescent health programming starts with identifying priorities for adolescent health programmes. This section explains why prioritization is necessary, and describes the process of national prioritization and its 3

1783 steps: needs assessment, landscape analysis, setting priorities. It provides example how is this process
1784 conducted to integrate considerations across all domains of well-being.

What is new in Section 4?

- ✓ The process of national prioritization is explained through the lenses of all domains of well-being
- ✓ A deeper focus on gender analysis during needs assessment and landscape analysis is presented.
- ✓ The need for priority setting at sub-national and local level is recognized
- ✓ New case studies are featured

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1786 Governments have increasingly recognized that diverse and complex adolescent health needs, as shown in
1787 sections 1 and 2, require prioritization so that effective use of national resources is amplified. The process of
1788 national prioritization includes three steps for strategic decision-making on national adolescent health
1789 programming:

Step 1 – A needs assessment takes stock of the adolescent health and well-being situation in the country, considering the current status as well as trends and inequities in exposure to risk factors, burdens and health-service access. It identifies which conditions have the greatest impact on adolescent health and development both among adolescents in general and among those most at risk. It should also account for differences between girls and boys and between younger and older adolescents, as well as other factors such as disability and socioeconomic status (among others) which affects health equity.	**Step 2** – A landscape analysis is based on a review of existing adolescent health and well-being programmes and policies as well as related legislation, capacity and resources within the country. It should also examine the barriers to services that all adolescents and vulnerable sub populations face. In addition, the landscape analysis should be based on a review of current global and local guidance to determine which interventions are the most evidence-based and effective to address the conditions identified in the needs assessment.	**Steps 3** – A priority-setting exercise considers the high-priority adolescent conditions and populations identified in Step 1, and the most evidence-based and feasible interventions and delivery mechanisms to address them, as identified in Step 2. This process should take into consideration the most vulnerable adolescents; the urgency, frequency, scale and consequences of burdens; the existence of effective, appropriate and acceptable interventions to reduce them; and the availability of resources and capacity to implement or expand priority interventions equitably.

Mechanisms should be put in place to ensure that adolescents participate and are able to contribute meaningfully to each step outlined above. Time, human resource capacity and funding will often dictate the level and depth that these steps encompass.

Guided by the first edition of the AA-HA! guidance, many countries have applied these steps to get national consensus of adolescent health priorities. As countries will be developing a new generation of programmes that will integrate better well-being considerations, it is important that the needs are assessed, and the landscape analysis is done, across all domains of well-being. See Box XYZ how the needs of adolescents with TB span across well-being domains, and what are the implications for needs assessment and landscape analysis.

Box XYZ

Needs assessment and landscape analysis across well-being domains in the context of Adolescents with TB

Physical and mental health

Assessing needs of adolescents with TB:

- ✓ What is known how adherence, stigma, mental health and quality of life impacts are impacted by the adverse effects of TB treatment, especially second-line treatment?
- ✓ What is the prevalence of substance or alcohol use among adolescents with TB?
- ✓ What is known about the impacts of substance or alcohol use on adverse events and TB care outcomes?
- ✓ Is there any data on TB risk and outcomes for pregnant adolescents?
- ✓ What is the effect of family challenges, poverty, stigma, attending work or school, and migration, on adolescent engagement with TB treatment?
- ✓ What is the role of anticipated stigma, concerns about confidentiality, travel costs, and need to attend school or work in ensuring equal access to for all adolescents to the facility-based directly observed therapy?

Landscape analysis:

- ✓ What are the current strategies for recognizing and managing substance or alcohol use in adolescents with TB?
- ✓ Are adolescents an explicit target group for TPT, and are they prioritized for TPT provision?
- ✓ Is data on TPT uptake and completion for adolescents regularly reported?
- ✓ How stigma, costs or challenges associated with clinic visits, affects coverage with TPT?
- ✓ Is facility-based directly observed therapy equally accessible and acceptable for all adolescents?

Connectedness and positive contribution to society

Assessing the needs:

- ✓ What is the psychosocial and emotional impacts on adolescents of prolonged isolation and hospitalization?

Landscape analysis:

- ✓ Are inpatient facilities adolescent-responsive and conducive to maintain family and peer relationships during prolonged period of hospitalization?

Safety and a supportive environment

Assessing the needs:

- ✓ What is known about how well the rights of adolescents with TB are protected, including rights to safety, basic needs, access to health care without discrimination, protection against unnecessary hospitalization, and benefit from scientific progress?
- ✓ What is known about the impact on adolescents and their families of catastrophic expenditures, loss of income and food insecurity from TB and its treatment?
- ✓ Are gender differences observed for certain outcomes, such as adolescent females' increased risk of HIV infection and, subsequently, TB disease?

Landscape analysis:

- ✓ Are there mechanisms to monitor that the rights of adolescents with TB are protected, including rights to safety, basic needs, access to health care without discrimination, protection against unnecessary hospitalization, and benefit from scientific progress? Are there mechanisms for complain and redress?

Learning, competence, education, skills and employability

Assessing the needs:

- ✓ What is known about the impact on education of TB and its treatment, including of prolonged isolation or hospitalization?

Landscape analysis:

- ✓ What are the mechanisms to prevent and mitigate the disruption in education resulting from TB and its treatment, and to ensure that adolescents' future livelihoods are not affected?

Agency and resilience

Assessing the needs:

- ✓ What is known about how stigma and hierarchical models of care such as facility-based treatment undermine adolescent agency?
- ✓ What are the threats to social networks related to TB and its treatment?
- ✓ What is the impact of increased in mental health challenges on adolescent resilience?

Landscape analysis:

- ✓ Are there peer support groups and other mechanisms to support adolescents with TB in finding a sense of purpose or meaning from their illness experience?

Source:[330]

4.1 Needs assessment

What is a needs assessment?

A needs assessment involves a systematic review of the health and well-being status of adolescents in that country [116]. It should include a review of available data disaggregated by sex; age subgroups; disability; education level; school status; literacy level; marital status; location (e.g. urban versus rural); living arrangements; socioeconomic status; access to and use of digital applications and services that impact on adolescent health; and other variables that may be important within the local context, such as ethnicity. As part of needs assessment, it is critical to conduct a gender analysis (see the check list for gender analysis of adolescent health programming in Box XYZ).

What type of data should be analyzed during needs assessment?

Based on the most recent, accurate and representative research, the needs assessment should identify the main causes of adolescent mortality, morbidity and disease prevalence, and contributing risk and protective factors across all domains of well-being. Section 2 of this document provides an example of a needs assessment at a global level. Ideally, something similar would be done at country level, and at subnational level.

It is critical that the reviewers consider data across all key areas of adolescent health and well-being, and not limiting analysis for certain health areas only (e.g. SRH or nutrition) where there might be more data. If there is no or limited data on certain conditions (e.g. adolescent mental health, FGM or STIs other than HIV) this should be acknowledged as a finding of needs assessment. Later at the stage of setting priorities this finding will inform a decision to establish mechanisms to gather missing data.

Specifically, the needs assessment should examine the:

- main health and well-being issues and challenges affecting adolescents;
- adolescent behaviours most proximately linked to these health and well-being challenges;
- adolescent behaviours that could lead to health and well-being problems in the future (e.g. risk factors including tobacco consumption, alcohol and drug use, physical inactivity and poor nutrition);
- harmful practices affecting adolescents (e.g. levels of child marriage and FGM);
- sociocultural context of adolescents' lives, including the protective and risk factors at various ecological levels (e.g. environmental exposures) and in different institutions (e.g. schools, health services and employment) that can influence the above issues; and
- influence of gender norms, roles and relations on the health and well-being of both girls and boys during adolescence [116].
- identify subgroups of adolescents who may be in the greatest need of services and

- programmes;
- who are the stakeholders, and what are the data sources, that can provide more information on gaps identified and need to be accessed to finalize the needs assessment

What are the data sources for needs assessment?

Key methods and data sources for needs assessment are described in Figure XYZ.

Box XYZ

Methods and data sources for needs assessment

- ✓ Desk review of data sources (e.g. Health Information Management System (HIMS), Global Health Observatory data, Demographic and Household Surveys (DHS), Multiple Indicator Cluster Surveys (MICS), Global School-Based Student Health Survey (GSHS), The World Mental Health Survey Initiative, Global Youth Tobacco Survey (GYTS), national disease surveillance records, national vital statistics, educational records, reports from key ministries featuring adolescents, reports from research studies, research from projects working with vulnerable groups or in fragile settings etc.).
- ✓ Desc review of national, regional and global estimates from e.g. Global Health Estimates (e.g. [397]) the Global Burden of Disease study (e.g. [398, 399]), or Global status reports (e.g. [242]) Estimates are especially useful in countries where civil registration and vital statistics systems are weak and required data is not readily available. WHO resource bank on adolescent health includes database and resources for statistics across key health areas [400] that can be used to extrapolate data in the absence of reliable national data
- ✓ Desk review of research such as national and subnational studies, peer-reviewed articles and other country assessments
- ✓ Desk review of policy documents (e.g. data from projects' evaluations).
- ✓ Interviews with key stakeholders from the health and other sectors, UN agencies (UNAIDs, UNESCO, UNFPA, UNICEF, WHO, UN Women).
- ✓ Focus group discussions with adolescents and youth.
- ✓ It is suggested that data are presented disaggregated by age (10-14 years and 15-19 years) and sex, as well as by geographic locations to show disparities.

Key stakeholders include adolescents and young adults; parents and families; community members; religious leaders; government representatives (e.g. from health, education and social protection sectors); national human rights institutions; NGO and civil society representatives; UN technical organizations; and bilateral and donor organizations. The needs assessment should establish a fair understanding of the most important health concerns and trends, even when it is not possible to compare and rank the rates of different conditions directly (e.g. road injury mortality and morbidity rates compared to HIV prevalence and teenage fertility rates).

Case Study 6

National ASHR Priority setting in Afghanistan

The WHO Adolescent and Youth Sexual and Reproductive Health and Rights Technical Assistance (TA) mechanism support countries to implement effective interventions by coordinating the provision of high-quality technical support using the growing commitment and resources for improving young people's

Sexual and Reproductive Health and Rights. In 2019, the TA Mechanism received a request from the Ministry of Public Health in Afghanistan (MOPH) to assess the situation of adolescents and youth in the country and to review the outcomes of the Afghanistan National Reproductive, Maternal, New-born, Child and Adolescent Health Strategy (2017-2021), in order to strengthen the adolescent health component of the MOPH in Afghanistan.

The assessment was conducted in three consecutive phases. The first phase included a needs assessment and a mapping exercise, based on a desk review and a landscape analysis. One of these provided an external perspective, based on factors such as prevalence, severity, and the availability and feasibility of evidence-based interventions to respond; and the other assessed in-country perspectives, from people involved with policies and programming, using a Delphi technique, and community consultations with young people. The second phase involved the prioritization of the problems and interventions identified during phase one, incorporating additional efforts to obtain the perspectives of people responsible for policies and programmes, and young people themselves. The third phase included the synthesis of all the evidence from the desk review, landscape analysis, and prioritization exercise in a summary report.

Based on the available data, adolescent pregnancy was the major health challenge for Adolescent Girls and Young Women (and their children) in Afghanistan. Pregnancy and childbirth complications were found to be a leading cause of death among girls 15–19 years of age and 20 and 24 years of age. Ninety-three percent of women 15-19 years of age used no contraceptive method, which left them at risk of early pregnancy. The determinants of high adolescent pregnancy rates included child marriage and the early onset of sex without contraception in the context of marriage. The needs assessment allowed for an evidence-based method for the MOPH in Afghanistan to set national priorities that considered perspectives from a broad group of stakeholders including young people who are key in the process.

Source: WHO WHO Adolescent and Youth Sexual and Reproductive Health and Rights (AYSRHR) Unit

4.2 Landscape analysis

What is landscape analysis?

Landscape analysis is the analysis of the current national response to the needs identified in step 1, needs assessment. Its aim is to identify to which extent are the problems identified during needs assessment are covered in national plans, polices and services.

What type of data should be analyzed during landscape analysis?

The landscape analysis gives on overview of national (i) laws and policies and laws (ii) plans and strategies (iii) stakeholders (iv) implementation aspects of delivery of programmes (v) financing and (vi) evidence-based interventions currently in place (Box XYZ). These are analyzed against needs identified in step 1. By comparing what is currently available with what the needs are, gaps in national response are identified (see case study XYZ from Paraguay and XYZ from Thailand).

Box XYZ
Checklist for landscape analysis

- ✓ Are the problems you identified in step 1 (needs assessment) covered to a sufficient extent in national plans and polices? What is the extent to which the national health plan integrates adolescents in its goals and programming?
- ✓ Are there specific laws or policies that may impede adolescents' access to health services?
- ✓ What are the existing interventions and programmes? Do those programmes respond to social, economic and other determinants of adolescents' health and well-being across well-being domains?
- ✓ What are the gaps in the delivery of programmes and services?
- ✓ Who are the key stakeholders and organizations involved in planning, managing, implementing and monitoring and evaluating these activities at the national and subnational level?
- ✓ What is the scale, scope, quality, coverage and evidence of impact of existing adolescent health programmes in the country?
- ✓ What are the systems in place to support capacity development, supportive supervision, coordination and other planning and management functions?
- ✓ How are interventions in relevant sectors targeted to reach particular groups of adolescents by age, sex, location, educational level and other socio-demographic variables?
- ✓ What is the level of funding to existing programmes and how are the available funds allocated? Are currently-funded activities aligned with the evidence-based practices recommended in the AA-HA! guidance (see Section 3 of the AA-HA! guidance, main document)?
- ✓ Are youth involved in the design, implementation and monitoring of the specified programmes? Have those marginalized such as the disabled, street workers, orphans and other vulnerable groups in humanitarian settings, have equal opportunities to participate?
- ✓ What supply and demand barriers to access quality services and financial protection are experienced by adolescents?
- ✓ What are the gaps (e.g. interventions that are currently not delivered but are recommended in section 3 of the AA-HA! guidance, or certain needs identified in needs assessment do not have a reflection in national or subnational response)?
- ✓ Who are the stakeholders, and what are the data sources, that can provide more information on gaps identified and need to be accessed to finalize the landscape analysis?

Like needs assessment, the landscape analysis should explicitly elicit gender differences in access to services, and reasons for them (see the check list for gender analysis as part of needs assessment and landscape analysis, Box XYZ)

Box XYZ

Types of questions to ask for a gender analysis of adolescent health programming:

- How do girls and boys get information about essential services, and what are their preferred

channels/methods/platforms/trusted sources? How do these differ for girls and boys, and for girls and boys from urban/rural areas, different ages and ethnicities, and those with disabilities?

- Who makes decisions about adolescents' access to essential and time sensitive services such as contraception? What resources do parents/legal guardians need to be able to ensure their child access to services (e.g., information, money, time, transportation)? Who has access to and control over these resources?
- How the need to confidential services impacts differently boys and girls? For example do girls and boys have different access to resources (e.g. freedom of movement, access to cash, unsupervised time) that might impact their ability to care in confidence?
- In specific neighbourhoods or communities, who can access households for outreach activities where house-to-house campaigns take place? Are there areas where only female health workers or volunteers are permitted to enter households? How does access (or lack of it) impact planning for frontline workers, such as social mobilizers and vaccinators?
- Are girls equally and meaningfully participating in programme design, implementation, monitoring and evaluation at different levels? How? What could be done to further increase their participation?
- What barriers exist for girls and boys to access health centres to seek services (related to, for example, quality, safety, availability, access and space in waiting areas)? How could these barriers be addressed most effectively?
- What are the possible barriers shaped by sociocultural and gender norms as well as laws/policies that might hamper timely access to critical services or, for example, the effectiveness of outreach services to reach out the most vulnerable?
- How are health workers recruited, trained and supported/supervised? What are their opportunities to progress professionally and to be equally remunerated? Are there any issues related to worker safety, workload or flexibility of working hours? Do health workers receive gender training?
- Have girls and boys from different backgrounds been consulted and involved in designing, monitoring and evaluating health care services? If so, in what ways?
- Are monitoring activities reaching equally boys and girls to hear their experiences and perspectives?

Source: adapted from https://apps.who.int/iris/rest/bitstreams/1410774/retrieve

What are the data sources for landscape analysis?

Key methods and data sources for landscape analysis are largely similar to those consulted for needs assessment, however the information gathered focuses on response (Box XYZ).

Box XYZ
Methods and data sources for landscape analysis

- ✓ Desk review of existing interventions, programmes, legislation, policies and projects that address adolescent health and well-being, as well as the results and outcomes of these initiatives and their alignment with the evidence base in what works. Special attention should be paid to what is being done by the government, NGOs and civil society organizations to address inequities and respond to social, economic and other determinants of adolescents' health problems.
- ✓ Desk review to map existing data sources (e.g. are there regular institutionalized mechanisms to gather age and sex disaggregated data on adolescent health, well-being and risk and protective factors)?
- ✓ Desk review of research such as national and subnational studies, peer-reviewed articles and other country assessments
- ✓ Desk review of programme documents (e.g. data from projects' evaluations).
- ✓ Field visits and interviews with key stakeholders to explain existing programme challenges and achievements, perceptions of needs and services and the capacity and interest for expanded work on adolescent health and well-being from the health and other sectors
- ✓ Focus group discussions with adolescents and youth, including with those marginalized such as the disabled, street workers, orphans and other vulnerable groups in humanitarian settings, to identify equity in response

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Case study 7

Landscape analysis in Paraguay

Paraguay has made significant progress in advocating health and education services for adolescents across the country. Despite the strong foundations for implementing school health policies, there are still significant structural gaps that hinder the effective implementation of health programs for adolescents and youth. In support of the Making Every School a Health promoting School initiative, WHO and UNESCO have developed and promoted]Global Standards for Health Promoting Schools (9789240025059-eng.pdf9789240025059-eng.pdf). The initiative is meant "to provide a resource for education systems to foster health and well-being through stronger governance" using eight global standards. The standards include, government policies and resources, school policies and resources, school governance and leadership, school and community partnerships, school curriculum, school social– emotional environment, school physical environment, and school health services. .

In Paraguay, for effective implementation of the Global standards for health promoting schools, the WHO and UNESCO in Partnership with the Ministry of Education, conducted a landscape analysis at the national and local levels involving various stakeholders including public institutions, international agencies, civil society organizations, and representatives at local communities where schools are located. The landscape analysis sought to identify existing strengths and weaknesses of health promotion strategies in schools. Using qualitative and quantitative data collection methods, data was collected on each of the 8 global standards for HPs. Key recommendations from the landscape analysis included the need for clarity of guidelines, strong leadership commitment, increasing and managing

resources for comprehensive school health programs, establish effective multisectoral and intersectoral means of collaboration, and strengthen health promotion in educational settings through the provision of adequate competent human resources and sustainable interventions. By conducting a landscape analysis, Paraguay has positioned itself to set school health priorities specific to both national and local contexts while considering existing systems that could be leveraged and those that should be introduced, developed or supported for all schools in Paraguay to become health promoting schools.

Case Study 8

Rapid Assessment to Assess Adolescent Health in Thailand

In 2019, as part of the regional assessment of adolescent health (AH), Thailand has undertaken a rapid assessment of the adolescent health situation in the country, and national response. By applying a systematic approach recommended in the Global Accelerated Action for the Health of Adolescents (AA-HA!), the country team systematically reviewed the health needs, strategy, policies, resources for adolescent health programme implementation and coordination mechanisms. The findings showed that there are gaps in existing policies and how they are implemented, access issues including poorly supported youth friendly clinics, inadequate data infrastructure to support effective measurement and evaluation of adolescent health programmes, and not enough support and resources for adolescent groups.

The results of the assessment helped the country team to identify structural and programmatic gaps that need to be addressed for effective implementation of adolescent health interventions. Programmatic interventions such as HIV prevention among young populations most at risk, and promotion of behaviors that prevent the onset of noncommunicable diseases in adulthood were highlighted as key programmes needed for the improvement of AH. For example, the assessment highlighted the need for Thailand to continue to strengthen the implementation of a National Strategy to Prevent Teenage Pregnancy through a 'genuine integration approach', with realistic budget integration. Also, by undertaken the analysis, the country identified the need to strengthen AH data and research infrastructure by increasing the wealth of knowledge and research base about adolescents, linking databases of adolescents between Ministries and agencies. By undertaking this assessment, Thailand is in a position where responsible ministries and departments can identify a clear strategy to implement school health programmes and initiatives such as sex education using appropriate channels, messages and target groups.

Source: Rapid assessment of the implementation of adolescent health programmes in countries of South-East Asia. New Delhi: World Health Organization, Regional Office for South-East Asia; 2021. Licence: CC BY-NC-SA 3.0 IGO.

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4.3 Setting priorities

All governments face resource constraints, so they must make difficult choices to ensure their adolescent health resources are used most effectively. A priority setting exercise is therefore necessary. Priority setting considers the high-priority adolescent conditions and populations identified in needs assessment, and the evidence-based and feasible interventions and delivery mechanisms to address them, as identified in landscape analysis. Prioritization of both key issues and interventions is therefore necessary. The prioritization process requires a systematic approach and a transparent set of criteria (ref.) (see Table XYZ); and should include meaningful participation and contributions by adolescents. All relevant stakeholders should be consulted (see case study from Sudan XYZ).

Table XZY

Guiding criteria to identify national priorities for adolescent health and well-being programmes

Criteria	Explanation
Magnitude and public health importance of the issue the intervention addresses	Resources should be directed at the main causes of death and illness or injury, but, using a life-course approach, should also go beyond them to address risk behaviours and exposures that could affect adolescents' health now and, in the future, and strengthen overall well-being (e.g. resilience, connectedness, etc.)
Equity – is the intervention likely to address the needs of vulnerable populations/ underserved groups?	All adolescents have health-related needs and can experience difficulties, but not all are equally vulnerable to health and social problems. Special consideration should be given to those interventions that are likely to address the needs of the adolescents who are most vulnerable and/or need them most
Availability of effectiv intervention(s)	It is important that scarce resources are used to deliver interventions that have the highest chance of effectiveness for the subpopulations of adolescents that need them the most. All interventions listed in Section 3 of this document are recommended by WHO and are known to be effective, but not all of them will address the issue in the specific country context with the same high impact.
Feasibility of delivering the intervention(s)	Social, economic and cultural constraints, including lack of recognition of adolescents' rights, may make it difficult to deliver certain interventions. Priority setting should be based on a careful and pragmatic analysis of the feasibility of delivering each intervention at scale in the country context. Acceptability of the intervention by the communities and political support for it are important considerations when selecting interventions.

Potential to go to scale	A realistic comparison is required of the current capacity to deliver each intervention against the capacity that is necessary to deliver it with high-quality and good coverage. Strong government and community ownership and political will help drive scale-up (see case study XYZ from Jamaica). Costing exercises can inform overall resource needs, and how plans can be implemented in a phased approach.

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Case Study 9

Scale Up of small-scale program- Jamaica-

Jamaica has come a long way since the 1970s to maintain low pregnancy rates among adolescents and provide better support systems for pregnant adolescents. Compared to 1977, where fertility rate among girls 15-19 years was at 31%, current adolescent pregnancy rates in Jamaica stand at 7.2%. (https://caribbean.unfpa.org/en/news/country-brief-jamaica). This decline has been sustained for nearly 4 decades and some of the success could be attributed to innovative solutions and interventions targeting adolescent girls with the goal of delaying pregnancy, and supporting pregnant adolescent girls and mothers. One of those initiatives was the Programme for Adolescent Mothers (PAM) that was launched by the Women's Center of Jamaica Foundation and started as a small-scale initiative implemented in 2 districts of Jamaica. The programme was designed to provide a plethora of interventions primarily targeting pregnant adolescent girls by focusing on their return to school and capacity building, as well as sexuality education meant to prevent repeat pregnancies. The programme was a first in Jamaica, and with initial seed funding from international non-governmental organizations and in-kind support from government, the pilot was successfully implemented in the two centers in Kingston and Mandeville. The pilot showed that 73% of girls registered in the programme were enrolled in a secondary school or vocational institution and more than 90% had accepted some form of contraceptive. These promising results led to the programme receiving funding from the government and other partners for an effective national scale-up. By 2018, PAM had been scaled up to 10 centers and 8 outreach centers in 14 parishes across Jamaica. The PAM was able to achieve both vertical and horizontal scale-up due to several factors including a supportive policy environment, political commitment, clarity, and relevance of the programme. Having a clear funding strategy and funding stream that included both government and non-governmental sources contributed as well to a successful scale-up of the program.

Source: **https://doi.org/10.1080/15546128.2022.2093808**

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1885 National priority-setting needs to take place even when it is not possible directly to compare and rank the
1886 rates of different conditions, and even when evidence of local programme effectiveness is limited. In many
1887 cases, this prioritization process will need to depend heavily on expert opinion, guided by relevant global
1888 evidence (see case study XYZ from Sudan).

Case Study 10

Sudan takes action to improve the health of its youth

Sudan's adolescents make about a fourth of the total population, yet not much is known about their diverse health needs. Although the country has a national health plan, it has so far not included adolescents even though they represent a significant portion of the population with poor health and wellbeing outcomes. Realizing the need to urgently address the problem, Sudan's Directorate of Maternal and Child Health of the Sudan's Technical Ministry of Health used guidance from the Global Accelerated Action for the Health of Adolescents (AA-HA!) document to mobilize stakeholders and work together in a coordinated manner to improve and implement adolescent health strategy in the country. Using an evidence-based process described in the AA-HA! document, Sudan was able to effectively engage other government ministries, UN agencies and key civil society organizations to conduct a needs assessment that highlighted critical health needs of country's adolescents. Critical to the needs assessment process was the engagement of youth groups on a variety of key health topics. Engaging youth ensured that their needs are well understood and included in the National Strategy of Adolescent Health and Wellbeing. In view of the gaps in knowledge about specific national indicators and interventions, the list of evidence-based interventions provided in the AA-HA! guidance helped the FMOH and stakeholders select national priority interventions relevant to Sudan's context. This document was the first national strategy document for adolescents aimed at creating a safe and supportive environment that offers protection and opportunities for healthy development, and provision of much-needed health information and skills for adolescents in Sudan. By employing an evidence-based approach from the AA-HA! guidance, Sudan has positioned itself to better protect its youth and the health of future generations in the country.

Source: [401]
ref

4.4 Additional considerations

Critically, over time it is important for countries to re-visit this three-step process of needs assessment, landscape analysis and prioritization, to ensure that they meet changing adolescent health and well-being needs. New health trends and innovations in service delivery, economic development, employment, migration, urbanization, conflict, environmental degradation and technological innovations should all be considered. For example, an updated landscape analysis might identify new resources that are not being harnessed to their maximum potential – such as growth in rural telecommunications infrastructure – which could be exploited for telemedicine or rollout of e-health and m-health interventions.

In addition, there may be times when a country or region needs to implement rapid and focused adolescent health and well-being priority-setting exercises, such as in the event of a humanitarian crisis. Box XYZ provides an example of how an adolescent SRH situation analysis might be conducted in humanitarian and fragile settings.

Box XYZ

An example of how an adolescent SRH situation analysis might be conducted in humanitarian and fragile settings

In a humanitarian and fragile setting, it is important to conduct a needs assessment and landscape analysis to understand the SRH situation of both male and female adolescents and in order to develop a plan that responds to their priority needs. The 2009 Adolescent Sexual and Reproductive Health Toolkit for Humanitarian Settings provides tools for initial rapid assessment, situation analysis and comprehensive SRH surveys of adolescents in emergency situations.
Specifically:

- **An initial rapid assessment** should be conducted during the first 72 hours of an acute emergency and be used to collect demographic information and identify life-saving issues that must be addressed urgently to ensure the well-being of the beneficiary population.

- **A situation analysis** conducted after an emergency situation has stabilized will provide information about the baseline status of SRH needs and services, and will help in the prioritization of interventions when comprehensive SRH services are introduced. Situation analyses may use several methods of data collection, including secondary data, in-depth interviews, focus-group discussions (sex-separated, if culturally required), community mapping and facility assessments.

- **Comprehensive SRH assessments** are not often conducted in emergency situations because they are time consuming and can place additional burdens on precious human and logistic resources. After stabilization of an acute emergency, however, a comprehensive assessment of SRH knowledge, beliefs and behaviours can provide valuable information that will help a programme to design an SRH programme that responds to the specific gendered needs of local adolescents.

Although the assessments and analyses above are valuable in a humanitarian crisis, it is important to remember that the minimum initial service package should be the first SRH intervention to be introduced, and should never be delayed.

Source: (287).

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Section 5: programming: translating priorities into actions and plans

Key messages

1. Most powerful gains for adolescent well-being result from multi-sectoral action. Countries should invest in inter-sectoral programmes for adolescent well-being to leverage the amplifying effect of join action, as well as capitalize on single sector action to normalize attention to adolescents' needs in all aspects of their work, towards the progressive realization of the "Adolescent Well-being in All Policies Approach".
2. The science is clear: smartest of all investments are the coordinated investments in health and education that bring mutually reinforcing benefits. School health programmes - the most ubiquitous inter-sectoral programmes in public health - are cost-effective, feasible in all settings and deliver significant development gains. Realising the potential for every learner and every school will require transition towards health-promoting education systems that embrace the health and well-being of learners as a core mission of education. The WHO and UNESCO Global Standards for Health Promoting Schools provide a framework for countries to adopt this more holistic and system-oriented approach to school health at all levels of the education system.
3. Adolescent-responsive health systems are key to achieving universal health coverage. To guarantee explicit ongoing, dedicated attention to adolescent health issues within the health sector, countries may consider mandating an adolescent health focal point in the Ministry of Health, with responsibilities for championing adolescent health within the ministry, coordinating systematic attention to adolescent needs in all health programmes and serving as a liaison person for multi-sectoral action.
4. Countries should ensure that adolescents' expectations and perspectives are included in national programming processes. Adolescent leadership and participation should be institutionalized and actively supported during the design, implementation, monitoring and evaluation of adolescent health programmes.
5. Adolescents is a very diverse group with diverse needs. "Leave no one behind" should be a key principle in programming for adolescent health. An equity lens, with due attention to age, sex, disability and in particular; vulnerable groups of adolescents should inform all stages of programming from identifying goals, targets and objectives, through to defining indicators to monitor achievements and plan interventions, services and activities.
6. To sustainably fund adolescent health programmes, the responsibility for funding adolescent well-being programmes should shift towards domestic resources, by including a focus on adolescents in national sectoral strategies, investment plans and budgets. Leveraging domestic resources for adolescent well-being will therefore require better advocacy, based in investment cases, for

adolescent health priorities within sectoral plans and budgets. External funding opportunities such as the Global Financing Facility and the applications for the Global Fund to Fight AIDS, Tuberculosis and Malaria (the Global Fund) provide additional opportunities to increase funding.

Section's overview

What is new in this section?

- ✓ A revised logical framework for programming, integrating well-being domains
- ✓ A better description of the complementarity of different approaches to programming for adolescent health and well-being
- ✓ New evidence from the global analysis of school health programmes
- ✓ Key implementation strategies in health and other sectors updated based on the latest guidance

This section describes implementation areas and strategies to achieve the overarching goals of improving adolescent health and well-being and equity in health outcomes. The section starts by identifying the common elements of programming for adolescent health and well-being that are summarized in the logical framework (section XYZ). It then gives an overview of HOW TO design a programme, taking into consideration possible pathways (section XYZ), and various degrees of sectors working together (Section XYZ). Specific aspects of programming for adolescent health in humanitarian and fragile settings are described in section XYZ, and gender-transformative approaches in section XYZ. It then describes WHAT needs to be done, by proposing implementation areas and strategies in each of the key sectors (section XYZ). Throughout the section, practical examples are provided on how programming has been applied in various countries.

There is some overlap between the implementation areas and strategies described in this section and some of the organizational, structural and macro-level interventions described in Section 3. This is because the complexity of interventions tends to increase the higher they are in the hierarchy of the ecological framework until some interventions (e.g. organizational level intervention of WASH in schools) are indistinguishable from a programmatic priority.

For the convenience of the reader, when there is such overlap we list the implementation areas and strategies along with other priorities for programming, even if it has also been mentioned as an intervention area in Section 3.

5.1A logical framework for translating priorities into plans and programmes

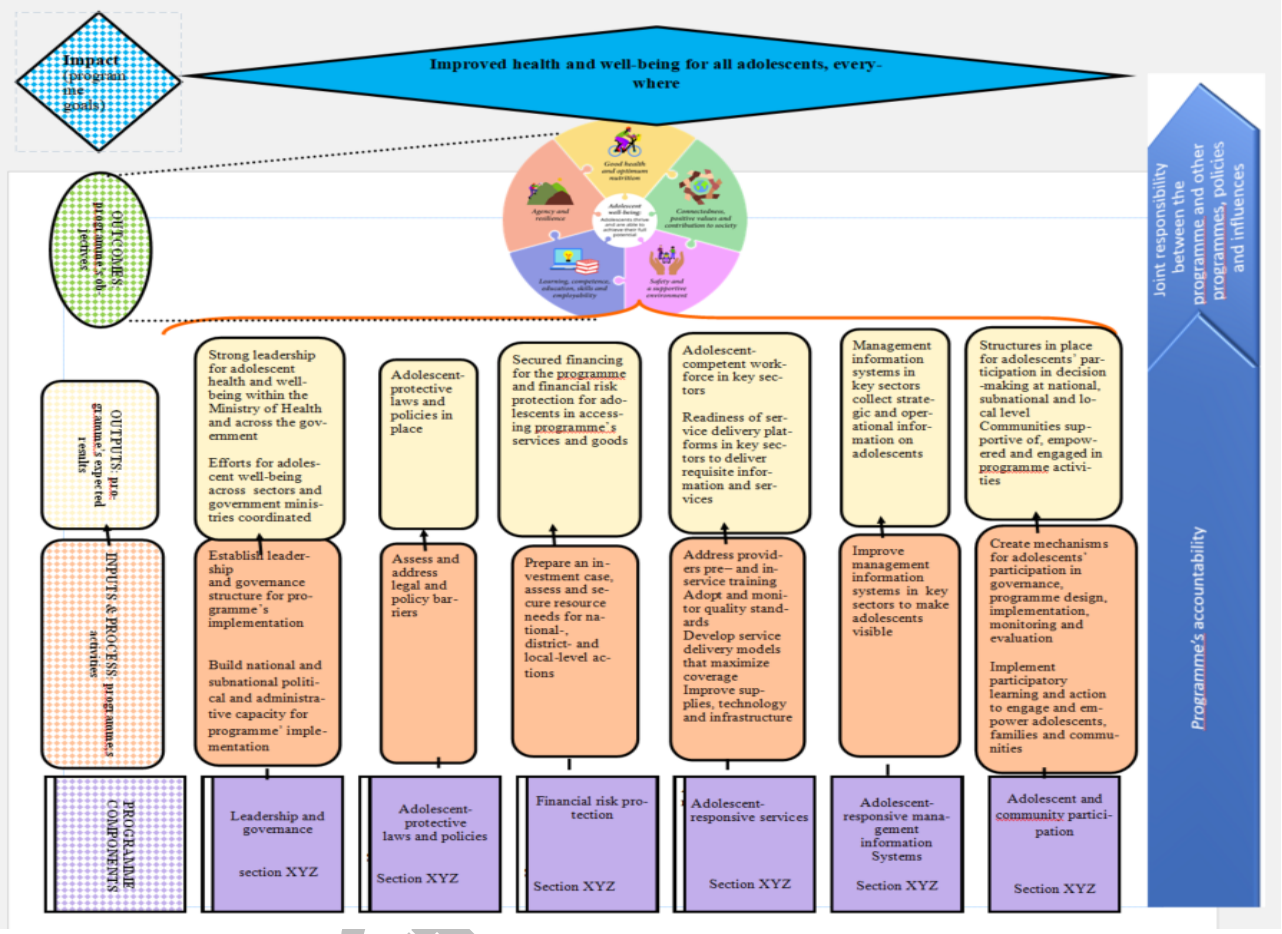
As described in Sections 2 and 3, the scope for adolescent health programming is large. It encompasses mental health, NCDs, SRH, road traffic injuries and violence, among others. It is difficult therefore to have a blueprint for the specific elements in the design and implementation of adolescent health programmes.

However, a unifying approach is possible. Recognizing that different levels of country capacity, and various well-being priorities and contexts will have implications for choosing interventions and key activities, programming for adolescent well-being has nevertheless common elements that are described by the logical framework (Fig. XYZ). The logical framework is a tool that provides a formalized approach to the planning, programming and evaluation of programmes and is a useful checklist of programme elements that need to be considered in planning a systemic response to adolescent health [402]. A logical framework makes explicit the links between the programmes' goals, objectives, key interventions, implementation strategies and activities.

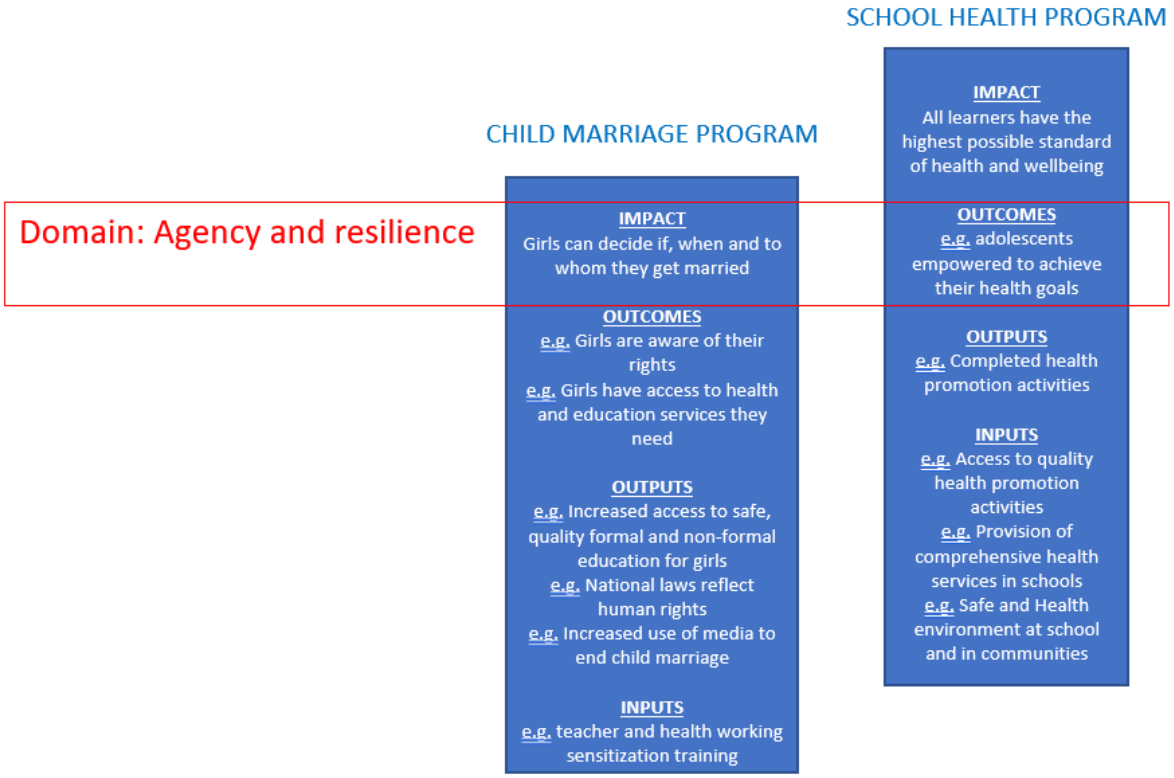
With the renewed attention to adolescent well-being, defined by five interconnected domains [30], the revised logical framework recognizes the equal importance of well-being domains and integrates outcome level measures for each of the well-being domains.

Notably, this logical framework is applicable not only to programmes led or implemented mainly by the health sector but also to programmes led or implemented mainly by other sectors.

A logical framework for national programming for adolescent health and well-being



Whereas programmes outcomes and impacts will always be related to one or another domain of well-being, depending on the programme' main goals and objectives other domains might become determinants. For example, for a programme that has a primary intention to reduce child marriage, girl's agency will be programme impact (Fig XYZ). However, for a programme that has its main goal to increase school enrolments of girls, girl agency will be a pre-requisite to achieve the main goal (Fig. XYZ).



In programming, a holistic view on impacts across well-being domains is not only important but, in many instances, essential. Even for programmes that have a primary focus health outcome, approaches that promote other dimensions of well-being – e.g., connectedness, education and employability - should be considered [5]. A useful example is nutrition. To address key drives of adolescent malnutrition, programme design must consider the interconnectedness of protective and risk factors for adolescent malnutrition across multiple domains of well-being. These include macro-level policies (e.g., poverty reduction strategies and social protection measures), education (e.g., health and nutrition literacy, shared values and social interaction around food), life skills (e.g., making health lifestyle choices, ability to critically assess online content), agency and resilience (e.g., empowerment to question gender biases and oppose discriminatory practices), and safe and enabling food environments (e.g., regulation of marketing, food security, micronutrient supplementation, and food oriented social protection) [9].

Another example is sexuality education that requires looking beyond mortality, morbidity and risks (e.g. reducing the risk of pregnancy or STIs) to developing a broader approach that addresses key issues such as young people's self-confidence, self-expression, citizenship, sexuality and aspirations, and ability to think critically and make informed decisions [403]. Case study XYZ illustrates an example of a rights-based, gender-focused and citizenship approach to sexuality education.

Programming for well-being means attention to all domains. In the regional consultations for adolescent well-being, Member States agreed that adolescent well-being to be included as a major implementation areas and

strategies in national and subnational implementation plans using a whole-of-government and whole-of-society approach [5].

Case Study 11

Comprehensive Sexuality Education Programme in Zambia

In 2016, in partnership with UNESCO, the government of Zambia launched a national comprehensive sexuality education programme targeting young people including disabled and those living with HIV. The goal of the programme was to increase access to age-appropriate comprehensive sexuality education (CSE) for young people aged 10-24 years. Ultimately, the aim of the programme was to improve the health of adolescents and young people by providing them with the opportunity to have better, appropriate, and timely sexual and reproductive health education. The implementation of the programme was guided by the International Technical Guidance on Sexuality Education developed by UNESCO and its partners (https://www.unfpa.org/sites/default/files/pub-pdf/ITGSE.pdf). The International Technical Guidance on Sexuality Education was developed to guide education stakeholders in the delivery of in-school and out-of-school CSE programs. Several strategies were implemented in Zambia including curriculum reforms that integrated CSE, revised curriculum in all government schools from grades 5 to 12, training teachers and providing them with culturally appropriate and gender sensitive teaching materials. The delivery and sustainability of the programme was ensured by collaboration across key sectors including the inclusion of relevant government ministries, local government, UN Agencies, NGOs, and other partners. Ownership of the programme at the local level was built by training and tasking Provincial Standards Officers to monitor the delivery and quality of CSE at the school level.

A careful and systematic approach to implementing CSE that is evidence-based, age appropriate and sustainable has so far resulted in positive results for schools implementing the programme. An evaluation of the program in 2015 using the Sexuality Education and Review Tool showed positive results, with high scores for key metrics including objectives, coverage, programme model, stakeholder analysis and programme content. By 2016, nearly 77% of the programme coverage target had been met, reaching over 1.35 million learners, and 243 master trainers and 38,521 in-service teachers trained to deliver CSEs. Lastly, an important milestone achieved by the programme is the implementation of CSE in all targeted government schools across the country.

Source:
https://www.unwomen.org/sites/default/files/Headquarters/Attachments/Sections/Library/Publications/2019/Promoting-gender-equality-in-SRMNCAH-Programming-guide-en.pdf

5.2 Planning multi-sectoral action

5.2.1 Two pathways for programming for adolescent well-being

Translating national goals into actions and plans can happen in two ways. One is to establish an adolescent-specific programme, which entails a coordinated and comprehensive set of planned, sequential health strategies, activities and services designed to achieve well-defined objectives and targets. Health and social systems response to adolescent well-being is often hampered by vertical projects led by multiple actors, which complicate effective management [7, 19]. These projects often do not have domestic budgets and supervision, therefore institutionalizing them under a coherent programme with strong central leadership, greater decision space for district leaders, accountability mechanisms, and increased stewardship by local leadership instead of external partners, and the ongoing involvement of community and district actors, will ensure greater programmatic coherence and relevance to local needs [7].

A national programme can be established within, and led by, one sector, or can be inter-sectoral (see section XYZ). It usually has national, subnational and local coordinators, and secured funding to support planned activities. The advantage of this way of programming is guaranteed attention and funding, enhanced by accountability. For the sustainability of the programme however, it is important that the funding source is coordinated/integrated with the overall health sector budget, and that the programme does not create separate organizational arrangements that may result in inefficient overlaps and duplications [6]. Ultimately, viable programmes are those that strengthen the core functions of the system to deliver for adolescents rather than create however perfectly parallel arrangements run.

However programming for adolescent well-being may happen in the absence of a specific programme, as part of the sector's strategic and operational planning cycles, when adolescent-specific considerations inform planning decisions. Supporting actions within single sectors that form their core business (such as ensuring children attend school and learn well for the education sector, access to safe water for the water and sanitation sector, or access to clean power for the energy sector) produces arguably the greatest benefits when single sectors are doing their own core business well. For example, for the education sector, keeping adolescent girls in school and providing good education that enables their economic empowerment might have greater and longer term health impact than activities to increase health literacy or undertake school based health clinics [404]. This way of programming requires that decision makers involved in strategic and operational planning are sensitized to adolescent-specific needs and solutions. This is often not the case in many countries, especially with limited prior experience in implementing policies and plans for adolescent well-being, in which case establishing an adolescent-specific programme might be a preferred pathway to maintain dedicated attention to adolescent well-being. Ideally, this should be supported by actions within single sectors that form their core business [404].

To sustain efforts, it is important that the programme is institutionalized (Box XYZ).

Box XYZ. Features of an institutionalized adolescent-health programme

A national adolescent health programme is a comprehensive set of planned and sequential strategies, activities and services designed to achieve well defined objectives and targets. The terms project, initiative and programme are often used interchangeably. Successful small-scale projects and initiatives may mature into national programmes (see for example the Case study XYZ) [405]. In this document we focus on institutionalized adolescent health programmes.

Their common features are:

- Having policy statements to support programme efforts
- Being a line item in a permanent health or education departmental budget
- Having a place in an organization chart
- Having permanent staff assigned to specific programme roles (e.g. National, subnational and local coordinators)Having descriptions that include prevention functions and level of effort
- Having facilities and equipment for programme operations
- Developing an institutional memory for important agreements and understandings.

Regardless of the pathway, programming efforts can achieve sustainable results only if efforts are contributing to strengthen the system' response, e.g. by building adolescent-responsive health systems (see section XYZ), or health-promoting education systems (see section XYZ).

5.2.2 Approaches to multi-sectoral action

Depending on the programme goals, multi-sectoral action is usually required.

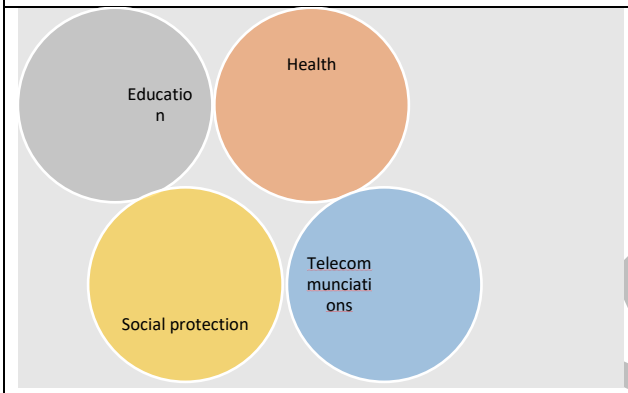
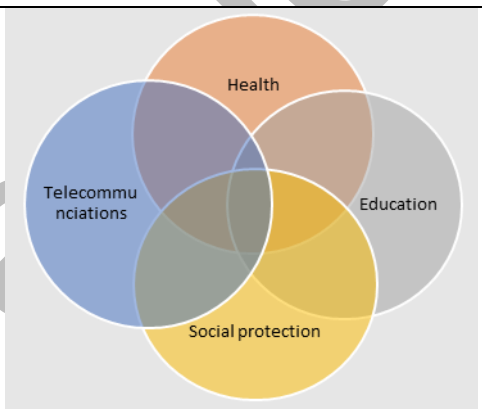
Approximately 50 percent of the gains made in the health of women, children and adolescents result from investments made outside the health sector [2], particularly through efforts in reducing inequalities, education, nutrition, water and sanitation, technology and creating healthier environment [404]. Often, the health sector has neither a sufficient mandate nor the competence to address wider determinants of adolescent well-being. In these cases, collaboration with other sectors is essential [406]. Therefore interventions beyond the health sector should be considered as core to national strategies on adolescents' health [404].

Multi-sectoral action includes two types of actions (Fig. 1). One is action within various single sectors (e.g. health, education, water and sanitation, environment and nutrition) which is appropriate when one sector has complete or near-complete control or influence over a given health or well-being problem.

Implementation areas and strategies for individual sectors' contribution to adolescent well-being are described in section XYZ. In this approach, each sector needs to normalize the attention to adolescent specific needs in all aspects of their work. If implemented with fidelity and with the lenses of Adolescent Well-being in All

Policies Approach (Fig.1), this approach leads long term to sustainable adolescent-responsive public policies in key sectors. These are described in section XYZ.

The second approach is inter-sectoral action which is a joint action across and between sectors (e.g., between health and education sectors, environment and water and sanitation sectors). In some situations, especially if the programme goals cut across well-being domains, inter-sectoral approach can achieve outcomes in a way which is more effective, efficient or sustainable than might be achieved by the health sector working alone [406, 407]. In inter-sectoral action, a joint focus also facilitates ongoing mutually informed learning [7, 406].

Action within single sectors and Adolescent Well-being in All Policies Approach	Inter-sectoral action for adolescent well-being
	
Formerly known as Adolescent Health in All Policies approach, with the advent of the well-being framework the Adolescent Well-being in All Policies (AWiAP) approach is defined here as an approach to public policies across sectors that systematically takes into account the implications of decisions on adolescent well-being, avoids harmful effects and seeks synergies in order to improve adolescent well-being and health equity. It is a strategy that facilitates the formulation of adolescent-responsive public policies in key sectors.	Inter-sectoral action broadly refers to the alignment of intervention strategies and resources between actors from two or more policy sectors in order to achieve complementary objectives that improve adolescent well-being or its determinants. While inter-sectoral action is usually concentrated in government, it has also been taken to mean actions across other sectors including civil society and the private sector. Adapted from. [148]

Unlike single-sector actions, inter-sectoral actions require public policies that involve two or more ministries performing different roles for a commonly agreed purpose. Such collaborations are much more complicated than merely involving other sectors in programme implementation through information exchange, coordination or cooperation. It is therefore important to build the necessary human and institutional

2090 foundations for inter-sectoral action even before establishing a formal inter-sectoral programme [48]. This
2091 can be done systematically (Box XYZ).

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Box XYZ. Practical considerations in planning and managing an inter-sectoral programme

- Raise awareness of the extent of the problem, and that prevention is possible. Because ministries of health, both at national and local levels, generate much of the available data on issues such as youth violence, self-harm, adolescent pregnancy and under-nutrition and oversee the treatment of a substantial proportion of victims, they are well positioned to campaign for more attention to these issues.

  Three types of awareness generally need to be achieved: awareness within the ministry of health and district health management teams, awareness among other sectors, and public awareness. See the example Case study XYZ [408].
- Clarify the policy framework that mandates or enables inter-sectoral action for the issue at stake. Identify policy documents, such as national strategies and plans of action that stipulate the necessity of joint action across sectors for the problem in hand, or otherwise are important for ensuring the good planning, coordination and implementation of inter-sectoral action.
- Invest in consulting with different sectors and in establishing a shared vision among key stakeholders. Identify focal points for the issue(s) at stake from other sectors and organize an informal meeting or meetings with other key sectors. Share information about your current work and goals, identify common interests, and establish a mechanism to exchange information regularly.
- Be aware of common barriers to inter-sectoral action and take anticipatory remedial actions. Collaboration with other sectors brings specific communication challenges. These include lack of understanding of the political agendas and administrative imperatives of other sectors, or differences in the discourse between sectors in framing priorities and goals. Structural barriers also exist. For example, budget allocations within each sector might be difficult to align with the budget lines needed for inter-sectoral action. Effective inter-sectoral action will have to anticipate these barriers (see Box XYZ. that presents a check list of behavioural and structural impediments for inter-sectoral action) and plan remedial actions. Box XYZ describes challenges that face adolescent sexual and reproductive health programmes in low- and middle-income countries.
- Establish a formal partnership with clear governance structure and a mandate from the highest level of the government, and strong representation of adolescents and the community (see Case study XYZ). Appoint a national lead with a mandate from the highest level of the government, who will be responsible for the overall delivery of the programme and engaging with national and local organizations (see case study from Philippines XYZ). Develop and agree

the terms of reference for the national lead and each agency involved. Organizations and individuals involved in partnerships need to have both the authority and the flexibility to engage in mutual decision-making. Clarity about partners and stakeholders is key: who, how many, their roles and responsibilities, and the need for consistency of participation and commitment.

- Consider an independent advisory group. Based on annual progress reports, this will ensure independent scrutiny of progress and will highlight potentially neglected issues for the attention of sectors involved.
- Invest early in organizational capability. A well-designed programme reaches and builds the capacity of a wide variety of health professionals, programme administrators and policy-makers to assist them in the development of local plans, service delivery and research. It provides guidance materials and manuals to support local implementation and to facilitate fidelity in programme implementation. Key areas where such resources might be needed include: community and youth engagement; district planning; working across disciplines and government sectors; public/research/practice partnerships; core indicators and measures; and specific health issues. Such a programme collaborates with key national research centres and institutions, and leverages their resources for intervention development and implementation research. It also develops the core capacity of other ongoing adolescent health and development programmes (e.g. national mental health programmes and HIV programmes).
- Ensure adequate financing for national, subnational and local activities. Decide on the approach to co-financing (see Table XYZ). Consider allocation of funds to local areas through contracts that are subject to conditions, such as appointing local coordinators and developing local plans (Case studies XYZ).

- Create a mechanism for review. This should be informed by systematic collection of data through the information system, and should facilitate adjustment of the response of the sectors involved, as required, at regular intervals. Provide continuous support to the ongoing monitoring, continuous quality improvement and rigorous evaluation of interventions and policies.
- Plan for long-term sustainability from the outset [409], by aligning service delivery, financing, generation of human and physical resources/inputs, and stewardship with system-wide objectives [19], and by considering enablers and barriers to sustain co-financing (see Table XYZ).

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Case Study 13

Management of the School Health Programme- in Philippines at the local level - Making every school a health-promoting school

About a third of the population of the Philippines are of school age, and health in schools is considered an important component of the country's Department of Health's agenda. Despite the country not having a direct school health policy based on the World Health Organization's (WHO) definition for Health Promoting Schools (HPS), the country nevertheless has a school health and nutrition programme that includes several interventions complementary to WHOs HPS. In July 2018, the Department of Education launched the "Health in Schools" programme. The goal of the programme is to provide basic primary health, nutrition, and dental care education in healthy lifestyle behavior for school staff and students, and ensure the link between health service providers and local governments for child and adolescent health services.

Despite the programme being led and implemented by the Department of Education, coordination of the program mostly depends on local governments. Local governments are responsible for the management and allocation of funds to schools for the implementation of the various programmes. They receive and allocate funds from central government as well as provide additional funding to support school improvement and other needed interventions not funded by the central budget. Local authorities such as school officials and superintendents support school initiatives such as school health and nutrition programmes and projects. They also provide other necessary administrative support needed for school-based management of "health in schools programme".

School management also contributes to the development of school level polices and the management of the school environment. Although barriers still exist in school health programmme, the health in schools' strategy which includes local authorities as key stakeholders has contributed to the success of some programs such as the WASH in schools' program.

Source: Making every school a health-promoting school: country case studies. Geneva: World Health Organization and the United Nations Educational, Scientific and Cultural Organization; 2021. Licence: CC BY-NC-SA 3.0 IGO.

5.2.3 Build leadership within the Ministry of Health and across the government

Good governance is a prerequisite for high-quality health systems [7], and leadership for adolescent well-being across the government is an essential foundation for successful programming [410]. A growing number of countries including Chile, England, Ethiopia and Thailand established strong leadership that led to put in place successful national government-led adolescent pregnancy prevention programmes (see also Case study XYZ from Scotland). Within the Ministry of Health, strong leadership for adolescent health is needed to mandate collaboration between different departments and to ensure an adolescent health focus in key policies,

including those related to financial risk protection; training and education of providers; quality improvement; health management and information systems; and infrastructure. As part of multicomponent programmes, over the last decade, they increased access to and uptake of contraception by adolescents by integrating adolescent-friendly health service elements into national health systems. To address other domains of well-being and their determinants, strong leadership is required at the highest level of both national and local government to mandate collaboration between different arms of government finance, gender, planning, statistics, social welfare, security, labour, health and education, working closely with communities, civil society, young people and the private sector.

Case Study 15

Leadership to Improve Pregnancy and Maternity conditions for Young People in Scotland

In Scotland, even though pregnancy rates have been on a steady decline in the last decade, pregnancy rates among young people are still among the highest in Western Europe. In 2016, Scotland's ministries of Children and Young People, and Public Health introduced the "Pregnancy and Parenthood in Young People's" strategy. The goal of the strategy was to improve pregnancy conditions for girls under 18 years and those looked after up to age 26. The strategy provided action-oriented strategies to support and improve the well-being and decrease deprivation among pregnant girls. Strengthening leadership and accountability is at the core of the strategy.

Since the launch of the strategy concrete leadership and accountability actions have been implemented both at the national and local levels. At the national level, the National Lead that was appointed for the "Pregnancy and Parenthood in Young People" has been pivotal in increasing advocacy efforts, coordination and engagement, especially with young people, and providing guidance on the implementation of "Pregnancy and Parenthood in Young People Strategy". At the local level, areas have been supported to develop tailored action plans that support pregnancy and parenthood for young people.

Strong leadership commitment also meant supporting improvements for young people to take more control over their own lives through actions such as improvements to pregnancy information targeting young people, publication of maternity documents specific to young people, increased funding to close educational attainment gap, support for positive relationships and sexual wellbeing, supporting young people with disabilities, etc. Looking ahead, there are plans for continued engagement and collaboration between local and national governments, increased accountability at all levels through good practices and trainings, and strategic partnerships with groups serving disadvantaged young people.

Source: https://www.gov.scot/publications/pregnancy-parenthood-young-people-national-progress-report-no-2/

Implementation areas and strategies to step up leadership for adolescent well-being within the Ministry of Health and across the government:

1. Establish a national-level mechanism, or use existing platforms, to oversee and coordinate efforts for adolescent well-being across sectors and government ministries. Such a mechanism would facilitate engagement of relevant agencies and civil society organizations, including adolescents themselves. It would also identify and periodically review priorities for inter-sectoral collaboration, create incentives to expedite the work, coordinate action across government ministries, and promote related accountability at all levels.
2. Mandate an adolescent health focal person in the Ministry of Health with the responsibility to:
    a. Work across departments within the Ministry of Health – i.e. financing, workforce, primary care and hospital care – to ensure that all health programmes have an appropriate focus on adolescent health
    b. Coordinate adolescent-specific programmes within the health sector or across sectors, depending on the mandate
    c. Work with other sectors during their routine strategic and operational planning cycles to ensure AHiAP (see Section XYZ).
    d. Liaise with other sectors through an inter-sectoral platform and ensure that there is strong leadership for adolescent health across government to mandate collaboration towards jointly owned health targets
    e. Plan and manage inter-sectoral action (see Box XYZ in Section XYZ)
3. Build national and subnational (e.g. district-level) political and administrative capacity and leadership for adolescent health, through:

a. development of adolescent-centered competencies in using data for decision-making
b. essential skills in advocacy, negotiation, budgeting, building consensus, planning and programme management
c. Collaborating across sectors
d. Coordinating multi-stakeholder action
e. Mobilizing resources
f. Ensuring accountability

5.2.4 Ensure meaningful adolescent and youth engagement

Adolescent engagement must be made integral to the design, implementation, monitoring and evaluation of programmes and to decision-making that affects them in all spheres **Error! Bookmark not defined.**. The s ignatories of the Global Consensus Statement on Meaningful Adolescent and Youth Engagement define meaningful adolescent and youth engagement as "an inclusive, intentional, mutually-respectful partnership

between adolescents, youth, and adults whereby power is shared, respective contributions are valued, and young people's ideas, perspectives, skills, and strengths are integrated into the design and delivery of programs, strategies, policies, funding mechanisms, and organizations that affect their lives and their communities, countries, and world" [53].

Policies in key sectors should not be based exclusively on adults' views of adolescents: too often, adolescents are tokenized, left out of discussions, or uncompensated for their time **Error! Bookmark not defined.**. H ealth and other ministries or governments have the responsibility not only to respect the right to participation but also to protect and fulfil it. It entails building adolescents' capacity and providing them with meaningful opportunities for participation in leadership and financing decisions and in all phases of the programming cycle, including assessment, analysis, planning, implementation, monitoring and evaluation [411].

Why meaningful adolescent and youth engagement in programmes is important?

Engaging adolescents in decisions affecting their lives brings multiple benefits [271, 412].

- From a **pragmatic** perspective, adolescent participation ensures better decisions and policies [271, 412]. It allows decision-makers to tap into adolescents' unique perspectives, knowledge and experience, which brings a better understanding of their needs and problems and leads to better suited solutions. For example, upholding adolescents' participation in health care helps create sustainable, acceptable, locally appropriate and more effective solutions, while also encouraging more adolescents to seek and remain engaged in care [413]. Having adolescent and youth perspectives in national policy has been linked to more coordinated responses from government, civil society organizations (CSOs) and donors. In addition, programmes can benefit from adolescents and youth playing an important role in tracking progress through giving their feedback on how the policy application is progressing.

- From a **developmental perspective**, meaningful engagement has an essential positive influence on social and emotional development [407]. It enhances adolescent-adult relationships, develops adolescents' leadership skills, motivation and self-esteem, and allows them to develop the competencies and confidence they need to play an active role in society [414].

- From an **ethical and human rights perspective**, children's right to participate in decision-making is enshrined in the United Nations Convention on the Rights of the Child and is a way to promote health equity. The underlying basis of inequities is the unequal distribution of power, money and resources, so empowering and involving vulnerable and excluded groups of adolescents through meaningful participation constitutes one of the mechanisms for the redistribution of power [415].

5.2.4.1 What are the modalities and principles for effective and ethical youth engagement?

5.2.4.2 Adolescent participation can take several different forms including

- **Informing** adolescents with balanced, objective information (e.g. Case study XYZ).
- **Consulting**, whereby an adult-initiated, adult-led and adult-managed process seeks adolescents' expertise and perspectives in order to inform adult decision-making. See the case study XYZ from Cambodia.
- **Involving**, or working directly with, adolescents in the communities.
- **Collaborating** by partnering with affected adolescents in communities in each aspect of a decision, including the development of alternatives and identification of solutions.
- **Empowering** by ensuring that adolescents in communities retain ultimate control over the key decisions that affect their well-being. This translates into adolescent-led participation where adolescents are afforded, or claim, the space and opportunity to initiate activities and advocate for themselves (see Case study XYZ from Malawi). Empowerment though shifting social norms, supporting policy change, fostering young women's and girls' leadership through effective partnerships is a strategy of particular importance in addressing the power imbalance resulting from unequal gender norms [416]

Each of these modes of participation is legitimate and appropriate in a different context, if it complies with the five basic principles (Fig. XYZ).

Case Study 12

Involving adolescents in formative research in Cambodia

Evidence from research have supported the inclusion of Adolescents in research to capture their perspectives and viewpoints since they are better positioned to provide information on their health and wellbeing. This realization has prompted many stakeholders to actively engage adolescents in participatory research methodologies to inform programming.

In Cambodia, where Adolescents make up about a fourth of the population, the World Food Programme (WFP) undertook research in Cambodia to contribute to the global evidence base on adolescents and to guide future nutrition programmes. The research was conducted between 2016 and December 2017 and followed a participatory research methodology that included adolescents and their communities. The objectives of the study were to assess adolescents' nutrition needs and priorities, engagement preferences for nutrition programs, understand current programmatic and policy environment and establish recommendations for context and user-centered nutrition interventions for adolescents. Data was collected from 280 participant in three provinces in Cambodia. Qualitative data collection methodologies that ensured active engagement and participation of adolescents were used for data

collection including focus group discussions, key informant interviews, workshops, and technology surveys.

The research elicited perspectives directly from adolescents on how they view and define their experience as adolescents, their food and nutritional needs, factors affecting their nutrition and how they would like to be engaged by programmes. The active participation of adolescents led to key recommendations for policy and programmatic considerations which included investments to increase access to healthy and nutritious foods, providing healthier food options, food preparation and consumption, improved land, and agricultural practices, keeping adolescents in schools, improve maternal health awareness. An important consideration of the results from the research was the attention to gender roles within communities and their influence on future programmes and interventions.

Source: https://docs.wfp.org/api/documents/WFP-0000064044/download/?_ga=2.155210803.907460398.1664883718-1710763202.1664883718

Case Study 16

Youth Group in Malawi equipped and empower young people

HeR Liberty, a youth-led agency established in 2017 in Malawi, has been working on adolescent focused approaches to improve the health and wellbeing of adolescents locally. In partnership with key stakeholders including the Global Financing Facility, the organization engaged meaningfully with youth to co-create approaches with youth from the local communities. Young people are given the freedom to develop a plan to improve their health and wellbeing based on their local needs and resources. The organization provides youth leaders with training and toolkits so that they are empowered to complete their own financial and narrative reports for projects they undertake. Youth leaders are also given training on how to engage local leaders and government bodies on issues related to the health and wellbeing of adolescents. The approach of HeR Liberty is to empower and support young people through effective advocacy, so adolescents are better informed on key health and wellbeing issues affecting them such as sexual health and reproductive rights.

The organization has successfully used music and short videos to develop advocacy toolkits and roadmaps in partnership with Youth Networks, UN Agencies and other organizations. Using a clear communication and media strategy, the organization uses social, online, and traditional media to share SRHR messages to local radio stations and broadcast on TV channels. By 2019, their advocacy song, "inu ndi ife" was played by 8 radio stations and 6 TV channels. In addition, downloads for the song via the online platform "www.malawi-music.com" had reached 16202 by December 2022. In one campaign, because the organization worked with youths to co-develop approaches and develop plans specific to

their context, the organization was able to reach 4000 youths in 30 days. Self-report by the organization indicates that by December 2022, the organization had reached 8000 young people in 12 districts and worked with 100 youth leaders and peer educators, and 80 clubs (https://herlibertymalawi.org/). The organization has also organized intergenerational dialogues with over 20 community and traditional leaders in 4 local districts in Zambia.

Source: https://apps.who.int/iris/handle/10665/362195

2196

2197 Figure XYZ describes the five principles for meaningful adolescent and youth engagement

Rights-based – Young people are informed and educated about their rights and empowered to hold duty bearers accountable for respecting, protecting, and fulfilling these rights;	**Transparent and informative** – Young people are provided with full, evidence-based, accessible, age-appropriate information which acknowledges their diversity of experience and promotes and protects their right to express their views freely. There is a clear and mutual understanding of how young people's information, skills, and knowledge will be shared, with whom, and for what purpose	**Voluntary and free from coercion** – Young people must not be coerced into participating in actions or expressing views that are against their beliefs and wishes and must always be aware that they can cease involvement in any process at any stage
Respectful of young people's views, backgrounds, and identities – Young people will be encouraged to initiate ideas and activities that are relevant to their lives, and to draw on their knowledge, skills and abilities. Engagement will actively seek to include a variety of young people according to the relevant needs or audience. Engagements will be culturally sensitive to young people from all backgrounds, recognizing that young people's views are not homogeneous, and they need to be appreciated for their diversity, free from stigma;		**Safe** – All adults and those in positions of authority working directly or indirectly with young people in relation to issues at every level have a responsibility to take every reasonable precaution to minimize the risk of violence, exploitation, tokenism, or any other negative consequence of young people's participation.

5.2.4.3 What is the current status of youth engagement?

Youth leaders are active in many countries, through community associations, school-based activities, youth councils, youth parliaments and other national or subnational youth advisory groups [417]. But much more needs to be done. In many setting the reasons for exclusion of adolescents and youth from decision-making process (Box XYZ) are still to be addressed.

Box XYZ

The dimensions of adolescents and youth exclusion from decision-making process

It is crucial to acknowledge that adolescents are a very heterogeneous group, and some forms of inequity and privilege are entrenched, systemic and even intentional. Vulnerability and exclusion can occur through one or multiple intersecting and overlapping dimensions of inequity, including, but not limited to, age, gender (including gender identity/sexual orientation), ethnicity, disability, care status, migration status, language and economic or social status. It can also be made worse by context (rural, emergency, conflict, poverty, exclusion, lack of digital connectivity, etc.). Peer pressure or discrimination can contribute to adolescents' confidence or lack of confidence to express their views. Broader social norms and cultural and organizational practices also help or hinder adolescents' participation and civic engagement. Within youth structures, younger adolescents are often marginalized in favour of older youth. Information and participation methods are not always sufficiently adapted to adolescents of different ages and abilities. When initiating consultations or forums for adolescents, many agencies find it easier to reach and involve school-going adolescents (especially those who are doing well in school). This, unintentionally, excludes more marginalized adolescents who may not regularly attend formal schools.

Source: https://www.unicef.org/media/73296/file/ADAP-Guidelines-for-Participation.pdf

As part of the accountability system for the Global Consensus Statement on Meaningful Adolescent and Youth Engagement (MAYE) [53], a survey of all 249 signatories of the statement was conducted to assess the progress made and the challenges identified during the first year of its implementation.

Despite reports of strong progress and the establishment of specific mechanisms for MAYE, challenges remain. Structural barriers - such as racism, misogyny and ageism - rooted in privilege and hierarchy still prevent adolescents and young people from meaningful engagement in all processes that affect their lives and hamper the advancement of MAYE within the endorsing organizations. In terms of establishing equal partnerships with youth-led initiatives, almost half of those answering questions on this matter referred to the use of informal agreements, rather than formal memoranda of understanding (MoUs), contracts or terms of reference (ToRs).

Many organizations reported that they expect to increase their MAYE commitments in the near future. This would be achieved by internalizing MAYE guidance documents, including but not limited to seeking ways to financially compensate adolescents and young people, or by developing accountability mechanisms.

As for identified barriers preventing young people's access to decision-making bodies, the commonest response was that unrealistic requirements for qualifications was the main reason preventing young people's access to those spaces. Findings from the survey suggest that organizational mandates and internal advocacy were the main enablers of financial support for work done by young people, while restrictive internal financing policies and lack of donor requirements/ encouragement were found to act as barriers. This implies that, if those determining financial systems and policies worked closely with internal advocates and enablers, that would produce significant opportunities for progress. The organizations responding to the survey also commented on the support they would need to advance MAYE. In response, PMNCH and WHO have developed a MAYE Practical Guidance Resource which unpacks the checklist criteria of the MAYE Consensus Statement, including an assessment tool, recommendations and case studies.

Key implementation areas and strategies for MAYE in programming for adolescent well-being:

1. Ensure that national policy frameworks recognize the importance of the meaningful engagement of adolescents and youth and establish mechanisms to guarantee it.

2. Create forums for meaningful youth engagement and participation as leaders and key stakeholders at the national level (e.g. independent youth commissioners and a national youth council) with resources for independent oversight of government actions to promote adolescent well-being.

3. Establish formal structures and processes to institutionalize adolescent meaningful participation in dialogues about relevant areas of public policy, financing and programme implementation (e.g. youth participation in the Civil Society Coordinating Group for the Global Financing Facility in Support of Every Woman Every Child ; youth participation in SDGs' regular Voluntary National Review process and SDG-related reporting; systematic inclusion of young people through civil-society involvement in country platforms for reproductive, maternal, newborn, child and adolescent health).

4. With the participation of adolescent and youth constituencies, adopt minimum standards for improved participation, inclusiveness and transparency and for the accountability of such country platforms. Ensure that policies for adolescent representation consider equity, addressing drivers of exclusion and barriers to participation of sub-populations (e.g., those with disabilities, poor access to internet, etc.). (see Box XYZ) to achieve greater parity, through adequate mechanisms for formal and informal youth representation, tailored capacity building and financial support.

5. Build mechanisms for youth participation at the local level, including taking advantage of technological platforms (e.g. mobile phones and social media) to facilitate youth engagement in problem identification, prioritization and solutions. Provide the resources to support these actions and ensure that the mechanisms allow the most vulnerable adolescents to participate.

6. Train and mentor a diverse group of youth leaders to build their competencies to play an effective role in governance and accountability processes around their health and well-being. Ensure that youth-friendly and accessible information, resources and financial and technical support are available to support training and mentoring activities, and enable adolescents to share their experiences, good practices and models of successful adolescent-led interventions.

7. Build legal awareness and literacy among adolescents about their rights under the Convention on the Rights of the Child, as well as about their legal entitlements (and limitations) under national laws and regulations. Ensure the existence of, and adolescents' ability to use, functioning and accessible mechanisms for remedy and redress when violations occur. Ensure easy access for young people to present cases before regional and international judicial and human rights bodies.

8. Put in place mechanisms and procedures to ensure adolescent participation in health services, including in their own care, in line with Standard 8 of the Global Standards for Quality Health-Care Services for Adolescents [413, 418].

9. Identify clearly the objectives of adolescent participation and institutionalize the monitoring and evaluation of youth engagement with specific indicators. See Case study A5.26 from the Adolescent and Youth Constituency of the Partnership for Maternal, Newborn & Child Health on how establishing an 18-month workplan with clear objectives and expected results helped to demonstrate impact.

10. Develop and implement internal policies and mechanisms that ensure proper recognition and compensation of adolescents and young people for their role in shaping policies, creating demand and providing services

Sources: [53, 54, 271, 412, 413, 415, 419].

Resource bank for adolescent participation in programming for well-being

5.2.5 Secure financing for adolescent well-being programmes

As shown in section XYZ, investing in adolescent health and well-being is a good investment. Continuous advocacy is needed to persuade funding bodies about it. To meet the needs of adolescents, resources need to be allocated and purchasing decisions made within and outside the health sector. Depending on whether the programme is a single-sector programme, or inter-sectoral, the processes and opportunities to expand resource allocation will differ. Each sector has its own processes and mechanisms for the allocation of resources within the sector, and it is beyond the scope of this document to cover all of these. Because of this, for single sector programmes, we only use the example of the health sector; we then describe the approaches for funding inter-sectoral programmes.

5.2.5.1 How to fund inter-sectoral programmes for adolescent well-being?

Despite strong calls for 'whole-of-government' approaches, 'health-in-all-policies', and 'inter-sectoral action for health', financing for health and well-being is still dominated by a sectoral approach [48, 404]. Single sector financing is particularly problematic for the funding of structural interventions that address the social determinants of health and well-being. For example, gender equality has the potential to generate large health

gains and synergies across education, economic empowerment, service uptake and improved health - outcomes that "belong" to different sectors.

However, health and other sectors rarely invest substantially in these inter-sectoral interventions, partially because of sectors' specific paradigms that tend to undervalue co-benefits that are outside the sector's mandate. The evaluation of the return on investment often excludes the consideration of a sector's non-specific costs and impacts [48, 420]. In recent years, there has been increasing recognition that governments need to provide the incentives, budgetary commitments, and sustainable mechanisms to support multi-sectoral collaboration, and calls to mobilize financing at the global level, and incentivize multi-sectoral collaboration and action through existing partnerships and new financing mechanisms have been made [48, 404]. Countries across income levels are beginning to explore how best to institutionalize these, and the funding flows that result from them [47].

There is no one recipe for financing inter-sectoral programmes that will be fit for all situations, nor a single set of contextual characteristics necessary to support a co-financing approach between sectors. However, a starting point should be the consideration of all the benefits and harms to the adolescent of a programme, spanning all the five domains of adolescent well-being, rather than only considering benefits or harms within one domain or sub-domain. The implementation strategies listed below are based on emerging models for financing inter-sectoral action for health (Table XYZ), with the recognition that more research is needed to establish a credible evidence base on the impact of co-financing [48].

Implementation areas and strategies;

1. Prepare a strategic and compelling plan for inter-sectoral investments in adolescents, making a strong case based on the triple dividend argument, and engage in negotiations with the Ministry of Finance over resource allocations.
2. Consider various financial mechanisms to implement the co-financing approach, such as pooled budgets, aligned budgets, joint commissioning, cross-charging and transfer payments, and implement those that are most suitable to the context (e.g. the existence of enabling legislation of the maturity of partnership between sectors, grants' conditionalities, etc.). Table XYZ describes the key features of inter-sectoral co-financing models and gives examples of their application in countries.
3. Before deciding and implementing the co-finance model, anticipate barriers and enablers to uptake, implementation and continuation of the co-finance, and plan remedial actions from the outset. Table XYZ describes key barriers and enablers for co-financing
4. Invest in programme managers´ specific skills that are required in the development stage of co-financing, including negotiation, resource mobilization, effective communication and public financial management.

2322 Table XYZ. Description of financial mechanisms used to implement the co-financing approach

2323

Financial mechanism	Definition	Example	Country	Description
Pooled budgets	At least two budget holders make contributions to a single pool for spending on pre-agreed services or interventions.	Children's Trust Pathfinders [421]	England	Local cross-sector partnerships between ? and ? promoting greater integration of professionals providing children's services.
Aligned budgets	Budget holders align resources, identify their own contributions towards pre-specified common objectives.	The Interagency Program for the Empowerment of Adolescent Girls (IPEAG) [422].	El Salvador	Programme providing an integrated response to the needs of adolescent girls
		Geracão Biz Program (PGB) [423].	Mozambique	Multi-sectoral adolescent sexual and reproductive health programme
In-kind support	Sectors contribute non-financial resources (e.g. human resources, infrastructure and/or technology) towards the joint provision of an intervention or programme	School Health & Nutrition [424].	Zambia	School-based deworming, micronutrient supplementation and health education

	with a shared objective.			
		Kenya National School-Based Deworming Programme [425].	Kenya	School-based deworming
Structural integration	Full integration of cross-sector responsibilities, finances and resources under single management or a single organisation.	Integrated Health & Social Services Board (1973-present) [68].	Northern Ireland	Mechanism for joint health & social care planning, commissioning & provision
Joint or lead commissioning	Separate budget holders jointly identify a need and agree on a set of objectives, then commission services and track outcomes.	Contra Costa County Community Services Dept. coordinated funds for early education [426].	United States	Full-day full-year integrated early education & support services
Cross-charging	The mechanism whereby a cross-sector financial penalty is incurred for the non-achievement of a pre-specified target.	ADEL reform (National Reform of Elderly Care) (1992-	Sweden	Local authorities (responsible for social care) are required to pay county councils (who run hospitals) for care delivered to patients in hospital once a patient is deemed fully medically treated by a hospital doctor

Transfer payments	Sectoral budget holders make service revenue or capital contributions to bodies in other sectors to support additional services or interventions in this other sector.	New York City Childhood Asthma Initiative [427].	United States	Community education on asthma and case coordination
		Road Safety Partnership Grant [428].	England	Inter-sectoral projects improving road safety

Adapted from: McGuire F, Vijayasingham L, Vassall A, Small R, Webb D, Guthrie T, Remme M. Financing inter-sectoral action for health: a systematic review of co-financing models. Globalization and health. 2019 Dec;15(1):1-8. [48]

Table XYZ: Barriers and Enablers to Uptake, Implementation and Continuation of Co-financing Models

Theme	Barriers	Enablers
Conceptual Buy-In	Actor resistance due to perceived risk, ambiguities, and threats	Favourable political climate, client, actor and public support
Model Design, Planning Framing, and Implementation	Unclear terms and unmatched partnership	Effective planning
		Context level for implementation
Organizational Resources and Capacity	Inadequate or incongruent resources	Matched Partnership with respect to resources, capacity, decision-making and implementation
	Differences in human resources and ways of working	Adequate Expertise and Capacity

	lack of leadership readiness, or leadership buy in	Strong leadership, with limited turnover, that prioritises the co-financing
	Insufficient time to produce impact	Time to foster relationship and achieve impact
	uncertainties over long-term sustainability beyond pilot or single term	
Relational and Organizational Culture	Non-constructive relational and work dynamics	Established positive relational and work dynamics
Evidence, Output Data Monitoring and Evaluation	Insufficient result-focused practices	Set targets
		Evidence of success
Finance and Accounting Practices	Unmatched methods and capacity to adapt to needs	Financial control

Adapted from: McGuire F, Vijayasingham L, Vassall A, Small R, Webb D, Guthrie T, Remme M. Financing inter-sectoral action for health: a systematic review of co-financing models. Globalization and health. 2019 Dec;15(1):1-8. [48]

5.2.5.2 How to expand resource allocation for adolescent health priorities in national health plans

Historically, especially in low- and middle-income countries, adolescent health programmes and projects were largely funded through donor assistance for priority areas such as SRH and HIV that often led programmes to operate largely autonomously from the rest of the health system in seeking to optimize the achievement of a specific objective [39]. This dynamic has implications for how priority interventions are delivered and sustained, sometimes with separate organizational arrangements resulting in inefficient overlaps and duplications [19, 429]. When the funding source for adolescent programmes is not coordinated/integrated with the overall health sector budget, it can jeopardize the sustainability of programmatic activities in the case that funding sources dry up, change or shift, particularly related to donor assistance [19, 429]. Globally, only a minority of countries' adolescent health programmes report having regular government budget allocation [430].

Whilst private financing plays a role in all health systems and in all kind of services, the evidence is clear that, where its role becomes large, it typically has a harmful impact on progress towards UHC [431]. Out-of-pocket payments are a particularly regressive way to fund health services and adolescents in particular are at risk of forgoing needed care if they have to rely on out-of-pocket payments. Private health insurance schemes can provide certain protections, however adolescents rarely have the necessary resources for private schemes´ premiums.

To make progress towards UHC, countries must move towards a predominant reliance on public funding for its health system in general [431], and for adolescent health programmes in particular. As contexts change, the responsibility for funding these programmes should shift more towards domestic resources, and the source of funding should come from the overall health sector budget [19]. Governments should include a focus on adolescents in national health strategies and investment plans for UHC [39]. Key actions therefore include better advocacy for adolescent health priorities within national health plans.

While domestically raised funding should be the main financing source to be leveraged for investing in young people's health, external funds can also play an important role in leveraging more resources for adolescent health in low-income countries. The Global Financing Facility is an important financing platform for the Global Strategy for Women´s, Children´s and Adolescents´ Health that is intended to support investment plans in selected countries that aim at smart, scaled and sustainable action for women's, children's, and adolescents' health [2]. The Global Fund to Fight AIDS, Tuberculosis and Malaria (the Global Fund) encourages countries to focus on adolescents in their applications [432-434] . See Case study XYZ.

Case Study 17

Global Fund invests in Adolescent Health Programmes

The Global Fund is a key funding partner investing in health and wellbeing initiatives specific to adolescents and young people. Globally, they have funded several initiatives on important public health issues affecting young people including HIV and Aids. One such initiative is the Linkages of Quality Care for key young populations (LOLIPOP). LOLIPOP has been implemented in Indonesia since 2015 with the goal of increasing HIV related services such as testing, treatment and adherence to Antiretrovirals among vulnerable youth groups including men who have sex with men, transgender, sex workers, those living with HIV, and those who inject drugs. The LOLIPOP programme supports strategic interventions focused on creating an enabling legal and policy environment, increasing access and quality of HIV services (supplies, health staff and commodities), encouraging young populations to use services, and generation of strategic information to guide programmes.

The project is implemented in partnership with both national and local level partners. At the national level, stakeholders involved in implementation are the Ministry of Health, UNICEF, National AIDS Commission, and local organizations such as Spiritia Foundation and Inti Muda. At the local level,

stakeholders include community-based organizations, Department of Health, sub recipients of grants from the Spriritia Foundation and District AIDS commissions. National level partners provide training and coordination needed for the implementation of the project, while local partners implement projects at the local level in coordination with the National level partners.

Pprogrammatic data from the first two semesters after implementation showed positive results for both outreach and testing services in the three intervention regions, i.e., Denpasar, Surabaya and West Jakarta. Improvements were observed in the number of people reached though outreach from 685 young people (15-24) in semester one to 1759 in semester two. Also, there was an over 50% increase in the number of youths that were targeted for voluntary counselling and testing.

Source: https://www.aidsdatahub.org/sites/default/files/resource/youth-lead-assessment-gf-investment-adolescent-and-ykp-2019.pdf

Implementation areas and strategies [19, 429, 435-438];

1. Prepare an investment case for a defined and costed national package of adolescent health interventions and use it as an instrument to guide purchasing decisions and benefit packages, giving particular attention to preventive services and adolescents' rights to confidentiality. Estimate resource needs for the implementation of the priority package of interventions and associated programme costs, using tools such as the One Health Tool (ADD ref here).
2. Ensure that adolescents and their advocates are represented in the process of developing national health financing strategies and defining the essential benefit package, and that their needs are well articulated and advocated for. Involve civil society and patient representatives in the benefit package selection process and strategic purchasing decisions so that adolescents' representatives are consulted about the final decisions on 'what's in and what's out' through a formal hearing process, by access to an process for appeals or another structured participatory process.
3. Participate and advocate for adolescents in the budgeting process at national and sub-national level, from the planning stage and throughout the budget preparation, the release of funds and the monitoring of expenditures [429].
4. Ensure that adolescent needs are well articulated and advocated for in discussions about strategic purchasing of services in order to achieve the government's strategic objectives related to adolescent health:
    a. Establish agreements with providers which make the expectations for the range, quantity and quality of services for adolescents explicit

b. Stimulate provider performance in providing adolescent-responsive care, e.g. by creating incentives, aligned with system-wide incentives, though performance indicators, provider payment methods such as fee-for-service of "pay for performance", and clinical guidelines
c. Improve the efficiency of the process for procurement of essential commodities for adolescent health services (e.g. menstrual kits)
d. Promote equitable access of adolescents to these services, such as through offering higher payment rates in areas that are under-served.

5. Build the capacity of adolescent health focal points in the ministry of health to apply the decision-making criteria used in defining essential health benefit packages to make evidence-based arguments in favour of adolescents (see Table XYZ).
6. Build the agency and capacity of district and community managers to address adolescent health priorities when making local adjustments to central budgets.
7. Build the capacity of national and district project managers to leverage external funds for adolescent health priorities using opportunities provided by the Global Financing Facility [436], and strategic investments by the Global Fund and GAVI the Vaccine Alliance, among others.

Table XYZ: Adolescent-specific application of criteria for essential health benefit package decision-making

Criteria for decision making	**The application of criteria in the context of adolescent health**
Burden of disease	The morbidity and mortality associated with diseases, injuries and risk factors affecting adolescents
Balance of benefits and harms	The balance of health benefits and harms reflects the health impact of an intervention on adolescents, the cost of action
Cost-effectiveness of interventions	The value-for-money of the intervention (usually expressed as a ratio of the costs of the intervention to its benefits).
Equity and priority to the worse off	A qualitative or quantitative measure of the ability of the intervention to address existing health system inequities affecting various sub-populations of adolescents including those with disabilities, the marginalized, displaced, orphaned, poor and those living in hard-to-reach areas.
Financial risk protection	The extent to which adolescents can afford the cost of the intervention and are protected from catastrophic health expenditure and health-related financial risk
Budget impact and sustainability	The overall financial implications, especially for additional costs, of implementing the adolescent health and well-being interventions for the available budget

Feasibility	The extent to which adolescent health and well-being interventions can be delivered through the existing health system taking into account available or a realistic increase in human resources, infrastructure and other resources, and whether it is socio-culturally acceptable to the public
Social and economic impact	The societal consequences resulting from adolescent health and well-being interventions, such as the triple dividend of health and well-being benefits, economic benefits and enhancement of social capital (see section 1.XYZ)
Political acceptability	Political dividends associated with supporting investments in adolescent health (e.g. acceptability of a policy or programme to politically influential constituencies, such as voters, donors, lobbyists)

Adapted from: WHO, 2021, Principles of health benefit packages [437].

5.2.6 A renewed attention to school health and mental health programmes

Priorities for inter-sectoral programmes will be established during the process of national prioritization, as described in Section 4. They can be focused on a single issue or area of concern, such as adolescent pregnancy (Case study XYZ) or be broad-based (case study XYZ). It is beyond the scope of this document to attempt an exhaustive list of inter-sectoral programmes for adolescent health since the need for them is context specific. There is however one notable exception, and that is school health, which is a cost-effective investment and feasible in all contexts and settings. Health promotion in schools is one of the three most common policy areas when multi-sectoral and inter-sectoral action is undertaken [41]. Importantly, when designed well, school health programmes act at the interconnectedness of protective and risk factors across multiple domains of well-being (Figure XYZ. well-being) [9]. This is perhaps why globally, 90% of countries have some form of SHN programme. SHN is one of the most widely implemented approaches to delivering health and social protection.

In the past five years, including due to the lessons learned from the COVID-19 pandemic when school closures prompted massive disruptions of critical services to school-age children [439], there has been a renewed attention to school health [6, 41, 43-45, 440]. The rationale is clear. Globally, over 90% of children of primary school age, and over 80% of children of lower secondary school age are enrolled in school [441]. On average, children and adolescents spend ‘7,590 hours in the classroom over 8–10 years during primary and lower secondary school [441].

This makes schools a unique setting for preventive interventions, and school years an important period to establish healthy behaviours that will contribute to a lifetime of health promotion [439]. Looking after the health and well-being of learners is one of the most transformative and cost-effective ways to improve education outcomes and make education systems more inclusive and equitable. Investing in school health

systems is a smart way for countries to improve the health and education prospects of today's learners and tomorrow's leaders. Concurrently, there have to be strategies put in place to reach the "out-of-school adolescents" who are also more likely to face the added health risks. For instance, adolescents with disabilities are 49% more likely to have never attended school and may be missed if the focus is only on school-based health programmes (see Box).

Box XYZ: **School health and nutrition programmes are a cost-effective investment, feasible in all settings, and deliver significant development gains**

School health and nutrition programmes are a cost-effective investment, feasible in all settings, and deliver significant development gains

- Schools reach millions of children and adolescents and SHN programmes are a cost-effective way to improve both health and education outcomes. For example, school feeding programmes deliver US$9 in returns for every US$1 invested. School programmes that address mental health can potentially provide a return on investment of US$21.5 for every US$1 invested over 80 years.
- Whole-school approaches have large effects on school climate, depressive symptoms, bullying, violence perpetration and victimization, attitudes towards gender, and knowledge of reproductive and sexual health [442].
- Investing in SHN benefits multiple sectors in addition to education, including health, social protection and local farmers where school meals are linked to local procurement. It delivers immediate, lifelong and inter-generational benefits for individuals and contributes to the creation of human capital and the sustainable growth of nations.
- Despite this, only US$2 billion is invested each year in addressing the health needs of school-age children and adolescents, whereas some US$210 billion is spent on educating this age group in low- and lower middle-income countries. As well as education expenditure, resources for school-age children and adolescents' health and well-being must increase substantially to maximize investments [41].

Despite the fact that clearly governments in many countries are already investing in the health and well-being of school-age children and adolescents through school health programmes, more needs to be done to ensure that these programmes are comprehensive and embedded into education systems to make them sustainable and serve every learner in every school [9]. Global data suggest that SHN programmes are not always comprehensive in scope, that coverage of essential components of SHN remains low, particularly in low-income countries, and that interventions are not consistently implemented at both primary and secondary school level [41].

The UNESCO and World Health Organization (WHO) Global Standards for Health Promoting Schools is one important vehicle through which countries are being supported to build health promoting education systems

(Figure XYZ) in order to adopt a more holistic and sustained approach to school health, and Make Every School a Health Promoting School.

What is a health-promoting education system?

A health promoting education system is one that constantly strengthens its capacity as a healthy setting for living, learning and working, achieved through active engagement between health and education officials, teachers, teachers' unions, students, parents, health providers and community leaders [443]. In line with the WHO's Global School Health Initiative, health promoting education systems aim to improve the health and well-being of students, school personnel, families and other members of the community through schools. Guidance on Health promoting schools was developed jointly by UNICEF and UNESCO [41] along with eight global standards and indicators [6]. The eight standards for a health-promoting education system and their relationship, are as shown in Figure XYZ.

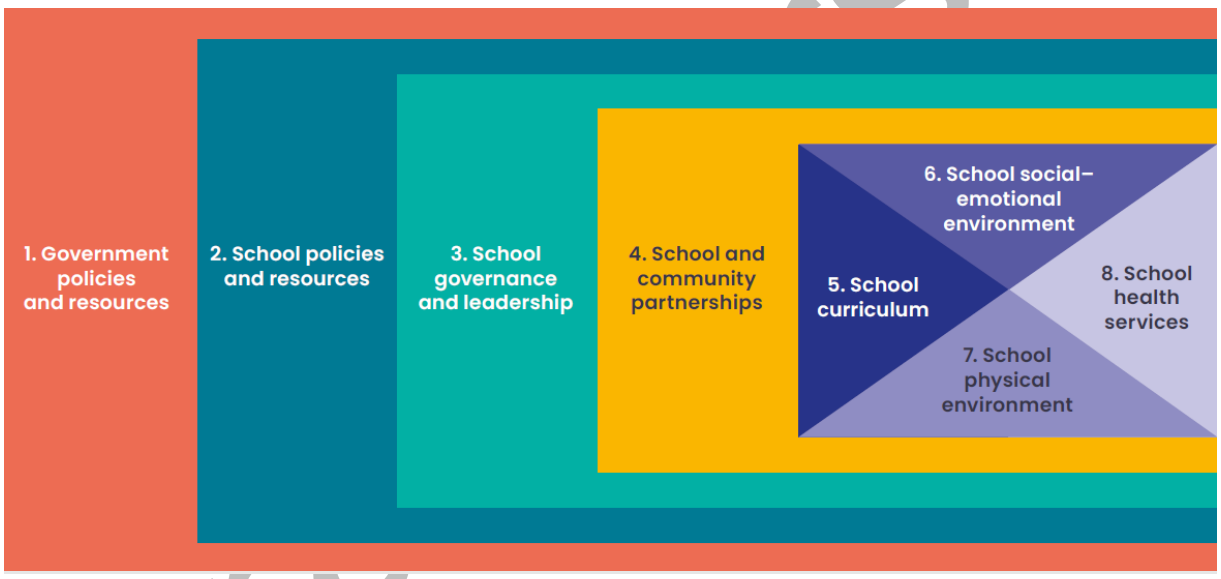


Figure XYZ Global standards for health-promoting schools and their relationship. Adapted from [6]:

Implementation areas and strategies to improve school health are described in section XYZ

Case Study 14

Building Teacher Capacity supports student inclusion in Scotland

In 2021, Scotland embarked on work to increase teacher capacity so that schools across the country can be more inclusive of Lesbian, Gay, Bisexual, Transgender, and Intersex (LGBTI) students. The LGBTI

inclusive education policy is complementary to other policies in the country such as the national anti-bullying initiative, Gender expression and Respect for all. The focus of the LGBTI inclusion education policy was in line with a national policy that aims to provide both students and teachers with the requisite skills and training so that they are adequately informed on LGBTI issues at both Primary and Secondary school levels. Teachers and staff in primary and secondary schools across Scotland were provided with toolkits and resources that geared towards increasing their competencies on LGBTI issues. The toolkits and resources also provided them with information and tools on how to implement a curriculum that includes considerations specific to the LGBTI community. In addition to the resources, teachers and staff were offered in-person and virtual training sessions and a certificate of completion. According to preliminary data from the Time for Inclusive Education in Scotland, almost all teachers who participated in the trainings reported increased knowledge on the implementation of the strategy of inclusive LGBTI in primary and secondary schools. In addition, some teachers are also reporting increased confidence in their ability to manage LGBTI issues.

Source: 91775206-en.pdf (oecd-ilibrary.org)

Mental health is another area for inter-sectoral action that came into spotlight during the COVID-19 pandemic (Box XYZ) [444], and practical guidance for programming became available since the first edition of the AA-HA! [11, 445].

BOX XYZ: Child marriage and intersectoral action

BOX XYZ: **COVID-19 and adolescent mental health and well-being**

COVID-19 and adolescent mental health and well-being

- The social and economic effects of COVID-19 including nationwide school closures posed many mental health challenges for adolescents [445].
- Unmet mental health need soared during the pandemic with adolescents reporting difficulties accessing services, and providers reporting some of their lowest attendances [88, 446].
- Prior to COVID-19, mental health disorders accounted for 13% of global burden of disease among adolescents, with self-harm, depressive disorders and anxiety disorders among the top 6 contributors of disability adjusted life years [447].
- During the pandemic, more adolescents reported depression, anxiety and behavioural disorders compared to prior years [88, 444].
- Some studies reported that rates of suicide among youth increased during the pandemic compared to pre-pandemic status [444].
- During the pandemic, mental health and well-being difficulties were more likely to be reported by adolescents with the following characteristics [214].

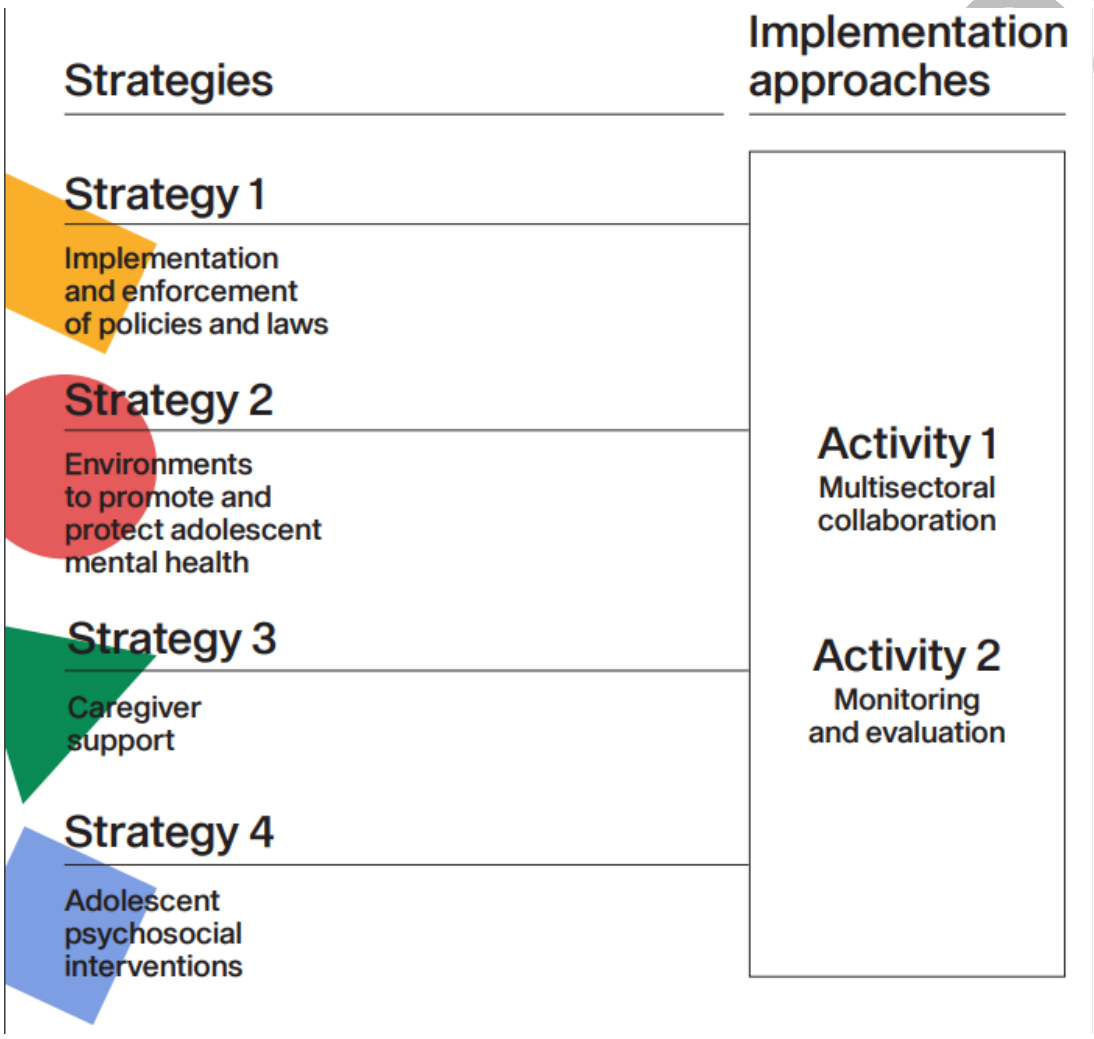
- female
- older (≥16 years)
- disadvantaged
- with special educational needs and disability

For a more integrated approach, a focus on mental health in school health programs is recommended. However the Helping Adolescent Thrive toolkit describes core principles that should guide programming efforts for adolescent mental health, as well as key implementation strategies and approaches that can be implemented in any programming context. (BOX XYZ)

BOX XYZ

Helping Adolescents Thrive Toolkit: evidence-based strategies to promote and protect adolescent mental health and reduce self-harm and other risk behaviours

The Helping Adolescents Thrive (HAT) toolkit, has been developed to improve programming for adolescent mental health promotion and prevention and to support the implementation of the WHO HAT guidelines on mental health promotive and preventive interventions for adolescents. The toolkit describes evidence-informed approaches for promoting positive mental health, preventing mental health conditions, and reducing engagement in self-harm and risk behaviours.



5.2.7 Addressing adolescent well-being in humanitarian and fragile settings

Addressing adolescent well-being in humanitarian and fragile settings is another example of multi-sectoral and inter-sectoral action for adolescent well-being. While child protection actors play a central role, all sectors need to be involved in preventing and responding holistically to the risks and vulnerabilities that affect girls and boys in crises [448].

A recovery programme in a humanitarian and fragile setting should be guided by development principles that seek to generate self-sustaining, nationally owned, resilient processes for early post-crisis recovery [449-451]. Therefore, the core implementation strategies as outlined in the logical framework (Figure XYZ) will be the same in humanitarian and fragile settings. They will encompass addressing laws and policies, human resource capacity, adolescent-responsive service delivery and financial risk protection, and promote adolescent participation in leadership and governance arrangements for accountability.

The key principles and standards for accountable and high-quality humanitarian action are described in The Core Humanitarian Standard on Quality and Accountability (CHS) that sets out Nine Commitments that organizations and individuals involved in humanitarian response can use to improve the quality and effectiveness of the assistance they provide [452]. In this section we only describe the adolescent-specific aspects of planning and delivering the humanitarian response, aligned with evidence-based interventions described in section 3.

All actions described below should be implemented by upholding the principles of child participation, non-discrimination, best interest of the child, the right to survival and physical, psychological, emotional, social and spiritual development; safety, dignity and rights to information, confidentially and privacy [448, 452, 453].

Implementation areas and strategies [448, 453, 454].

1. **Coordinate:**
    a. Establish a child and adolescent health working group to integrate CAH priorities into the humanitarian response plan and actively engage partners from key sectors to ensure an integrated multi-sectoral response
    b. Advocate for child and adolescent health to health and humanitarian authorities
    c. Participate in humanitarian structures to effectively integrate child and adolescent health into humanitarian action
    d. Identify key humanitarian actors and reach out to partners and work to establish common systems and avoid duplication

2. **Engage:**
    a. Establish systems for adolescent participation in decision-making (especially for girls and those with disabilities and other vulnerabilities), in developing and implementing responses at community, provincial and national levels [455].

b. Ensure that mechanisms for adolescent participation encompass engagement across the humanitarian programme cycle, including needs assessment and analysis, strategic planning, resource mobilization, implementation and monitoring, and peer review and evaluation [453].

3. Communicate:

a. Develop a communication strategy for child and adolescent well-being, communicate without delay urgent messages to the affected population

b. Implement, update and coordinate internal, multi-sectoral and multiagency communications and advocacy policies and processes to ensure all messages support children's and adolescents' needs for protection and well-being. Avoid messages that re-traumatize children and adolescents or create fear, division or violence

4. Assess and prioritize:

a. Ensure a systematic, objective and ongoing assessment of the context and its impact on child and adolescent health, nutrition and well-being and assessing the safety and security of affected, displaced and host populations of children and young people to identify threats of violence and any forms of coercion, denial of subsistence or denial of basic human rights

b. Assess existing resources and capacity and their adequacy to ensure access of children and young people to critical interventions and services

c. Prioritize child and adolescent health interventions confronting the biggest causes of death and morbidity with the most cost-effective tools and providing extra attention to populations at high risk

5. Train staff

a. Train staff, including clinical staff (community health workers, nurses, midwives, doctors, paramedics, national and international volunteers) in providing care with respect to adolescents' right to information, dignity, best interests, safety, autonomy and self- determination, and participation

b. Develop the capacity of child protection workers and all health and humanitarian workers to prevent, detect and respond appropriately to child protection issues.

6. Provide services:

Health services

a. Adapt, improve or establish adolescent-responsive service delivery structures such as flexible and integrated adolescent-friendly health services, temporary clinics that are community-based and mobile, provision of comprehensive sexual and reproductive health services for adolescents at a single site, home-based care, education and outreach through non-health facilities and safe spaces.

b. Use innovation to enhance the capabilities of existing service delivery platforms:

- Use of social media to promote access to quality health information and information sharing

- Flexible outreach strategies, including transportation budgets that consider the difficulty of reaching adolescents in insecure environments and otherwise hard-to-reach areas

c. Provide services to tackle key health concerns in adolescents:

i. Preventive care: contraception, condoms, emergency contraception, prevention of sexual and gender-based violence, mental health, sexuality education, life skills, maternal health care including family planning counselling, voluntary counselling and testing for HIV, iron and folic acid supplements

ii. Treatment: treatment of traumas and orthopedic surgery, emergency obstetric and neonatal care services, contraception, nutrition, comprehensive abortion care, clinical care for survivors of sexual violence, treatment of sexually transmitted infections, emergency skilled birth attendance, postnatal care including for postpartum depression, antiretroviral treatment

iii. Supplies: Ensure the availability and provision of menstrual hygiene kits (dignity kits), post-rape kits, sexually transmitted infection kits, contraception kits

Education and recreation

a Ensure safe spaces for education that are disaster resilient, safe, dignified and accessible to all children and adolescents

b Address barriers to enrolment and issues related to school retention for specific groups, such as girls and child mothers and children and adolescents with disabilities.

c Provide targeted support for schooling options (safe passage, financial support to families e.g. cash and voucher assistance) and vocational training, and access to life skills and comprehensive sexuality education in and out of schools

d Ensure safe spaces, especially for girls, for recreation and play and barriers that might prevent inclusion of adolescents with disabilities.

e Ensure safe access to and use and maintenance of toilets; and materials and facilities for menstrual hygiene management.

Nutrition

a Ensure safe, adequate and appropriate nutrition services, especially for pregnant and lactating women and girls

b Implement integrated response interventions for households at risk of malnutrition

c Develop and implement child- and adolescent-friendly, multi-sectoral referral mechanisms and standard operating procedures for malnutrition cases.

7. Protect:

a Map existing protection services, identify and address gaps.

b Support the most at-risk children and adolescents.

- Sexual violence. Recognize that sexual violence is common. Seek to understand local perceptions and reactions. Disseminate sexual violence prevention messages. Educate health

and allied staff to look, recognize, and respond to sexual violence sensitively. Report information in line with national laws and international norms.

- Armed forces. Assess involvement of children and adolescents in armed forces, community perceptions, and demobilization and reintegration activities. Support schools and other institutions protecting children. Share prevention, reporting and survivor care information.
- Survivors. Develop age-appropriate survivor assistance that includes medical care, physical rehabilitation, psychosocial support, legal support, economic inclusion, and educational and social inclusion. Include non-stigmatizing support for those who need additional attention (e.g. those involved in armed forces, pregnant girls, sexually exploited children and adolescents, girls who are pregnant as a result of rape).
- Child labour. Prioritize action on the worst forms of child labour, including forced/bonded labour, armed conflict, trafficking, sexual exploitation, illicit work, unsafe work. Involve affected families and other local stakeholders in responses.
- Unaccompanied and separated children. Assume all children have a caring adult with whom they can be reunited, until tracing proves otherwise. Review existing legal systems and procedures for family tracing and reunification. Assess the scope, causes and risks of family separation. Take practical steps to prevent separation (e.g. reception registers, ID cards). Re-establish community support networks and structures for orphans and vulnerable children, and ensure that adolescents who have lost their parents or carers have consistent, supportive care-giving. Avoid unintentionally encouraging abandonment (e.g. advertising special assistance to unaccompanied and separated children).
- Justice system. Strengthen child-friendly spaces in courts and police stations. Identify children in detention (especially arbitrary detention), and patterns of violations. Promote diversion activities to resolve issues without the trauma of the justice system.

c. Establish procedures for informed consent/assent

i. supports participants' ownership over their personal information and its use

ii. prevents possible conflicts of interest between data collectors and respondents

8. Monitor and evaluate

a Monitor programme quality, outputs, outcomes and, where possible, impact. Monitor changes in the adolescent well-being situation and adjust programme implementation accordingly.

b Collaborate with children and adolescents and other stakeholders to design, implement and monitor adolescent-friendly confidential and gender-, age-, disability- and culturally sensitive mechanisms to gather and process feedback and reports from children, families and communities that:

i. Allow flexibility in the programme design to incorporate feedback in a timely manner

ii. Immediately address any safeguarding issues

c. Share findings and learning from assessments, monitoring, feedback and accountability mechanisms with all stakeholders, including Children and families. Ensure they understand how their efforts have contributed to programmes.

5.2.8 Gender transformative approaches in programming

Gender is a powerful determinant of adolescent well-being as sex and gender intersects with other drivers of inequalities such as income, age, gender-based violence, stigma, discrimination and child marriage to exacerbate the vulnerability and susceptibility of adolescent girls and boys to health and social risks [22, 60]. Sex and society, nature and nurture, genetics and environment interact in complex ways to determine adolescent well-being outcomes. Gender inequality is explicitly recognized as an important determinant of health outcomes, with women and girls often at a societal disadvantage. Adolescents and young adults facing discrimination based on their sex, gender identity, gender expression or sexual orientation have unequal access to, and uptake of, health services and resources. Gender inequalities exacerbate the problem for adolescent girls, who in some settings bear the consequences of low value that families place on their education, expectations about domestic chores, unequal food allocation within households, increasing the risk of malnutrition for them and any future children, especially in countries with high rates of early adolescent pregnancy [16, 441]. To achieve the goal of gender equality, programmes need to apply the process and strategy of gender mainstreaming (Box).

Box XYZ: Gender mainstreaming and why it matters

What is gender mainstreaming and why does it matter in adolescent health programming?

Gender mainstreaming is a process of assessing the implications for adolescent boys and girls of any planned action, including legislation, policies and programmes, in all areas and at all levels. The starting point for gender mainstreaming is gender analysis described in section 4. As a strategy it involves integrating the concerns and experiences of girls and young women, as well as boys and young men into the design, implementation, monitoring and evaluation of adolescent well-being policies, budgets and programmes. It matters not only because diverse adolescent boys and girls have different needs, but also because the different roles and expectations within a society for boys and girls dictate what it means to be male and female and consequently, shapes context and the situation in which programming is conducted. By applying gender mainstreaming programmes are more effective in promoting equality and not perpetuating inequality.

Adapted from: World Health Organization. Why gender matters: immunization agenda 2030 [60].

Without gender mainstreaming programmes risk to be gender unequal or gender-blind. Adolescent health programmes and interventions should, at a minimum, be gender-specific, and ideally and when possible,

2642 gender-transformative. Fig. XYZ provides an overview of each level, with illustrative examples related to
2643 adolescent health programming.

			GENDER-RESPONSIVE	
Gender-unequal	Gender-blind	Gender-sensitive	Gender-specific	Gender-transformative
Perpetuates gender inequalities, reinforces stereotypes, and privileges boys over girls (or vice versa).	Ignores gender roles, norms and relations, and the differences in opportunities and resource allocation.	Shows an awareness of gender roles, norms and relations while not necessarily addressing inequality generated by them; no remedial action developed.	Intentionally targets a specific group of girls or boys for a specific purpose; doesn't challenge gender roles and norms.	Addresses the causes of gender inequality; transforms harmful gender roles, norms and relations; promotes gender equality.
Examples: Intentionally only disseminating vaccination leaflets to men; promoting harmful, traditional stereotypes about boys' and girls' roles in information, education and communication materials.	Examples: Informing the youth in the community about the HIV prevention only through youth clubs when 80% of visitors there are boys; setting up an HPV vaccination point only at a marketplace where girls are not allowed to visit.	Examples: Director of a national adolescent health programme acknowledges gender issues; programme assessment includes gender analysis which is not followed up in implementation.	Examples: Organizing an information campaign to prevent injuries from burns targeting girls in households with traditional stoves, and boys in sport clubs, with messages adjusted for different causes of burns in boys and girls.	Examples: Community programme supporting families to value girls' education; cash-plus transfer programmes that directly address social norms--including in relation to domestic and care work within the household, access to income and asset-generation opportunities; encouraging boys to question established stereotypes on masculinity (see Box XYZ); establish mechanisms for adolescent girls and boys equally

				participate in programme design and implementation at different levels.
Source: Adapted from WHO's Gender Responsive Assessment Scale [456]				

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Box XYZ: Progressive masculinities

Programmes aimed at encouraging kinder, gentler forms of masculinity are increasingly common in LICs and MICs and a small number have been linked to cash transfers in Latin America and sub-Saharan Africa. The Bolsa Familia Companion Programme, run by the NGO Promundo, which was among the first to directly tackle masculinities, has been found to make men's beliefs about their responsibilities for childcare, cooking, and domestic chores more equitable. In Ethiopia, the BMGF-funded Act with Her programme is following a multi-faceted design and in partnership with the DFID-funded GAGE longitudinal research programme will be able to tease out the effects of cash in combination with classes on progressive masculinities for boys and life skills for girls in comparison to an intervention without cash in both the short and longer term.

Source: [457]

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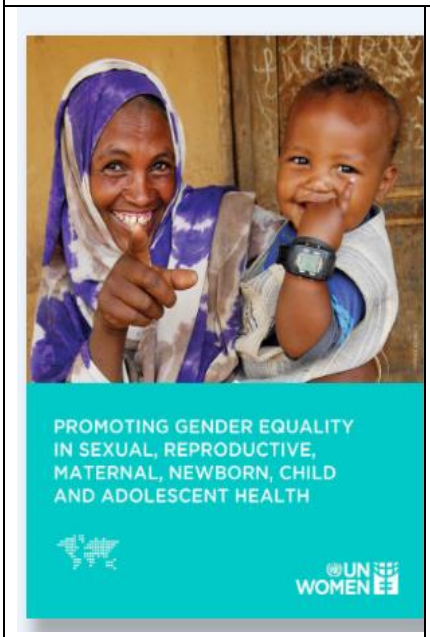
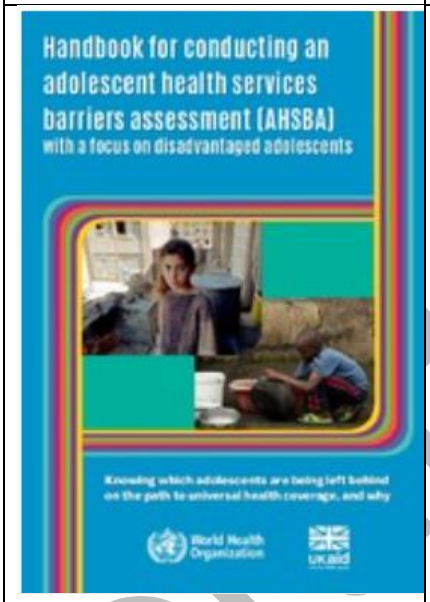
Resource bank for gender mainstreaming into adolescent health programmes		
		
		

Demands for social and gender transformative approaches are building across areas such as HIV [15, 58], mental health [59], and SRMNCAH [22]. Countries have implemented several comprehensive best practice programmes focused on increasing the agency, economic empowerment and improving access to HIV and sexual and reproductive health and reproductive rights (SRH&RR) services for adolescent girls and young women [58], such as the DREAMS, SASA, HER programme and She Conquers with positive outcomes reported [15].

5.3 Implementation areas and strategies in key sectors

As stated earlier, accountability for contributing to adolescent well-being lies within various sectors and branches of the government. Health, education, social protection, labour, criminal justice, telecommunication, urban planning, energy and environment sectors have an important contribution to make to adolescent well-being, and to do so effectively, they need to normalize the attention to adolescent specific needs in all aspects of their work. In this section, implementation areas and strategies are described for the sector specific contributions to adolescent well-being.

5.3.1 Health

The COVID-19 pandemic has slowed progress on the SDGs for both universal health coverage and health determinants, for which the rate of progress is one quarter or less of what is needed to achieve 2030 targets [458]. The pandemic has disrupted adolescents' access to mental health, SRH, child protection, immunization and nutrition services, with potentially substantial reversals of preventing child marriage, adolescent pregnancy and FGM [95]. But even before the pandemic, adolescents access critical services less frequently than do any other age group, and when available, services are of poor quality [7]. When they do access services, their experience is often far from optimal, especially for adolescents who are sexually active, pregnant, unmarried, have a disability, or are from low-income families, and who commonly face disrespect and mistreatment. Adolescents are less likely to report having a usual source of care than are older individuals in LMICs. Adolescent girls are less likely to use modern contraceptives than are older women. Compared with adolescents in HICs, far fewer adolescents in LMICs report being somewhat or very confident in their ability to receive the care they needed from their health system [7].

One important lesson learned from the COVID-19 pandemic, is that strengthening health systems, with a focus on primary health care, provides the foundations for both UHC and health security . Therefore not only investing in adolescent- responsive health systems is a way to achieve UHC for the world 1.2 billion adolescents, but it is also a measure to ensure that should another public health emergency occur in future, health systems will be able to continue providing critical services to adolescents. Another lesson was that many critical services are depending on schools remaining open when the COVID-19 pandemic forced 190 countries to close schools, 1.6 billion learners lost access to critical services such as psychosocial support, school meals and child protection. It is important therefore to invest more in integrating services across health, education and other sectors, in ways that are responsive to the needs of communities.

To achieve universal health coverage, health systems need to become adolescent-responsive, meaning that they need to normalize the attention to adolescent-specific needs in all aspects of their work (Fig. XYZ).

Figure XYZ

What is an adolescent-responsive health system?

An adolescent-responsive health system is the one that includes this group in the overall health systems strengthening efforts:

- Invests in leadership for health including for adolescent health
- Ensures adequate financing of the priority package of health services and interventions inclusive of adolescents' needs, and ensures financial risk protection of adolescents
- Builds an adolescent-competent workforce at all levels of care
- Ensures that the quality of health services responds to adolescents' specific needs and invests in service platforms that maximize coverage (e.g. primary care, school-based and school- linked health services, outreach in communities, and e-health)
- Invest in making adolescents visible in health management and information systems, in analytical capacity and reporting of age- and sex- disaggregated data

Adolescent-responsive health systems is the strategy to achieve the UHC.

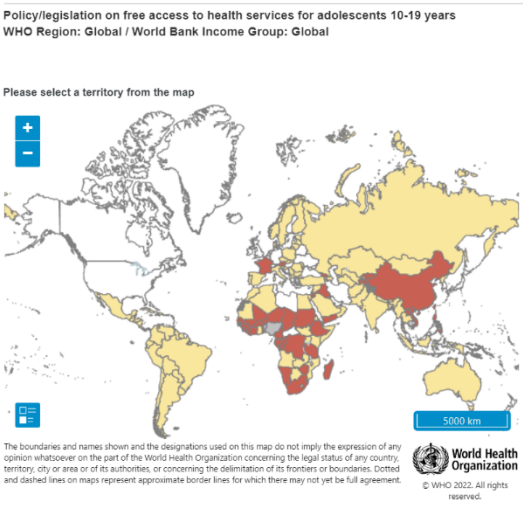
Box XYZ: What does UHC means for the world's 1.2 billion adolescents?

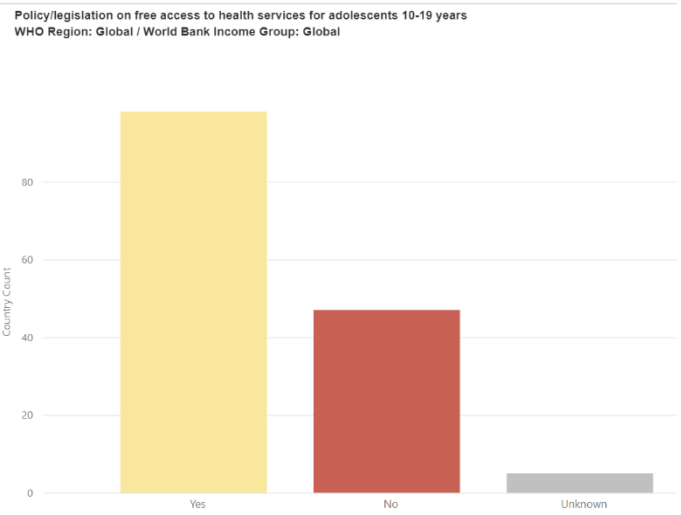
Universal health coverage means that all adolescents can use the promotive, preventive, curative, rehabilitative and palliative health services they need – of sufficient quality to be effective – while also ensuring that the use of these services does not expose them to financial hardship [39]. UHC embodies three programmatic objectives [437]:

1. Equity in access to health services – every adolescent who needs services should get them, not only those who can pay for them;
2. The quality of health services should respond to adolescents' specific needs, to improve the health of those receiving services;
3. Adolescents should be protected against financial risk, ensuring that the cost of using services does not prevent them from using services and put them at risk of financial harm.

5.3.1.1 Ensure financial risk protection of adolescents

An important function of high-quality health systems is to reduce financial hardship from care seeking [7, 40]. Financial barriers are among the key barriers for adolescents to access services. According to a recent WHO policy survey, adolescents in many countries do not have access to services that are free at point of use (Figure XYZ based on latest data) [39].





There are many reasons why adolescents face specific vulnerabilities in relation to financial access [39, 459]:

- Adolescents and young adults have the poorest insurance rates when compared with children and adults older than 24 years old, particularly if they are not in school, are older than 18 years, are not employed or live in low-income households.
- Second, adolescents are disproportionally deterred from seeking care by out-of-pocket payments. This is because of their limited access to money; either their own or their family's.
- Third, adolescents have limited capacity to access services independent of their parents, although they have a greater need for confidentiality than younger children.
- Fourth, not all services needed by adolescents are adequately covered by prepaid pooled funding arrangements. For instance, contraceptives for adolescents or HPV vaccine might not be covered in the benefit package.
- Fifth, mechanisms for paying providers are not always aligned with service requirements for adolescents. In fee-for-service schemes, providers might be discouraged from spending sufficient time consulting an adolescent client – who may need more time than an average adult or child, especially in a first consultation. It is therefore important that mechanisms for paying providers are aligned with the needs of adolescents.

Although insurance can reduce financial hardship, little evidence is available about its effects on adolescents [7]. Removal or fee exemptions for health system users in Africa resulted in immediate increases in care use; however, in many cases, informal, drug, and transport payments still caused substantial financial hardship [7].

Implementation areas and strategies to ensure financial risk protection of adolescents [7, 40, 64, 435, 437, 460]:

1. Communicate the basic benefit package clearly to beneficiaries for adolescents to understand their entitlements, and ensure monitoring of the boundary between the benefits package and privately financed services to prevent providers from diverting adolescents to private services
2. Ensure that adolescents and youth are covered by mandatory, prepaid and pooled funding to access the services they need.
3. Assess the impact of out-of-pocket payments at the point of use for adolescents accessing key services. Use data to advocate for reduction or elimination of adolescents' out-of-pocket payments at the point of use.
4. Design and implement measures for adolescent financial risk protection (e.g. waivers, vouchers and exemptions or reduced co-payments) so that health services and commodities, including contraceptives, are free or more affordable to adolescents at the point of use. See Case study XYZ on
5. Identify subgroups of adolescents that are not covered by mandatory, prepaid and pooled funding arrangements, and design mechanisms to maximize their coverage. This can take different forms, e.g. an explicit insurance programmes; access to facilities that are financed by prepaid pooled funds; or adequate subsidization for vulnerable adolescents and their families. Consider cash transfer schemes to increase adolescents' access to critical services and advise welfare and social protection sectors on this issue. See Case study XYZ on cash transfer schemes as a vehicle to achieve public health objectives.
6. Monitor facilities to ensure that payment exemption policies are observed.
7. Provide financial, such as pay-for-performance, or non-financial, such as recognition and awards, incentives that motivate health workers to implement quality interventions that are essential for adolescent health and development

5.3.1.2 Reinforce adolescent-protective laws and policies

Laws and policies should protect, promote and fulfil adolescents' right to health. Legal and regulatory frameworks should be based on internationally recognized and accepted human rights principles and standards. See the case study XYZ from South Africa on how international and national legal instruments were used to uphold the fundamental rights of children to health, education and nutrition during the COVID-19 pandemic.

However currently, national legal frameworks are highly heterogeneous, for example for issues related to age limits for adolescents to provide consent that vary by marital status and by the type of health service. A

greater number of countries have legal age limits for unmarried adolescents as compared to married adolescents [119]. This makes it more difficult for unmarried adolescents to access services, particularly SRH, HIV as well as mental health services. **Error! Bookmark not defined.**

Case Study 18

Balancing the rights to education, health and basic nutrition during COVID-19 in South Africa

In the midst of the Covid-19 pandemic, schools in South Africa closed, limiting the delivery of the National School Nutrition Programme (NSNP), which provides a daily meal to all pupils in South Africa who are eligible based on economic need. The government announced that schools would reopen on 8 June, 2020 and the NSNP would be restored, but when the time came to reopen schools to some pupils, the NSNP meals were not delivered as promised.

The NSNP was explicitly introduced to address both the right to basic education under section 29(1)(a) of the Constitution and the right of children to basic nutrition under section 28(1)(c), and consequently the authorities had a constitutional duty to provide basic nutrition to pupils. Therefore, the suspension of the NSNP program during the pandemic, and the delay in its restoration, was a failure in upholding this duty, and has infringed upon the right of pupils for basic nutrition.

The case was brought to Court for a violation of constitutional and statutory duties to achieve full implementation of the NSNP program. The Court has considered the fundamental rights involved such as the right to education, right of every child to have basic nutrition, and the legal instruments such as the right to have access to sufficient food and water, art. 27(1)(b) of the South African Constitution, the right of every child to have basic nutrition, shelter, health care, and social services, art. 28(1) of the South African Right to a basic education, art. 29(1)(a) of the South African Constitution.

The Court held that the government has a "negative" obligation not to impair a right protected in the Constitution and concluded that the suspension of the NSNP had diminished the constitutionally protected rights by delaying the implementation of the NSNP program. The court argued that all eligible pupils are entitled to a daily meal from the NSNP, and ordered a restoration of the program and progress report every 15 days on the implementation of the NSNP.

Source: COVID-19 litigation, Open access case law database.https://www.covid19litigation.org/case-index/south-africa-high-court-south-africa-gauteng-division-pretoria-225882020-2020-07-17

Implementation areas and strategies [11]:

Adolescents are in need of protective policies, as described in Section 3. Parents or legal guardians, health and social workers, teachers and other adults have a role to play in ensuring a safety net for them. However, this should not mean that adolescents are seen as incompetent and incapable of making decisions about their

lives (Figure XYZ. in Annex XYZ). Protection and autonomy may seem to be conflicting principles – because protective measures tend to restrict adolescents' autonomy – but in fact they can be balanced and are mutually reinforcing. Fostering autonomy, for example by empowering adolescents to access health services, is a protective measure, since timely access to services could protect them from potential harm. Laws and policies should therefore ensure that all the various rights of every adolescent are afforded equal priority.

In seeking to provide an appropriate balance between respect for the emerging autonomy of adolescents and sufficient levels of protection in national policies, consideration needs to be given to: the level of risk involved; the potential for exploitation; an understanding of adolescent development; how competence and understanding do not develop equally across all fields at the same pace; and individual experience and capacity (15). The section below presents key areas that need to be considered in designing laws and policies that treat the rights to health, protection and autonomy as universal, indivisible and interrelated.

Compliance of legal and regulatory frameworks with internationally recognized and accepted human rights principles and standards	• Develop laws and policies that promote sexual health and reproductive rights • Develop laws and policies that eliminate harmful practices inflicted on young people without consent, including female genital mutilation and early and/or forced marriage. • Develop policies and laws that protect and support vulnerable adolescents (e.g. adolescents with disabilities, children involved in armed conflict, refugees and migrants, orphans, adolescents in detention and/or with incarcerated caregivers). • Assess and update the legal and regulatory frameworks that mediate adolescents' access to services to ensure compliance with internationally accepted human rights principles and standards, e.g. by using the WHO toolbox for examining laws, regulations and policies [461].
Equity	• Review and amend laws and policies to ensure access to the required health and well-being service package by adolescents regardless of gender, income, rural living, disability, sexual orientation and other groups known locally to face discrimination. o Ensure gender-responsive programming to mitigate specific barriers faced by adolescent girls and boys in accessing services. o Enforce policies to redress inequalities and discriminatory practices (both real and perceived) in adolescents' access to services.

Privacy and confidentiality	• Establish procedures to be followed in health facilities to ensure that:
	  ○ information about clients is not disclosed to third parties;
	  ○ personal information, including client records, are held securely;
	  ○ there are clear requirements for the organization of the physical space of the facility, and actions to ensure visual and auditory privacy during registration and consultations with a service provider.
	• Specify in health-care guidelines that consultations with adolescent clients accompanied by parents or guardians should routinely include time alone with the adolescent.
	• Review national laws and policies to indicate situations, clearly and unambiguously, when confidentiality may be breached, with whom and for what reasons (e.g. disclosure of sexual abuse of a minor, significant suicidal thoughts or self-harm or homicidal intent).
	• Establish standard operating procedures for situations in which confidentiality might be breached due to legal requirements.

Consent and assent to health treatment or services	• Train health care providers to assess and support adolescent capacity for autonomous decision making in line with WHO protocol [120].
	• Determine appropriate age limits for consent or refusal of health treatment or services without parental or guardian involvement. The following are common considerations:
	  ○ In most settings adolescents aged 15 years and above are able to give oral or written informed consent, while for the younger, decisions should be made on a case-by-case basis in the best interest of the adolescent.
	  ○ Age limits informed by developmental stage, evolving capacity, and careful evaluation of risks, security and other issues in the local context.
	• Adopt flexible policies to allow specific groups of adolescents to be considered "mature minors". For example, locally established procedures should not impede unaccompanied

	adolescents or those who do not have parents or carers from accessing services. • Remove the need for parental or guardian consent when an adolescent is seeking counselling and advice services. The right to counselling and advice is distinct from the right to give medical consent and should not be subject to any age limit. • Remove the need for mandatory third-party (e.g. parental, guardian or spousal) authorization or notification in the provision of SRH services, including contraceptive information and services. Adopt a legal presumption of competence that an adolescent seeking preventive or time-sensitive SRH goods and services (e.g. contraception or safe abortion) has the requisite capacity to access such goods and services. • Establish standard operating procedures for obtaining informed consent. Consent forms and other information tools (e.g. posters) should be developed in line with internationally agreed guidelines, consultation with trusted community members and designed specifically for the age groups to be included in the activity. • Enforce a policy that in all cases – whether or not the consent of the parent or carer is required – an adolescent's voluntary, adequately informed (using language appropriate for age, education level and culture), non-forced and non-rushed assent for services and participation in a data-gathering activity is obtained. • Adopt policies to protect the rights of adolescents with disabilities, including demanding that their views be given due weight in accordance with their age on an equal basis with others. Adolescents with disabilities may face particular barriers and require opportunities for supported decision-making. • Where legal, modify legislation to include provision for adolescents easily to access safe abortion care, without parental or spousal consent requirements. • Ensure elimination of harmful practices inflicted on young people without consent, including FGM and early and/or forced marriage.

BOX XYZ

How to assess and support adolescents' capacity for autonomous decision-making in health-care settings?

Evaluation of decision-making capacity is not straightforward for HCPs, many of whom lack training and tools in conducting such evaluations.

The new WHO tool and its accompanying algorithm provides a step-by-step guidance for assessing and supporting adolescents' capacity for autonomous decision-making.

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Joint exploration of the situation and options:	Common synthesis of the situation:	Decision point:	Follow-up:
Explore with the adolescent the important elements of decision-making and the overall situation, including the adolescent's psychosocial life, risks and resources. The role of the professional is to provide all the necessary information in appropriate language on the framework of care, the medical condition and the options to help the adolescent in making a choice.	Summarize the issues raised in step 1 and ensure common understanding. The HCP should be particularly attentive to elements that are likely to alter a decision and address them as appropriate to allows deliberation with the adolescent and any relevant partners in order to reach a consensual decision. The involvement of parents or legal guardians and other relevant people should be discussed with the adolescent.	Decide whether the adolescent has the capacity to make an autonomous decision in a given situation at a given time.	Outline guidelines for follow up, whether or not consensus is reached on a decision.

The tool is based on shared decision-making and thus considers the perspectives of the individual, families and communities to assess and support adolescents in making decisions about their health. Its aim is to move from a vertical, paternalistic, unilateral view of assessment to a much more horizontal, integrated process, with the adolescent as a partner at the centre of the process [119, 120]..

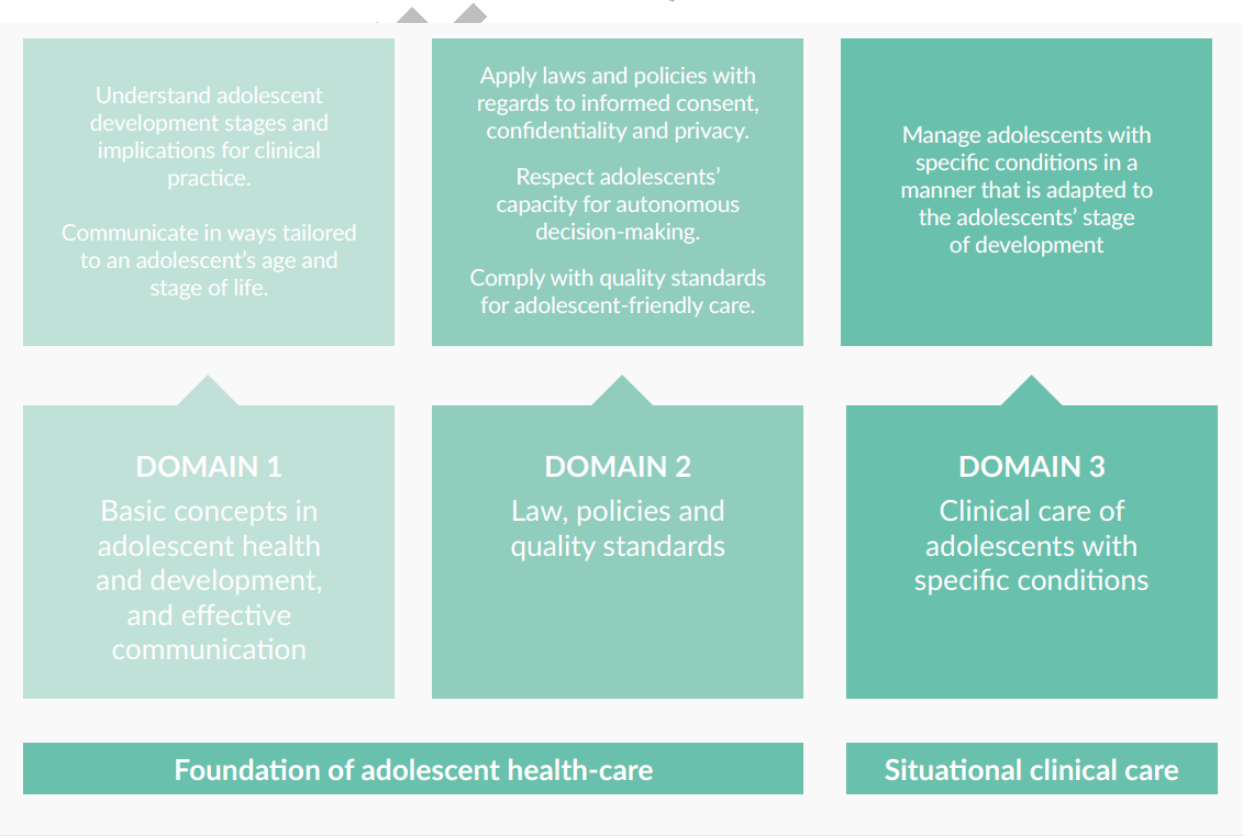
2790

5.3.1.3 Build an adolescent-competent workforce at all levels of care

Adolescents are not simply older children or younger adults. Returning to the ecological model described in Section 1, individual, interpersonal, community, organizational, environmental and structural factors make adolescent clients unique in the ways that they understand information, in what information and which channels of information influence their behaviours, and in how they think about the future and make decisions in the present [135, 270]. Therefore, achieving the ambition of universal health coverage for the world 1.2 billion adolescents requires a health workforce that is equipped to provide services in a way that is cognizant of adolescent specific needs and vulnerabilities.

Competency-based education is the most effective approach to ensuring preparedness for practice [462]. The Global Competency and Outcomes Framework for Universal Health Coverage identifies six domains of health worker competencies towards the achievement of UHC: people-centeredness, decision-making, communication, collaboration, evidence-informed practice and personal conduct [462]. Whereas these are entirely valid for adolescent health care, their contextualization for the specifics of adolescent health care is described in the WHO Core competencies for adolescent health and development for primary care providers [463]. All health workers who are in places that adolescents visit (e.g. hospitals, primary care facilities and pharmacies) should develop these competencies (Fig. 5.3).

Figure XYZ. Domains for core competencies in adolescent health care



Source: [463]

Core competencies can be taught in both pre-service and in-service education [269, 462]. A progression across this spectrum of education is necessary to ensure lifelong learning [270, 462]. Many countries, however, do not have sustainable forms of continuous professional education [463]. Therefore, improving the structure, content and quality of the adolescent health component of pre-service curricula is very important. Making competency-based education in adolescent health-care mandatory in pre-service curricula and postgraduate education is one of the key actions towards a workforce that is competent in adolescent health [39, 269].

To support countries in building an adolescent- competent workforce, WHO developed Core Competencies in Adolescent Health and Development for Primary Care Providers, which includes a tool to assess the adolescent health and development component in pre-service education, and develop recommendations [463].

Case study

Implementation areas and strategies to build an adolescent-competent workforce [135, 269, 462, 463].

1. Create a common understanding about the importance of investing in an adolescent-competent workforce among key players, such as the ministries of health, education and youth; the national board of licensing and certification; curriculum development agencies; professional associations; and other civil society organizations.
2. Define core competencies in adolescent health and development in line with WHO Core Competencies for Adolescent Health and Development for Primary Care Providers [463]. Where relevant, include competency in adolescent health in job descriptions and policies related to human-resource capacity.
3. Create and implement competency-based training programmes in pre-service and continuing professional education. To inform the development of such programmes, assess the structure, content and quality of the adolescent health component of existing pre-service curricula at key educational and training institutions. Identify opportunities to strengthen the adolescent health component. The WHO tool to assess the adolescent health and development component in pre-service education [463] may inform this process.
4. Support institutions teaching adolescent health to assess the quality of teaching and learning, and to evaluate the progress of implementation of adolescent health competencies. Apply the quality assessment conceptual framework [269] to support such assessments.
5. Establish a mechanism to consult health-care providers on their training and education needs in adolescent health-care, and conduct capacity-building activities at national and district levels that are aligned with reported needs. Facilitate providers' access to online free-of-charge courses, and use

other effective pedagogy, such as peer education, simulation, reflection, blended learning etc. recommended for adolescent health and education [269].

6. Develop and review information and training materials, practice guidelines and other tools to support decision-making in adolescent health-care.
7. Strengthen the capacity of community health workers in reaching adolescents, especially those out of school, with health education and services.
8. Set up a system for supportive supervision of adolescent health-care, and provide collaborative learning opportunities as a key strategy to improve providers' performance.

5.3.1.4 Improve quality of services and service delivery platforms that maximize coverage such as digital health and school health services

Global initiatives are urging countries to prioritize quality of care as a way of reinforcing rights-based approaches to health and achieving universal health coverage [464, 465]. However, evidence from high-, middle- and low-income countries shows that adolescents experience many barriers to receiving information and quality health-care, and that services for adolescents are often fragmented, poorly coordinated and uneven in quality [7, 403, 466-468]. Quality of services for adolescents is substandard across both health and social systems. Health systems have deficits in care competence (e.g., diagnosis and management), system competence (e.g., timeliness, continuity, and referral), user experience (e.g., respect and usability), service provision for common and serious conditions (e.g., cancer, trauma, and mental health), and service offerings for adolescents [7].

Recognizing the problems, many countries have moved towards a standards-driven approach to improve quality of care for adolescents (Case study XYZ). However, the success and sustainability of such efforts will be dependent on the effective alignment and integration with the national direction for quality of health services informed by facility- and district-level realities, and considerations for a systems approach to enhance quality of care, and long-term national aspirations [469]. The WHO planning guide for quality health services describes actions required at the national, district and facility levels to enhance quality of health services, providing guidance on implementing key activities at each of these three levels [469]. It is important therefore that adolescent specific aspects of quality of care are well articulated and embedded in these activities.

A critical consideration in national adolescent health programming is integrating services at the delivery level. For example, integrating treatment of the presenting complaint with a broader assessment using the HEADSSS check list (home, education, activities/employment, drugs, suicidality, sex) is an opportunity to provide a context for anticipatory guidance and preventive interventions [135]. For example, to extend the reach of deworming interventions to all adolescent girls, it is recommended to integrate deworming with other programmes targeting this age group, such as human papillomavirus vaccination, iron and folic acid

supplementation, and school health and nutrition programmes. [198, 470]. To combat TB and HIV, it is required in most settings for TB and HIV to be addressed through maternal, newborn and child health (MNCAH) programmes **Error! Bookmark not defined.** [471]. Integration of services is important from t he point of view of both maximizing efficiency and improving responsiveness to adolescents' needs.

2872

Case Study 19

Using Web-based Platform to Measure the quality of health-care services for adolescents

The Global standards for quality health-care services for adolescents developed by the WHO and other stakeholders has been used by countries since 2015 (A guide to implement a standards-driven approach to improve the quality of health care services for adolescents (who.int)). The aim of the document is to assist policymakers and health service planners in improving the quality of health-care services so that adolescents find it easier to obtain the health services that they need to promote, protect and improve their health and well-being. In collaboration with stakeholders, eight global standards focusing on adolescent health literacy, community support, appropriate package of services, providers competencies, facility characteristics, adolescents' participation, equity and non-discrimination, and data and quality improvements were proposed. Periodic monitoring of the implementation of standards was a key component of the document but required time consuming and expensive surveys for data collection. The World Health Organization has developed a web-based platform to digitally monitor and evaluate national quality standards. Ghana was among the first early adopter countries to pilot the Web platform to monitor the Global standards for quality health-care services for adolescents. In 2019, the platform was introduced by WHO to the Adolescent Health and Development Programme of Ghana Health Service. A total of six facilities in the Cape Coast Municipal and Abura Asebu Kwanmankese district in the Central region were selected for the pilot. These were predominantly school clinics including; Aggrey Memorial Senior High School Clinic, Cape Coast School for the Deaf and Blind School Clinic, St Augustine's School Clinic, Wesley Girls High School Clinic, Holy Child School Clinic., and Planned Parenthood Association of Ghana Clinic (Standalone private health facility).

School Nurses are provided with mobile phone tablets and source of internet to facilitate regular access to the web application. Using guidance from the Global AA-HA document, the first step in the implementation of the web-based platform was the adaptation of the Global Standards for quality healthcare services to the national context followed by orientation of stakeholders on the utility of the web platform. Staff in participating facilities, districts and national focal points were given access to their respective dashboards through specific user accounts. Training sessions on adolescent health and development were held with both trainers and providers. Supervisory visits to facilities were made to support and motivate staff as well as resolve ongoing issues. Review meetings at district and national levels provided feedback on project implementation.

After three months of project implementation, six facilities had access to the web platform and have collected information on the quality of care from more than 3000 adolescents and health care staff. Staff had been extensively trained in adolescent health and development, adapted the user manual for the web platform to suit local content including translations. Evidence and feedback from Ghana show that the implementation of the web platform has already had a positive impact on the facility, district and national management environment, and, importantly, increased awareness of the unique health needs of adolescents, by both health care personnel and adolescents themselves. Improved communication, enhanced professional competencies, standardized tools and materials - such as TORs and guidance - have resulted from the implementation of the project to date. The Country subsequently adopted the use of the platform with support from UNFPA as part of the Joint UN Programme for Adolescent Girls. The number of implementing schools were scaled up to 12 in 2020, 28 in 2021 and 33 in 2022 with support from FCDO through WHO. Plans for 2023 include improving data management for planning, decision-making and advocacy, provision of learning materials to improve school health teaching and learning, sensitization of staff and students in focal schools, training for service providers on the use of the platform, etc.

Source: WHO AYH Unit internal report

Implementation areas and strategies to ensure adolescent health services are of high quality:

1. Develop a shared understanding of adolescent health and the need to improve the quality of health services for adolescents in the context of national quality improvement efforts [469, 472].
2. Develop and implement national quality standards and monitoring systems in line with the WHO and UNAIDS Global Standards for Quality Health-Care Services for Adolescents [274]. Position standards-driven quality improvement within national adolescent health programmes [473], where such exist, or within overall national platforms for quality improvement. As part of standards' implementation, empower adolescents to raise their expectations of health systems [7].
3. Implement e-standards to automate the processes of data collection and analysis, and to improve adolescent participation in providing feedback to facilities by using IT.
4. Establishing performance-based incentives (financial and non-financial) to stimulate performance measures related to adolescent health care, as part of a robust quality improvement programme
5. Establish local, sub-national and national learning platforms for quality improvement.

Ever since the Declaration of Alma-Ata of 1978, and later reconfirmed in the Declaration of Astana in 2018, health promotion and disease prevention was recognized as central to the role of primary health care [474, 475]. However, despite longstanding and widespread agreement on the centrality of prevention to the public

health agenda, the health sector remain challenged to meaningfully include prevention, focusing more on conspicuous health issues. This has meant preventive interventions were not translated into viable models for service delivery. ref

This is changing with new attention to well-child and well-adolescent visits, integrated into primary care. These visits move beyond common screening tests for common conditions towards integrating other well-being dimensions through broader evaluation of social risks, emotional state, as well as individual and family resources delivered with context-specific recommendations through key moments during the first two decades of life (see Box XYZ).ref.

Box XYZ **What is a well-adolescent visit and what is its added value?**

A well-adolescent visit is a system-supported (e.g. guaranteed in the basic benefit package) or system-initiated (i.e. scheduled) encounter between the adolescents and health care provider(s) at pre-established age (e.g. 10 and 15 y.o.). The visits allow the health care provider or the team to examine the adolescent holistically, assess their physical and emotional needs, support their growth and development, and intervene quickly if any issues arise.

Whereas such visits are well established during pregnancy and for small children, they are less common in adolescents. While many countries have routine check-ups, usually as part of their school health services, only few use these contacts at the critical junctions in adolescent life to move beyond screening towards a more holistic focus on well-being including psychosocial assessment and anticipatory guidance [476].

The services provided during the visit include

- Health and development assessments
- Psychosocial assessment of the adolescent, their environment and needs, as well as the strengths and needs of the family
- Brief interventions and referrals to services that operate within the context in which the adolescent lives in response to identified problem
- Anticipatory guidance based on the developmental stage

WHO is investing in generating evidence for a model of these visits across the first two decades of life that encompasses detection of morbidities and risk factors for future disease as well as preventive interventions. Ref

Implementation areas and strategies to expand service delivery models that maximize coverage [10, 477-480]

1. Improve primary- and referral-level care capacity to deliver integrated, adolescent-centered services (e.g. train providers in conducting a HEADSSS assessment using pre-visit psychosocial assessment tools [477] to detect any health and development problems that the adolescent has not presented with (see Box XYZ))
2. Invest in well-child, well-adolescent visits to ensure universal health coverage with health promotive, preventive and anticipatory guidance and care interventions (see Box XYZ).ref
3. Implement and strengthen comprehensive school health services (school-based and school-linked) and their linkages with health services to facilitate adolescents' access to preventive services, and promptly manage conspicuous health problems [10]. See the menu for school health services interventions in the WHO guideline [10].
4. Invest in telehealth consultations for adolescents to address problems of distance and access and exploit other benefits (see Box XYZ), by setting up a teleconsultation service, integrated and aligned with national vision for telehealth [480].
5. Explore the potential of digital and mass communication platforms, including radio, television, mobile phones, and the internet to provide information through use of social and digital media, helpline support, text messaging for health education and appointment reminders, and online prescription. See for example the WHO VMMC app that provides access to up to date Voluntary Medical Male Circumcision (VMMC) for HIV prevention guidelines and resources from WHO's Global HIV, Hepatitis and STIs Programmes. WHO VMMC app makes it quicker and easier to view the guidance on smartphones and tablets, online or off, everywhere and at any time [481]. Other examples include the WHO MyopiaED and WHO mSafeListening handbook, which are toolkits to assist policy- and decisions-makers and implementers to establish national or large-scale myopia and hearing loss prevention programmes, built on a smartphone technology platform [482, 483]. (ref.)
6. Conduct regular assessments of services delivered through digital technology and mobile phones before they are expanded, or before current care models are replaced, to identify effects on outcomes, care processes, cost, and equity, as well as both beneficial and detrimental system-wide effects (e.g., reductions in needed in-person care) [7].
7. Invest in "activated adolescent patients" - defined as having "the skills and confidence that equip patients to become actively engaged in their health care" [7], and build self-care skills for pregnant adolescents, adolescents with HIV, and other chronic physical or mental health conditions, as part of school health and other programmes, while paying attention to coordination with existing services, a supportive local sociopolitical context, and an enabling environment [13].
8. Engage community health workers in reaching adolescents, especially those out of school, with health education and services.
9. Establish mechanisms for formal engagement of NGOs in service delivery on behalf of the government to strengthen community-based platforms for service delivery, and to reach underserved populations of adolescents in coordination with other health providers. See Case study XYZ.

2940

A focus on School health services [484, 485]

What are School health services?

School health services (SHS) are health and well-being services provided by professionals to healthy or chronically ill pupils enrolled in education institutions [484]. SHS programs have been operational in many countries for decades [485].

What are the benefits SHS?

With at least 90 per cent of children attending primary school and over 50% attending secondary school, schools are the only institution with the most contact with adolescents and children [486]. Schools therefore offer a unique platform for delivery of health and well-being services. The widespread attendance also makes schools a unique opportunity to reach underserved, low-income and high-risk populations thereby addressing some of the health and well-being inequalities during adolescence.

What services do SHS offer?

Many health and well-being programs are being offered in schools. Focusing Resources on Effective School Health (FRESH), a United Nations framework promoting health-related school policies lists provision of safe water and sanitation, skills-based health education and school-based health and nutrition services, as the four pillars of SHS [487]. Other health and well-being issues such as oral health and malaria, are also included based on local needs.

2941

The promise of pre-visit multi-domain psychosocial assessments [477]

What is a pre-visit psychosocial screening?

Pre-visit psychosocial assessment is a self-assessment using a questionnaire completed by the adolescent client before the planned contact with a professional (health, education, or social service). The assessment is done to detect and prioritize potentially problematic issues beyond the presenting complain, which the adolescent would normally not have otherwise considered to bring up, making consultations more holistic. Psychosocial assessment increases the possibility of early detection and timely intervention for health and well-being issues, improving prognosis. This is especially important because during adolescence there is a high burden of psychosocial issues, risky behaviours and corresponding disease burden in adult life.

What are the benefits of conducting multi-domain psychosocial assessments before the (clinical) consultation?

Psychosocial assessments are recommended as a routine practice during each visit. However often providers do not have sufficient time, and validated tools to conduct them. Moving the assessment outside the consultation has several benefits. The self-administration allows for greater disclosure and timely interventions for sensitive topics which during adolescence include emerging sexual and reproductive health challenges. It will free provider's time to focus during the consultation on detected issues, and provide brief intervention on the spot, or organize a referral, as appropriate.

What tools exist to facilitate pre-visit psychosocial screening?

An overview of pre-visit multi-domain psychosocial screening tools has been published in a recent systematic review [477]. The most included health and well-being domains across these tools are denoted using the acronym HEEADSSS, and include: Home environment, Education and employment, Eating, peer Activities, Drugs, Sexuality and Suicide/depression, Safety and security, Screens and Strengths. The tools have been shown to be acceptable, and to detect health and well-being issues similar to when the assessment is done by the practitioner. Their ease of deployment and utility mean that they can be accessed widely, opening room for interventions to adolescents in settings with limited provider time. Digital versions of the tools – completed by the adolescents and results being available immediately to providers – have additional advantages.

2942

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The promise of teleconsultations [479, 480]

Teleconsultation is the use of information and communication technologies by a professional, to provide health and well-being services to a remotely located client. The main benefits of teleconsultation are summarized in the figure below.

Teleconsultation with adolescents requires that practitioners are aware of and accommodate the necessary conditions to ensure adolescents' rights to autonomy, participation, safety, and developmentally appropriate information, and confidentiality. Practitioners also need to take into account adolescents' limited ability to communicate or engage effectively, and biological or illness related concerns such as potential for rapid deterioration. A detailed WHO guideline has been developed to support the planning and conduct of teleconsultations with children and adolescents [480].

5.3.1.5 Make age- and sex-disaggregated data on adolescents visible in health management information systems

National health management information systems rarely report data specific to adolescents. Even when these data are captured at the facility level, the reported data are often aggregated with data from other age groups as they move up from facility to district or national level. Age- and sex-disaggregated data on adolescents are rare in countries that most need them, i.e. those with large adolescent populations, high adolescent disease burdens and relatively weak infrastructures. Instead, data are typically compiled in ways that obscure adolescents' particular experiences; for example, using 5–14 year, 15-24 year 15–49 year age bands [328]. There are other weaknesses beyond age- and sex-disaggregation. Data on young adolescents (10–14 years) are mostly available from school-based data collection systems that have limited utility where absenteeism is high and retention is low. Programmes should review all national systems for health-data collection and find ways to incorporate a focus on adolescents, including on young adolescents and those out of school. Ideally, some data need to be disaggregated by sex and five-year age bands for the entire life period.

Implementation areas and strategies for adolescent-responsive health management and information systems [3]: add newest reference to this topic, e.g., GAMA papers

1. Identify and respond to specific weaknesses in national data collection systems, including a review of sources and mechanisms for data collection on impact, outcome, output, process and input indicators (see Section 6).
2. Improve the capacity of national and subnational statistics agencies to report regularly on the health, development and well-being of adolescents, disaggregated by age and sex. At a bare minimum, data should be disaggregated by age and sex, and wherever possible other relevant stratifiers should be included, e.g. disability, education, rural or urban. Ensure that this information is easily accessible to constituents.
3. Implement participatory monitoring approaches to engage adolescents themselves in designing monitoring and evaluation systems, to capture the user perspective (i.e. service quality and policy implementation), and to ensure that mechanisms are in place to hear the voices of young adolescents (10–14 years).
4. Ensure that facility data collection and reporting forms allow for an explicit focus on adolescents (including young adolescents), cause-specific utilization of services, and quality of care (see Box XYZ.).
5. Ensure that district and national reports address adolescents including cause-specific utilization of services and quality of care.
6. Develop national capacity to conduct standardized surveys on key adolescent behaviours and social determinants, and conduct such surveys at regular intervals. Examples include the Global School-Based Student Health Survey (GSHS), the Global Youth Tobacco Survey (GYTS), and the Health Behaviour in School-Aged Children (HBSC) survey.
7. Ensure that data-collection systems are available for out-of-school adolescents.
8. Develop national capacity to conduct standardized surveys to monitor inputs, processes and outputs within national school health programmes, for example School Health Policies and Practices Survey (G-SHPPS) . Conduct such surveys at regular intervals.
9. Strengthen the availability of disaggregated data and information to expose inequities. Use data to plan remedial actions to address inequities.
10. Strengthen the capacity to conduct qualitative research to understand the underlying causes of trends (e.g. in health-related behaviours or use of services).
11. Synthesize and disseminate the evidence base for action.

5.3.2 Education

Why actions by the education sector for adolescent well-being? Cross reference with the other Box in section XYZ

Implementation areas and strategies:

1. Reinforce inter-sectoral government and multi-stakeholder coordination.

Establish structures and processes to facilitate and implement communication and coordination within and between all relevant sectors (education, health, social services, agriculture), and local and national government departments and development partners. Establish a committee with a clear structure, roles and responsibilities for Health Promoting Schools (HPS).

2. Develop or update the school health policy

Review and update existing policies, strategies and plans for school health and well-being following a systematic multi-stakeholder consultative process of identifying, defining, and prioritizing health and education needs and targets including how HPS can address them.

3. Strengthen school leadership and governance practices.

Define and implement an inclusive model of school leadership for HPS and governance structure with representatives from students, school management and local community members and subnational and national government.

4. Allocate resources

Establish mechanisms for predictable and sustainable financing of school health programmes:

- Identify domestic resources dedicated to support long term and predictable financing of school health programmes
- Maximize investments by using available resources including staff, information and infrastructure, and by exploiting synergies between programmes and projects
- Embed flexibilities in the use of national funds for health promotion in the form of grants and other mechanisms that schools can access according to their needs and contexts.

5. Use evidence-informed practices

Generate context-specific evidence to inform the initial design, continuous update, monitoring and evaluation of HPS activities in all policies and plans. Support evidence generation and sharing culture by routinely facilitating research and evaluation of HPS activities and establishing communities of practice or information-sharing networks for school communities and stakeholders.

6. Strengthen school and community partnerships.

Maintain an active partnership between school and community (e.g. community members, local businesses, health services) with formal, well documented, and regularly reviewed roles, responsibilities, and accountability for contributions to collaborative activities.

7. Invest in school infrastructure.

Establish a set of national infrastructure requirements for maintenance of school physical and social–emotional environments in line with international guidelines. Support local government, school leaders, and communities in maintaining and improving existing infrastructure to align with requirements.

8. Develop the curriculum and associated resources and ensure its implementation.

Develop, review and implement the curriculum (including content and pedagogy) and associated resources (e.g. assessment tools, sample lesson plans, audio-visuals) to promote health and well-being in all subject areas (all scholastic and co-scholastic domains)

9. Ensure access to teacher training and professional learning.

Ensure inclusion of students' health and well-being, and principles of HPS in pre-service teacher education, professional learning for in-service teachers, and in graduate and in-service teacher standards and certification.

10. Ensure access to comprehensive school health services

Deliver comprehensive school health services in line with WHO guideline [10], based on a formal agreement between schools (or local education departments) and health service providers, and ensure competency-based professional education and development of school health personnel.

11. Involve students.

Include students on school councils and governance boards and on school health/HPS design teams, with parents, caregivers and local community members, and create equal opportunities for all students to be ethically and meaningfully involved in the governance, design, implementation and evaluation of school health/HPS programmes.

12. Involve parents, caregivers and the local community.

Include parents, caregivers and representatives of the local community on the school council or governance board and on HPS design teams, and create opportunities for parents, caregivers and local community

members to participate meaningfully in the governance, design, implementation and evaluation of school health/HPS programmes.

13. Monitor and evaluate

Design, develop and share practices and tools for local, subnational and national approaches for collecting, storing and analysing data, generating reports, disseminating findings, and adapting school health/HPS programmes accordingly. Invest in capacity development activities on monitoring, evaluation and quality improvement to all those involved in HPS design, planning, and implementation and monitoring.

Implementation strategies for each of the 13 implementation areas are described in more details in the implementation guidance for Global Standards for health promoting Schools [6].

5.3.3 Social protection

Why actions by the social protection sector for adolescent well-being?
Government-led social transfers have positive and significant impact on adolescents' school attendance and enrolment, food security and nutrition, a protective, negative impact on paid or unpaid labour activities outside the households, a potential to delaying sexual debut and reducing the prevalence of multiple sexual partners and depend on context, short-term protective effects against early marriage with increase in the age of marriage and reducing migrate for marriage purposes, and depending on context a positive effect on mental health outcomes [16, 21, 29].

Implementation areas and strategies in social protection:

1. Scale up general social protection and anti-poverty coverage so that more adolescents in poor and vulnerable households are covered.
2. Expand targeting to include adolescents including through expansion of age-related eligibility cutoffs of child grants, while improving the adolescent-responsiveness of social protection programmes by exploring how payment schedules and modalities might be adapted to improve adolescent outcomes.
3. Strengthen civil registration programmes to ensure adolescents have legal identity documents to claim benefits for which they are eligible.
4. Design programme components to respond to adolescent-specific vulnerabilities, including:
    a. Increase transfer amounts to households with adolescents to offset opportunity costs of attending school;

b. Strengthen linkages to health services to address sexual and reproductive health needs and prevent sexually transmitted infections and adolescent childbearing, including through supply-side training (to make services more adolescent-friendly), premium fee waivers for enrolment in health insurance schemes, and improved access to information about available services;
c. Strengthen linkages to social services, including through case management whereby social workers can identify adolescents' needs and connect them to available services.

5. Implement conditional and unconditional cash transfer programmes that create incentives to increase specific health-promoting behaviours (e.g. nutrition, school attendance, medical check-ups and vaccinations). Make cash transfer payments sustained, large enough, and predictable and on time, and maintain their real value, so households can invest in the health and education of adolescents and delay their transitions to adulthood (in terms of sexual debut, pregnancy and marriage).
6. Invest in gender-transformative cash-plus approaches that support programme beneficiaries and their families with cash while simultaneously linking them to complementary programming, including health and social information and services.**Error! Bookmark not defined.** These can include linkages to h ealth services through supply-side strengthening, community health workers outreach, income generation and vocational training, or fee waivers for enrolment in health insurance schemes (see Case study XYZ). Design cash-plus approaches in a way so they focus directly on adolescents' age- and gender-related needs – such as safe-space empowerment programming for girls, masculinities programming for boys, and broader norms interventions aimed at communities and parents.
7. Design demand-side interventions to increase adolescents' access to health services, which may include reimbursing user fees and the costs adolescents incur in transportation.
8. Increase the portability of social protection benefits so that health coverage is more responsive to the needs of increasingly mobile populations of older adolescents and young adults who may also be subject to more frequent changes of employer.
9. Tailor health and nutrition interventions to the developmental needs of adolescents at various ages, e.g. ensure that in-kind transfers to improve nutrition take into consideration recommended calorific intake for adolescent boys and girls.
10. Invest in more research on the following under-researched areas:
    - Impact and outcome evaluations, age-disaggregated by subgroups of adolescents, on the following under researched outcomes: use of health services, sickness, mental health, psychosocial well-being, transitions from school to the labour market, community/civic participation, depression, alcohol and drug abuse, unprotected sex, early pregnancy, HIV, early marriage, violence and transactional sex; and measure pathways of impact (for example, stress, time spent in unpaid care, social support, etc.).
    - Impacts of integrated social protection programming (sometimes referred to as 'cash plus'), especially between health and social protection
    - Longitudinal studies to understand whether impacts are sustained into early adulthood.

Case study **20**

The Adolescent Girls Initiative-Kenya

The Adolescent Girls Initiative-Kenya (AGI-K) investigated the effect of a multi-sectoral cash plus interventions targeting the community and household level, combined with interventions in the education, health, and wealth-creation sectors on fertility, sexual and reproductive health, and education outcomes. The AGI-K study randomly assigned 2,075 girls aged 11 to 14 years to the following four intervention packages:

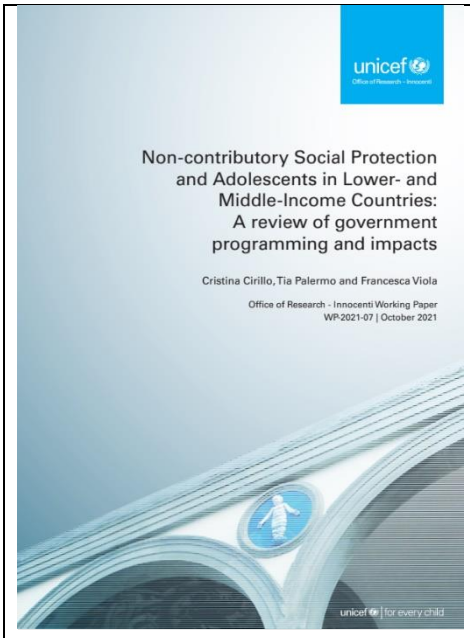
- community dialogues on unequal gender norms and their consequences (violence prevention),
- violence prevention and a cash transfers conditional on children attending school (education)
- violence prevention, education and health and life skills training (health)
- violence prevention, education, health and financial literacy training and savings activities (wealth)

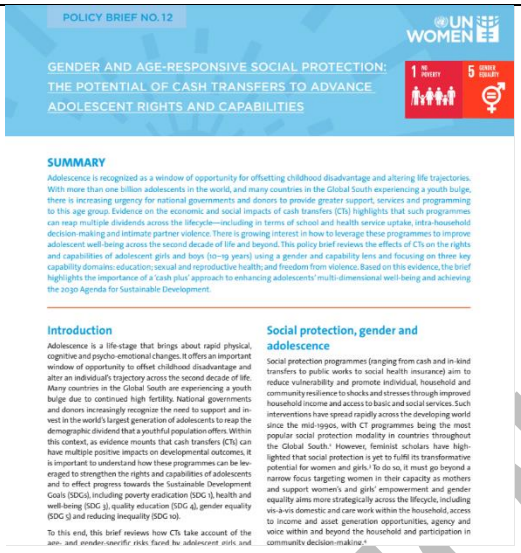
The interventions were implemented between 2015 and 2017, and participants were followed through to 2019. The primary outcomes were fertility (ever having sex, pregnancy, or delivery) and herpes simplex virus-2 infection. Secondary outcomes were violence prevention, education, health knowledge, and wealth creation.

The study demonstrated that multi-sectoral cash plus interventions targeting the community and household level, combined with interventions in the education, health, and wealth-creation sectors that directly target individual girls in early adolescence, generate protective factors against early pregnancy during adolescence. Such interventions, therefore, potentially have beneficial impacts on the longer-term health and economic outcomes of girls residing in impoverished settings.

Source: [21]

Resource bank





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3121 ### *5.3.4 Criminal justice system*

Why action in criminal justice systems is important for adolescent well-being?

1. More than one million children worldwide are deprived of their liberty by law enforcement officials. Most have committed petty crimes or minor offences such as truancy, begging or alcohol use. Often, children who engage in criminal behaviour have been used or coerced by adults.
2. Even one day in detention and incarceration has devastating impact on a child's physical, emotional and mental development
3. Child victims themselves have limited knowledge of their rights. And they are often dependent on the adults around them to bring violators to justice.
4. Child-friendly justice systems can operate in the best interest of the child and take into account the child's age and development stage, by establishing processes and procedures that are child-friendly and gender-sensitive and ensure cooperation between Justice, child protection and allied systems to respond to violence, abuse and the exploitation of children [24, 488].

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Implementation areas and strategies

1. Put in place programmes for prevention of child offending, including early intervention directed at children below the minimum age of criminal responsibility:
    a. Implement intensive family and community-based prevention and early intervention programmes focused on support for families, in particular those in vulnerable situations or where violence occurs. Provide support to children at risk, particularly children who stop attending school, are excluded or otherwise do not complete their education.
    b. Provide early intervention for children who are below the minimum age of criminal responsibility though child-friendly and multidisciplinary responses to the first signs of behaviour that would, if the child were above the minimum age of criminal responsibility, be considered an offence.
    c. Decriminalize minor offences such as school absence, running away, begging or trespassing, which often are the result of poverty, homelessness or family violence. Remove status offences from countries' statutes.
2. Establish a minimum age of criminal responsibility that recognizes the evolving nature of maturity and the capacity for abstract reasoning in adolescence. It is recommended to increase the minimum age of criminal responsibility to at least 14 years of age, and if higher minimum ages are currently established, for instance 15 or 16 years of age, not to reduce them under any circumstances. Abolish systems with exceptions to the minimum age, for example, for serious offence, and set one standardized age below which children cannot be held responsible in criminal law, without exception.
3. If there is no proof of age and it cannot be established that the child is below or above the minimum age of criminal responsibility, the child is to be given the benefit of the doubt and is not to be held criminally responsible.
4. Establish comprehensive child justice systems with specialized units within the police, the judiciary, the court system and the prosecutor's office, as well as specialized services such as probation, counselling or supervision and specialized defenders or other representatives who provide legal or other appropriate assistance to the child.
5. Apply child justice system to all children above the minimum age of criminal responsibility but below the age of 18 years at the time of the commission of the offence, and extend its protection to children who were below the age of 18 at the time of the commission of the offence but who turn 18 during the trial or sentencing process.
6. Ensure systematic and continuous multidisciplinary training to all the professionals involved in the child judiciary system on a variety of fields on, inter alia, the social and other causes of crime, the physical, psychological, mental and social development of children and adolescents teams, the special needs of the most marginalized children such as children belonging to minorities or indigenous peoples, the culture and the trends in the world of young people, the dynamics of group activities and the available diversion measures and non-custodial sentences, in particular measures that avoid

resorting to judicial proceedings. Consideration should also be given to the possible use of new technologies such as video "court appearances", while noting the risks of others, such as DNA profiling.

7. Develop competencies of police officers and prison staff to identify mental health problems and provide timely, culturally-appropriate first-line care to children [489].
8. Avoid resorting to judicial proceedings for children above the minimum age of criminal responsibility by giving preference to diversion - referral of matters away from the formal criminal justice system, usually to programmes or activities - in dealing with children (see case study XYZ from Zambia). Extend the range of offences for which diversion is possible, including serious offences where appropriate. Make opportunities for diversion available from as early as possible after contact with the system, and at various stages throughout the process, and implement it according to the principles outlined by the Committee on the Rights of the Child [490].
9. When judicial proceedings are necessary, apply the principles of a fair and just trial and provide ample opportunities to apply social and educational measures, and to strictly limit the use of deprivation of liberty, from the moment of arrest, throughout the proceedings and in sentencing. Put in place a probation service or similar agency with well-trained staff to ensure the maximum and effective use of measures such as guidance and supervision orders, probation, community monitoring or day reporting centres, and the possibility of early release from detention.
10. Put in place safeguards against discrimination from the earliest contact with the criminal justice system and throughout the trial, and active redress mechanisms if discrimination occurs against any group of children. In particular, gender-sensitive attention should be paid to girls and to children who are discriminated against on the basis of sexual orientation or gender identity. Accommodation should be made for children with disabilities, which may include physical access to court and other buildings, support for children with psychosocial disabilities, assistance with communication and the reading of documents, and procedural adjustments for testimony.
11. Enact legislation and ensure practices that safeguard children's rights from the moment of contact with the system, including at the stopping, warning or arrest stage, while in custody of police or other law enforcement agencies, during transfers to and from police stations, places of detention and courts, and during questioning, searches and the taking of evidentiary samples.
12. Ensure that child' rights to effective participation in the proceedings are upheld by providing support by all practitioners to comprehend the charges and possible consequences and options in order to direct the legal representative, challenge witnesses, provide an account of events and to make appropriate decisions about evidence, testimony and the measure(s) to be imposed. Proceedings should be conducted in a language the child fully understands or an interpreter trained to work with children is to be provided free of charge at all stages of the process. Proceedings should be conducted in an atmosphere of understanding to allow children to fully participate. Developments in child-friendly justice provide an impetus towards child-friendly language at all stages, child-friendly layouts of

interviewing spaces and courts, support by appropriate adults, removal of intimidating legal attire and adaptation of proceedings, including accommodation for children with disabilities.

13. Ensure child' access to legal or other appropriate assistance, and support by a parent, legal guardian or other appropriate adult during questioning. Police officers and other investigating authorities should be well trained to avoid questioning techniques and practices that result in coerced or unreliable confessions or testimonies, and audiovisual techniques should be used where possible.
14. Take measures to ensure that deprivation of liberty is used only as a measure of last resort. In the minority of cases when deprivation of liberty is deemed necessary, it should be conducted in accordance with the principles and procedural rights as stipulated by the Committee of the Rights of the Child [490].
15. Children with developmental delays or neurodevelopmental disorders or disabilities (for example, autism spectrum disorders, fetal alcohol spectrum disorders or acquired brain injuries) should not be in the child justice system at all, even if they have reached the minimum age of criminal responsibility. If not automatically excluded, such children should be individually assessed.
16. Systematically collect disaggregated data, and ensure regular evaluations of national child justice systems, preferably carried out by independent academic institutions, in particular of the effectiveness of the measures taken, and in relation to matters such as discrimination, reintegration and patterns of offending. Involve children is this evaluation and research in line with existing international guidelines.

Case study 21

Zambia's National Diversion Framework

The National Diversion Framework was developed by the Ministry of Community Development and Social Services, supported by UNICEF, following an initial assessment of diversion and alternative sentencing practices in Zambia. The assessment found that diversion was being carried out across Zambia in an informal, ad hoc manner, typically by police officers mediating with the accused child and complainant (and their families). It also found that more intensive and rehabilitative 'diversion' programmes were being implemented through a number of CSOs and NGOs. However, the vast majority of referrals into these programmes were coming from the Courts, and were not strictly diversion, but rather, constituted community-based sentencing alternatives. These measures were limited to parts of the country in which links had been established to appropriate service providers (notably, Lusaka and Kitwe).

Stakeholders consulted in the process of developing the Framework identified a need for standardization of approaches to diversion and consistency in the implementation of diversionary measures. There was general agreement that a National Framework on Diversion was needed.

The Framework aims to assist all stakeholders, including the law enforcement agencies, Social Welfare, Public Prosecutors, Magistrates and NGO service providers to respond to child offending by way of diversion out of the formal court proceedings, in accordance with the UN Convention on the Rights of the Child (UNCRC). The Framework sets out the scope, criteria, process and options for the use of diversion in Zambia, such as warnings, restorative measures (mediation, family group / community conferencing, restitution), and rehabilitative programmes.

Source: [491]

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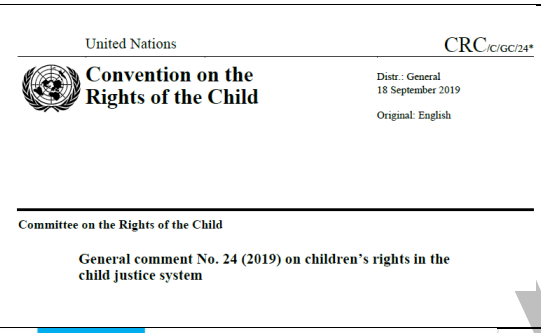
Resource bank


United Nations CRC/C/GC/24*

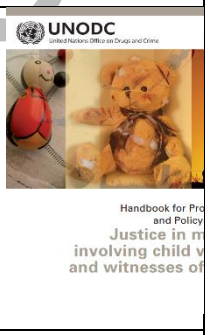
Convention on the Rights of the Child

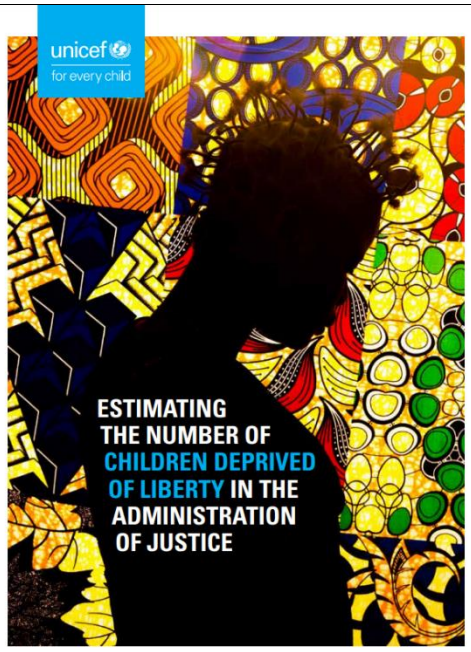
Distr.: General
18 September 2019

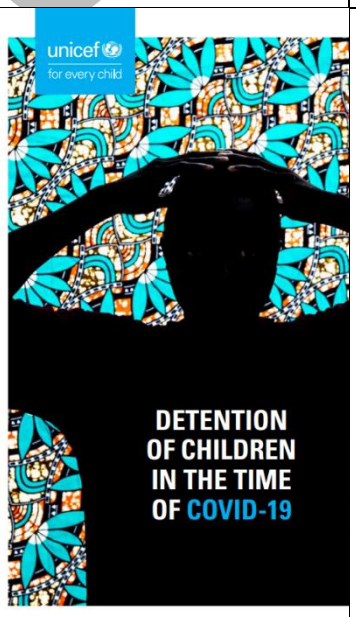
Original: English

Committee on the Rights of the Child

General comment No. 24 (2019) on children's rights in the child justice system







3220 ### *5.3.5 Labour*

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Why actions by the labour sector for adolescent well-being?

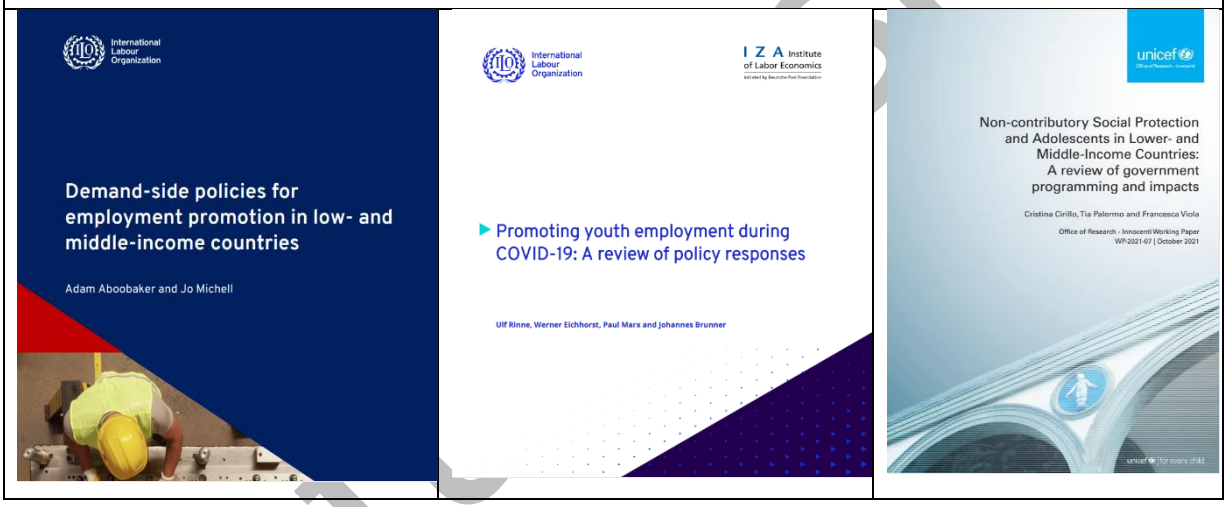
Implementation areas and strategies:

1. Sustain youth employment measures put in place during COVID-19 pandemic (e.g. training bonuses) with broader policy support and recovery strategies including demand-side policies to increase the number of decent work opportunities that are available to young people, supported by supply-side interventions to give young adults the competencies needed to take advantage of new opportunities in the labour market [492].
    a. promoting education and reducing the number of school drop-outs;
    b. extended access to vocational training, reskilling and up-skilling for youth, and career guidance and mentoring
    c. job search support and youth-adapted job search infrastructure
    d. job creation through public employment programmes for youth and the provision of subsidies for private sector work
    e. youth-targeted wage subsidies and other hiring incentives
    f. investments in youth entrepreneurship
2. Implement youth employment policies following good practices**Error! Bookmark not defined.** s uch as ;
    a. Early intervention (addressing the labour market risks faced by young people at the earliest stage of human capital formation);
    b. Support rather than compulsion (supporting the self-employment and youth entrepreneurship);
    c. Individualized, tailored support (shaping the support according to the individual needs of the young participants)
    d. Integrated approach (providing a combination of measures)
    e. Human capital development (improve the employability of young people by equipping them with business- and market-relevant knowledge and skills via career counselling, vocational guidance and training components)
    f. Creation of better opportunities (enhance the existing opportunities e.g. though employment services provision through financial support to direct job creation)
3. In collaboration with social protection, contribute to the design, implementation and evaluation of active youth labour policies so that policies provide unemployed youth with opportunities for re-training and job-seeking support, as well as schemes for income security to protect young adults from being disproportionally affected by unemployment.

4. Monitor the impact on youth psychosocial and physical health of labour market transformation underpinned by new technologies and growing prevalence of flexible, temporary and irregular work among young workers, long working hours and blurred boundaries between home and work; and mitigate negative health and safety implications of new work practices [493].

5. Engage in public-private partnerships to combat child labour in countries where a large number of children are involved in labour (e.g. farming), by enhancing coordination with national child-labour committees and supporting the development and extension of community-based monitoring systems

Resource bank



5.3.6 *Telecommunications*

"We grew up with the Internet. I mean, the Internet has always been here with us. The grown-ups are like 'Wow the Internet appeared', while it is perfectly normal for us." – Boy, 15 years, Serbia [494] .

Why actions by telecommunications for adolescent well-being? [132, 495, 496]

Adolescents today spend an increasing part of their lives online: since 2011, the number of 12- to 15-year-olds who own smartphones has increased by more than 50%. With 69 per cent of young people online in 2019, and one in three children with Internet access at home, the Internet has become an integral part of adolescents' lives.

The digital environment offers tremendous benefits to adolescents, opening new channels for education, creativity and social interaction including for political and civic participation. The digital environment facilitates daily interactions in a number of contexts, including formal and informal education, formal and informal health services, recreation, entertainment, maintaining links to culture, socializing, expressing themselves and their identity through the creation of digital content, engagement with political issues, and as consumers.

But it also presents serious risks, including cyberbullying, extortion and risks to privacy. These risks have become particularly acute amid the COVID-19 crisis and the surge in screen time it has precipitated. Children and adolescent might be more vulnerable than adults to content, contact, and conduct risk, as well as risks related to them as consumers, product safety, digital security, data protection and privacy. Those who are more vulnerable offline are also more vulnerable online, and protective offline factors can also reduce exposure to online risks.

Governments have a key role in mitigating these risks, and in responding to the needs of children in the digital environment by putting in place policies and regulation to establish a safer digital environment by design. Since adolescents' capabilities vary by age, maturity, and circumstances, actions and policies for adolescents in the digital environment should be age-appropriate, tailored to accommodate developmental differences, and reflect that adolescents may experience different kinds of access to digital technologies based on their socio-cultural and socio-economic backgrounds and the level of parental, guardian, and carer engagement.

Implementation areas and strategies:

1. Develop an inclusive multi-stakeholder national child online protection strategy that aims to ensure a safe, inclusive, and empowering digital environment. The strategy should be fully integrated with policy frameworks relevant to children's rights and complement national child protection policies by offering a specific framework for all risks and potential harms for children in the digital environment.
2. Address the online risks by implementing the following policy actions:

Child rights

- Standardize the definition of a child as anyone under the age of 18 in all legal documents
- Build on and collaborate with independent human rights institutions for children to ensure children's protection online through specialized expertise, investigation and monitoring, promotion, awareness raising, training and education, and with children's participation.

- Include direct consultation with children into the development, implementation, and monitoring of any kind of child online protection framework or action plan.

Legislation

- Review the existing legal framework to determine that all necessary legal powers exist to enable and assist law enforcement and other relevant actors to protect persons under the age of 18 from all types of online harms on all online platforms.

Establish that any illegal act against a child in the real world is, mutatis mutandis, illegal online and that the online data protection and privacy rules for children are adequate.

- Align legal frameworks with existing international standards, laws, and conventions related to children's rights and cybersecurity, facilitating international cooperation through the harmonization of laws.
- Encourage the use of appropriate terminology in the development of legislation and policies addressing the prevention and protection of sexual exploitation and sexual abuse of children

Law enforcement

- Ensure that cases of children who harm others online are dealt with in line with child rights principles, appropriately inscribed in national legislation, strongly favouring tools other than the criminal law.
- Provide appropriate financial and human resources, as well as training and capacity building to fully engage and equip the law enforcement community.
- Ensure international cooperation between law enforcement agencies around the world, allowing a quicker response to online-facilitated crimes.

Regulation

- Consider the development of a regulatory policy (co-regulatory policy development, full regulatory framework).
- Place an obligation on businesses to undertake child-rights due diligence and to safeguard their users.
- Establish monitoring mechanisms for the investigation and redress of children's rights violations, with a view to improving accountability of ICT and other relevant companies.
- Strengthen regulatory agency responsibility for the development of standards relevant to children's rights and ICTs.

Monitoring and evaluation

- Establish a multi-stakeholder platform to steer the development, implementation, and monitoring of the national digital agenda for children.

- Develop time bound goals and a transparent process to evaluate and monitor progress and ensure that the necessary human, technical, and financial resources are made available for the effective operation of the national child online protection strategy and related elements.

ICT industry

- Engage industry in the process of elaborating child online protection laws and common metrics to measure all relevant aspects of child online safety.
- Establish incentives and remove legal barriers to facilitate the development of common standards and technologies to combat content risks for children.
- Encourage industry to adopt a safety and privacy by design approach to their products, services, and platforms, recognizing respect for children's rights as a core objective.
- Ensure that industry uses rigorous mechanisms to detect, block, remove, and proactively report illegal content and any abuse (classified as criminal activity) against children.
- Ensure that industry provides suitable and child-friendly reporting mechanisms for their users to report issues and concerns and where users can obtain further support.
- Collaborate with industry stakeholders to promote awareness in order to support industry to identify hazards in development and correct existing products and services. This includes considering other stakeholder concerns and the risks and harms to which the end users are being exposed.
- Support industry stakeholders to provide age-appropriate family friendly tools to help their users to better manage the protection of their families online.

Reporting

- Establish and widely promote mechanisms to easily report illegal content found on the Internet.
- Establish a national child helpline with the necessary capacity on online facilitated risks and harms or child hotline/child helpline to facilitate reporting of child online safety concerns by victims.
- Establish safe and easily accessible child-sensitive counselling, reporting, and complaint mechanisms.

Social services and victim support

- Ensure that universal and systematic child protection mechanisms are in place that oblige all those working with children (e.g. social care, healthcare professionals and educators) to identify, respond to and report any sort of harm to children that occurs online.
- Ensure social services professionals are trained both for preventative action and response to online harms to children, identifying child abuse and providing adequate specialized and long-term support and assistance for child victims of abuse. – Develop child abuse prevention strategies and measures based on scientific evidence.
- Provide appropriate human and financial resources to ensure the full recovery and reintegration of children and to prevent re-victimization of child victims.

- Ensure that children have access to adequate health care (including mental health as well as physical well-being) including in the event of victimization, trauma, or abuse online.

Data collection and research

- Invest in and align the development, monitoring and evaluation of frameworks and activities.
- Undertake research of the spectrum of national actors and stakeholders to determine their opinions, experiences, concerns and opportunities with regard to child online protection.

Education

- Ensure educators and school administrators/ professionals are trained to identify and adequately respond in suspected or confirmed cases of child victims of abuse.
- Develop a broad digital literacy programme that is age-appropriate and focused on skills and competencies to ensure that children can fully benefit from the online environment, are equipped to identify threats, and can fully understand the implications of their behaviour online. Such a programme can be built upon existing educational frameworks.
- Develop digital literacy features as part of the national school curriculum that is age-appropriate and applicable to children from an early age.
- Create educational resources outside the school curriculum that emphasize the positive and empowering aspects of the Internet for children and promote responsible forms of online behaviour.
- Avoid fear-based messaging.
- Consult children, as well as parents and carers on the development of educational programmes, tools and resources.

National awareness and capacity

- Develop national public awareness campaigns, covering a wide variety of issues that can be linked to the digital environment and tailored to all target groups.
- Enlist public institutions and mass media for the promotion of national public awareness campaigns.
- Harness global campaigns, as well as multi-stakeholder frameworks and initiatives to build national campaigns and strengthen national capacities on child online protection.

Resource bank

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3376 ***5.3.7 Road and transportation.***

Why Action by road and transportation for adolescent well-being? [280]

Over 500 children and adolescents under the age of 18 years are killed on the world's roads each day and thousands more are injured. Road traffic injury is a leading killer of adolescents and the vast majority (95%) of child road traffic fatalities are in low- and middle-income countries. Limited by their physical, cognitive and social development, younger adolescents are more exposed to risk in road traffic than adults due to developmental factors such as judgment of proximity, speed and direction of moving vehicles; older adolescents may be more prone to take risks including as drivers, such as speeding.

The road and transportation sector has an important role to play since most road traffic injuries are largely preventable by child- and adolescent specific measures directed at speed management,

supervision, infrastructure design and improvement, enforcing vehicle safety standards and traffic regulation laws, and prompt trauma response measures after crash.

Implementation areas and strategies:

Speed management

- Implement low-speed zones (30 km/h limits) around schools and other locations with high volumes of child pedestrians by applying road design solutions (road narrowing, traffic calming, speed bumps, signalized crossings, etc.). Enforce speed limits with measures such as automatic speed cameras in areas with high volumes of child pedestrians.

Leadership on road safety

- Improve data collection to develop effective policies and target interventions. Disaggregate data by age and collect data to identify high-risk areas where children are exposed to high traffic speed and where safe infrastructure is lacking.
- Ensure collaboration and coalition building among institutions and stakeholders, and between diverse sectors (e.g. education, health, local government, transport and police), to improve protection for children on the roads.
- Engage schools and students in road safety policy decision-making. Establish supervision schemes, with the involvement of parents, teachers and caregivers, for protecting children on the roads, particularly in poorer communities and complex and risky road environments. Establish partnerships between local communities, schools and the police to manage school crossing patrols and walking-bus initiatives, particularly when parents are at work and unable to supervise children.

Infrastructure design and improvement

- Prioritize safe infrastructure provision (sidewalks, safe crossings, traffic calming measures, speed bumps, etc.) for protecting children on the school journey. Design or reconfigure the built environment in schools and densely populated neighborhoods to prioritize pedestrians and cyclists as part of policies to promote child health and tackle obesity.

Vehicle safety standards

Improve vehicle safety for child passengers, by applying the UN minimum safety regulations to new vehicles and including measures such as ISOFIX child restraint anchorage points. Promote consumer awareness and demand for higher standards of safety for all car occupants including children.

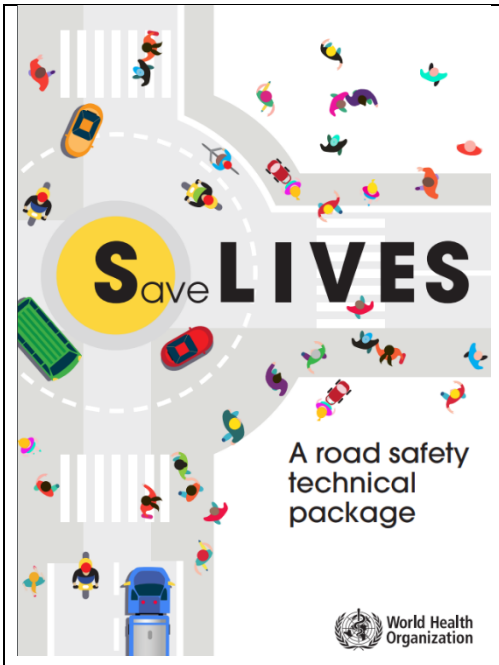
Enforcement of traffic laws

- Strengthen and enforce legislation to protect children on the roads by enacting and enforcing laws addressing the use of child restraints, helmet legislation focused on child passengers as well as adults; laws and regulations to ensure seatbelts on school buses and the safety of school vehicles; and enforcement of speeding and drink–driving legislation.
- Employ communication and social marketing strategies focused on the need to protect children to promote public support for road safety enforcement.

Survival after a crash

- Improve trauma response to accommodate the needs of children by training teacher and school transport drivers in safe immediate stabilization of injuries; equipping emergency vehicles with child-sized medical equipment and supplies; and improving paediatric-specific rehabilitation services for children [280].

Resource bank



5.3.8 Housing and urban planning.

Why actions by the housing and urban planning sector are important for adolescent well-being? Young women and men are flocking to cities more than ever before. It is expected that by 2030 more than 50% of urban populations will be under 35. Despite this, young people have little voice in decision-making and face major obstacles to education, employment and safety. UN-Habitat https://unhabitat.org/topic/youth

Implementation areas and strategies:

1. Ensure a participatory formulation of a national or city urban youth strategy, which encompasses skills development, creation of decent jobs and livelihoods for youth, sports, and recreation [497]. Gather youth perspectives in urban planning to inform such strategies [27].
2. Consider the adolescent-specific and gender-responsive aspects of the four dimensions of planning for health in urban and territorial planning [498-500], and healthy recovery from COVID-19 [501]:

a. Basic planning and legislative standards to avoid risk to health

Examples

- ***Design, implement and maintain, public spaces for children are safe from physical hazards (such as pollution, waste, and traffic) and social risks (such as crime, exclusion, and bullying), and are easily accessible by children irrespective of age, physical abilities, economic status, gender, or race.***

- Develop and implement design guidelines for recreational and sports facilities that optimize location to ensure equitable, safe and universal access by adolescents of all ages and abilities, and access by walking and cycling with provision of appropriate end of trip facilities [367].
- Enforce water and sanitation standards in housing, schools, sport clubs and recreational facilities visited by adolescents
- Ensure adequate storage of chemicals and other hazardous substances
- Legislate equal access to urban resources by both men and women, and by youth
- Secure non-discriminatory and equitable access, use and control of land for all, through the development and utilization of pro-youth and gender-responsive land tools [499].
- Ensure the long-term affordability of housing for youth through measures such as housing price caps, rent vouchers and social housing [498]

b. Planning codes to limit environments that detract from healthy lifestyles or exacerbate inequality

Examples

- Restrict "hot food takeaways" near to schools
- Limit car-oriented, isolated developments;
- Prevent urban physical degradation and design for defensible space that enhances openness and promotes social interaction and community surveillance to prevent youth violence
- Provide good-quality, low-cost homes for vulnerable families in the places with accessible schools and health care facilities

c. Spatial frameworks to enable healthier lifestyles

Examples

- Encourage city compactness and development near to transport hubs
- Provide citywide access to safer walking to enable "walking school buses", improve cycling infrastructure and cycle paths to schools with provision of appropriate end of trip facilities, as well as reliable and safe - for boys and girls - public transport
- Improve access to safe playgrounds and recreational areas for adolescents, green spaces around schools to provide shade and improve air quality
- Ensure women and girls' safe and autonomous access to quality city services, public spaces and all forms of mobility [499].

d. Urban and territorial processes to capture multiple co-benefits of "building in" health

Examples

- Improve urban governance through accountable, inclusive, democratic, gender-responsive institutions and systems, including by strengthening local institutions to enable women and girls' active and meaningful participation in urban planning, management and governance [499].

- Track policy decisions using urban health equity indicators that capture the social determinants of health (e.g. percentage of subsidized enrolment in youth after school programmes housing, percentage of youth participating in cultural programmes) to inform efforts to promote greater urban health equity for youth [502].
- Work with multiple partners to strengthen co-benefits through systemic holistic approaches. Examples include: active travel, slow city, age-friendly or child-friendly initiatives; peri-urban, urban and school food systems, and regional economic resilience strategies

3489 Resource bank

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3492 ***5.3.9 Energy***

Why actions in the energy sector are important for adolescent well-being?

Women and youth face structural disadvantage in the energy sector

Despite the barriers that women and youth face, they continue to provide creative sustainable energy solutions and strive for a more sustainable future. Young women and men are at the forefront of creating innovative approaches and demanding tangible actions from policy makers and world leaders. However, they face structural education barriers related to a mismatch between what the education system offers and what the market needs. The market also favors experience over creativity and diversity, which puts youth at a disadvantage. Due to the multiple barriers that young women and girls can face due to their age and gender, they are often exposed to double discrimination in the energy sector [503].

Reliance on polluting fuels and technologies is associated with significant chore and time loss for children – especially girls.
Women and girls are the primary procurers and users of household energy services, and bear the largest share of the health and other burdens associated with reliance on polluting and inefficient energy systems. In sub-Saharan Africa, household air pollution exposure is the single greatest health risk for women and girls. The never-ending job of feeding the stove prevents many girls from attending school, and robs them of time to spend in rest and socializing [284].

Implementation areas and strategies:

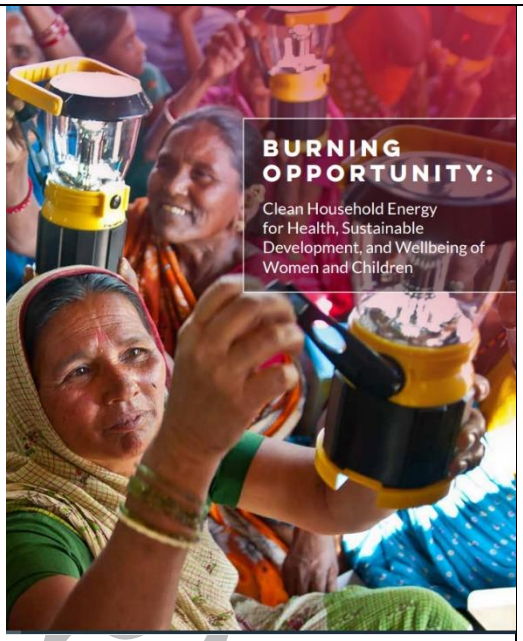
1. Champion Youth Mainstreaming in Energy Compacts to accelerate a just, inclusive and sustainable energy transition [504]:
    a. Assess and strengthen national and regional ecosystems to promote and support youth empowerment and leadership, including meaningful youth participation in policy- and decision-making in the energy sector
    b. Support youth in developing competencies relevant to clean energy transition and the job markets of tomorrow, including in the fields of science, technology, engineering and mathematics (STEM) [4].
    c. Ensure girls equal access to relevant technical skills and digital literacy to be able to take advantage of the essential technology and digital tools for clean energy transition [4].

d. Provide equitable access to productive resources, such as finance, technical knowledge, entrepreneurial training, technical skills development and business development services for youth-led enterprises
e. Elevate youth participation in the sustainable energy workforce through the provision of career advancement avenues and the increase of entry-level jobs in the energy sector and training—designed with a youth-centric approach
f. Provide equal access to affordable financial mechanisms as well as tenders and other business opportunities for women and youth-led enterprises, nonprofit projects, and other initiatives, e .g. through gender-responsive procurement and budgeting [4].
g. Put women and youth at the center of economic recovery. Integrate incentives into program funds and green recovery packages to encourage employers to employ, retain and advance more women and youth in the clean energy sector [4].
h. Generate knowledge, monitor and evaluate implemented measures of youth involvement in the energy sector and the energy transition
i. Champion diversity, gender equality, women's empowerment and inclusion in decision-making

Ensure access to clean energy for cooking, heating and lighting in homes [284], schools and health facilities. Disseminate information on how safely to install, manage and maintain improved cooking stoves.

2. Support initiatives to implement energy-efficient public transport and cycle and pedestrian routes.

Resource bank



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5.3.10 Environment

Adolescents face many environmental risk factors for poor health and well-being [505], which if addressed would avert as much as a quarter of the global burden of disease [506]. The necessary changes for minimizing the impact of environmental risk factors include ensuring access to safe household water, better hygiene measures, improved management of waste and toxic substances, and improved urban air and household quality, and minimized impact of adverse climate change [505]. These actions require coordinated actions from energy, environment, transport, agriculture, industry and health sectors.

Why actions by the environment sector for adolescent well-being?

Schools are ill-equipped to provide healthy and inclusive learning environments for all children

Globally, 29 per cent of schools still lack basic drinking water services, impacting 546 million schoolchildren; 28 per cent of schools still lack basic sanitation services, impacting 539 million schoolchildren; and 42 per cent of schools still do not have basic hygiene services, impacting 802 million school children [507].

Smaller hands, cheaper labour: the crisis of e-waste affects children's health

An estimated 152 million children aged 5–17 years are involved in child labour, including 18 million children (11.9%) in the industrial sector, which includes waste processing. Some 73 million children worldwide engage in hazardous labour, with unknown numbers in the informal waste recycling sector. Children are particularly vulnerable to some of the toxicants found in, or produced by, e-waste and e-waste recycling activities [139].

More than 90% of the world's children breathe toxic air every day

Every day around 93% of the world's children under the age of 15 years (1.8 billion children) breathe air that is so polluted, it puts their health and development at serious risk. 1 billion children under 15 years are exposed to high levels of household air pollution from mainly cooking with polluting technologies and fuels. Air pollution affects neurodevelopment, leading to lower cognitive test outcomes, negatively affecting mental and motor development.

Children and adolescents are particularly vulnerable to ill health due to exposure to chemicals

Chemicals such as heavy metals, pesticides, solvents, paints, detergents, kerosene, carbon monoxide and pharmaceuticals lead to unintentional poisoning at home and in the workplace. Children are particularly vulnerable to these exposures because of their developing systems and behaviours [136]. Exposure to certain chemicals, such as lead, is associated with reduced neurodevelopment in children and increases the risk for attention deficit disorders and intellectual impairments [140].

Climate change has increased levels of uncertainty about our future for the world's 1.8 billion young people

Young people are not only victims of climate change. They are also valuable contributors to climate action. They are agents of change, entrepreneurs and innovators. Whether through education, science or technology, young people are scaling up their efforts and using their skills to accelerate climate action [26].

Implementation areas and strategies:

1. Assess and mitigate the impact of e-waste on children and adolescents [139]:
    a. Eliminate child labour and incorporate adult e-waste workers including youth into the formal economy with decent conditions across the value chain of collection, processing and recycling, and resale by transitioning informal workers to the formal economy
    b. Raising awareness of e-waste recycling health risks to women and children and encourage responsible recycling with policy-makers, communities, waste workers and their families
    c. Pursue better data and further research about women, children and adolescents involved with e-waste
2. Prepare schools for future pandemics and provide disability inclusive WASH services in schools [136, 508]:
    a. Build and upgrade education facilities that are child, disability and gender-sensitive and provide safe and effective learning environments that includes availability and sustainable management of safe drinking water, sanitation and hygiene services
    b. Improve coverage of disability-inclusive WASH services in schools
3. Improve air quality and minimize children's exposure to polluted air and chemicals [136, 332]:
    a. Adopt measures to ensure exclusive use of clean technologies and fuels for household cooking, heating and lighting activities, including by making clean fuels and technologies affordable, available and accessible to low-income families through social transfers
    b. Ensure better waste management to reduce the amount of waste that is burned within communities and thereby reducing 'community air pollution'.

c. Train health professionals to recognize air pollution as a major risk factor for their young patients, understand the sources of environmental exposure in the communities they serve, "prescribe" solutions to air pollution-related problems, such as switching to clean household fuels and devices, and advocate solutions to other sectors, policy- and decision-makers.

d. Implement lead paint hazard control in homes, and ensure safe management of chemicals in the home, schools and community.

4. Climate action [509]

a. Develop age-appropriate and engaging multimedia content and interactive features to inform, engage, educate, and lead to youth climate action [509].

b. Promote social and behavioural change and support sustainable education and youth-led action with outreach campaigns and public engagement and by engaging with formal and non-formal education activities that shift knowledge, attitudes, behaviours and norms to address the indirect drivers of biodiversity loss and the degradation of nature [510].

c. Enforce standard-setting and eco-labelling schemes to promote and improve existing consumer information tools by including criteria of the effect of key products on biodiversity, and promote adolescents' literacy in eco-labelling [510].

d. Strengthening environmental digital literacy and e-governance capacities of youth to engage in the environmental dimensions of digital transformation [510].

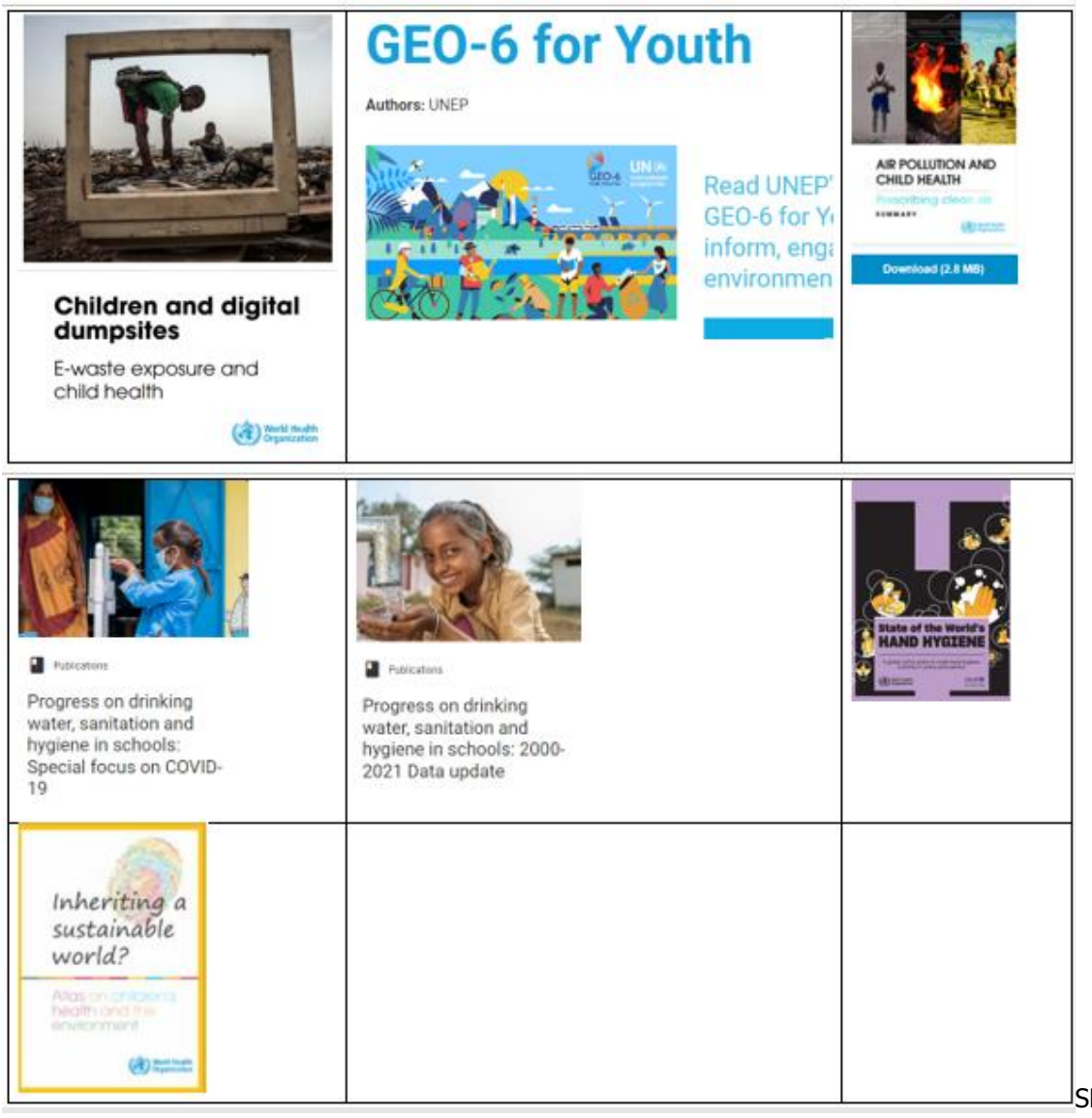
e. Leverage on youth activism, and amplify youth voices, to gain support for positive environmental change, reducing and preventing pollution and promoting sustainable, healthier living [510].

f. Collaborate with health and education ministries to integrate sustainable living (e.g. lifestyle changes to reduce greenhouse gas emissions).

Resource bank

What is new in this section

- ✓ The Global Action for Measurement of Adolescent health (GAMA) proposes a set of priority indicators for adolescent health measurement, building on previous efforts
- ✓ A measurement approach for adolescent well-being is being developed
- ✓ Good practices and key principles for the meaningful inclusion of adolescents in monitoring, evaluation and research of adolescent health and wellbeing programmes are introduced.



SECTION 6: Monitoring, Evaluation and Research

Key messages

- To focus measurement on the most important adolescent health issues, the Global Action for Measurement of Adolescent health (GAMA) Advisory Group proposes 52 priority indicators. These indicators draw from and complement those included in the monitoring frameworks of the Sustainable Development Goals (SDGs) and the Global Strategy for Women's, Children's and Adolescents' Health. Building on existing systems, countries should – as much as possible - collect and use the data on these indicators to monitor progress towards improving the health of their adolescents.
- An adolescent well-being measurement approach is currently being developed. The approach will be designed for use at global, regional and country levels, encompassing multiple domains beyond health to provide a broad perspective of adolescent well-being.
- The rapid physical, emotional and social changes across the adolescent period pose special challenges for adolescent health programmes, making it essential to disaggregate data by age (five-year age groups) and sex.
- It is essential for adolescent health programmes to monitor the full range of indicators from inputs and processes to outputs, outcomes and impact – they answer different questions and are useful for different purposes. Periodic evaluations of adolescent health programmes are essential and should build on routinely collected monitoring data.
- Over the last decade, WHO has conducted a number of priority-setting exercises in areas of adolescent health. These exercises can help researchers and research funders to identify and prioritize areas of research that require particular attention.
- Monitoring, evaluation and research designed to improve the health of adolescents should include the opinions of adolescents themselves. Increasingly, youth-led participatory methods are being used, including engaging adolescents as active evaluators and in participatory research.
- Key principles for engaging adolescents in monitoring, evaluation and research include: Balancing their participation with the safety of their engagement; Paying attention to the evolving capacity of adolescents to make informed decisions; Gender and equity considerations should always be included; Including disadvantaged, vulnerable or marginalized adolescents; and if possible, integrating adolescents in evidence generation activities as advocates, data collectors, analysts and researchers.

6.1 Global adolescent health measurement

6.1.1 Overview of global frameworks and the Global Action for Measurement of Adolescent health (GAMA)

In 2015, all United Nations Member States adopted the 2030 Agenda for Sustainable Development [511]. It sets out 17 Goals, which include 169 targets that are being tracked by 232 unique Indicators [512]. Together,

the goals aim to transform our world and call to action to end poverty and inequality, protect the planet, and ensure that all people enjoy health, justice and prosperity. Adolescents have been repeatedly mentioned to be a crucial population group to achieving many of the Sustainable Development Goals (SDGs) [513]. Yet, they are largely invisible in the Global indicator framework, including due to a lack of age- and sex-disaggregated details to measure progress for 10-19-year-olds [407, 514].

The Global Strategy for Women's, Children's and Adolescents' Health (2016-2030) (Global Strategy) [513] emphasizes that children and adolescents must be at the heart of the SDGs and strives for a world in which every woman, child and adolescent can thrive to realize their full potential. Its objectives and targets as well as 34 of its 60 indicators are aligned with the SDGs, while an additional 26 indicators have been drawn from established global initiatives for reproductive, maternal, newborn, child and adolescent health. A total of 43 of the Global Strategy indicators relate to adolescent health [515].

In addition to the indicator frameworks of the SDGs and the Global Strategy, a recent mapping has identified another 14 global and regional initiatives including adolescent health indicators [516]. They include, for example, The Lancet Commission on Adolescent health and Well-being [517], Countdown to 2030 [518], and the Measurement of Mental Health among Adolescents at the Population Level initiative [519].

With the overarching aim to improve and harmonize national and global adolescent health measurement, WHO in collaboration with United Nations (UN) H6+ partner agencies established the Global Action for Measurement of Adolescent Health (GAMA) Advisory Group, consisting of 16 global adolescent health experts [520]. The objectives of the GAMA Advisory Group are to [521]:

- provide technical guidance to WHO, UN H6+ agencies and other relevant measurement groups to define a core set of adolescent health indicators, for the purpose of harmonizing efforts around adolescent health measurement and reporting;
- promote harmonized guidance for adolescent health measurement, supporting countries and technical organizations in collecting useful data to track progress in the improvement of adolescent health.

In line with the first objective, a consensus list of priority indicators with metadata was developed with structured inputs from a broad range of stakeholders [3] (Figure 6.1). The list builds on indicators promoted by other initiatives, including the SDGs and the Global Strategy, and ensures to cover the most important health issues for adolescents. Notably, several indicators were adopted from other initiatives and only modified by restricting the age range to 10-19 years. While the list of priority indicators proposed by the GAMA Advisory Group is currently being further harmonized and tested for feasibility in countries, it may already be used to orient national adolescent health monitoring efforts and to identify measurement gaps. Table 6.1 shows the short names of the indicators included in the list of priority indicators recommended by GAMA as well as how it complements the SDG and the Global Strategy for Women's, Children's and Adolescents' Health (2016-2030) indicator frameworks.

Step 1. Identification of 16 global and regional measurement initiatives including adolescent health indicators

Step 2. Selection of 33 core areas for adolescent health measurement, considering four inputs:

- ✓ Adolescent health burden (by region, adolescent age group and sex)
- ✓ Areas covered by existing initiatives
- ✓ Inputs from country adolescent health stakeholders
- ✓ Inputs from youth group representatives

Step 3. Mapping of 413 indicators assessing any aspect of the selected core measurement areas

Step 4. Definition of indicator selection criteria

Step 5. Selection of 52 priority indicators

Step 6 (on-going). Assessment of feasibility of indicators and harmonization of their measurement

Figure 6.1. Process of selecting priority indicators for adolescent health measurement used by the GAMA Advisory Group.

Table 6.1. The priority indicators (short names) for adolescent health measurement proposed by the GAMA Advisory Group and how they complement the SDG and Global Strategy indicator frameworks.

Domain	No.	Indicator (short name) proposed by the GAMA Advisory Group	Corresponding SDG indicator	Corresponding Global Strategy indicator
Social, cultural, economic, educational, environmental determinants of health	1.01	Adolescent population proportion		
	1.02	School completion rate	4.1.2	
	1.03	Poverty (national reference)	1.2.1*	
	1.03-ALT	Poverty (international reference)	1.1.1*	
	1.04	Food insecurity	2.1.2*	
	1.05	Sexual and reproductive health decision-making among older female adolescents	5.6.1*	Thrive*
	1.06	Not in education, employment or training	8.6.1*	Transform*
	A1.01	Foundational learning skills	4.1.1	Key indicator 14 - Transform
Health behaviours and risks	2.01	Overweight and obesity		
	2.02	Thinness		
	2.03	Heavy episodic drinking	3.5.2*	Survive*†
	2.04	Psychoactive drug use		

	2.05	Tobacco use	3.a.1*	Survive*
	2.06	Fruit and vegetable consumption		
	2.07	Physical activity		Thrive*
	2.08	Bullying	4.a.2 (thematic indicator)*	
	2.09	Early sexual debut		
	2.10	Condom use at last sex		
	2.11	Skilled birth attendance	3.1.2*	Survive*
	2.12	Modern contraceptive use at last sex		
	2.13	Met need for modern contraception	3.7.1*	Thrive*
	A2.01	Alcohol use		
	A2.02	Sugar-sweetened beverage consumption		
	A2.03	Pre-menarche menstruation awareness		
	A2.04	Electronic cigarette use		
Policies, programmes, and laws	3.01	National adolescent health programme		
	3.02	National standards for adolescent health service delivery		
	A3.01	Health service user fee exemptions for adolescents		
	A3.02	Legal restrictions for accessing health services		
Systems performance and interventions	4.01	Health services use		
	4.02	HPV vaccine coverage	3.b.1*	Survive*†
	4.03	Health data disaggregation by age and sex		
	A4.01	Comprehensive school health services		
	A4.02	Schools offering HIV and sexuality education	4.7.2 (thematic indicator)	Thrive*†
Subjective well-being	5.01	Social connectedness		
	A5.01	Parental/guardian connectedness		
Health outcomes and conditions	6.01	Mortality rate (all-cause)		Key indicator 5 – Survive
	6.02	Mortality rate (cause-specific)		Survive†
	6.03	Incidence of HIV infections	SDG 3.3.1*	Survive*
	6.04	Incidence of sexually transmitted infections (STIs)		
	6.05	Suicide attempt		
	6.06	Depression/anxiety symptoms		Survive*†
	6.07	Incidence of injuries		
	6.08	Physical violence experience	16.1.3*	
	6.09	Contact sexual violence experience	16.1.3*	
	6.10	Adolescent birth rate	3.7.2*	Key Indicator 7 – Thrive*
	6.11	Anaemia		Thrive*
	A6.01	Physical violence perpetration		
	A6.02	Sexual violence experience by age 18	16.2.3	Transform
	A6.03	Suicidal thoughts		
	A6.04	Care seeking for depression/anxiety		
	A6.05	Female genital mutilation/cutting	5.3.2*	Transform*

3666 *Indicator proposed by GAMA has been modified †Global Strategy for WCAH notes indicator is for development

Measuring adolescent well-being

In 2020, the UN H6+ Technical Working Group on Adolescent Health and Well-being developed an adolescent well-being definition and conceptual framework. The proposed definition, "Adolescents thrive and are able to achieve their full potential", is underpinned by five domains: 1. Good health and optimal nutrition; 2. Connectedness, positive values and contribution to society; 3. Safety and a support environment; 4. Learning, competence, education, skills and employability; and 5. Agency and resilience. To move the adolescent well-being agenda forward, WHO, in collaboration with PMNCH and UN partners and with the support of an expert consultative group, is leading the development of a measurement approach for adolescent well-being. As part of this effort, priority indicators will be identified, building on and adding to the adolescent health indicators prioritized by the GAMA advisory group. The measurement approach will be designed for global, regional, and country levels, with the primary aim of supporting countries to gather the most important data for improving the well-being of their adolescents.

6.1.2 Data collection systems for adolescent health indicators

Data for adolescent health indicators may come from a variety of sources. Table 6.2 provides an overview of common data sources.

One of the main data sources for many of the adolescent health-related indicators are nationally representative household surveys, such as the Demographic and Health Surveys [522] (DHS) or the Multiple Indicator Cluster Surveys (MICS) [523] (though these usually do not include adolescent boys and young men), or school-based health surveys, such as the Global School-Based Student Health Survey (GSHS) [524], the Health Behaviour in School-Aged Children (HBSC) [525] survey and the Global Youth Tobacco Survey (GYTS) [526]. While sources such as DHS and MICS do not explicitly focus on adolescents, older adolescent girls, and sometimes boys aged 15–19 years, are usually included.

Another important source for adolescent data is the Civil registration and vital statistics (CRVS) system. A well-functioning civil registration and vital statistics (CRVS) system registers all births and deaths, issues birth and death certificates, and compiles and disseminates vital statistics, including cause of death information. It may also record marriages and divorces [527].

National Health Information Systems (NHIS) serve multiple users and a wide array of purposes that can be summarized as the 'generation of information to enable decision-makers at all levels of the health system to identify problems and needs, make evidence-based decisions on health policy and allocate scarce resources optimally. They include Routine Health Information Systems (RHIS) involving regular collection of data and reporting from health facilities [528].

Health policy surveys collect information on policies that may be relevant to adolescent health. An example of a policy survey at the school level is the Global School Health Policies and Practices Survey (G-SHPPS) that enables countries to generate credible school-level data describing characteristics of school health policies and practices nationwide [529].

Data collection systems need to ensure that monitoring data can and will be used for management at all levels of the health system, such as the district or subdistrict levels. Systems are also needed to allow for data to be used for monitoring at regional and national levels.

Table 6.2. Common data sources for adolescent health-related indicators

INDICATOR DOMAIN	DATA SOURCES	EXAMPLES
Determinants of health	• CRVS • Nationally representative household surveys such as DHS, MICS	• Adolescent population proportion • Not in education, employment or training
Health behaviours and risks	• Nationally representative household surveys such as DHS, MICS • School surveys	• Overweight and obesity • Tobacco use
Policies, programmes and laws	• Policy surveys, including school policy surveys • Key informant interviews • Self-reported by governments	• National adolescent health programme • National standards for adolescent health service delivery
Systems performance and interventions	• National Health Information System • Health facility surveys • Policy surveys, including school policy surveys	• HPV vaccine coverage • Health services use • Schools offering HIV and sexuality education
Health outcomes and conditions, subjective well-being	• CRVS • National Health Information System • Nationally representative household surveys such as DHS, MICS • School surveys	• Mortality rate (all-cause) • Incidence of HIV infections • Sexual violence experience by age 18 • Suicide attempt

6.1.3 Global adolescent health databases

WHO's Maternal, Newborn, Child and Adolescent health and Ageing Data portal [530], UNICEF's Adolescent Data Portal [530, 531], and UNFPA's Adolescent and Youth Dashboard [532] bring together and display global adolescent health and well-being data for some of the most important indicators, drawing from common data sources.

Through these data portals, up-to-date global, regional and country data can be accessed, visualized in a variety of ways, including in country profiles, and downloaded [533]. Where no data exist, the data portals

also highlight these data gaps. The NCD Microdata Repository [534] holds unit record data from Global School-based Surveys (GSHS) done in over 100 countries around the world.

6.1.4 Monitoring of inequality and disaggregation of health data

Health determinants, risk and protective factors and outcomes are rarely distributed equally in populations, and health programmes reach different subpopulations to different degrees. For example, one of the indicators proposed by the GAMA Advisory Group and the Global Strategy is the prevalence of insufficient physical activity among adolescents. Insufficient physical activity differs substantially between young adolescents and older adolescents, by sex within each of these age groups, by rural or urban residence, and by in-school versus out-of-school adolescents [250]. Ignoring these differences may mean that the needs of particular subpopulations remain unaddressed.

Few surveys collect data on a representative sample of all adolescents. Global school surveys, such as Global School-based Student Health Survey (GSHS), the Health Behaviour in School-aged Children (HBSC), or the Global Youth Tobacco Survey (GYTS) aim to include a representative sample of school-going adolescents within specified age ranges. The biases introduced by excluding out-of-school adolescents will vary by country, as the proportion of adolescents who are in school differs considerably. However, accessing out-of-school adolescents may be more problematic, as there is no one setting where they can be reached easily.

Furthermore, in adolescent programmes, it is often harder to reach those at the greatest risk, both in terms of health behaviours and ill-health, as those adolescents might also be the least likely to attend school or seek health services.

Monitoring of equity and adolescents' rights is critically important, and the Innov8 technical handbook provides a useful tool for this [535]. WHO guidance on health inequality monitoring is also relevant to monitoring of adolescent health [536].

As part of monitoring inequality, the 2030 SDG agenda [512, 515] as well as the Global Strategy call for disaggregation of data, including by age, sex, disability, socioeconomic status and other dimensions as appropriate. The work of the GAMA Advisory Group has further highlighted the great importance of disaggregation of reported data for adolescents [3], and a recent article suggests age disaggregation by 5-year age groups across the life course [537]. It is however acknowledged that – despite these global recommendations for standard age disaggregation, different disaggregation might be needed on the basis of local context, specific health programmes, policies, and specific diseases.

6.2 Monitoring and evaluation of adolescent health programmes at country level

6.2.1 Monitoring adolescent health programmes

Programmatic monitoring is the systematic collection of data to check on the progress of a programme. It aims to answer the question, are we doing what we planned to do? It is an essential component of programmes to guide efforts and investments and to act as the basis to accelerate and reinforce progress. It is also a critical tool for advocacy to redouble programme efforts. Section 5 of this report sets out the logical framework (Figure XYZ) required to translate priority adolescent policies and interventions into programme implementation. Monitoring the success and challenges of implementation is important not only for demonstrating progress, but also for identifying areas where corrective action is needed for the programme to be able to meet its objectives.

The International Health Partnership (IHP+) Common Monitoring and Evaluation Framework [538, 539] classifies indicators for monitoring health programmes into five categories (see logical framework in section 5): inputs (e.g. financing, human resources); processes (e.g. supply chain and mechanisms for sharing information); outputs (e.g. availability of services and interventions and their quality); outcomes (e.g. intervention coverage and prevalence of risk behaviours); and impact (e.g. health impact and system efficiency). The IHP+ Framework is useful for thinking about the processes that will be needed to monitor and evaluate adolescent health programmes (Table 6.3).

Most of the globally proposed indicators either measure health outcomes or impact [3, 512, 515], with relatively few indicators measuring inputs, processes or outputs. In the national context, selected indicators for monitoring inputs, processes and the outputs unique to a country's context need to be added to drive improvements in programme effectiveness, efficiency and sustainability.

This section on adolescent health programme monitoring builds on the previous sections of the document by adding examples of indicators needed to measure the extent to which a programme is facilitating an adolescent-responsive national health system. It also provides an example of monitoring an adolescent nutrition programme to illustrate key principles of how countries can monitor the success of their chosen programmes to improve the health of adolescents (Table 6.3).

3771

3772 **Table 6.3.** Examples of indicators to monitor a programme designed to ensure that the national health system
3773 is adolescent-responsive, and an adolescent nutrition programme

Programme (see Section 5)	Inputs and processes	Outputs	Outcomes	Impact
Programme to ensure the national health system is adolescent-responsive	**National adolescent health policy** • National adolescent health policy available **Programme funding and resources available** • By source • Number of health workers by 10,000 population by categories, geographical distribution, place of employment, etc. **Appropriate processes in place to support adolescent health** • Governance structures for the adolescent health programme are defined at national, subnational and local levels • Mechanisms in place to ensure that health system is adolescent-responsive	**Adolescent health training provided to health-care providers** • Number and percentage of health-care providers trained in the provision of health services to adolescents • Proportion of target education and training institutions that have an adolescent health component in their curriculum in line with WHO core competencies in adolescent health for primary-care providers **Adolescent-responsive health services available and accessible** • Number and proportion of health facilities with adolescent-friendly accreditation • Number and proportion of health workers with adolescent-friendly accreditation by category **Teachers trained to provide adolescent health education** • Proportion of target education and training institutions that have their faculty trained in recommended approaches to adolescent health education and training	**Health services acceptable to adolescents** • Proportion of adolescents reporting satisfaction with care **Coverage** • Percentage of 15-19 year-old females who have their need for family planning satisfied with modern methods	**Improved adolescent health outcomes** • Adolescent mortality rate (by sex and age group) • Adolescent birth rate (by age group)

Programme to improve adolescent school health and nutrition (ASHN)	**Policy, legislation, and/ or regulations** • Guidance on operationalization of ASHN policy/program at subnational level • Training curricula for teachers and/or ASHN providers, including comprehensive sexuality education available • Monitoring and supervision tools and mechanisms available **Funding available (national and subnational level)** • By source **Operational modalities agreed and established** • MoU with relevant local entities to enable referral system • Human resources to implement ASHN services (teachers/ health workers/school nurses) identified and recruited	**Procurement and distribution (to subnational level) of commodities/materials** • Number of vaccine/ supplements/ meals/ counseling materials delivered **ASHN package delivered (coverage of the intervention)** • Number of schools implementing the ASHN package • Number of [male/female] students who received interventions from the ASHN package **Improved health and nutrition knowledge and behaviors among adolescents** • Improved knowledge on health and nutrition topics covered by ASHN package • Improved access to health and nutrition services by adolescents	**Improved educational outcomes** • Improved attendance • Improved academic performance **Improved health, nutrition, and learning outcomes among adolescents** • Years of education completed • Delayed sexual debut • Increase in contraceptive use • Improved energy and nutrient intake • Improved nutritional status	**Short-term impact: improved health, nutrition, and education outcomes among adolescent populations** • Reduction in adolescent pregnancies • Reduction in malnutrition among adolescents, particularly girls • Reduction in childhood stunting **Long-term impact:** • greater employment and earning opportunities; economic growth

The indicators that are suggested in Table 6.3 are not intended to be either prescriptive or exhaustive, but are used as examples to demonstrate the importance of different types of indicators for day-to-day programme monitoring and evaluation. The choice of indicators depends on the specific strategic priorities of the programme and is limited by practical considerations and available data sources. Countries will need to select relevant indicators to complement the generic indicators recommended by the GAMA Advisory Group that are specifically tailored in order to give a clear picture of whether the programme is doing what is planned.

These indicators will also provide information to support day-to-day programme management and decision-making. To run a programme effectively, monitoring needs to be addressed at every stage of the programme, including programme planning. Each step in the logical framework (described in Section 5) needs to be considered separately, and each important activity should be monitored. In the short term, the most useful data will come from indicators that monitor progress in the first half of the results chain from inputs and process to outputs, since these should change relatively rapidly. However, outcomes and impact indicators should also be monitored from the start to ensure that a baseline is established to track progress over time.

Adolescent health programmes have specific features relative to those for other age groups and these must be considered when designing systems to monitor them. Prominent among these is the fact that many of the health needs of young adolescents are very different from those of older adolescents. The developmental changes during adolescence are rapid and, unlike in younger children, they differ substantially between the two sexes. As a result, detailed age and sex disaggregation of monitoring data is needed to a greater degree than for any other age group.

6.2.2 Evaluation of adolescent health programmes

While monitoring is the systematic collection of data to check on the progress of a programme or the implementation of an intervention, evaluation is the critical assessment of the degree to which the programme fulfils its stated goals and objectives. It aims to answer questions such as, Is the programme achieving its objectives, goals and associated targets? and is it run in an effective and efficient way? Evaluations contribute to the overall evidence-base for the effectiveness of interventions and can be used to improve or redirect implementation and for subsequent programme planning. They can either be conducted by internal programme staff or by external evaluators. Monitoring data is a major resource for any programme evaluation.

Programme evaluations should follow the Development Assistance Committee criteria [540], which include measurements of programme:

- relevance – consistency with the overall programme goal and its desired impact;
- effectiveness – reasons for achievement (or not) of the programme's main objectives;
- efficiency – whether the least costly resources were used to achieve results;
- impact – measures that the programme made a real difference to its beneficiaries; and
- sustainability – likelihood that the programme benefits will continue in the absence of external support.

This document will not cover the basics of programme evaluation in general. Good guidance on that can be found elsewhere [538, 539]. The aim here is to highlight issues that are particularly important considerations for evaluations of adolescent health programmes.

Countries should conduct periodic evaluations of the degree to which their adolescent health programme is meeting its goals and targets related to the Global Strategy. An example of an evaluation of the Healthy Communities programme in Uganda Case study 22.

Case Study 22

Process Evaluation of USAID's Communication for Healthy Communities programme in Uganda

USAID's "Accelerating the rise in contraceptive Prevalence" implemented in Uganda between 2016-2017 targeted adolescent girls between 15-24 and their partners as part of the Communication for Healthy Communities programme. The programme was implemented in five districts of Uganda and also targeted other groups including adolescent boys and men between 15-24 years, parents/guardians of adolescents and other groups such as religious leaders and healthcare workers. To do a real-time assessment and progress of the programme, type of intervention activities, context, personnel, audience and effort, a process evaluation was undertaken to understand the effect of current interventions for future programming. Using a socio-ecological model, undertaking a process evaluation provided opportunities on learning and improving effectiveness of interventions across various levels including interpersonal, institutional, community and policy environments. Even though undertaking a process evaluation does not equate to a comprehensive impact assessment of the entire Communication for Healthy Communities adolescent programming, results from the evaluation were helpful in informing context of programming, areas of programme success including coverage and reach, dose delivered and received, and areas for strengthening adolescent health programing. Undertaking such an evaluation allowed for the identification of key influencers such as linking "income-generating activities to health promotion programmes" with reputable and reliable implementation tools.

Source [541]:

For a programme evaluation to be meaningful and useful, it must be both rigorous and objective. It should go beyond a superficial checklist that reveals little about the quality or coverage of an implemented programme. For example, an evaluation of a national comprehensive sexuality education (CSE) programme should go further than simply documenting that sex education is in the national curriculum. The evaluation should review whether each aspect of the CSE curriculum is in line with the topics and approaches proposed in the UNESCO International Technical Guidance on Sexuality Education [114], particularly any topics which may be sensitive or controversial. The evaluation should assess the quality and coverage of related aspects of teacher-training programmes. It should also include an assessment of the quality and coverage of CSE programme implementation. Ideally, such an evaluation would include the participation of external CSE experts, to ensure there is the technical capacity rigorously to evaluate the programme and to reduce the potential for bias – as education sector representatives may have a conflict of interest.

Planning for evaluations should be an integral part of programme planning and should be included in the initial programme plan so that adequate budget is allocated for the evaluations. Evaluation planning also helps

clarify the specific goals and targets of the programme, making it easier to anticipate and avoid the challenges that would otherwise be detected by the evaluators.

The main function of a monitoring and evaluation system is to produce information on which to base management decisions. If programmes are evaluated, the information obtained should feed directly and promptly into programme planning and priority- setting. Periodic programme reviews are a way to make sure that the findings of evaluations are used rather than gathering dust on bookshelves. These reviews should include an assessment that takes into account the findings from both internal and external programme evaluations. Programme reviews should also take account of available monitoring data and stakeholder opinions, which should include the opinions of adolescents themselves and of youth-led and youth-serving organizations. The assessment findings should feed into participatory review processes where programme priorities, approaches and targets are re-evaluated, and changed where necessary.

6.2.3 Country support for monitoring adolescent health programmes

Many countries will have empirical data on some but not all of the adolescent health indicators recommended by the GAMA Advisory Group. The World Health Organization, the Health Data Collaborative and other entities are working with countries to improve the availability, quality and use of data for local decision-making and tracking of progress toward the health-related Sustainable Development Goals (https://www.healthdatacollaborative.org/). For monitoring and evaluation of adolescent health programming, countries will need to ensure that they include a focus on age and sex disaggregation.

6.3 Advancing research for adolescent health and wellbeing

Research aims to systematically investigate and study important questions in order to increase current knowledge through the discovery of new facts. The earlier sections of this document have demonstrated that much is known about the burden of disease and injuries in adolescence and the risk factors for future adult burden; what adolescent health interventions are effective; and how best these interventions might be prioritized and then implemented within adolescent health programmes.

Further research will be essential to push progress forward for adolescent health in order to achieve the ambitious health-related Sustainable Development Goals. Key areas of focus will include research to develop evidence on *which* interventions should be implemented and *under what conditions* (research on the what *and* the how of adolescent health programming). Emerging threats and opportunities, such as online use, climate change and pandemic risk, will also necessitate research investments.

Research focused on child and adolescent development has been conducted primarily in high-income countries in North America and Western Europe [542, 543], neglecting developmental issues that are unique to the majority who live in low- and middle-income countries. This leaves a gap in basic research addressing normative development during adolescence in a range of cultural, social and environmental contexts. Interdisciplinary approaches and collaborations between academic researchers and those working in applied settings provide much potential to fill research gaps.

To strengthen programs and policy action, further investment is needed to unpack the challenges and opportunities of multisectoral programs for adolescents; and conceptual and measurement advances are particularly needed with respect to studying adolescent voice and agency, connectedness, civic and social participation and engagement. In addition, household surveys often capture the situation of adolescents 15 years and older, but 10- to 14-year-olds remain particularly understudied. Last, but not least, inclusion should be a priority for data collection and research. A recent review of evidence gap maps collated the highest quality evidence on adolescent wellbeing and noted that less than one in five studies analyzed gender as a variable of interest. Disability was seen in only 3% of studies [544].

Unfortunately, relative to the research capacity for maternal, newborn and child health, adolescent research capacity is weak, especially in LMICs where it is needed most [407]. Investment in research capacity strengthening will need to involve multiple disciplines and is likely to bring a substantial return on investment.

Undeniably, the number of important research questions is large. Priorities will need to be selected for investment. Over the last ten years, WHO has conducted a number of priority-setting exercises in areas of adolescent health to help countries prioritize their research investments [545-549]. These use versions of the Child Health and Nutrition Research Institute (CHNRI) methodology [550], in which experts propose potential research questions and then score them based on explicit criteria related to clarity, answerability, importance, potential for implementation and relevance for equity. Exercises showed that priorities have shifted away from basic questions on the prevalence of specific health conditions towards questions about how best to scale-up existing interventions and testing the effectiveness of new ones.

6.4 Involving adolescents in monitoring, evaluation and research

Ideally, the monitoring, evaluation and research of programmes designed to improve the health of adolescents should always include the opinions of adolescents themselves. There is also the increasing potential for adolescents or young people to be engaged as active evaluators rather than only as subjects of the evaluation. Increasingly, youth-led participatory action research is being undertaken to advance research particularly in

community settings. Adolescents engaged in such research identify issues they want to improve, conduct research to understand the issues and possible solutions, and advocate for changes based on research evidence. Using such collaborative models helps to increase the power of marginalized groups to effect change. Youth- led participatory action research has four phases: issue selection, research design and methods, data analysis and interpretation, and reporting back and taking action for change. Involving young researchers can strengthen the validity of research by applying their unique expertise and insider experience to develop research questions, instruments and interpret findings. Dissemination among adolescents may also be perceived to be more credible if their peers participated in generating the evidence.

Unfortunately, adolescents can be excluded from research in part because of confusion about whether they should be regarded as children or adults [551]. Adolescents' rapidly evolving capacity to make informed decisions is important related to their consent and assent in data collection, and the role that adolescents can have in actively being involved in the design, implementation, analysis and interpretation of programme evaluations. The capacity of a 19-year-old will be very different from that of a 10-year-old. Furthermore, all adolescents of the same age will not have the same capacity. In order to achieve a proper ethical balance, researchers need to achieve the twin goals of including adolescents in research and protecting them from research risk (ibid). Data collection methods and study instruments may need to vary across adolescence, and special data collection approaches may be required to overcome shyness or to ensure understanding, especially among young adolescents.

Different data collection instruments may be needed for young versus older adolescents, or for adolescents with disabilities. Extra consultation is often required with adolescents, their parents, families and communities prior to data collection. An example of this would be if a questionnaire survey is to be used that will require asking sensitive questions to adolescents who are under the legal age of majority (usually under 18 years), such as questions to unmarried adolescents about their sexual behaviour or use of illegal drugs. Also, appropriate consent from parents or legal guardians, in addition to assent from adolescents themselves, is required for underage adolescents. Legal and ethical provision of protection and ensuring access to services also need to be considered.

BOX: **Key principles for involving adolescents in monitoring, evaluation and research** [552]

- Adolescents of all ages should not be excluded from research or data collection unless there is a risk to their safety or there is no benefit from their inclusion.
- The evolving capacity of adolescents to make informed decisions should be central to considerations about adolescent research involvement and who should provide informed consent for adolescent participation.
- Inclusion of adolescents in research and protection from research risk can both be achieved. To achieve this, research and data collection require nuanced understanding of adolescent development and their social contexts.
- Gender and equity should always be considered. This means including appropriate age (10-14 and 15-19) and sex disaggregated data, as well as ensuring research is gender and age sensitive.
- Disadvantaged, vulnerable or marginalized adolescents should be included in research and data collection by prioritizing sex- disaggregated sampling of marginalized adolescents and by including them through inclusive community-based participatory approaches.
- To the fullest extent possible, integrate adolescents as local advocates, data collectors, analysts and researchers in evidence generation activities.

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