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

Guidance to Support Country Implementation

Annexes 1–6 and Appendices I–IV

The Partnership
for Maternal, Newborn
& Child Health

WE SUPPORT
EVERY WOMAN
EVERY CHILD
FOR HEALTHY AND EMPOWERED WOMEN
CHILDREN AND ADOLESCENTS

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Global Accelerated Action for the Health of Adolescents (AA-HA!): guidance to support country implementation. Annexes 1–6 and Appendices I–IV.

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Acknowledgements

Glossary

Adolescent: A person aged 10–19 years. Young adolescent refers to 10–14 year olds, while older adolescent refers to 15–19 year olds. Table A shows how the term adolescent relates to the terms child, youth, young adult and young person.

Table A. Ages covered by terms child, adolescent, youth, young adult and young person

TYPE OF YOUNG PERSON	AGE IN YEARS															
	0-9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Child																
Adolescent																
Youth																
Young adult																
Young person																

Source: (341).

Burden of disease or injury: The impact of a health problem in a population, as measured by rates of mortality and disability-adjusted life years (see below). It is not limited to disease, but also includes other burdens, such as disability caused by injury.

Country income level: This is defined by a 2014 gross national income per capita of US$ 1045 or less (low-income countries); US$ 1046–US$ 4125 (lower middle-income countries); US$ 4126–US$ 12 735 (upper middle-income countries); and US$ 12 736 or more (high-income countries) (342).

Disability-adjusted life year (DALY): A measure that combines the estimated years of life lost through premature death and the estimated years of life lived in states of less than optimal health (343). The sum of DALYs across a population is a way to measure the gap between current health status and an ideal health situation in which the entire population lives to an advanced age, free of disease and disability.

Demographic dividend: Accelerated economic growth that may result from a decline in a country's mortality and fertility rates, and a subsequent change in the age structure of the population. With fewer births each year, a country's young dependent population grows smaller in relation to the working-age population. With fewer people to support, a country has a window of opportunity for rapid economic growth (344).

Demographic transition: A shift in population structure; for example, population change that occurs as a country transitions from high birth and death rates to lower birth and death rates, and from a pre-industrial to an industrialized economic system (344).

Determinant: A factor that can affect the health of adolescents and their communities, including personal, social, economic and environmental factors. Determinants occur at different ecological levels. For example: individual characteristics (e.g. age, beliefs, income and social status, education, social support networks, genetics, health services and gender); the immediate environment (e.g. parents, teachers, peers); social values and norms (e.g. gender norms restricting girls' access to education; encouragement of boys to take health-related risks); policies and laws (e.g. related to tobacco and alcohol); macro-social factors (e.g. distribution of money and resources); and the physical and biological environment (e.g. malaria prevalence; access to toilets while menstruating). Some determinants may be inter-related and clustered, and together affect adolescent development and ability to learn and acquire skills (345).

Emergency situation: A single or multiple country event with minimal (Grade 1) to substantial (Grade 3) public health consequences that WHO has identified as requiring a response. In the months immediately after an emergency situation is graded, it is considered acute. When it is likely to continue for more than six months its grade may be removed and it will be recategorized as protracted (346).

Epidemiological transition: An epidemiological shift; for example from mortality primarily due to acute infectious diseases, to that due to chronic, non-infectious, degenerative diseases, occurring as a result of higher standards of living and the introduction of medical and public health practices in high-income nations (347).

Equity: The absence of avoidable, unfair or remediable differences among groups of people, which may be defined socially, economically, demographically or geographically, or by other means of stratification. Health equity means that ideally everyone has a fair opportunity to attain their full health potential and no one should be disadvantaged from achieving this potential (21).

Evidence-based intervention: Interventions found to be effective through rigorous evaluation. The particular standards used to evaluate effectiveness vary depending on many factors, including the type of health condition, intervention and available data. For example, a biomedical intervention may be considered to have strong evidence of effectiveness if multiple experimental trials have consistently demonstrated positive impact on desired outcomes (348). However, such research is not always feasible, particularly in non-bio-medical fields where there may be a long and complex causal pathway between the implementation of an intervention and any potential impact on population health (345). In such cases, other criteria may be used to identify interventions with the strongest evidence-base.

Health system function: This is a key purpose and activity of health systems. WHO identifies four functions as critical for health systems: service provision; generation of human and physical resources that make service delivery possible; raising and pooling the resources used to pay for health-care; and stewardship (i.e. setting and enforcing the rules and providing strategic direction for all actors). These functions are performed in the pursuit of three goals: health, responsiveness and fair financing (153).

Health system strengthening: The process of identifying and implementing changes in policy and practice in a country's health system, so that the country can respond better to health system challenges. Health system strengthening also can be defined as any array of initiatives and strategies that enhance the functioning of a health system and lead to better health through improvements in access, coverage, quality or efficiency (153).

Humanitarian and fragile settings: Settings that face social, economic and environmental shocks and disasters. These include conflict and post-conflict situations, transnational crises, countries that have experienced one or more serious natural disasters, and situations of protracted socioeconomic and political instability. In such settings, health challenges are particularly acute among mobile populations, internally displaced communities and those in refugee or temporary camps (1).

Programme: A coordinated and comprehensive set of planned, sequential health strategies, activities and services designed to achieve well-defined objectives and targets. A national programme usually has national, subnational and local coordinators, and dedicated funding to support planned activities. Within the health sector the term national health programme is often used to indicate national health-care system components that administer specific services (e.g. national programmes for HIV, adolescent health or school health services) (153).

Programming: The stage of a sector's planning cycle in which newly identified priorities are translated into operational plans (10). Programming and programme overlap but are not identical concepts; programming – for adolescent health for example – may happen in the absence of a specific programme, as part of the sector's strategic and operational planning cycles.

Protective factor: A factor that encourages and sustains positive behaviours, reduces the risk of negative health behaviours and outcomes and diminishes the effect of, and supports recovery from, negative health outcomes. Examples of protective factors for adolescent health include caring and meaningful relationships, appropriate structure and boundaries, opportunities for participation and contribution, and encouragement of self-expression (349).

Risk factor: An attribute, characteristic or exposure that increases the likelihood of an individual suffering a negative health outcome immediately or in the future. Some conditions can be both a risk factor and a burden of disease. For example, iron-deficiency anaemia is a risk factor for death or disability from postpartum haemorrhage but also causes lassitude and weakness (350).

Annex 1. Additional information about the Global AA-HA! guidance to support country implementation and adolescent development

A1.1.
The Global Strategy for Women's, Children's and Adolescents' Health (2016–2030)

On 1 January 2016, spearheaded by the United Nations, the 17 Sustainable Development Goals (SDGs) of the 2030 Agenda for Sustainable Development officially came into force. Over the next 15 years, these goals will guide countries as they mobilize efforts to end all forms of poverty, fight inequalities and tackle climate change. The Global Strategy for Women's, Children's and Adolescents' Health (2016–2030) is closely aligned to the SDGs. This is seen in its Survive, Thrive and Transform objectives and targets, i.e. to end preventable deaths, ensure health and well-being and expand enabling environments (1). The Global Strategy provides a roadmap for ending all preventable maternal, newborn, child and adolescent deaths by 2030, and for improving overall health and well-being. It is universal and applies to all people (including the marginalized and hard-to-reach), in all places (including humanitarian, fragile and crisis situations) and to transnational issues. For the first time, building on the first Global Strategy (2010–2015), which specifically targeted women and children, adolescents are at the heart of the Global Strategy. This acknowledges not only the unique health challenges facing adolescents, but also their pivotal role alongside women and children as key drivers of change in the new sustainable development era.

The Global Strategy takes a life-course approach that aims for the highest attainable standards of health and well-being – physical, mental and social – at every age. A person's health at each stage of life affects health then and at later stages, and also has cumulative effects for the next generation. The Global Strategy also guides greater integration among actors in the health sector and across other sectors, such as infrastructure, nutrition, education, water and sanitation. An operational framework has been developed to accompany the Global Strategy for its first five years, to be updated every five years through 2030 (2). The operational framework will guide countries as they develop and refine their plans for women's, children's and adolescents' health, based on country-identified needs and priorities. In addition, the Global Strategy Indicator and Monitoring Framework will support national SDG and health monitoring (3). These global documents will guide national governments in the coming years as they develop and update their plans for reproductive, maternal, newborn, child and adolescent.

The Global Strategy is guided by several well-established principles of global health and sustainable development. It is country-led; universal; sustainable; rights-based; equity-driven; gender-responsive; evidence-informed; partnership-driven; people-centred; community-owned; and accountable to women, children and adolescents. The Global Strategy identifies nine action areas to update national policies, strategies, plans and budgets: country leadership; financing for health; health system resilience; individual potential; community engagement; multisectoral action; humanitarian and fragile settings; research and innovation; and accountability (Appendix I) (1). For each action area, the Global Strategy outlines three broad actions, and seven to 13 specific interventions. The operational framework also identifies an "ingredient for action" for each of the nine Global Strategy action areas. For each ingredient for action, the operational framework lists up to five implementation objectives (Appendix I) (2).

Table 3.1 compiles the 26 Global Strategy interventions for children and adolescents that are directly relevant to adolescent health, and adds one composite intervention that represents the 48 maternal health interventions. Appendix II summarizes broader Global Strategy health-system and multisectoral policies and interventions that are relevant to adolescent health, including those related to emergency preparedness. The Global Strategy stresses that the SDGs will not be reached without specific attention to humanitarian and fragile settings that face social, economic and environmental shocks and disasters (e.g. armed conflict, natural disaster, epidemic or famine), as these can result in a critical threat to the health, safety, security and well-being of large groups of people. The Global Strategy further notes that humanitarian emergency responses have historically given insufficient attention to protecting adolescents, who in crises may face increased risks of poor physical and mental health outcomes, harassment, assault and rape.

In addition, a fundamental principle of the Global Strategy and this guidance document is that adolescents should be involved as actors and partners in the planning, implementation, monitoring and evaluation of interventions to improve and maintain their health and development. This is discussed further in Box A1.1.

Annex 1. Additional information about the Global AA-HA! guidance to support country implementation and adolescent development

Box A1.1. Involvement of adolescents as partners in health programming

Adolescents can be a force for their own health and for the health of their families and communities. They also have the right to participate in decisions that affect their lives. Adolescents around the world already contribute in many ways to their families and communities, for example, by taking responsibility for domestic chores and caring for older and younger family members. This engagement gives them both a stake in their communities and important first-hand perspectives on a range of life issues. Increasingly, young people are developing local, national, regional, and international networks, and their voices are reaching influential platforms and earning respect and appreciation (e.g. Global Youth Meet on Health 2015). Adolescents are a strong transformative force, with great potential creativity, maturity, and roles as agents of positive change. In taking a more active role in the development, implementation and monitoring of health interventions that affect them, they not only realize their potential but contribute to improved programming and outcomes.

Many stakeholders agree that adolescents can and should have a say in the programmes and policies that affect their lives, but ensuring their meaningful involvement is not always straightforward. Several global resources have been developed to provide practical guidance on facilitating youth engagement in development and health programming (e.g. ECPAT International (4); YouthNet, Family Health

International, Advocates for Youth (5); SPW/DFID Youth Working Group (6); USAID (7); WHO and UNAIDS (8)). For example, the 2015 WHO and UNAIDS Global Standards for Quality Health-Care Services for Adolescents identifies adolescent participation as one of the eight global standards of adolescent health-care. That guidance document stresses that adolescents have important contributions to make in health-care policy-making, planning, implementation, and monitoring. If empowered and trained, adolescents can also be effective peer educators, counsellors, trainers, and advocates, particularly as they may have the best knowledge about their lives and needs, and they have the capacity to identify best approaches or solutions to health challenges.

At an individual level, ignoring adolescent views regarding their own health-care can lead to disengagement (e.g. discontinuation of a treatment) and loss to follow-up. At a broader level, upholding adolescents' participation in their own care and that of their community helps create sustainable, acceptable, locally appropriate and more effective solutions, while also encouraging more adolescents to seek and remain engaged in care. Towards that end, Table A1.1 lists measureable criteria for adolescent participation in health-care (8).

Table A1.1. Measurable criteria for adolescent participation in health-care services

INPUT	PROCESS	OUTPUT
1. The governance structure of the facility includes adolescents.	4. The health facility carries out regular activities to identify adolescents' expectations about the service, and to assess their experience of care, and it involves adolescents in the planning, monitoring and evaluation of health services.	7. Adolescents are involved in planning, monitoring and evaluation of health services.
2. There is a policy in place to engage adolescents in service planning, monitoring and evaluation.		8. Adolescents are involved in decisions regarding their own care.
3. Health-care providers are aware of laws and regulations that govern informed consent, and the consent process is clearly defined by facility policies and procedures in line with laws and regulations.	5. Health-care providers offer accurate and clear information on the medical condition and management/treatment options, and explicitly take into account the adolescent's decision on the preferred option and follow-up actions.	9. Adolescents are involved in certain aspects of health-service provision.
	6. The health facility carries out activities to build adolescents' capacity in certain aspects of health-service provision.	

Source: (8).

A1.2.
Development of the Global AA-HA! guidance to support country implementation

The Sixty-Eighth World Health Assembly endorsed a proposal by the WHO Secretariat to develop an adolescent health framework aligned with the Global Strategy for Women's, Children's and Adolescents' Health (2016–2030) and its operational framework. This Global AA-HA! guidance to support country implementation document is the result of that process. Initiated by the WHO Department of Maternal, Newborn, Child and Adolescent Health in October 2015, this guidance document was developed, reviewed and refined based on the input of many stakeholders before finalization in February 2017.

The goal of the Global AA-HA! guidance is to provide countries with a basis for developing a coherent national plan for the health of adolescents. It is intended to help align the contributions of relevant stakeholders in planning, implementing and monitoring actions across sectors towards agreed goals to help adolescents Survive, Thrive and Transform the environment in which they live. The primary target audience for this document is national-level policy-makers and programme managers. Secondary audiences include representatives of nongovernmental organizations (NGOs) and funding agencies, as well as researchers, educators, activists and community and religious leaders.

A1.2.1.
Assessment of adolescent health (Section 2)

Section 2 describes major disease and injury burdens that affect adolescent well-being detrimentally. The main sources of information on adolescent disease and injury burdens in the Global AA-HA! guidance document are the 2015 Global Health Estimates (GHE). The GHE database compiles health statistics reported by countries to WHO on an annual basis and provides comprehensive and comparable estimates of rates of mortality and disability-adjusted life years (DALYs) lost. The 2015 adolescent GHE data are accessible online within the WHO Global Health Observatory app: http://apps.who.int/gho/data/view.wrapper. MortAdov?lang=en&menu=hide. In a few instances, the Global AA-HA! guidance refers to different figures than shown online; these newer figures represent updated estimates based on new analyses.

Based on the 2015 GHE, the Global AA-HA! guidance summarizes the five leading causes of adolescent mortality and DALYs lost, disaggregated by sex, age group (10–14, 15–19 years) and modified WHO region. The 2015 GHE database only identifies the five leading causes of adolescent rates of mortality and DALYs lost because there is considerable uncertainty about empirical estimates of mortality rates and DALYs lost for lower-ranked causes. To create the seven groups of modified WHO region, all high-income countries (HICs) were extracted from the six WHO regions into a separate HIC group, with the remaining low- and middle-income countries (LMICs) grouped together for each of the six WHO regions (Appendix III).

The GHE database offers important insights into adolescent health globally, disaggregated by WHO region, country income level, sex and age group. Nonetheless, assessment of rates of mortality or DALYs lost only give a partial view of the relative importance of health conditions. For example, these data may not capture key aspects of positive adolescent health and development (e.g. menstrual hygiene and access to contraception). They may also underestimate the importance of disease burdens that are highly sensitive and challenging to measure (e.g. female genital mutilation, induced abortion, sexually transmitted infections, sexual violence, and self-harm). In addition, some burdens may result from diverse causes and outcomes, so they are difficult to define and as-sess consistently (e.g. maternal conditions). Finally, some countries with very limited health systems may under report conditions due to poor diagnostic services, health-care access or documentation (e.g. road traffic injury, and diseases related to poor water and sanitation). To compensate for such limitations, the Global AA-HA! guidance also draws on complementary sources of data.

Annex 1. Additional information about the Global AA-HA! guidance to support country implementation and adolescent development

A1.2.2.
Selection of evidence-based interventions (Section 3)

Section 3 describes evidence-based interventions to promote and protect adolescent health, development and well-being. For this section, a literature review was conducted to identify examples of each of the 27 Global Strategy adolescent health interventions, as well as examples of interventions for positive adolescent development, and interventions addressing the needs of adolescents in humanitarian and fragile settings.

An initial search and review was conducted of relevant publications from all WHO departments published since 2000. This review provided the vast majority of the intervention examples described in Section 3. When there were gaps in the WHO literature, other United Nations publications related to

the topic of interest were searched and reviewed. When those sources also proved insufficient, a third tier of search and review took place focused on other major international agency publications and/or review articles in academic journals. In total, more than 2000 documents were at least briefly reviewed for content relevant to the Global AA-HA! guidance to support country implementation, approximately 600 of which are cited in the final publication.

Finally, once content on evidence-based interventions was drafted for the Global AA-HA! guidance, relevant WHO departments reviewed and provided feedback on any topics related to their areas of expertise; their recommended edits were incorporated in the final draft.

A1.2.3.
Participation of adolescents

Two special studies were commissioned to enhance the participation and input of adolescents in development and finalization of the Global AA-HA! guidance to support country implementation. First, a series of focus-group workshops were conducted with young and/or vulnerable adolescents in the six WHO regions. In each location, workshops were held with one or two groups of early adolescents (generally 12–14 years old) as well as one or two groups of vulnerable adolescents, i.e. those who were new immigrants or out-of-school (Hong Kong [China SAR] and Slovenia); lesbian, gay, bisexual or transgender (Indonesia and Philippines); pregnant and/or rural (Nigeria and Turkey); refugee and/or rural (West Bank and Gaza Strip); or from urban settlements (Colombia). In the workshops, adolescents were asked about their perceptions of health and happiness; their main concerns about those issues; the types of actions they believe can be implemented in the schools and communities to improve them; and the most important thing that adolescents themselves can do to improve their health and happiness, both now and in the future.

The second study involved secondary data analysis of health themes in the Global Early Adolescent Study, which used narrative interviews with 10–14 year olds to examine the

development of gender norms that predispose sexual health risks and contribute to healthy sexuality. For the Global AA-HA! guidance to support country implementation, young adolescent perceptions of the following topics were examined: what is healthy and unhealthy; empowerment and related factors; what influences health and ill-health; risk and protective factors, including safety and security; actions they can take to stay healthy; and access to and use of media, including social media. Themes were analysed from study sites in Belgium, China, Democratic Republic of Congo, Ecuador, Egypt, India, Kenya, Nigeria, Scotland, and the United States of America.

All of the adolescent opinions and feedback above informed the ongoing analysis, interpretation and writing of this Global AA-HA! guidance document. In addition, the AA-HA! advisory groups included adolescents and young adult members, while adolescents and young people were consulted about the development of the draft document in a series of meetings in each of the WHO regions and through two global online surveys, as described further below. To illuminate key concepts and individual opinions, adolescent quotes from the two commissioned studies and the second global online survey are highlighted throughout the document.

Annex 1. Additional information about the Global AA-HA! guidance to support country implementation and adolescent development

A1.3.
Stakeholder review of the draft Global AA-HA! guidance to support country implementation

From October 2015 to February 2017, the Global AA-HA! guidance document was developed, reviewed and refined based on the input of many stakeholders. Consultations included:

- ongoing draft review and feedback from key WHO departments;
- ongoing draft review, and a global meeting involving an external advisory group of 30 non-WHO members representing ministries of health of selected Member States in the six WHO regions; United Nations agencies and partners (e.g. the International Association for Adolescent Health); civil society (including youth and youth-serving organizations); and academia;
- consultation meetings with national-level programme managers, policy-makers and adolescents and young adults in each WHO region;
- a series of focus-group discussions conducted with young and/or vulnerable adolescents in the six WHO regions, as described above;
- secondary data analysis of health themes in the Global Early Adolescent Study, as described above; and
- two global consultations on the Global AA-HA! guidance document, as described below.

The first round of global consultation on the development of the Global AA-HA! guidance to support country implementation document took place between October 2015 and March 2016 in order to review the proposed principles for the document. In total, 888 participants from 126 countries in all six WHO regions participated in face-to-face or online surveys (9). Participants represented individual adolescents and young adults, youth groups and government, civil society, private sector, academic and donor agencies. Among respondents who indicated their country (n=599), most were from the Region of the Americas (34%), followed by the African (22%), South-East Asia (17%), European (17%), Western Pacific (7%) and Eastern Mediterranean (3%) Regions. Adolescents and young adults from 57 countries participated and made up 12% of respondents. Public health or national or regional health managers from 72 countries also participated.

Overall, this consultation found there was strong agreement with all principles proposed for the Global AA-HA! guidance document, i.e. the central involvement of youth; equity, human rights and gender equality; a comprehensive approach to positive adolescent development; reinforcement of relevant existing WHO global and regional strategies and action plans; acknowledgement of diversity and adequate attention to vulnerable adolescents; promotion of integrated responses that address multiple outcomes, risk factors and determinants; and flexibility to account for various epidemiological and socioeconomic contexts. Sixty per cent of respondents agreed or strongly agreed that the document should have the role of the health sector as its primary focus. However, there was also overwhelming agreement that it should address social determinants of health, the role of sectors other than health, and performance targets and indicators to ensure accountability. There were no major differences between answers given by young people and other groups.

> During this first round of consultation, participants were invited to suggest the one most important thing that the Global AA-HA! guidance document should aim to achieve.
>
> The most frequent suggestions were:
> - give attention to and involve adolescents; and
> - address a range of health needs related to comprehensive prevention and care (e.g. mental health, violence, nutrition and sexual and reproductive health).

> Conversely, when participants were invited to suggest the single most important thing that the Global AA-HA! guidance document should avoid, the most frequent recommendations were to avoid:
> - not involving youth properly;
> - creating a general blueprint rather than accounting for specific contexts; and
> - not being comprehensive enough (i.e. focusing too much on a single issue).

The second round of global consultations on the development of the Global AA-HA! guidance document was an online survey that took place from 15 December 2016 to 15 January 2017. The survey was available in all six of the official WHO languages, and respondents were allowed to write narrative responses in those languages. Respondents were asked to comment on one or more sections of the penultimate draft of the guidance document and its annexes. Specifically, they were asked to identify aspects that they liked and thought should be kept, and also those they disliked and thought should be reduced or altered. In total, there were 386 respondents from 55 countries, representing all six WHO regions. Among respondents who indicated their country (n=340), the largest number were from the Region of the Americas (39%), followed by the European (24%), African (14%), Western Pacific (11%), and Eastern Mediterranean and South-East Asia Regions (6% each). Participants represented all key categories of stakeholder. Adolescents and young adults constituted less than 10% of respondents.

Overall, there was strong satisfaction with the penultimate draft of the Global AA-HA! guidance document. Respondents greatly welcomed the consultative process that guided its design and development. Of particular interest was the adoption of the ecological model; respondents saw considerable merit in the utilization of this multidimensional approach to adolescent health and well-being. The focus on positive adolescent development was also highly appreciated. Respondents also identified the content, flow and layout of the draft document as key strengths.

In response to questions about how the penultimate draft could be improved, some respondents suggested restructuring and possibly shortening it, expressing concern that it might be too lengthy for consultative purposes. There were also recommendations to update reference citations with more recent and available information. Finally, there was a request to increase content related to sexual and reproductive health and gender issues, including increased disaggregation of results by gender.

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Annex 1. Additional information about the Global AA-HA! guidance to support country implementation and adolescent development

A1.4.
Adolescent rights

The 2030 Agenda for Sustainable Development and its Sustainable Development Goals (SDGs), and the Global Strategy for Women's, Children's and Adolescents' Health (2016–2030) (the Global Strategy), emphasize the importance and centrality of internationally recognized human rights standards in all efforts to improve the health and development of adolescents and young people.

The Convention on the Rights of the Child (CRC) (10) and other relevant, legally binding human rights instruments provide useful legal and normative frameworks. These guide the development, implementation, monitoring and evaluation of national laws, policies and programmes, budgetary processes, strategies, plans of action and services aimed at optimizing adolescent health and development, including sexual and reproductive health (11). Based on recognized legal entitlements and freedoms of all adolescents, they require and facilitate a comprehensive, inclusive and participatory approach. This includes "recognition and respect for the dignity and agency of adolescents; their empowerment, citizenship and active participation in their own lives; the promotion of optimum health, well-being and development; and a commitment to the promotion, protection and fulfilment of their human rights, without discrimination" of any kind (12). In other words, protecting and improving the health and development of adolescents is not merely a matter of recognizing their needs and accepting responsibility. It also requires recognizing these needs as legal entitlements, and ensuring that governments and other stakeholders uphold these entitlements by fulfilling their legal obligations. Even when responsibilities are delegated or provided by non-state actors, states are held primarily responsible (13).

The rights of adolescents are summarized in Table A1.2. The overarching principles relate to equality and non-discrimination, including gender equality, participation and accountability. All actions should be guided by the best interest of the child (14) and consideration for the child's views (15) while keeping in mind the child's right to privacy (16) and to protection from inappropriate information (10). In Table A1.2 specific health-related rights are summarized under seven headings: health; nutrition; education and the transition to work; clean air; water, sanitation and hygiene; infrastructure; child protection and provisions for vulnerable groups.

A critical issue to consider within human rights is the role of gender and how it impacts on adolescent health. "Gender" refers to socially constructed male and female characteristics, such as norms, roles and relationships of and between groups of adolescent girls and boys (21). Gender norms, roles and relations often contribute to enhanced vulnerability in adolescents. For instance, marginalized adolescent girls affected by harmful traditional practices bear burdens of discrimination and human rights violations that often affect their health and well-being as well as curtail their schooling (22). Girls who are married or who work in domestic service are examples of socially isolated girls whose needs are often overlooked and whose behaviour may be dictated by others, to their detriment (e.g. access to health-care, or rapid repeat pregnancy) (23). Gender roles may also detrimentally influence the health of adolescent boys; for example, social norms of masculinity may contribute to risk-taking and resultant injuries (24).

All adolescents have rights in relation to health and development that are protected under the Convention on the Rights of the Child and other relevant human rights treaties CRC Art. 24 (paragraph 1) (10); ICESCR Art. 10, Art. 12 & Art. 13 (11); UDHR Art. 25 & 26 (18); CRPD Art.24 & Art. 25 (19); CEDAW Art. 5 (20); ICMW Art. 30 & Art. 45 (17)

Overarching principles that are necessary to respect, protect and fulfil enshrined entitlements and freedoms

Equality and non-discrimination, including gender equality: without discrimination of any kind, irrespective of the child's or his or her parent's or legal guardian's race, colour, sex, language, religion, political or other opinion, national, ethnic or social origin, property, disability, birth or other status CRC Art. 2 (10); Disability: CRC Art. 23 (paragraph 1-3) (10); Gender: CRC General Comment 15, Art. 43 & Art. 56 (13), CRC General Comment 20, Art. 27-30, Art. 33 & Art. 34 (12); Health-care services: CRC Art. 24 (paragraph 1) (10); Education: CRC Art. 28 (paragraph 1b & 1d) (10)

Participation: Freedom of expression including the right to express views on all matters affecting him or her; freedom of thought, conscience and religion; freedom of association and assembly and right to maintain direct contacts with both parents CRC Art. 9 (paragraph 3 & 10), Art. 10 (paragraph 2), Art. 12 (paragraph 1) & Art. 13-15 (10)

Accountability: Awareness of the principles and provisions of the Convention; right to justiciability* and non-retrogression of entitlements**; best interest of the adolescent to be considered in all proceedings depending on age and maturity (evolving capacity); international cooperation and exchange of information with particular attention given to the needs of developing countries CRC Art. 3 (paragraph 1), Art. 4, Art. 23 (paragraph 4), Art. 24 (paragraph 4), Art. 28 (paragraph 3), Art. 42 & Art. 44 (paragraph 6) (10)

Table A1.2.

A summary of adolescents' rights related to health

HEALTH	Right to highest attainable standard of health and to health-care (that is sufficiently available, accessible and acceptable to all adolescents, without discrimination of any kind, and is of high quality) **CRC Art. 24 (paragraph 1, 2b & 2f) (10); ICESCR General Comment 14 Art. 12 (14)**
	Right to health-related information and education, including in relation to sexual and reproductive health **CRC Art. 24 (paragraph 2f) & Art. 17 (10)**
	Right to access to education and support in the use of basic knowledge of child health and nutrition, the advantages of breastfeeding, hygiene and environmental sanitation, prevention of accidents and family planning education **CRC Art. 24 (paragraph 2e & 2f) (10)**
NUTRITION	Right to adequate and nutritious food and basic knowledge of health and nutrition **CRC Art. 24 (paragraph 2c & 2e) (10)**
	Right to material assistance and support programmes for nutrition from parents, guardians or the State to realize the right to a standard of living adequate for healthy development **CRC Art. 27 (10)**
EDUCATION & TRANSITION TO WORK	Right to free and available compulsory primary education **CRC Art. 28 (paragraph 1a) (10)**
	Right to non-discrimination in accessing secondary and higher education and to available and accessible educational and vocational information **CRC Art. 28 (paragraph 1b & 1d) (10)**
CLEAN AIR	Right to be free of impediments (e.g. environmental pollution) that prevent the full implementation of the right to health **CRC Art. 24 (paragraph 2c) (10)**
WATER, SANITATION & HYGIENE	Right to clean drinking-water and to regulate environmental pollution in combating disease to ensure full implementation of the right to health **CRC Art. 24 (paragraph 2c) (10)**
	Right to support in the use of basic knowledge on hygiene and environmental sanitation **CRC Art. 24 (paragraph 2e) (10)**
INFRASTRUCTURE	Right to a standard of living adequate for healthy development, including housing and health-care facilities **CRC Art. 24 (paragraph 1), Art. 27 (paragraph 1 & 3) (10)**
CHILD PROTECTION AND PROVISIONS FOR VULNERABLE GROUPS	Right to be protected from – and to recovery and reintegration when victim of – violence, abuse, neglect, maltreatment or exploitation, including sexual exploitation and abuse, harmful traditional practices and discipline, and to periodic review of treatment provided under protection*** **CRC Art. 19, Art. 24 (paragraph 3), Art. 25, Art. 28 (paragraph 2), Art. 34, Art. 36, Art. 39 (10); CRC OP (Sale of children, child prostitution and child pornography)**[1]
	Right to legal help and fair treatment in a justice system, including alternatives to institutional care, and right to not be punished in a cruel or harmful way when accused of breaking the law, for example death sentence or life imprisonment without possibility of release **CRC Art. 37 & Art. 40 (paragraph 1 & 3b) (10)**
	Right to be protected from harmful and exploitative work that endangers education, health or development **CRC Art. 32 (paragraph 1) (10); ILO C138**[2] **& C182**[3]
	Right to be protected from using harmful drugs and being used in the drug trade **CRC Art. 33 (10)**
	Right of adolescents deprived of a family environment, adopted, refugees or belonging to indigenous and minority groups to special protection and care and to enjoy their own culture, religion or language **CRC Art. 20-22 & Art. 30 (10)**
	Right not to be forced or recruited to take part in a war or join the armed forces and be protected when affected by war as guaranteed under international humanitarian law, including for adolescent refugees **CRC Art. 22, Art. 38 & Art. 39 (10); CRC OP (Involvement of children in armed conflicts)**[4]

[1] OHCHR. Optional protocol to the convention on the rights of the child on the sale of children, child prostitution and child pornography. Convention on the rights of the child: New York; 2000. (http://www.ohchr.org/EN/ProfessionalInterest/Pages/OPSCCRC.aspx).

[2] International Labour Organisation. Minimum age convention, C138. Geneva; 1973. (http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:C138).

[3] International Labour Organisation. Worst forms of child labour convention C182. Geneva; 1999. (http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:C182).

[4] OHCHR. Optional protocol to the convention on the rights of the child on the involvement of children in armed conflict. Convention on the rights of the child: New York; 2000. (http://www.ohchr.org/EN/ProfessionalInterest/Pages/OPACCRC.aspx).

Key: Table shows rights enshrined in various human rights instruments with the article number and instrument highlighted in blue.

*Justiciability: ability to take an issue to court (standing) and for the court to exercise its judicial authority.

**Non-retrogression of entitlements: guarantee not to be deprived of rights that one is used to enjoying by acts of omission or of commission by the state (implicit right derived from the entitlement of progressive realization of economic, cultural and social rights).

***Under Protection: children who are looked after by their local authorities, rather than their parents, for the purposes of care, protection or treatment of his or her physical or mental health.

A critical issue to consider within human rights is the role of gender and how it impacts on adolescent health. "Gender" refers to socially constructed male and female characteristics, such as norms, roles and relationships of and between groups of adolescent girls and boys (21). Gender norms, roles and relations often contribute to enhanced vulnerability in adolescents. For instance, marginalized adolescent girls affected by harmful traditional practices bear burdens of discrimination and human rights violations that often affect their health and well-being as well as curtail their schooling (22). Girls who are married or who work in domestic service are examples of socially isolated girls whose needs are often overlooked and whose behaviour may be dictated by others, to their detriment (e.g. access to health-care, or rapid repeat pregnancy)(23). Gender roles may also detrimentally influence the health of adolescent boys; for example, social norms of masculinity may contribute to risk-taking and resultant injuries (24).

Annex 1. Additional information about the Global AA-HA! guidance to support country implementation and adolescent development

A1.5.
Digital media opportunities and challenges

Adolescents today are engaged with digital media in many diverse ways. In most HICs, for example, it is not unusual for adolescents to have access to multiple digital platforms (e.g. laptops, digital music players and mobile phones), and for them to spend many hours per day using them (25); (26). Adolescents in LMICs are also often exposed to digital media in a variety of forms. Some LMICs, for example, have developed extensive mobile phone systems in recent years, because these are far more affordable and accessible than pre-existing landline telephone systems.

Social media can be an opportunity for adolescent education, self-expression, creativity, entertainment and activism (27). A combination of digital, media and social literacy are fundamental to an adolescent's capacity to use digital media competently and safely. Such literacy provides adolescents with the technical and higher-order evaluative skills required to access, understand, produce and participate in digital media. In addition to the opportunities for positive development provided by digital media and the online environment, several important risks exist, particularly as adolescence is a time of significant developmental change, when adolescents exhibit a limited capacity for self-regulation and an increased susceptibility to peer pressure and experimentation (28). Relationships may be more intense, with more opportunities for contact and less visibility or moderation by adults, and relationships and friendships often create permanent digital content (26). Access to adult or extreme material is fundamentally different and much easier online than offline, and quality information, clear social norms and opportunities for redress are less present in digital spaces than is usual offline.

Research on the potentially harmful effects of digital media on adolescents has largely focused on negative impacts on mental health, particularly moderate to severe depressive symptoms, substance use and suicide ideation and attempts (29). The International Telecommunication Union (ITU), the United Nations specialized agency for information and communication technologies, has broadly outlined risks for children online relating to content, contact, conduct, commerce, excessive use and societal inequity (30). Specific risks and negative consequences for adolescents can result from sleep disruption; cyberbullying; gambling; contact with strangers; sexual messaging (known as sexting); pornography exposure; and influence on alcohol use, self-esteem and body image (29); (31-38). For example, a review of studies of cyberbullying estimated that a significant proportion of children and adolescents (20–40%) have been victims of cyberbullying, and found that accompanying psychopathology is common, including an increasingly well-established link to suicidality (39).

Studies in HICs and LMICs have also found that adolescent exposure to pornography is not unusual and sometimes is associated with negative consequences. In a Swedish study, for example, frequent pornography use was associated with increased alcohol use and selling of sex. In a Côte d'Ivoire study, it was associated with being sexually active, early onset of sexual intercourse and multiple sexual partners. In a Sierra Leone study, it seemed to have become the default, primary source of sex education. In a Hong Kong (China SAR) study, family functioning and positive development characteristics were found to be protective factors in reducing pornography consumption (40); (41).

Annex 2. Additional information about disease and injury burdens

A2.1.
Risk factors for specific adolescent disease and injury burdens

The following sections describe risk factors that are associated with the main causes of adolescent mortality and DALYs lost, as described in Section 2.1. Importantly, these are examples of risk factors rather than exhaustive lists.

A2.1.1.
Unintentional injury

Risk factors associated with road traffic injury can be grouped in four categories: those related to exposure to risk (e.g. inadequate separation of high-speed motorized traffic from vulnerable road users); accident involvement (e.g. inappropriate or excessive speed; presence of alcohol, medicinal or recreational drugs; use of a mobile phone); accident severity (e.g. non-use of seat-belts, child restraints or crash helmets); and severity of post-accident injuries (e.g. those for which medical care is not needed or sought; those that result in a permanent disability) (42); (43). For young car drivers, principal risks include being male, night-time driving, and transporting other young people as passengers.

Risk factors associated with drowning include a lack of physical barriers restricting exposure to water bodies; poor swimming skills; low awareness of water dangers; high-risk behaviour (e.g. consuming alcohol near water); use of unsafe transport on water and water crossings; lack of a safe drinking-water supply; and flood disasters (44); (45). Adolescents tend to be less supervised than smaller children, and are more likely to engage in risky behaviour around water, including consuming alcohol. These factors can contribute to adolescent drowning mortality and morbidity (46).

Risk factors associated with burn injury differ according to region, but typically include alcohol and smoking; high set temperature in hot water heaters; substandard electrical wiring; fireworks (particularly for adolescent boys); use of open fires to heat rooms and use of kerosene for lamps; and the use of open fires for cooking, especially when wearing long, loose-fitting clothing (particularly for adolescent girls and women) (44); (47).

A2.1.2.
Violence

Risk factors associated with youth violence include those at the individual level (e.g. male sex; conduct disorder; low academic achievement; involvement in delinquency, illicit drug use; harmful alcohol use); the family and peer level (e.g. poor parental supervision; family history of antisocial behaviour, bullying and victimization; antisocial peers); and the community and society level (e.g. poverty; weak governance and poor rule of law; easy access to alcohol, illicit drugs and firearms) (48).

Risk factors associated with intimate partner and/or sexual violence include those at the individual level for either the perpetrator (e.g. experience of childhood sexual abuse; antisocial personality) or the victim (e.g. young age; intra-parental violence) or both (e.g. low education; harmful use of alcohol; acceptance of violence); the community level (e.g. weak community sanctions; poverty); and the societal level (e.g. traditional gender norms; social norms supportive of violence) (49).

Risk factors associated with child maltreatment include the child being an adolescent as opposed to a child aged 5–9 years and being unwanted or having special needs. For the caregiver, they include having been maltreated themselves as a child; lacking awareness of child development, or having unrealistic expectations; misusing alcohol or drugs; and experiencing financial difficulties. For the relationship, they include physical, developmental, or mental health problems of a family member, and being isolated in the community. For the community, risk factors include inadequate policies and programmes to prevent child maltreatment, child pornography, child prostitution and child labour. They also include social and cultural norms that promote or glorify violence towards others, support the use of corporal punishment, demand rigid gender roles, or diminish the status of the child in parent-child relationships (50); (52).

Figure A2.1 provides an overview of how risk factors associated with violence against children relate to each other within a social ecological model.

Figure A2.1. Social ecological model summarizing factors contributing to violence against children

SOCIETAL	COMMUNITY	RELATIONSHIP	INDIVIDUAL
• Rapid social change • Economic inequality • Gender inequality • Policies that increase inequalities • Poverty • Weak economic safety net • Legal and cultural norms that support violence • Inappropriate access to firearms • Fragility due to conflict/post-conflict or natural disaster	• Concentrated poverty • High crime levels • High residential mobility • High unemployment • Local illicit drug trade • Weak institutional policies • Inadequate victim care services • Physical enviroment situational factors	• Poor parenting practices • Marital discord • Violent parental conflict • Early and forced marriage • Low socio-economic household status • Friends that engage in violence	• Sex • Age • Income • Education • Disability • Victim of child maltreatment • History of violent behaviour • Alcohol/substance abuse • Psychological personality disorder

Source: (52).

Annex 2. Additional information about disease and injury burdens

A2.1.3.
Sexual and reproductive health, including HIV

Risk factors associated with horizontal infection with HIV in adolescence include living in settings with a generalized HIV epidemic; sharing needles and syringes to inject drugs; having sexual intercourse without using a condom; having another sexually transmitted infection; having a high number of sexual partners; being an older adolescent rather than a younger one; the boy or man being uncircumcised; and (females only) being divorced, separated or widowed (53-55). HIV has also been associated with transactional sex, i.e. non-marital, non-commercial sexual relationships motivated by the assumption that a girl or woman will exchange sex for status or material benefit received from a boy or man (56). Key populations such as males who have sex with males, transgender persons, sex workers, or injecting drug users are also more vulnerable to HIV. The involvement of adolescents under 18 years in sex work is, by definition, sexual exploitation. Any adolescents who are sexually abused and/or exploited are vulnerable to HIV, as are those in prisons and other closed settings (54).

Risk factors associated with becoming pregnant, or making someone pregnant, in adolescence include early marriage; sexual coercion; lack of access to and use of contraception; alcohol use; not already having a child; low access and other barriers to condom use; having a sexual partner with lower education or negative attitudes about condoms; and (females only) early pubertal development; being an older rather than a young adolescent; younger age at first marriage; having low future aspirations; having a pregnant friend; and being employed (53); (57).

Risk factors associated with maternal health problems among pregnant adolescents include low educational attainment; inadequate nutrition (e.g. anaemia; iodine deficiency); being a young adolescent; immaturity of the pelvic bones and birth canal; malaria; HIV; and pregnancy-induced hypertension (58). In addition, pregnancy and lactation can cause weight loss, depletion of fat and lean body mass, and a ceasing of linear growth in young adolescent girls. This may contribute to stunting, may exacerbate the outcome of future pregnancies, and may increase the risk of maternal morbidity and mortality (59); (60).

A2.1.4.
Communicable diseases

Risk factors associated with lower-respiratory infections include outdoor air pollution; ambient particulate matter pollution; indoor air pollution from solid fuel use; tobacco exposure; alcohol use; and zinc deficiency (61-63).

Risk factors associated with diarrheal diseases include poor personal hygiene (e.g. in food-handlers); lack of sanitation (e.g. in food preparation and health-care settings); eating undercooked food; contaminated soil, water and food; poverty; and climate change (61); (64).

Risk factors associated with meningitis take place at the level of the organism (e.g. some strains are more virulent than others); individual (e.g. low socioeconomic status; tobacco use; HIV infection; mucosal lesions; concomitant respiratory infections); population (e.g. immunological susceptibility of the population) and environment (e.g. crowding; travel to epidemic areas; special climatic conditions such as the dry season or dust storms) (65-67).

Risk factors associated with malaria can relate to being a young adolescent; being female; occupation (e.g. migrant worker); location (e.g. near a large dam); ecology (e.g. deep forests); climate change; use of insecticide-treated nets; and weak health systems. For example, malaria may concentrate in marginalized populations, such as those living in remote border areas, and tribal populations (61); (68). Important preventive factors are using a long-lasting insecticide treated bednet (LLIN) when sleeping at night.

Risk factors associated with tuberculosis include those related to exposure and transmission (e.g. household air pollution (340); poverty) and those related to developing tuberculosis after infection, including age (i.e. adolescence); immunodeficiency (e.g. that caused by HIV infection, measles or severe malnutrition); several noncommunicable diseases (e.g. diabetes mellitus; silicosis); smoking; and harmful alcohol and drug use (69); (70).

A2.1.5.
Noncommunicable diseases

Risk factors associated with congenital anomalies can relate to genetics (e.g. consanguinity; ethnicity) and/or maternal factors (e.g. infections; poor nutrition; environmental exposure) (72).

Risk factors associated with leukaemia include genetic susceptibility and environmental factors. The major environmental risk factor for leukaemia is ionizing radiation, but weaker associations have also been found for non-ionizing radiation; chemicals (e.g. hydrocarbons; pesticides); and alcohol, cigarette and illicit drug use (62); (73).

Risk factors associated with cerebrovascular disease and stroke include behaviours such as tobacco use; physical inactivity; having an unhealthy diet (rich in salt, fat and calories); and harmful use of alcohol. Metabolic risk factors include raised blood pressure (hypertension); raised blood sugar (diabetes); raised blood lipids (e.g. cholesterol); and overweight and obesity. Other risk factors include ambient particulate matter pollution; household air pollution from solid fuels; lead exposure; poverty; low educational status; being male; genetic disposition; and psychological factors (e.g. stress or depression) (62); (74); (75).

Risk factors associated with chronic respiratory diseases, including asthma, include tobacco use; second-hand tobacco smoke; other indoor air pollutants; outdoor air pollutants; allergens; and occupational agents (76); (77).

Risk factors associated with iron-deficiency anaemia primarily relate to dietary inadequacies (e.g. diets based mostly on staple foods with little meat intake; past malnutrition; low body nutrient stores). Risk factors also include early pregnancy and specific health conditions (e.g. infections that cause blood loss, such as hookworms, malaria and urinary schistosomiasis) (78); (79).

Risk factors associated with skin disorders in low- and middle-income countries include hot and/or humid climate; poor hygiene; low water use; overcrowding; and other skin disorders (80).

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Annex 2. Additional information about disease and injury burdens

Mental health, substance use, and self-harm

Risk factors associated with non-suicidal self-injury in adolescents include a history of sexual or physical abuse, negative or stressful life events, and symptoms often linked with psychiatric morbidity (e.g. depression; dissociation; anxiety; hostility; poor self-esteem; antisocial behaviour; smoking; emotional reactivity; and deficits in emotion regulation). Stressful life events often involve interpersonal conflict; losses; family discord; difficulties with friends; problems in romantic relationships; and school problems. Notably, all of these risk factors are not specific and are also risk factors for suicidal behaviour (81).

Risk factors associated with suicide can function at different ecological levels, including:

- **individual** – e.g. history of self-harm or previous suicide attempt; mental disorders; harmful use of alcohol or drugs; job or financial loss; hopelessness; chronic pain; family history of suicide; genetic and biological factors;

- **interpersonal** – e.g. sexual, physical or emotional abuse or neglect in childhood or adolescence; sense of isolation and lack of social support; relationship conflict, discord or loss; intimate partner violence; experience of cyberbullying;

- **community** – e.g. discrimination against lesbian, gay, bisexual, transgender or intersex persons; stigma associated with help-seeking; stresses of acculturation and dislocation;

- **organization** – e.g. barriers to accessing health-care; and

- **environment/structure/macro** – e.g. access to means; disaster, war and conflict.

  (51); (62); (82-84).

Risk factors associated with depression include those that are biological (e.g. being female for a postpubertal adolescent; family history of a mood disorder) and experiential (e.g. harsh parenting or parental rejection; child abuse and neglect; bullying; stressful life events, such as loss of a parent) (62); (85); (86).

Risk factors associated with anxiety include adverse childhood experiences (e.g. abuse, neglect, separation from parents and death of a parent); genetic and biological factors (e.g. family history of anxiety; anxious temperament as an infant/child); learning processes during childhood (e.g. modelling and over-control by overanxious parents); feelings of lack of control; and low self-efficacy, coping strategies and social support (85); (87).

Risk factors associated with conduct disorder include maternal smoking during pregnancy; behavioural impulsivity; parenting issues, such as harsh and inconsistent discipline and inadequate supervision; parental antisocial behaviour and substance use; child abuse; early aggressive behaviour and conduct problems; early substance use; deviant peer groups; low popularity among peers; and impoverished and socially disorganized neighbourhoods with high levels of crime (85).

Risk factors associated with adolescent alcohol use disorders include environmental factors (e.g. peer influence on risk-taking; peer acceptance as reward; high peer alcohol use and favourable attitudes of peers toward alcohol use; low levels of parental supervision; exposure to a close family member who drinks; easy access to alcohol; positive expectations of alcohol); a family history of alcohol problems; and mental health (e.g. childhood sexual abuse; sensation seeking and behavioural disinhibition; conduct disorder; antisocial behaviour; depression) (62); (88).

Risk factors associated with drug-use disorders include: early onset of drug use; using multiple types of illicit drugs; onset before age 15 years of externalizing (e.g. conduct disorder) and internalizing mental disorders (e.g. depression); high unemployment; and poverty (89).

A2.2.
Additional information about humanitarian and fragile settings

Many of today's humanitarian crises involve collective violence, including political conflicts that occur within or between states (e.g. war; terrorism), state-perpetrated actions (e.g. genocide; repression; disappearances; torture), and organized crime (e.g. banditry and gang warfare) (90). Civilians are often the primary victims and may be exposed to human rights abuses, physical and sexual violence, arbitrary detention and imprisonment, intimidation, and forced displacement (91). During both natural and human-caused crises, health infrastructure can be damaged and health systems and service delivery severely disrupted (92). Such events have devastating impacts on human health, potentially causing hundreds of thousands of deaths, and illness and injury for millions of others. Table A2.1 summarizes the main ways that large-scale conflicts or natural disasters directly impact on the health of general populations.

Table A2.1. Examples of increased mortality, morbidity, and disability in humanitarian and fragile settings

HEALTH IMPACT	CAUSES
Increased mortality	Deaths due to external causes, mainly related to weapons
	Deaths due to infectious diseases (such as measles, poliomyelitis, tetanus and malaria)
	Deaths due to noncommunicable diseases, as well as deaths otherwise avoidable through medical care (including asthma, diabetes and emergency surgery)
Increased morbidity	Injuries from external causes, such as those from weapons, mutilation, antipersonnel landmines, burns and poisoning
	Morbidity associated with other external causes, including sexual violence
	Infectious diseases: • water-related (such as cholera, typhoid and dysentery due to Shigella spp.); • vector-borne (such as malaria and onchocerciasis); and • other communicable diseases (such as tuberculosis, acute respiratory infections, HIV infection and other STIs).
	Reproductive health: • a greater number of stillbirths and premature births, more cases of low birth weight, and more delivery complications; and • longer-term genetic impact of exposure to chemicals and radiation.
	Nutrition: • acute and chronic malnutrition and a variety of deficiency disorders.
	Mental health: • anxiety • depression • post-traumatic stress disorder • suicidal behaviour.
Increased disability	Physical
	Psychological
	Social

Source: (90).

Annex 3. Additional information about evidence-based interventions

Positive development interventions

A3.1.1.
Adolescent-friendly health services

Adolescent-friendly health services are those that are accessible, acceptable and appropriate for adolescents (93). They are equitable because they are inclusive and do not discriminate against any group within this young clientele on grounds of gender, ethnicity, religion, disability, social status or any other reason. Indeed, they may reach out to those who are most vulnerable and those who lack services. In 2012, WHO published Making Health Services Adolescent Friendly, a guidance document on developing national quality standards (94). Table A3.1 defines the eight global standards for health-care services for adolescents (8).

Table A3.1. Global standards for quality health-care services for adolescents

STANDARD	DEFINITION
1. Adolescents' health literacy	The health facility implements systems to ensure that adolescents are knowledgeable about their own health, and they know where and when to obtain health services.
2. Community support	The health facility implements systems to ensure that parents, guardians and other community members and community organizations recognize the value of providing health services to adolescents and support such provision and the utilization of services by adolescents.
3. Appropriate package of services	The health facility provides a package of information, counselling, diagnostic, treatment and care services that fulfils the needs of all adolescents. Services are provided in the facility and through referral linkages and outreach. Service provision in the facility should be linked, as relevant, with service provision in referral-level health facilities, schools and other community settings.
4. Providers' competencies	Health-care providers demonstrate the technical competence required to provide effective health services to adolescents. Both health-care providers and support staff respect, protect and fulfil adolescents' rights to information, privacy, confidentiality, non-discrimination, non-judgemental attitudes and respect.
5. Facility characteristics	The health facility has convenient operating hours, a welcoming and clean environment and maintains privacy and confidentiality. It has the equipment, medicines, supplies and technology needed to ensure effective service provision to adolescents.
6. Equity and non-discrimination	The health facility provides quality services to all adolescents irrespective of their ability to pay, age, sex, marital status, education level, ethnic origin, sexual orientation or other characteristics.
7. Data and quality improvement	The health facility collects, analyses and uses data on service utilization and quality of care, disaggregated by age and sex, to support quality improvement. Health facility staff are supported to participate in continuous quality improvement.
8. Adolescents' participation	Adolescents are involved in the planning, monitoring, and evaluation of health services and in decisions regarding their own care, as well as in certain appropriate aspects of service provision.

Source: (8).

Adolescent-friendly health services are comprehensive in that they deliver an essential package of services to the whole target group (e.g. Case studies A3.1 and A3.2) (8). The 2010 WHO Adolescent Job Aid is a desk reference tool to assist primary health-care workers to respond appropriately to adolescents and to provide integrated management of common concerns, including developmental conditions; menstrual conditions; pregnancy-related conditions; genital conditions; questions related to HIV; abdominal pain; suspected anaemia; tiredness; headache; skin problems; body image concerns; vision problems; and concerns about assault or abuse (95).

Case Study A3.1

Egypt's youth-friendly health services and health education in schools

Studies have shown that many young Egyptians have sexual relations before marriage. However, Egyptian adolescents receive little accurate information about sexuality and protecting their health, leaving them vulnerable to coercion, abuse, unintended pregnancy and HIV and other STIs. Since 2003, the Egyptian Family Planning Association, which is the government's primary partner in sexual and reproductive health (SRH), has attempted to address these issues through youth-friendly clinics and school-based health education. Over a decade, approximately 30 clinics in Cairo and Upper and Lower Egypt participated in initiatives to build their capacities to respond appropriately to adolescent SRH issues.

Each youth-friendly clinic is staffed by a doctor and a nurse who has been trained in providing youth SRH services at subsidized prices, including pre-marital counselling and examination; counselling, examination and treatment or referral for STIs; counselling, examination and treatment of pubertal disorders; counselling and provision of contraceptive methods for married youth; antenatal and postnatal care and counselling and laboratory services. Limitations include that, in accordance with government policies, youth-friendly clinic providers can only provide information and counselling and are not allowed to give physical examinations to unmarried youth. In addition, despite the need for youth SRH services, the youth-friendly clinics are currently underutilized. Several factors have contributed to this situation, including ineffective advertising, fear of stigma and lack of female physicians in some clinics.

As an extension to youth-friendly clinics, an SRH education project was rolled out in schools close to clinics in 22 governorates. The project aims to provide accurate and appropriate reproductive health information to adolescent students, correct their misconceptions, and respond to their questions and concerns. Two physicians from each governorate – one male and one female – were trained in communication skills and a participatory approach to teaching. In health education sessions, the physicians and/or peer educators discuss topics such as puberty, life skills, reproductive anatomy and physiology, nutrition, anaemia and smoking with the students. More than 2000 sessions in 667 schools were conducted between 2010 and 2012. These were attended by almost 32 500 students, of whom more than 17 000 were girls.

Sources: (96-98).

Case Study A3.2

Zimbabwe's youth-friendly health services to reduce unintended pregnancies

In 2009, Zimbabwe conducted a pilot project focusing on behaviour change among young people and delivery of effective, quality health services for this age group. The purpose of the project was to reduce unintended pregnancies among nursing students at Parirenyatwa Nursing School. The problems identified before launching the project were: a high pregnancy rate; a high unsafe abortion rate; a high rate of unmet contraceptive need among students who had discontinued their studies; and a lack of friendly health-care services tailored to young people. The project was a student-run programme, so young people were involved in the planning, implementation and monitoring of all activities. Priority was given to treating students who attended health facilities with respect and protecting their privacy and confidentiality. After three years of implementation, more than 75% of students had used the services; the number of pregnancies per year fell from 21 to two; the number of unsafe abortions decreased from five to one; students from other institutions began to use the service; similar services were established in two other nursing schools; and planning for nationwide provision of such services was underway.

Source: (37).

Annex 3. Additional information about evidence-based interventions

Importantly, when adolescents seek help from a health worker, they tend to volunteer information about the health problem that seems most important to them (i.e. the presenting complaint). They may have other health problems and concerns but may not say anything about them unless directly asked, especially if they feel embarrassed or scared. In such situations, health workers should consider conducting a HEADSSS assessment (an acronym for home, education/employment, eating, activity, drugs, sexuality, safety, suicidal thinking/depression) to detect any health and development problems that the adolescent has not presented with, and whether the adolescent engages in, or is likely to engage in, behaviours that could put them at risk of negative health outcomes (such as injecting drugs or having unprotected sex) (95). Information that can be obtained from a HEADSSS assessment is detailed in Table A3.2.

Table A3.2. Content of a primary care HEADSSS assessment with an adolescent: home, education/employment, eating, activity, drugs, sexuality, safety, suicidal thinking/depression

CATEGORY	INFORMATION TO BE ASSESSED
1. Home	• where they live • with whom they live • whether there have been recent changes in their home situation • how they perceive their home situation.
2. Education/ employment	• whether they study or work • how they perceive how they are doing • how they perceive their relation with their teachers and fellow students/employers and colleagues • whether there have been any recent changes in their situation • what they do during their breaks.
3. Eating	• how many meals they have on a normal day • what they eat at each meal • what they think and feel about their bodies.
4. Activity	• what activities they are involved in outside study or work • what they do in their free time – during week days and on holidays • whether they spend some time with family members and friends.
5. Drugs	• whether they use tobacco, alcohol or other substances • whether they inject any substances • if they use any substances, how much do they use; when, where and with whom do they use them.
6. Sexuality	• their knowledge about sexual and reproductive health • their knowledge about their menstrual periods • any questions and concerns that they have about their menstrual periods • their thoughts and feelings about sexuality • whether they are sexually active; if so, the nature and context of their sexual activity • whether they are taking steps to avoid sexual and reproductive health problems • whether they have in fact encountered such problems (unintended pregnancy, infection, sexual coercion); if so, whether they have received any treatment for this • their sexual orientation.
7. Safety	• whether they feel safe at home, in the community, in their place of study or at work, on the road (as drivers and as pedestrians) etc. • if they feel unsafe, what makes them feel so.
8. Suicidal thinking/ depression	• whether their sleep is adequate • whether they feel unduly tired • whether they eat well • how they feel emotionally • whether they have had any mental health problems (especially depression); if so, whether they have received any treatment for this • whether they have had suicidal thoughts • whether they have attempted suicide.

Source: (95).

Related to sexual and reproductive health assessments with adolescents in primary care, WHO recommends a brief sexuality related communication for prevention of STIs among adults and adolescents in primary health services. Health-care providers thus should be trained in the sexual health knowledge and skills they need to carry out such communication (99). Sexual health here is defined as a state of physical, emotional, mental and social well-being in relation to sexuality; it is not merely the absence of disease, dysfunction or infirmity. The WHO working definition of sexuality is: "a central aspect of being human throughout life that encompasses sex, gender identities and roles, sexual orientation, eroticism, pleasure, intimacy and reproduction" (99).

Brief sexuality related communication involves a nurse, doctor or health educator using counselling skills, when the opportunity arises, to address sexuality and to promote sexual well-being during the length of a typical primary health-care visit. It is rooted in the understanding that there is often a gap between intention and behaviour, and seeks to enable clients to bridge this gap by helping them to establish clear personal goals, as well as to initiate and sustain their motivation and actions towards achieving these. Because this communication is provided by a health worker, it has a greater likelihood of overcoming cultural sensitivities that exist in many contexts around giving information and support to adolescents in relation to sexuality – assuming that the provider has received appropriate training and support to deliver it well.

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Annex 3. Additional information about evidence-based interventions

School health, hygiene and nutrition interventions

WHO, the United Nations Children's Fund (UNICEF), the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the World Bank have agreed upon a core group of cost-effective components of a school health, hygiene and nutrition programme, as follows:

- health-related policies in schools that help to ensure a safe and secure physical environment and a positive psychosocial environment, and address all types of school violence, such as abuse of students, sexual harassment and bullying;

- safe water and sanitation facilities, as first steps in creating a healthy school environment;

- skills-based health education that focuses on the development of the knowledge, attitudes, values and life skills needed to make, and act on, the most appropriate and positive decisions concerning health; and

- school-based health and nutrition services that are simple, safe and familiar, and address problems that are prevalent and recognized as important in the community.

    (100).

WHO has provided detailed guidance to countries on these and other aspects of a health-promoting school through a series of publications. WHO's Information Series on School Health includes issues focused on local action (189); healthy nutrition (101); emotional and social well-being (102); skills for health (103); violence prevention (104); reproductive health (105); HIV/AIDS/STI and related discrimination (106); physical activity (107); reducing helminth infections (108); tobacco use prevention (109); sun protection (110); oral health (111); and the physical environment (112).

For example, in 2003 WHO published a guidance document that outlines what is needed for a school to provide a healthy psychosocial environment for students (102). The document explains how teachers and other school staff can assess the psychosocial environment at their school and make organizational changes to improve promotion of the mental health and well-being of students. This process includes assessing whether the school provides a friendly, rewarding and supportive atmosphere; supports cooperation and active learning; forbids physical punishment and violence; does not tolerate bullying, harassment and discrimination; values the development of creative activities; connects school and home life through involving parents; and promotes equal opportunities and participation in decision-making (e.g. Case study A3.3).

Table A3.3 lists more resources from various organizations on planning, implementing, monitoring and evaluating school health programmes.

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Table A3.3. Resources from various organizations on planning, implementing, monitoring and evaluating school health programmes

ORGANIZATION/INITIATIVE	ADVOCACY, POLICY GUIDANCE, CASE STUDIES FROM COUNTRIES	IMPLEMENTATION MANUALS AND TOOLS	MONITORING AND EVALUATION
WHO	**European framework for quality standards in school health services and competences for school health professionals.** (http://www.euro.who.int/__data/assets/pdf_file/0003/246981/European-framework-for-quality-standards-in-school-health-services-and-competences-for-school-health-professionals.pdf?ua=1).		**Global School-based Student Health Survey (GSHS)** (http://www.who.int/chp/gshs/en/). **Global Youth Tobacco Survey (GYTS)** (http://www.who.int/chp/gshs/en/). **Health Behaviour in School-Aged Children (HBSC)** (http://www.hbsc.org/). **Case studies from countries on HBSC data-driven policy** (http://www.euro.who.int/__data/assets/pdf_file/0008/303488/HBSC-No.7_Success-stories.pdf?ua=1).
School for health in Europe	**School health promotion: evidence for effective action** (http://www.schools-for-health.eu/uploads/files/SHE-Factsheet_2_School%20health%20promotion_Evidence.pdf).	**School for health online school manual** (http://www.schools-for-health.eu/uploads/files/Final_English_SHE%20school%20manual_print%20version_21072015.pdf). **School action planner** (http://www.schools-for-health.eu/uploads/files/SHE%20school%20manual_School%20action%20planner_21072015.docx).	**SHE (online) rapid assessment tool** (http://www.schools-for-health.eu/uploads/files/English_SHE%20health%20promoting%20school%20Rapid%20Assessment%20Tool.pdf.
International Union for Health Promotion and Education (IUHPE)	**Monitoring and assessing progress in health-promoting schools: issues for policy-makers to consider** (http://www.iuhpe.org/images/PUBLICATIONS/THEMATIC/HPS/HPS_Issues4Policy-Makers2Consider_EN.pdf). **Facilitating Dialogue between the Health and Education Sectors to advance School Health Promotion and Education** (http://www.iuhpe.org/images/PUBLICATIONS/THEMATIC/SCHOOL/FacilitatingDialogueHE_EN.pdf). **Promoting Health in Schools: From evidence to Action (the document is available in Arabic, Simple Chinese, Traditional Chinese, English, French, Italian, Japanese, Portuguese, Russian and Spanish)**	**Achieving Health-Promoting Schools: Guidelines to Promote Health in Schools (the document is available in Arabic, Chinese, English, French, Italian, Japanese, Portuguese, Russian and Spanish)** (http://www.iuhpe.org/images/PUBLICATIONS/THEMATIC/HPS/HPSGuidelines_ENG.pdf).	
Interagency partnership on Focusing Resources on Effective School Health (FRESH)	**FRESH examples from countries and policy guidance on HIV** (http://hivhealthclearinghouse.unesco.org/library/search/_all_/theme/hiv-and-education/theme/school-health) **School health in Latin America and the Caribbean** (http://hivhealthclearinghouse.unesco.org/library/search/_all_/region/americas-and-caribbean/theme/hiv-and-education/theme/school-health)	**FRESH implementation tools on food and nutrition** (http://www.schoolsandhealth.org/Pages/SchoolNutrition.aspx) **FRESH implementation tools on water, sanitation and hygiene** (http://www.schoolsandhealth.org/Pages/WASH.aspx)	**Monitoring and Evaluation Guidance for School Health Programmes – Eight Core Indicators to Support FRESH** (http://hivhealthclearinghouse.unesco.org/sites/default/files/resources/FRESH_M%26E_CORE_INDICATORS.pdf). **Monitoring and Evaluation Guidance for School Health Programmes – Thematic Indicators** (http://hivhealthclearinghouse.unesco.org/sites/default/files/resources/FRESH_M%26E_THEMATIC_INDICATORS.pdf) **Monitoring and Evaluation Guidance for School Health Programmes – Appendices** (http://hivhealthclearinghouse.unesco.org/sites/default/files/resources/FRESH_M%26E_Appendices.pdf).
Centers for Disease Control and Prevention (CDC)	CDC tools and resources on school health across topics (277)	**Professional Development and Training** (https://www.cdc.gov/healthyschools/trainingtools.htm).	**School Health Policies and Practices Study (SHPPS) (survey questionnaires, reports)** (https://www.cdc.gov/healthyyouth/data/shpps/index.htm).

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Case Study A3.3

The Islamic Republic of Iran's school mental health promotion project

The national mental health programme in the Islamic Republic of Iran was launched in 1988, and at that time focused mainly on the integration of mental health into primary health-care for the general population. Subsequent student surveys highlighted psychosocial problems among adolescents, which led to a new focus on mental health promotion in schools. A pilot project for school children and their parents was started in Damavand, a city north of Tehran. An evaluation found the intervention significantly improved students' and parents' attitudes towards mental health, increased student self-esteem, reduced fear of examinations, ended corporal punishment, reduced sexual assaults, and reduced student smoking. The programme was subsequently scaled-up to the national level.

Source: (113).

Nutrition services, including meal provision

Schools provide a wealth of opportunities to improve adolescent nutrition through formal learning, gardening, cooking and feeding (79). To implement comprehensive school-based nutrition programmes, national governments should:

- establish standards for meals provided in schools, or foods and beverages sold in schools, that meet healthy nutrition guidelines;
- eliminate the provision or sale of unhealthy foods, such as sugar-sweetened beverages and energy-dense, nutrient-poor foods, in the school environment;
- ensure access to potable water in schools and sports facilities;
- require inclusion of nutrition and health education within the core curriculum of schools;
- improve the nutrition literacy and skills of parents and caregivers; and
- make food preparation classes available to children, their parents and caregivers.

  (114)

School feeding programmes are especially important as they can ensure equitable food availability even for disadvantaged adolescents, and promote healthy eating for all on a large scale (e.g. Case study A3.4) (101). These programmes might provide breakfast, lunch and/or snacks at reduced price or free of charge. Feeding programmes have been shown to increase the weight of children who do not otherwise have access to adequate food, and in some cases they have increased school attendance and achievement, particularly among girls (79); (101). In addition, the controlled nature of the school environment and its position within society makes establishing norms for nutritional quality a relatively easy task (115). School food is generally subject to strict quality and composition regulation, and studies have found that the nutritional quality of school lunches is significantly better when it is provided by the school, compared to food brought from home or purchased externally. WHO has also produced resources to aid governments in promoting healthy drinks in school environments, e.g. the 2016 WPRO guidelines Be Smart: Drink Water: A Guide for School Principals in Restricting the Sale and Marketing of Sugary Drinks in and around Schools (116).

Case Study A3.4.

Sweden's national programme to provide school meals to all students

Sweden has a long tradition of providing free school meals in primary and secondary school. This is regulated by state law, although state regulation is interpreted differently by municipalities across the country. School meals are funded by municipal taxes and municipalities operate the services in most areas; private-contract caterers do so in some others. Head teachers, municipal dieticians or private-contract caterers are responsible for school-meal staff. The focus is on lunch, but a growing number of schools now also offer breakfast. School food must comply with Swedish Government Food Agency quality criteria and guidelines based on national nutrition recommendations that address nutrient content, menu planning, hygiene, eating environment and integration of the school food service within curricular activities. The main focus is on healthy food provision, but the choice of meals varies between municipalities and schools despite state regulation. The Swedish Government Food Agency hosts a website on which pupils, parents, school-meal

personnel and decision-makers can rate meals. The meal service is mandatory, so the compliance and participation rate is very high. However, in many cases the school food is unpopular among students, teachers and parents.

The Swedish Municipality of Malmø, which has 82 primary schools, has made considerable efforts to make an appealing and sustainable food service through its environmental protection agency, taking a particular focus on the climate effects of food choices. One of its flagship schools developed new recipes based on the local food supply, school-based gardening and seasonal, organic produce, and rebuilt the school kitchen to support such innovation. The school has reported increased support and demand for school meals since this revitalization effort began. School and municipal practitioners attribute their success to the wide participation of catering and educational staff, and the creation of education opportunities for staff to support implementation.

Source: (115).

Health education, including comprehensive sexuality education

Skills-based health education uses participatory activities to help students acquire knowledge and develop the attitudes and skills required to adopt healthy behaviours (98). These can include cognitive skills (e.g. problem-solving, creative thinking, critical reflection and decision-making); personal skills (e.g. self-awareness, anger management and emotional coping); and interpersonal skills (e.g. communication, cooperation and negotiation). For example, skills-based health education seeks to clarify students' perceptions of risk and vulnerability, which can help them avoid becoming infected with HIV; increase their understanding of the importance of washing hands after going to the toilet or before eating; or realize their own role in the use of resources and their impact on the environment. It has the potential to empower adolescents to protect and improve their own and others' health, safety and well-being, leading to better health and educational outcomes for them and their communities.

Within broader health programmes, adolescents should have access to reproductive health education, focused not only on reproduction's biological and technical aspects, but also on the social and emotional issues (98). Adolescents particularly need to explore feelings and relationships, as well as understand female hygiene including menstrual hygiene, male hygiene, body awareness, the maturation process and changes during puberty. Box A3.1 details the topics that should be addressed within school-based puberty education.

Annex 3. Additional information about evidence-based interventions

Box A3.1. Topics that should be included within puberty education

- What is puberty?
- When does puberty start? When does it end?
- What changes take place in female and male bodies? Body image.
- Hormonal and psychological changes and how to manage them.
- The male and female reproductive systems, i.e. sexual and reproductive anatomy and physiology, and the maturation process.
- What emotional changes are experienced?
- Erections, ejaculation, wet dreams and male hygiene.
- What is menstruation? What is premenstrual syndrome? Does menstruation hurt? How do you manage pain? How do you manage your menstruation?

- Menstrual hygiene materials, hygiene around menstruation, and how to dispose of menstrual materials. Menstrual calendar for tracking monthly menstrual flow, as well as identification of signs that a girl is going to have her period (e.g. breast sensitivity or changes in vaginal discharge).
- Cultural and religious beliefs, social norms and myths surrounding menstruation and puberty (location-specific).
- Gender roles.
- Privacy and bodily integrity.
- Adult perceptions – changing expectations and roles, and the way girls and boys are viewed as a result of reaching puberty (context-specific).
- How puberty affects a young person's role and relationship with family and friends.

Source: (98).

Puberty education should be provided in the context of comprehensive sexuality education (CSE). CSE covers a broad range of topics, including decision-making about sex and relationships, sexual health and well-being, and STI and pregnancy prevention (e.g. Case study A3.5). It should be gender-sensitive, contextually adapted, rights-based, scientifically accurate and age-appropriate (117). CSE is curriculum-based education that aims to equip adolescents with the knowledge, skills, attitudes and values that will enable them to develop a positive view of their sexuality, in the context of their emotional and social development (118). By embracing a holistic vision of sexuality and sexual behaviour, which goes beyond a focus on prevention of pregnancy and STIs, CSE enables children and young people to acquire accurate information, explore and nurture positive values and attitudes and develop life skills (118).

Case Study A3.5.

Brazil's experience with curriculum-based sex education in schools

In 2000 in Brazil, a curriculum-based sex education pro-gramme endorsed by the State Departments of Education and Health of the State of Minas Gerais was adopted in five municipalities. This programme, known as PEAS Belgo, was based on the principle that sex education is a right and an essential component of adolescent development. At least 60% of staff in participating schools were trained as part of the programme, and the curriculum included activities both inside and outside of school designed to engage adolescents in a participatory learning process. Activities included workshops, radio programmes, research projects and theatrical plays as well as the distribution of educational materials and communication tools. Adolescents participating in the sex education programme reported positive changes in sexual behaviour, including increased modern contraceptive use and more consistent condom use with casual partners.

Sources: (119); (120).

Characteristics of an effective CSE curriculum relate to development, content and implementation, as follows:

- **Development** – assessing the relevant needs and assets of the particular adolescent target group; identifying health goals, behaviours affecting those goals, and risk and protective factors affecting those behaviours; and designing activities consistent with those factors, community values and available resources (e.g. staff skills, staff time, space and supplies).
- **Content** – creating a safe social environment for adolescent participants; focusing on prevention of HIV, other STIs, early pregnancy and unsafe abortion; targeting specific sexual behaviours that lead to these health goals (e.g. reducing number of sexual partners, or using condoms and other contraceptives); clearly addressing how to avoid situations that might lead to risky behaviours; multiple activities to change each of the targeted risk and protective factors affecting these behaviours (e.g. knowledge, perceived risks, attitudes, perceived norms and self-efficacy); and using teaching methods that actively involve youth participants and help them to personalize the information.
- **Implementation** – educators with desired characteristics and training to carry out the curriculum; at least minimum support from appropriate authorities (e.g. Ministry of Health, Ministry of Education, school district and community organization); and implementation of curriculum activities with quality and fidelity.

    (121)

CSE content must respond appropriately to the specific context and needs of young people in order to be effective. This adaptability is central to culturally relevant programming, and includes understanding the messages that cultures convey around gender, sex and sexuality (122). This may include a concerted focus on topics such as gender discrimination, sexual and gender-based violence, HIV and AIDS, child marriage and harmful traditional practices.

The 2014 United Nations Population Fund (UNFPA) Operational Guidance for Comprehensive Sexuality Education provides tools to support governments in designing, implementing and evaluating CSE programmes (118). Ideally adolescents will be involved in the development, content and implementation of CSE programmes, both as a participatory right and as a way to maximize programme relevance, quality and effectiveness.

Menstrual hygiene management interventions

Adolescent girls need an adequate, regular supply of materials for menstrual hygiene management, as well as access to a lockable, single-sex, private toilet with water and soap for washing, and a suitable private space to dry wet menstrual cloths and/or a closed bin or incinerator for used menstrual pads (123); (124). Currently there is an absence of guidance, facilities and materials for girls to manage their menstruation in many LMICs (125). Following menarche, the social effects of ineffective management of regular menstruation can result in girls being excluded from everyday tasks, including touching water, cooking, cleaning, attending school, participating in religious ceremonies, socializing, or sleeping in their own homes or beds (124). In schools, girls may lack provisions for menstrual hygiene management. Many have also reported feelings of fear, confusion and shame in class due to leakage and dropping of sanitary material, smell and staining of clothes, teasing, and experience of harassment by male students and teachers (124); (126).

The NGO WaterAid has produced a useful, comprehensive resource with nine modules on menstrual hygiene management addressing: sanitary protection materials and disposal; initiatives in communities, schools, workplaces and emergency settings; and support for girls and women in vulnerable, marginalized or special circumstances (123); (126). Each module has a toolkit with checklists, technical designs and specifications, case studies and references.

Annex 3. Additional information about evidence-based interventions

A3.1.3.
Multisectoral initiatives

There are many multisectoral interventions that can contribute to the positive development of adolescents. The examples described below focus on the five Cs, adolescent participation, parenting skills and digital media.

Interventions to promote the five Cs

Lerner and colleagues (2011) have described positive adolescent psychosocial development in terms of the five Cs: competence, confidence, connection, character and caring/compassion. These lead to a sixth C: contribution. These are detailed in Table A3.4.

Table A3.4. The five Cs of positive youth development: competence, confidence, connection, character and caring/compassion, which lead to contribution

NO.	ATTRIBUTE	DEFINITION
1	Competence	Ability in social, academic, cognitive, health, vocational and other areas. Social competence refers to interpersonal skills (e.g. conflict resolution). Cognitive competence refers to school performance, as shown, in part, by school grades, attendance and test scores. Health competence involves using nutrition, exercise and rest to keep oneself fit. Vocational competence involves work habits and exploration of career choices (e.g. effective entrepreneurial skills).
2	Confidence	An internal sense of overall positive self-worth and self-efficacy.
3	Connection	Positive bonds with people and institutions that are reflected in exchanges between the individual and peers, family, school and community, in which both parties contribute to the relationship.
4	Character	Respect for societal and cultural rules, possession of standards for correct behaviours, a sense of right and wrong (morality) and integrity.
5	Caring/ Compassion	A sense of sympathy and empathy for others.
Together these five result in no. 6:		
6	Contribution	Contributions to self, family, community and the institutions of a civil society.

Source: (127).

Interventions to promote the five Cs – often referred to as positive youth development (PYD) interventions – generally take place in family, school or community settings, and target the individual, a system or both (128). They may focus on increasing resilience by improving young people's overall social and emotional well-being, and/or helping adolescents to develop the knowledge, skills and resources needed to succeed in school and at work. Interventions to increase resilience aim to promote psychological well-being, reduce problem behaviours and help young people form stable attachments. They include cognitive behavioural therapy, multisystemic and functional family therapy, and mentorship, e.g. pairing adolescents with caring, supportive adults who serve as role models. Interventions to develop the knowledge, skills and resources that adolescents need to succeed in school and at work focus on increasing their human, social, cultural and economic capital. These include: educational programmes for at-risk students; career-focused training in educational settings (e.g. vocational schools and community colleges); career and employment programmes (e.g. career mentoring and internships); family-focused programmes that encourage parental involvement in children's education; and community-based programmes that help young people access employment, training, educational and supportive services.

PYD interventions vary in strategy and form, but a review by Catalano and colleagues (2004) found that effective ones share certain attributes, including that they: shape messages from family and community about clear standards for youth behaviour; increase healthy bonding with adults, peers and younger children; expand opportunities and recognition for youth; provide structure and consistency in programme delivery; and intervene with youth for at least nine months (129).

Adolescent participation initiatives

Article 12 of the United Nations Convention on the Rights of the Child specifies, "State parties shall assure to the child who is capable of forming his or her own views the right to express those views freely in all matters affecting the child, the views of the child being given due weight in accordance with the age and maturity of the child" (10). Adolescent participation has been explored and promoted in many different initiatives, ranging from health programme implementation to advocacy to broader issues of citizenship (130). In most contexts, the focus of participation is on inclusion of adolescents in meaningful and substantial ways, both as a human right and as a component that will improve the health or development outcomes of a given programme or intervention (131).

UNICEF and Save the Children (2011) identify three broad approaches to child participation that are valid and meaningful (132). Specified for adolescents, these are:

• **Consultative participation** – This is a process in which adults seek adolescents' views in order to build knowledge and understanding of their lives and experience. It is characterized by being adult-initiated, adult-led and adult-managed. It does not allow for sharing or transferring decision-making to adolescents. However, it does recognize that adolescents have expertise and perspectives that should inform adult decision-making.

• **Collaborative participation** – This provides a greater degree of partnership between adults and adolescents, with the opportunity for active engagement at any stage of a decision, initiative, project or service. It can be characterized as adult-initiated, involving partnership with adolescents, empowering adolescents to influence both process and outcomes, and allowing for increasing levels of self-directed action by adolescents over a period of time.

• **Adolescent-led participation** – This is where adolescents are afforded or claim the space and opportunity to initiate activities and advocate for themselves. It is characterized by the issues of concern being identified by adolescents themselves, adults serving as facilitators rather than leaders, and adolescents controlling the process.

The UNFPA Framework for Action on Adolescents and Youth (2007) identifies practical programming components that relate to adolescent participation (133), including:

• devise creative mechanisms for adolescents to engage in policy dialogue and advocacy efforts at the country level;

• build strategic alliances with youth networks and civil society partners;

• incorporate gender and social equity considerations in young people's participation;

• create an enabling environment contributing to the perception of young people as citizens and contributors to development;

• give a leadership role to young people in behaviour change communication and other forms of communication;

• address issues of capacity building for promoting young people's participation;

• take youth participation beyond peer education to include identifying vulnerabilities and risks, designing programming, participation in governance structures, monitoring, and evaluation of results;

• identify institutional mechanisms for incorporating young people's input into policy and programming processes and ensuring the rights of young people to participate in partnerships with adults;

• invest in capacity building and leadership skills of young people to help them become advocates for their own rights and development issues; and

• promote peer educators as agents for transacting SRH education, linking peers with services, and allying with young people's networks and coalitions.

Annex 3. Additional information about evidence-based interventions

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Digital media interventions

The International Telecommunication Union (ITU) has produced guidelines for policy-makers and the technology industry on child online protection (134); (135).

The policy-maker guidelines encourage countries to formulate national strategies; key areas for consideration in this process are summarized in Table A3.5.

Table A3.5. Key areas for consideration when formulating a national strategy for child online protection

KEY AREAS FOR CONSIDERATION	FURTHER EXPLANATION
Legal framework	Review the existing legal framework to determine that all necessary legal powers exist to enable law enforcement and other relevant agencies to protect persons under the age of 18 online on all internet-enabled platforms.
	Establish that any act against a child that is illegal in the real world is illegal online and that the online data protection and privacy rules for legal minors are also adequate.
Law enforcement resources and reporting mechanisms	Ensure that a mechanism is established and is widely promoted to provide a readily understood means for reporting illegal content found on the internet; for example, a national hotline that has the capacity to respond rapidly and have illegal material removed or rendered inaccessible.
National Focus	Draw together all of the relevant stakeholders with an interest in online child safety, in particular: • government agencies; • law enforcement; • social services organizations; • internet service providers and other electronic service providers; • mobile phone network providers; • other relevant hi-tech companies; • teacher organizations; • parent organizations; • children and young people; • child protection and other relevant NGOs; • academic and research community; and • owners of internet cafés and other public access providers e.g. libraries, telecentres and online gaming centres.
	Consider the advantages that a self- or co-regulatory policy development model might present, as expressed by the formulation and publication of codes of good practice, both to help engage and sustain the involvement of all relevant stakeholders and to enhance the speed with which appropriate responses to technological change can be formulated and put into effect.
Education and awareness resources	Draw on the knowledge and experience of all stakeholders and develop internet safety messages and materials that reflect local cultural norms and laws and ensure that these are efficiently distributed and appropriately presented to all key target audiences. Consider enlisting the aid of mass media in promoting awareness messages. Develop materials that emphasize the positive and empowering aspects of the internet for children and young people and avoid fear-based messaging. Promote positive and responsible forms of online behaviour.
	Consider the role that technical tools such as filtering programmes and child-safety software can play in supporting and supplementing education and awareness initiatives.
	Encourage users to take responsibility for their computers through regular servicing, which includes updates of the operating system and the installation and upgrading of a firewall and antivirus application.

Source: (134).

There is a great need for education about online risks with each new generation of adolescents and their families. However, a recent WHO survey found that only 41% of governments conduct initiatives to provide information and education to citizens about internet safety and literacy, and only 30% of the countries with such initiatives specifically target children (136). Increasingly, safety tools and security technologies (such as filters, blocks or monitors) are required by law for schools, libraries and other public places with internet facilities used by children. However, approximately half (47%) of countries surveyed reported they did not have such arrangements. One third (33%) of countries surveyed require internet service providers to provide online safety tools or technologies to protect children.

In addition to the policy and industry guidelines mentioned above, ITU has produced guidelines on child online protection for parents, educators and children (134); (138). For example, the ITU guidelines for 8–12 year olds address online friends, netiquette (i.e. electronic standards of conduct or procedure), playing online games, bullying, and a child's digital footprint (134). For children aged 13 and above, the guidelines focus on harmful and illegal content, grooming (i.e. when sexual predators contact, manipulate and gain the confidence of children for sexual purposes), cyberbullying, defending one's privacy, respect for copyright, and online commerce.

In addition to child online protection interventions, there is promising potential to promote adolescent health through online, e-health (electronic health), and m-health (mobile health) initiatives. e-health is the use of information and communication technologies for health, including treating patients, educating the health workforce and monitoring public health. M-health is a type of e-health involving mobile phones and other wireless technology use in health-care, including telemedicine, helplines, emergency services, surveys, surveillance, awareness-raising, and decision-support systems (139). Communication technologies cannot replace contact with a competent health-care provider, but e-health and m-health technologies may complement efforts to bring services closer to adolescents, as they can achieve high coverage at low cost. Increasingly, e-health and m-health technologies are being used to support adolescent health related to a variety of conditions, including SRH, obesity prevention and treatment, and chronic disease prevention and management (e.g. type 1 diabetes, asthma, cancer, smoking cessation and alcohol-related problems) (140-144). Methods include web-based learning, active video games, text messaging, and mobile phone and tablet software programme apps. Evaluations of such interventions has been very limited to date, but they do provide preliminary evidence indicating that targeted digital media interventions have the potential to improve adolescent health knowledge, attitudes and behaviours.

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Road traffic injury interventions in-depth

Globally, the highest road traffic fatality rates occur in middle-income countries (MICs) (43). One half of all deaths occur among vulnerable road users, i.e. motorcyclists (23%), pedestrians (22%) and cyclists (5%). Low-income countries (LICs) have the highest rate of such deaths (57%), followed by MICs (51%) and high-income countries (HICs) (39%) – reflecting the fact that a relatively high proportion of road users in LICs and MICs are vulnerable. As noted in Section 2, older adolescent males have very high rates of mortality and DALYs lost due to road traffic injury. Indeed, fully three quarters of all road traffic deaths are among young males. Among drivers, young males under the age of 25 years are almost three times as likely to be killed as their female counterparts, which may reflect the fact that males are more likely to be on the roads because of sociocultural reasons, as well as a greater propensity to take risks compared to females (145). Distracted driving is also a serious and growing threat to road safety. For example, drivers using a mobile phone are about four times more likely to be involved in an accident than those not using a phone. This risk is similar for both hand-held and hands-free phones (43).

Many key interventions to reduce adolescent road traffic injury are also key multisectoral interventions for general populations (e.g. Case study A3.6). At the country level, an adequately funded lead agency and a national plan or strategy with measureable targets are crucial components of a sustainable response to road safety (146). Related to this, the 2013 WHO Global Status Report on Road Safety stated three major recommendations for governments: (1) pass comprehensive legislation that meets best practice on all key risk factors to address preventable road death, injury and disability; (2) invest sufficient financial and human resources in the enforcement of these laws, as an essential component for their success; and (3) make a concerted effort to make road infrastructure safer for pedestrians and cyclists (43).

Case Study A3.6.

Brazil's improvement of road safety legislation

Between 1991 and 1997, the Ministry of Health of Brazil recorded a dramatic increase in mortality from road traffic accidents. In response, legislators introduced a new traffic code in 1998 to toughen the punishment for driver infractions and transfer administrative duties to local government. Between 1998 and 2001, mortality rates from road traffic injuries fell markedly. Subsequent analysis estimated that the new code had saved some 5000 lives nationally during that period. In 2001, a National Policy on Morbidity and Mortality Reduction due to Accidents and Violence was approved, allowing the Ministry of Health to build on the groundwork laid by the new traffic code and implement further violence and traffic accident prevention measures.

Source: (147).

The WHO Global Plan for the Decade of Action for Road Safety (2011–2020) outlines more specific, practical guidance to help governments and other stakeholders develop national and local plans of action to reduce road traffic injury. Effective interventions include incorporating road safety features into land-use, urban planning and transport planning; designing safer roads and requiring independent road safety audits for new construction projects; improving the safety features of vehicles; promoting public transport; effective speed management by police and through the use of traffic-calming measures; setting and enforcing internationally harmonized laws requiring the use of seat-belts, helmets and child restraints; setting and enforcing blood alcohol concentration limits for drivers; and improving post-accident care for victims of road traffic injuries, including pre-hospital care, hospital care and rehabilitation (e.g. Case study A3.7). Public awareness campaigns also play an important role in supporting the enforcement of legislative measures, by increasing awareness of risks and of the penalties associated with breaking the law (146).

Case Study A3.7.

Iraq's post-conflict innovative emergency medical services

In post-conflict, rural Iraq there were no formal emergency medical services. An innovative programme created a two-tier network of village first responders, i.e. villagers who had completed a two-day basic first aid course, and paramedics who had been trained in a 450-hour course. Mortality among injured people declined dramatically, from 40% to 9%. This programme supplied training and basic equipment, but no ambulances or other vehicles. Over time, the system grew and adapted to a changing epidemiological pattern, including caring for increasing numbers of road traffic accident victims and other medical emergencies.

Source: (148).

In addition to interventions for general populations, which in some contexts may be the most effective way to reduce the adolescent road traffic injury burden, some evidence-based programmes specifically target youth. One example is interventions to lower blood alcohol limits for young and novice drivers, because those who drink and drive have a greatly increased risk of an accident compared to older and/or more experienced drivers (43). Setting a lower permitted blood alcohol concentration limit (0.02 g/dl) for young drivers than WHO recommends for older drivers (0.05 g/dl) effectively reduces accidents related to drink-driving. Currently, 42 countries have implemented such limits (43).

Another example of a youth-specific intervention to reduce road traffic injury is the promotion of helmet use among young drivers and passengers of motorized two-wheelers (e.g. Case study A3.8). Motorcycles are less safe than cars, but in LMICs children riding on a motorcycle as a passenger or driver are a very common sight, even where this might be prohibited by law for the driver (149).

Related to this, WHO recommends that children under 15 years old should not be allowed to drive a motorcycle; children whose feet cannot reach the footrest of a motorcycle not be transported on it; children use all available protective gear when being carried on a motorcycle (i.e. a crash helmet, covering for their legs, and footwear); and only motorcyclists who have passed a test for carrying a child passenger be allowed to carry children under 12 years. For adolescent drivers, WHO recommends: driving education and skills development training programmes be designed to increase adolescent knowledge of safe driving and hazard perception; and novice drivers be supervised during the first few months of driving, and limited in their driving to reduce high-risk situations according to road type, passengers and night-time driving. Supervision and limitation criteria should reflect physical growth and motor, cognitive and psychosocial development, so that criteria are more stringent for young age groups (e.g. 15–17 years) than for older ones (e.g. 18–19 years).

Case Study A3.8.

Viet Nam's promotion of child motorcycle helmet use

Since 1999, the Asia Injury Prevention Foundation in Hanoi has promoted motorcycle helmet use through public awareness campaigns; lobbying of the government; helping develop helmet standards for both adults and children; distributing child helmets along with information on their use; and pushing to increase the production of helmets.

At the end of 2007, the Vietnamese government passed a law that made helmet wearing compulsory for drivers and passengers on motorcycles. Following its introduction, rates of helmet use increased to more than 90%. Hospitals began reporting reductions in the number of deaths and brain injuries resulting from motorcycle accidents.

Source: (44).

Annex 3. Additional information about evidence-based interventions

Youth violence interventions in-depth

For LICs and MICs, the highest estimated rates of homicide in general populations are in the WHO Region of the Americas, with an annual rate of 29 deaths per 100 000 population, followed by the African Region with a rate of 11 per 100 000 (150). Males account for 82% of all homicide victims and are associated with estimated rates of homicide that are more than four times those of females (11 and 3 per 100 000 respectively). The highest estimated rates of homicide in the world are found among males aged 15–29 years (18 per 100 000); in contrast, rates of homicide among females range from 1 per 100 000 in the age range 5–14 years, to 3 per 100 000 for 15–29 years. When women are killed, it is often their partners who are responsible. In 2013, WHO and others estimated that as many as 38% of female homicides globally were committed by male partners, while 6% of males were killed by their female partner (150).

In the age range 5–14 years, homicide rates increase progressively from high- to low-income countries. By contrast, homicide rates in the 15–29 age range are highest in upper middle-income countries, followed by low-income countries. This may reflect the influence of factors other than income, particularly in upper middle-income countries in the Region of the Americas. For example, firearms are highly prevalent in the Region of the Americas and are the predominant weapon used in violent encounters, including intimate partner homicides. In other regions, weapons such as knives and beatings with fists, feet or objects are more common. Firearm homicides account for 75% of all homicides in the Region of the Americas, compared to 38%, 35%, 26% and 25% of homicides in the African, South-East Asia, Eastern Mediterranean and European Regions respectively (150).

As noted in Section 2, youth violence has a great impact on DALYs lost as well as mortality. Globally, an estimated four out of 10 young people are in a physical fight annually; one out of four teenagers are bullied each month; and two out of three victims of school violence ever tell anyone about it (150).

Many evidence-based initiatives to reduce and respond to violence in general populations also positively reduce youth violence (e.g. Case study A3.9). The 2014 WHO Global Status Report on Violence Prevention made several recommendations to national governments to reduce violence in general populations, namely:

- strengthen data collection to reveal the true extent of the problem;
- develop comprehensive and data-driven national action plans;
- integrate violence prevention into other health platforms;
- strengthen mechanisms for leadership and coordination;
- ensure prevention programmes are comprehensive, integrated and informed by evidence;
- ensure that services for victims are comprehensive and informed by evidence;
- strengthen support for outcome-evaluation studies;
- enforce existing laws and review their quality;
- implement and enact policies and laws relevant to multiple types of violence; and
- build capacity for violence prevention.
  (150)

Case Study A3.9.

Colombia's upgrading of low-income urban neighbourhoods

In 2004, municipal authorities in Medellín, Colombia, built a public transport system to connect isolated low-income neighbourhoods to the city's urban centre. Transit-oriented development was accompanied by municipal investment in the improvement of neighbourhood infrastructure. Rates of violence were assessed in intervention neighbourhoods and comparable control neighbourhoods before (in 2003) and after (in 2008) completion of the project, using a longitudinal sample of 466 residents and homicide records from the Office of the Public Prosecutor. When compared to control communities, intervention communities had a 66% greater decline in homicide rates, and a 75% greater decline in resident reports of violence.

Source: (48).

Globally, there has been wide enactment of laws relevant to violence, but enforcement of those laws is usually much lower than would be expected based on the legislation (150). Limited progress has also been made in the area of national action plans: 51% of 133 countries surveyed had a national action plan that addressed all forms of violence. Countries in the Region of the Americas reported a much higher frequency of such plans (76%), as well as a higher frequency of all types of subplans related to specific types of violence, e.g. 91% of American countries had national action plans specifically addressing child maltreatment, compared to 86% addressing intimate partner violence and sexual violence, and 71% addressing youth violence.

In the 2014 Global Status Report on Violence Prevention, WHO and its partners identified seven "best-buy" anti-violence strategies – six focused on preventing violence and one focused on response efforts. These strategies can potentially reduce multiple types of violence and help decrease the likelihood of individuals perpetrating violence or becoming a victim.

The strategies are:

1. develop safe, stable, and nurturing relationships between children and their parents and caregivers (e.g. Case study A3.10);
2. develop life skills in children and adolescents;
3. reduce the availability and harmful use of alcohol (e.g. Case study A3.11);
4. reduce access to guns and knives;
5. promote gender equality to prevent violence against women;
6. change cultural and social norms that support violence; and
7. implement victim identification, care and support programmes (150)

Case Study A3.10.

The Russian Federation's mentoring programme

The Big Brothers, Big Sisters mentoring programme is currently implemented in the Russian Federation and 11 other countries. The programme matches a volunteer adult mentor to a child, with the expectation that a caring and supportive relationship will develop. Once matches are made, they are monitored and supervised by a professional. Relationships between mentor and child are one-to-one, and involve meeting for three to five hours per week over the course of a year or longer. Goals are set jointly with the child and parents at the beginning of the mentoring relationship and may relate to problem behaviours, school attendance, academic performance, relationships with other children or learning new skills. The case manager maintains regular contact with the mentor and the child to determine how the relationship is developing. Internationally, this programme has been shown to reduce alcohol and drug use, physical violence and absenteeism from school, and to improve the quality of relationships between children and their parents.

Source: (48).

Case Study A3.11.

The former USSR's strict alcohol regulation

A strict anti-alcohol campaign was implemented in the former USSR in 1985 to address growing levels of alcohol consumption and related harm. Facilitated by a state monopoly on legal alcohol production and sales, the campaign included:

• reduced state alcohol production;
• reduced numbers of alcohol outlets;
• increased alcohol prices;
• a ban preventing alcohol use in public places and at official functions;
• increased age of alcohol purchase (to age 21); and
• increased penalties for, and the enforcement of a ban on, the production and sale of homemade alcohol.

The campaign initially had significant impact. In Moscow, state alcohol sales fell by 61% (1984–1987), alcohol consumption by 29%, total violent deaths by 33% and alcohol-related violent deaths by 51% (1984–1985/6). However, the campaign became unpopular, and by 1988 the consumption of illegal alcohol had increased while government finances suffered due to reduced alcohol taxes. Late that year, alcohol production, outlets and trading hours were expanded, effectively ending the campaign. By 1992, market reforms had been introduced that liberalized prices and trade, and the number of violent deaths rose dramatically to exceed previous levels. Given the additional social and political changes in the Russian Federation over this period, the increase in violent deaths was unlikely to be due to alcohol alone. However, temporal relationships between the changes in alcohol regulations and subsequent variation in violence suggest that they are at least closely related.

Source: (152).

Annex 3. Additional information about evidence-based interventions

The 2015 WHO Preventing Youth Violence report identifies six activity areas for governments initiating a public health approach to youth violence. For each of the six, the report outlines core responses that can be undertaken without additional resources; expanded responses that require extra resources; and desirable responses for which considerable additional resources may be required. These are described in Table A3.6 below.

Table A3.6. Activity areas for governments initiating a public health approach to youth violence

CORE OPTIONS	ENHANCED OPTIONS	DESIRABLE OPTIONS
1. Raise awareness about prevention		
• Consult with key persons from government, including ministries of justice, education and social services. • Develop/adapt and disseminate a policy brief describing the scale of victimization, consequences of youth violence, and effective interventions to prevent it.	• Organize a national policy discussion around youth violence prevention with representatives from various sectors. • Develop an awareness-raising campaign and distribute printed and electronic documents. • Organize a study tour for policy-makers and planners to visit emergency wards, the police and youth violence prevention programmes.	• Produce educational materials, brochures, pamphlets, posters, videos, slides, multimedia, websites and electronic bulletins. • Organize conferences, workshops and group discussions on youth violence. • Work with the media to organize news conferences, television and radio shows and training to advise journalists how to report on youth violence in newspapers and the media. • Document adverse long-term consequences of youth violence.
2. Develop partnerships across sectors		
• Identify focal points for youth violence prevention from other sectors and organize an informal meeting with at least two other sectors. • Share information about your current work and goals, identify common interests, and establish a mechanism to exchange information regularly. • Develop a stakeholder map for youth violence prevention.	• Establish a formal partnership with key sectors. • Establish a coordination platform and terms of reference. • Explore joint initiatives and projects that do not require substantial additional resources (e.g. joint mechanisms for data exchange).	• Develop a partnership workplan, which is reflected in the annual workplans and budgets of the individual organizations that are members of the partnership.
3. Strengthen knowledge about the importance of data collection on fatal and non-fatal youth violence and on related risk and protective factors		
• Identify existing data sources that contain information on the prevalence, consequences and risk factors for youth violence.	• Compile existing data on youth violence. • Draft a policy brief informed by existing data.	• Conduct and regularly repeat a nationwide population-based survey on prevalence and risk factors for youth violence. • Ensure that existing health information systems, emergency department trauma registries, and vital registration systems for causes of death capture age- and sex-disaggregated data on violence using International Classification of Disease codes.
4. Enhance the capacity to evaluate existing prevention programmes		
• Conduct developmental and process evaluations of your country's violence prevention programmes. • Identify data sources that can provide information about the effectiveness of your programme, project or policy from existing data sources, e.g. emergency department records. • Collect implementation data (e.g. information on dropouts); conduct focus groups and in-depth interviews with various stakeholders to identify strengths and weaknesses of the programme.	• Conduct a simple outcome evaluation by collecting data before and after an intervention, ideally comparing findings for the group that received the intervention with a comparison group that has the same characteristics but did not receive the intervention.	• Conduct quasi-experimental outcome evaluations or randomized, controlled trials with an experimental and a control group, which is similar to the group that receives the intervention but is not exposed to the programme. • Publish your evaluation results in scientific journals.
5. Establish a policy framework		
• All steps of the policy development process are key to youth violence prevention efforts and can be pursued with almost no or very few additional resources. • Review existing laws on youth violence prevention.		
6. Build capacity for youth violence prevention		
• Integrate youth violence prevention into existing curricula and training for health and social workers. • Establish a focal point or unit in charge of youth violence prevention.	• Develop jointly with other sectors and NGOs a strategy on how to increase human capacity for youth violence prevention.	• Establish a career path for violence-prevention professionals. • Establish university courses or studies in the area of violence prevention.

Source: (48).

Although the burden of youth violence is higher in LMICs, until recently almost all studies of prevention effectiveness come from HICs (48); (52). Within the pool of existing studies, the evidence is unevenly distributed over different ecological levels. The largest proportion of youth violence interventions and outcome evaluation studies concerns strategies that address risk factors at the individual and close relationship levels. Far fewer community- and society-level interventions have been evaluated. In addition, despite the importance of prevention efforts that target children at an early stage, few longitudinal studies measure the effects of interventions delivered in early childhood on subsequent youth violence outcomes.

Globally, a half of 133 reporting countries currently implement life-skills and social-development programmes (51%) and bullying-prevention programmes (47%) to address youth violence on a large scale. Approximately one third implement large-scale programmes focused on parent-child relationships, pre-school enrichment, and after-school activities, and one quarter report the same for mentoring programmes (150).

The last two sections have focused on interventions to prevent and respond to youth injury and violence, but additional resources exist to help countries better respond to other forms of violence, e.g. the 2016 Global Plan of Action to Strengthen the Role of the Health System within a National Multisectoral Response to Address Interpersonal Violence, in Particular against Women and Girls, and against Children (153). Also available are resources to help countries better respond to adolescent injury and violence after it occurs, including guidelines related to pre-hospital response, hospital-based trauma programmes, and long-term care (154-156).
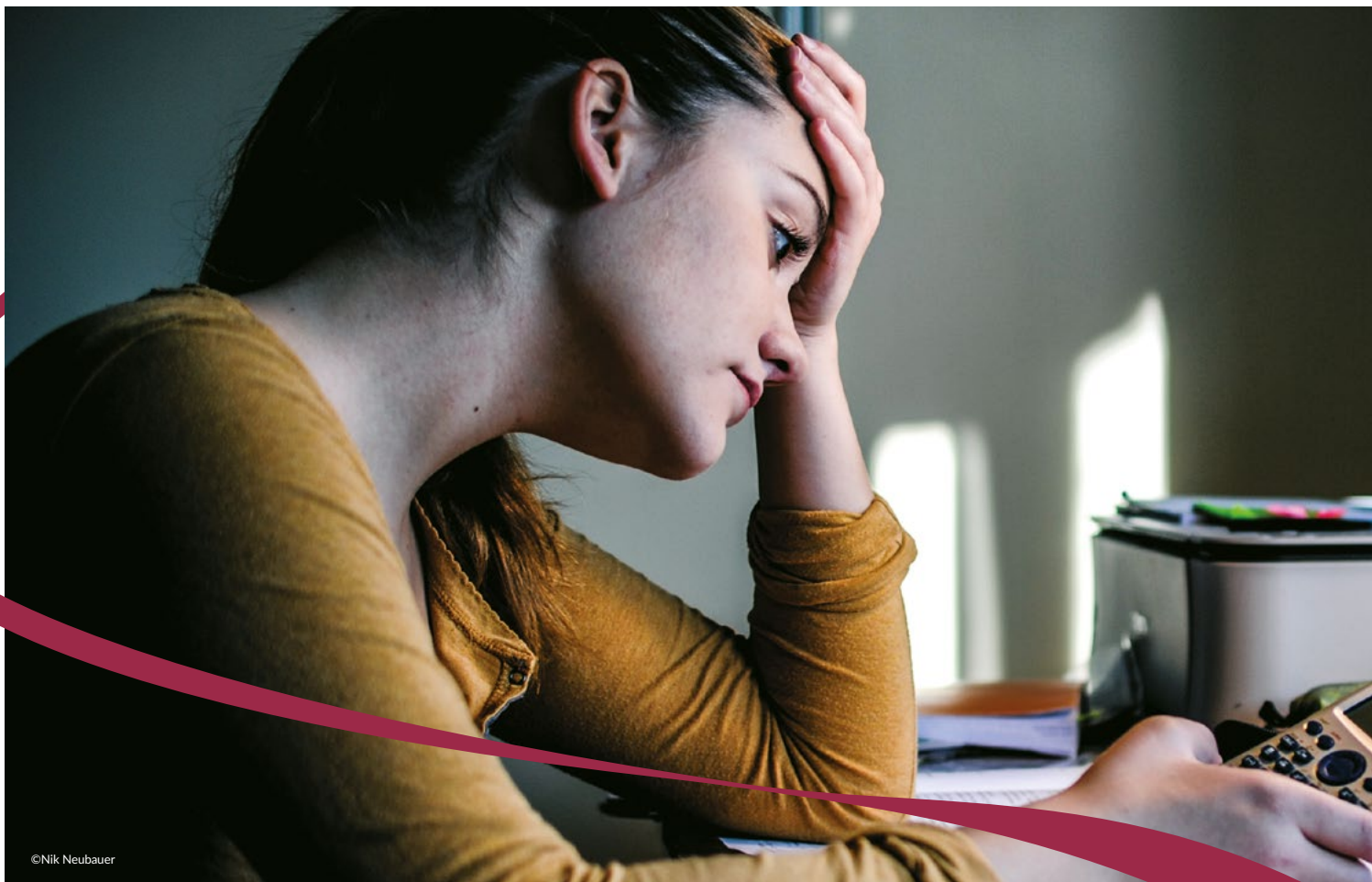
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Annex 3. Additional information about evidence-based interventions

A3.4.
Sexual and reproductive health interventions in-depth

In 2003, the United Nations Convention on the Rights of the Child focused its General Comment No. 4 on Adolescent Health and Development. In that document, the Committee stated, "In light of Articles 3, 17, and 24 of the Convention (i.e. best interest of the child, access to information, and health/health services, respectively), States Parties should provide adolescents with access to sexual and reproductive information, including on family planning and contraceptives, the dangers of early pregnancy, the prevention of HIV/AIDS and the prevention and treatment of sexually transmitted diseases. In addition, States Parties should ensure that they have access to appropriate information, regardless of their marital status and whether their parents or guardians consent. It is essential to find proper means and methods of providing information that is adequate and sensitive to the particularities and specific rights of adolescent girls and boys. With regard to privacy and confidentiality, and the related issue of informed consent to treatment, States Parties should (a) enact laws or regulations to ensure that confidential advice concerning treatment is provided to adolescents so that they can give their informed consent. Such laws or regulations should stipulate an age for this process, or refer to the evolving capacity of the child; and (b) provide training for health personnel on the rights of adolescents to privacy and confidentiality, to be informed about planned treatment and to give their informed consent to treatment" (16).

A3.4.1.
Early and/or unintended pregnancy interventions in-depth

Recent research suggests that adolescents have somewhat elevated rates of maternal mortality compared to older age groups, although this risk is lower than that estimated by previous research (158); (159). It is evident, however, that adolescents have high rates of unintended pregnancy, which can lead to a range of adverse physical, social and economic outcomes. The clearest way to prevent these adverse outcomes is by ensuring access to contraception to prevent unintended pregnancies.

Adolescents in many countries lack adequate access to contraceptive information and services that are necessary to protect their SRH. Analysis of inequalities in survey data from 98 LMICs found that, in virtually all countries, sexually active adolescents had lower coverage of family planning needs than sexually active women aged 20 years or older. In several countries, the differences are substantial. In addition, adolescents aged 15–17 years tend to have lower coverage than those aged 18–19 years (160).

Structural interventions to reduce unintended pregnancies among adolescents include legislating adolescent access to contraceptive services, reducing the cost of contraceptives to adolescents, and legally prohibiting child marriage and coerced sex (57). Adolescents' best interests and their evolving capacities need to be systematically considered. Human rights bodies have called on states strictly to respect adolescents' rights to privacy and confidentiality, including when providing advice on health matters, and to ensure the availability of youth-friendly, confidential contraceptive and other reproductive health-care services for adolescents from all socioeconomic backgrounds (161-163).

Adolescents are eligible to use all the same methods of contraception as adults, and must have access to a variety of contraceptive choices. Age alone does not constitute a medical reason for denying any method to adolescents. Recommended policy actions to expand adolescent access to high-quality contraceptive services include eliminating social and nonmedical restrictions on the provision of contraceptives to adolescents (e.g. prohibitive social or gender norms) and enacting policies enabling adolescents to obtain a full range of contraceptive methods and services, through delivery mechanisms that are appropriate and acceptable to them (161).

Recommended programme actions include:

- engage adolescents as full partners in designing, implementing and monitoring contraceptive information and service provision;

- draw upon the support of parents and other influential adults in providing contraceptive services;

- make available a full range of contraceptive methods through outlets that different groups of adolescents are likely to frequent, including social marketing outlets, educational and social facilities, and the health system;

- use traditional and innovative ways of providing contraceptive information and services to both girls and boys;

- link the provision of contraceptive services to the provision of wider SRH service for adolescents, including information and clinical services related to HIV and other STIs, and as an integral component of a comprehensive response to sexual violence; and

- require and support contraceptive service providers to be respectful of adolescents, regardless of whether or not they are in formal unions.

(161)

Box A3.2 provides guidance on how health-care providers can engage with adolescents in youth-friendly ways during clinical interactions.

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Box A3.2. Examples of how health workers can provide youth-friendly sexual and reproductive health services

All adolescents deserve high-quality and respectful care. Criticism or unwelcoming attitudes will keep them away from the care they need. Counselling and services do not encourage adolescents to have sex. Instead, they help young people protect their health.

To make services friendly to adolescents, health-care providers can:

- Show adolescents that they enjoy working with them.
- Counsel in private areas where they cannot be seen or overheard, ensuring confidentiality and assuring the client of confidentiality.
- Listen carefully and ask open-ended questions such as, "How can I help you?" and "What questions do you have?"
- Use simple language and avoid medical terms.
- Use terms that suit young people, avoiding terms such as family planning, which may seem irrelevant to those who are not married.

- Welcome partners and include them in counselling, if the client desires.
- Try to make sure that a young woman's choices are her own and that she is not pressured by her partner or her family. In particular, if she is being pressured to have sex or to not use condoms, providers should help a young woman think about, and practise, what she can say and do to resist and reduce that pressure.
- Speak without expressing judgment (say, for example, "You can" rather than "You should"), and avoid criticizing the adolescent even if the provider does not approve of what the adolescent is saying or doing. The provider should help adolescents make decisions that are in their best interest.
- Take time to address fully questions, fears and misinformation about sex, STIs and contraceptives. Many adolescents want reassurance that the changes in their bodies and their feelings are normal. Providers should be prepared to answer common questions about puberty, monthly bleeding, masturbation, night-time ejaculation and genital hygiene.

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Source: (336).

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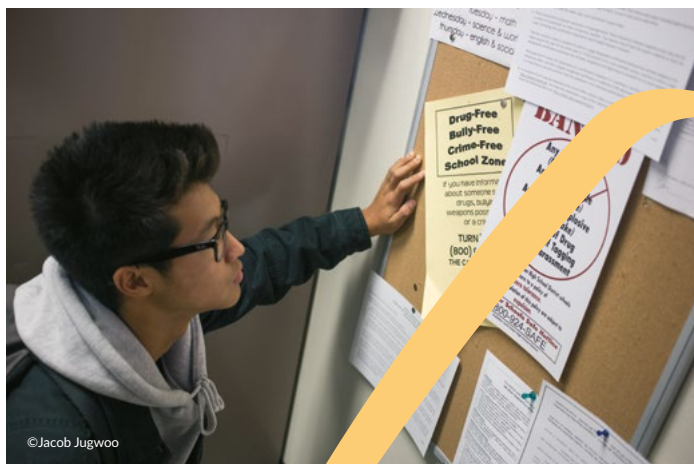
Annex 3. Additional information about evidence-based interventions

Box A3.3 explains the safety and appropriateness of each method of contraception for young people.

Box A3.3. The safety and appropriateness of different contraceptive methods for young people

Young people can safely use any contraceptive method.

- Young women are often less tolerant of contraceptive side effects than older women. With counselling, they will know what to expect and may be less likely to stop using their methods.
- Unmarried young people may have more sex partners than older people and so may face a greater risk of STIs. Considering STI risk, and how to reduce it, is an important part of counselling.

For some contraceptive methods, there are specific considerations for young people:

- **Hormonal contraceptives** (oral contraceptives, injectables, combined patch, combined vaginal ring, and implants)
  – Injectables and the combined ring can be used without others knowing.
  – Pills must be taken every day, so this method requires the user's conscientious action.
- **Emergency contraceptive pills**
  – Young women may have less control than older women over having sex and using contraception. They may need emergency contraceptive pills more often.
  – Provide young women with emergency contraceptive pills in advance, for use when needed. Emergency contraceptive pills can be used whenever a young woman has any unprotected sex, including if she has sex against her will, or if a contraceptive mistake has occurred (e.g. condom was used incorrectly, slipped or broke; or she missed three or more combined oral contraceptive pills).

- **Female sterilization and vasectomy**
  – Provide with great caution. Young people and people with few or no children are among those most likely to regret sterilization.
- **Male and female condoms**
  – These protect against both STIs and pregnancy.
  – They also are readily available in many settings (particularly male condoms), and they are affordable and convenient for occasional sex.
  – It may help to practise putting condoms on alone, before using them with a partner for the first time.
- **Intrauterine device (copper-bearing and hormonal intrauterine devices)**
  – Intrauterine devices are more likely to come out among women who have not given birth because their uteruses are small.
- **Diaphragms, spermicides and cervical caps**
  – Although among the least effective methods, young women can control use of these methods, and they can be used as needed.
- **Fertility awareness methods**
  – Until a young woman has regular menstrual cycles, fertility awareness methods should be used with caution.
  – Users need to have a backup method or emergency contraceptive pills on hand.
- **Withdrawal**
  – Requires the man to know when he is about to ejaculate so he can withdraw in time. This may be difficult for some young men.
  – This is one of the least effective methods of pregnancy prevention, but it may be the only method available – and always available – for some young people.

Source: (336).

As for other contraceptive methods, for long-acting prevention methods such as the intrauterine device and the progestogen implant, WHO recommends the elimination of medical and non-medical barriers to use, including the requirement of parent or partner consent, or limiting the use of methods based on an adolescent's age or parity (165).

When they do become pregnant, adolescents may be more likely than older women to delay seeking maternal health-care because they do not know they are pregnant or that they are having complications, they are experiencing shame or stigma if they are pregnant outside of marriage, or they are constrained in making decisions about their use of medical care (e.g. by in-laws) (166). Pre-natal care is important to prevent, identify and treat iron deficiency and anaemia in adolescents, and also to identify and treat preg-nancy-induced hypertension, which is a leading health risk among adolescents having a first baby. Pregnant adolescents also have a higher risk of malaria-related mortality, spontaneous abortions and preterm delivery (107).

Skilled attendance is particularly important during first births because of the lack of birth history, increased likelihood of complications among first births, and potential lack of awareness of danger signs (166). The pelvic bones and birth canals of adolescents, especially very young ones, are still growing, which increases their risk of complications during vaginal birth. Therefore, young adolescents are more at risk of prolonged or obstructed labour and ideally should have skilled care in a setting where labour augmentation, caesarean section, and operative vaginal delivery with vacuum or forceps extraction can be performed. Obstructed or prolonged labour is one of the more serious complications that can cause mortality or potentially long-term injuries, including obstetric fistulae. In the latter case, a girl may not only suffer the medical consequences of the fistula, but in many cases may also be shunned by her partner, family and community, leading to social isolation and problems with mental health. Care during pregnancy and soon after childbirth is also critical for reducing levels of maternal mortality. For example, because adolescents have a higher risk of difficult labour than older women, they may be at increased risk for postpartum infections.

Final issues in considering the SRH intervention needs of adolescents are the particular health risks posed by early and/or forced marriage, and unsafe abortion. Married adolescent girls are vulnerable to sexual and reproductive ill-health, with potentially life-threatening consequences. The age of marriage is rising in most parts of the world, but the number of early marriages is still substantial. The 10 countries with the highest rates of child marriage – measured as rates among women who are now aged 20–49 years – are all in Africa and South-East Asia (167). In Africa these include Niger (77%), Chad (69%), Mali (61%), the Central African Republic (60%), Guinea (58%), Ethiopia (58%) and Burkina Faso (52%), while in South-East Asia they are Bangladesh (74%), India (58%) and Nepal (52%). Niger has the highest overall prevalence of child marriage in the world, but Bangladesh has the highest rate of marriage involving girls under 15 years. In absolute numbers, South Asia is home to 42% of all child brides worldwide; India alone accounts for one third of the global total.

Once adolescent girls are married, they typically are not reached by school-based or peer-led adolescent health programmes. They may also not make use of programmes for married women, because they do not know what services are available or how to access them, especially if they have not yet had a child (167). In some settings, specialized outreach services may be effective in promoting services with such girls (e.g. Case study A3.12).

Case Study A3.12.

The USA's home visits to prevent rapid repeat adolescent pregnancies

Rapid repeat pregnancy, which is usually defined as pregnancy onset within 12–24 months of a previous pregnancy, is common among adolescent mothers. A randomized controlled intervention trial conducted in Baltimore recruited adolescent mothers following delivery and assigned them either to receive a theory-based home-mentoring curriculum for up to 19 visits, or to receive the usual care. Compared with controls, adolescents who received multiple home visits were significantly less likely to have a repeat birth, while those who participated in more than eight of the 19 sessions had no births in the two-year follow-up period.

Source: (169); (170)

Complications from unsafe abortion are also an important cause of adolescent maternal disorders, so countries should strive to reduce unsafe abortions among adolescents. This may include enabling access to safe abortion and postabortion services, actively informing adolescents about them, and increasing community awareness of the dangers of unsafe abortion (120). According to the Guttmacher Institute, in developing regions in 2008, 3.2 million adolescent girls and women aged 15–19 years are estimated to have undergone unsafe abortions, which is an annual rate of about 16 unsafe abortions per 1000 15- to 19-year-old females (171). These overall figures mask substantial variation in the unsafe abortion rate between geographic regions. Africa, and Latin America and the Caribbean, where most countries have very restrictive abortion laws, had very high unsafe abortion rates, i.e. 26 per 1000 15–19 year old females in Africa, and 25 per 1000 in Latin America and the Caribbean. In Asia, which contains many countries with more liberal abortion laws, the unsafe abortion rate in 2008 was only nine per 1000 adolescents.

Annex 3. Additional information about evidence-based interventions

HIV interventions in-depth

Access to and uptake of HIV testing and counselling (HTC) by adolescents is lower than for many other age groups, which detrimentally affects adolescent HIV prevention, treatment and care services (172). This is especially true of adolescents in key populations who are at higher risk of horizontal (i.e. sexual or intravenous) HIV infection in all regions and epidemic types. These include sex workers, males who have sex with males, transgender people, youth, and/or injecting drug users (54); (172). Another important consideration is the role of counselling prior to HIV testing and how it encourages or discourages access among adolescents. While specific programmes may be developed to test adolescents (e.g. through schools), all strategies directed to adults – including community-based testing and counselling, prevention of mother-to-child transmission, and physician-initiated testing and counselling – should take the needs of adolescents into equal consideration (54).

All adolescents should have access to HIV testing, and structural interventions may be necessary to ensure this (e.g. Case study A3.13). It is especially important to ensure that those who are most vulnerable, and those with high-risk behaviours, are supported to access testing that is linked with adequate post-test counselling and prevention and/or treatment and care. Late diagnosis of HIV infection resulting in delayed anitretroviral therapy (ART) initiation is a significant problem among vertically (i.e. perinatally) infected adolescents in Africa. Access to treatment and care also remains inadequate. Following HTC, there are poor linkages to and retention in HIV care for most populations, and ART coverage rates for adolescents are even lower than for other age groups. Interventions and support for sustained ART adherence and retention in care are inadequate in many settings, which has led to high levels of adolescent treatment failure and HIV-related morbidity and mortality (54).

Case Study A3.13.

South Africa's reduced age of consent for HIV testing

In 1997, the South African Law Commission reviewed the existing Child Care Act, which allowed children above the age of 14 to consent to medical treatment. The Commission held public consultations and actively sought input from children themselves. The outcome of the process was a new Children's Act that reduced age-related barriers to children's access to health-care. Review of the age of consent for medical interventions, including HTC, was at least partly informed by research on the age of sexual debut, rates of STIs in adolescents, and the realization that the age threshold needed to be lowered to allow children younger than 14 years to access needed sexual and reproductive health services. Since July 2007, any adolescent aged 12 years and older in South Africa has had the right to consent to an HIV test, if it is considered to be in his or her best interest, and so long as he or she is of sufficient maturity to understand the benefits, risks and social implications of the test. According to South African HIV counselling and testing guidelines, an HIV test is in the best interests of a child if the test will result in access to the continuum of care and support for their physical and emotional welfare.

Source: (54)

Countries should promote equitable, accessible, acceptable, appropriate and effective adolescent-friendly health services to ensure that adolescents are diagnosed and receive ART in a timely manner, and are supported to remain in HIV care and to stay on treatment. The implementation of adolescent-friendly health services has been proven to improve health outcomes, utilization and acceptability of services for adolescents, including those living with HIV (e.g. Case study A3.14) (54).

Case Study A3.14.

Namibia's strengthened linkage of HIV testing and support services for adolescents living with HIV

Namibia has implemented a programme in the Caprivi and Khomas regions to strengthen the design, development and implementation of HTC for adolescents, including post-test support services and improved service provision for adolescents living with HIV. The programme was developed with input from government, non-government and other stakeholders, and was supported by the Ministry of Health's adoption of a training curriculum on adolescent-friendly health services specifically focused on adolescents living with HIV. The programme was initiated in a hospital where there was already a functional teen club, with the support of hospital management and ART site staff. Activities include training of adolescent facilitators who are living with HIV, and also their parents, caregivers and health-care providers; establishment of peer support groups and spaces for them to meet; and use of a disclosure tool with all adolescents with HIV attending the paediatric ART target site. In addition, HTC is emphasized as an entry point to other HIV services through strengthened referral linkages between HTC and prevention, care and treatment, and support services, and through community-based mobilization, including interpersonal and mass-media communication to reach out to adolescents.

Source: (54)

HIV care and treatment has shifted rapidly in recent decades. For example, ART drugs have become safer and more efficacious; new classes of drugs have become available; and a public health approach has led to consolidation and simplification of ART drugs for HIV treatment and prevention across all age groups and populations, based on the HIV service continuum (174). The 2013 WHO Consolidated Guidelines on the Use of Antiretroviral (ART) Drugs for Treating and Preventing HIV Infection provide comprehensive clinical recommendations on the provision of ART for all populations, including first, second and third line ART for adolescents (174).

As noted in Section 3, currently ART should be initiated in, and provided lifelong to, all adolescents living with HIV, regardless of WHO clinical stage and at any CD4 cell count (consolidated guidelines). As a priority, 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. Antiretroviral (ARV) regimens for adolescents should be guided by the convenience of once-daily dosing and the use of fixed-dose combinations whenever possible; and the desirability of aligning recommended regimens for adolescents with those for adults (174). Countries are at different stages of ART coverage and implementation of the consolidated guidelines, but there is a consistent trend towards initiating treatment earlier and expanding the use of ARV drugs for HIV prevention to achieve greater impact. For example, since 2014 Uganda has provided ART to all children younger than 15 years, regardless of immune or clinical status. In 2014 this resulted in a 74% increase in the number of children starting ART, and 75% of children and adolescents were reported to have started ART within two days after enrolment into care (173).

In all settings, symptom screening for tuberculosis (TB) should be conducted at every health visit with adolescents living with HIV. In addition, TB-preventive therapy should be carried out for those living with HIV in whom active TB has been ruled out. Access to TB diagnostic services and linkage to treatment should also be provided as necessary (175).

Annex 3. Additional information about evidence-based interventions

It is also critical to address the needs and vulnerabilities of adolescents from key populations. For example, to make HIV services more accessible, acceptable and affordable for young people who sell sex, community-based, decentralized services are recommended, both through mobile outreach and at fixed locations where sex is sold (e.g. Case study A3.15). Depending on the needs of the particular setting, differentiated approaches are also recommended to reach those who do not sell sex regularly, those who are trafficked or have restrictions on movement, and those may use the internet to make contact with clients (176).

Case Study A3.15.

The United Republic of Tanzania's drop-in centre to reach young people who sell sex or inject drugs

Kimara Peer Educators and Health Promoters Trust Fund – a community-based NGO in a low-income area of Dar es Salaam in the United Republic of Tanzania – has a drop-in centre to provide outreach and services to young people aged 16 and above who inject or otherwise use drugs. It also serves young people who sell sex, since there is an overlap between the two populations. Services include individual and group psychosocial therapy and support; referrals to methadone-assisted therapy; and basic information on harm reduction, HIV and AIDS, viral hepatitis, other STIs, sexual and reproductive health, and condom use. Referrals to government hospitals are made only with the young person's consent, and confidentiality is maintained unless the young person gives permission for their parents or other family members to be informed. Government approval is being sought for provision of clean needles and syringes upon request at the drop-in centre and by outreach workers. Services are offered by a professional social worker and community outreach workers from the local area.

Source: (55)

It is important to consider that adolescents living with HIV need access to a full range of contraceptive options (177). Dual methods – condoms, both male and female, and lubricants in conjunction with hormonal methods, including emergency contraception – are essential to protect against unwanted pregnancy, STIs and HIV transmission. Sexual and reproductive health services must also be able to address unwanted pregnancy for HIV-positive adolescent women, where the law allows, either providing or referring clients for termination of pregnancy services if requested.

Finally, it is important to note that rapid growth in the numbers of adolescents in the coming years is likely to challenge progress in combating HIV, particularly in countries with generalized HIV epidemics (178). Indeed, many of the countries presently struggling to reverse generalized HIV epidemics are experiencing rapid growth in their numbers of adolescents and youth, meaning that an increasing amount of resources are needed to maintain and expand coverage of HIV prevention and treatment services to young people. This is especially true for the countries with 5–15% of the adult population living with HIV in 2013, as they are likely to be challenged to provide services to 30–50% more adolescents and youth in 2030 than they needed to serve in 2015.

A3.5.
Water, sanitation and hygiene (WASH) interventions in-depth

Diarrhoeal diseases are major adolescent health burdens, as was shown in Section 2. There are many ways that adolescents can be exposed to diarrhoeal infections, so prevention efforts must identify and effectively target all possible modes of transmission in a particular country or setting. Diarrhoeal diseases are typically caused by faecal-oral pathogens that are transmitted through poor sanitation and hygiene. For instance, when faeces are disposed of improperly, and hand washing facilities and practices are inadequate, then human excreta may contaminate hands and be ingested by hand-to-mouth contact, or through food preparation. Current handwashing prevalence is low in LMICs where the levels of diarrhoeal diseases are high (179).

Globally in 2015, an estimated 2.4 billion people still use unimproved sanitation facilities. The vast majority of them live in the South-East Asia, African, and Western Pacific Regions (180). In the last decades, use of improved sanitation facilities increased in most parts of the world, except Oceania. Rates of improvement were much lower in sub-Saharan Africa (6 percentage points) than in East Asia (28 percentage points), Southern Asia (25 percentage points), and South-East Asia (24 percentage points), but two thirds (64%) of those without access to improved sanitation in South Asia still practise open defecation, compared with one third (33%) in sub-Saharan Africa (180). In addition to direct contamination of the environment through open defecation and unimproved latrines, faecal pathogens may be transferred to waterborne sewage systems through flush toilets or latrines, and these may subsequently contaminate surface waters and groundwater.

Through such pathways, drinking water, recreational water or food may be contaminated and cause diarrhoeal disease following ingestion. Globally, recent research estimates that 26% of people drink water that is at least occasionally contaminated with faecal-indicator bacteria, with rates ranging from 14% in Europe LMICs to more than 52% in African LMICs (179).

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Annex 3. Additional information about evidence-based interventions

A3.5.1.
WASH interventions for general populations

Many WASH interventions for general populations are known to be effective in reducing diarrhoeal disease transmission, and these would also reduce the substantial rates of adolescent mortality and DALYs lost due to diarrhoeal diseases in LMICs. For example, large potential health gains could be achieved from the widespread adoption of appropriate handwashing practices, and related policies and programmes to promote this behaviour. Estimates suggest that simple interventions to improve handwashing after toilet or latrine use, or before food preparation, reduce the risk of diarrhoeal disease by 23% (179). Promotion of other food-hygiene behaviours could also be effective, such as routine cleaning of kitchen surfaces and utensils with solutions of soap or bleach in water, or re-heating food before eating to reduce bacterial growth (e.g. Case study A3.16) (181).

Case Study A3.16.

Nepal's approach to improved food hygiene

A recent study in Nepal developed and tested innovative, evidence-based behaviour-change approaches to improve food-hygiene practices. The intervention was implemented by conducting group sessions and household visits. Each session focused on a specific motivational theme, including nurture, disgust and social respect. Activities consisted of storytelling and motivational games introducing an Ideal Mother figure; providing reminder materials in kitchens related to five key food-hygiene behaviours; video screenings; a jingle installed on mobile phone ringtones; contamination demonstrations; public pledges of commitment to the campaign; competitions; and public reward ceremonies. One of the targeted behaviours was for mothers to keep food adequately hot to reduce bacterial growth. The nurture message communicated to mothers was that hot food is tastier food, so children will eat it more readily than food that is cold or at room temperature. Preliminary results of this campaign indicate that mothers practised the behaviours, in particular reheating food, because they found that children indeed liked it more.

Source: (181).

Other effective approaches are to increase access to basic sanitation at the household level, and to provide improved sanitation in households (e.g. flushing to a pit or septic tank, dry pit latrine with slab, or composting toilet). Limited evidence also suggests that connection to a sewerage system that safely removes excreta from both the household and community yields great health benefits (179). In addition, in settings where open defecation is widely practised, community campaigns to discourage the practice may be very effective.

The consistent application of household water treatment and safe storage has also been found to reduce diarrhoeal disease in general populations by between 28% and 45%, depending on the type of water supply. Shifting from an unprotected source of drinking water (e.g. dug well or spring; river, pond or other surface water; water provided by a vendor with a cart or tanker truck) to improved point sources of drinking water (e.g. borehole; protected dug well or spring; rainwater collection) only provides modest health gains, because the sources may be contaminated, or water may become contaminated before consumption (e.g. during transport, handling or household storage) (179). Limited evidence suggests that major diarrhoeal disease reductions (e.g. 73%) can be achieved by transitioning to water services that confer a safe and continuous supply of piped water.

Implementation of water-safety plans and guidelines for drinking-water quality are the most effective way of consistently ensuring the safety of a drinking-water supply at the country level. These plans require a risk assessment that considers all steps in water supply from catchment to consumer, followed by implementation and monitoring of control measures. WHO provides guidance and support to regulators, water suppliers and sanitation planners on how to implement and scale-up preventive risk management (e.g. WHO (182); WHO (183); WHO (184)). WHO standards of WASH in health facilities are also detailed according to hygiene; water quantity, access and quality; and sanitation quantity, access and quality (183).

A3.5.2.
Adolescent-specific WASH interventions

The heath sector must work closely with the education sector to reduce water- and sanitation-related health problems among adolescents, both in ensuring that schools provide safe water and sanitation facilities, and in implementing WASH interventions to promote healthy, lifelong practices at scale (e.g. Case study A3.17). In a recent survey, more than three quarters of 93 countries had nationally approved policies for sanitation and drinking water in schools, but only 22% of those measures were fully implemented, funded and regularly reviewed. Of the measures to sustain and improve services, sanitation had the lowest level of implementation: 80% of countries reported that measures are in place to rehabilitate broken or disused latrines at schools and other public facilities, but only 11% of those countries reported a high level of implementation of those measures (185).

Case Study A3.17.

Mauritania's improvement of water quality, sanitation and hygiene in vulnerable schools

In Mauritania, sewage systems often contaminate the groundwater supply, and water for household and school use frequently is collected and transported in plastic containers. Many children suffer from diarrhoea and other diseases related to such environmental conditions. In recent years, the government has worked to improve the quality of drinking water, sanitation and hygiene in schools. In the El Baraka School in the capital city of Nouakchott, for example, water basins have been installed and advice provided on handwashing and hygiene in classrooms and toilets. The entire school community – students, teachers and administrative staff –actively participates in creating a more hygienic school. Street vendors who sell food to the school community have also been provided with recommendations to improve the quality and safety of their food. More than 6500 people have benefited from the project to improve hygiene in schools, and the improved conditions have led to reduced student absenteeism.

Source: (186).

The Global Health Estimates definition of diarrhoeal diseases does not include helminths (e.g. tapeworms, roundworms and schistosomes), but some of those diseases involve similar transmission routes and intervention approaches. Historically, health and hygiene education programmes in schools have been important entry points for deworming activities. In 2011, more than 300 million preschool-aged and school-aged children were treated with anti-helminthic medicines in endemic countries, corresponding to 30% of the children at risk. WHO and partners have produced guidelines on school-based WASH interventions, including teacher manuals on how to conduct a school deworming day (187), and related school health modules focused on healthy nutrition (101), the physical school environment (188), and local action to create health-promoting schools (189).

In half of all households worldwide, water is carried to the home for household use, and women and girls are the primary water collectors (190). This is a time-consuming activity that can reduce girls' school attendance and focus on homework, and can also contribute to musculoskeletal problems. Walking great distances to collect water, or not having access to a toilet or latrine, can both be unsafe conditions that make adolescent girls isolated and vulnerable. Indeed, not having adequate WASH facilities has been associated with sexual assault and gender-based violence (126).

In addition, many girls miss school when they are menstruating if schools do not have adequate water and sanitation facilities. Menstruating girls, due to lack of knowledge, cultural beliefs, and inadequate hygiene facilities and supplies, may feel shame and social isolation resulting in poor self-esteem and decreased school attendance (185). The WASH Yatra project in India found that more than 70% of girls did not know what was happening to their bodies when they began menstruation and regarded the process as dirty, leading to an increased sense of shame (126). Interventions that promote menstrual hygiene management in communities, schools and emergencies can improve these conditions by creating appropriate resources and information (e.g. Case study A3.18). Multisectoral approaches linking WASH with health, education and the private sector are essential to ensure that girls have access to supplies for menstrual hygiene management, knowledge, and the autonomy to improve personal hygiene practices.

Annex 3. Additional information about evidence-based interventions

Case Study A3.18.

Papua New Guinea's school WASH facilities designed by adolescent girls

Historically, girls in Papua New Guinea have sometimes missed school due to their monthly menstruation, or attended school but experienced teasing by classmates and had to dispose of their used materials in long grasses. Most schools provided no education on menstruation, and teachers and school board members were mainly men. In order to raise awareness, female staff discussed menstruation with their male colleagues, which led to plans to construct showers and incinerators for use by the girls. However, when external facilitators led a knowledge-sharing workshop with girl students they said that they would prefer a simple facility that allowed them to sit down, and which also had a washing line positioned outside. Technicians helped them develop a prototype. A simple building was designed with woven grass matting lined with a waterproof shower liner to prevent the grass rotting, and for an increased level of privacy. A teacher and a student took part in a local radio programme and spoke about the challenges girls face and the knowledge-sharing workshop. A recording of this programme was broadcast on local radio several times for a month.

Source: (126).

A3.6.
Noncommunicable disease interventions

To date, most international efforts to prevent and treat noncommunicable diseases (NCDs) have focused on adults, but increasingly attention is also being given to NCDs experienced by children and adolescents (191). These NCDs may be triggered by a complex interaction between the child's body, the surrounding environment, living conditions, infectious agents, and nutritional and/or other factors.

Another important consideration is that major NCDs can influence and be influenced by other conditions (192). For example, childhood maltreatment is assumed to be a risk factor for the subsequent adoption of high-risk behaviours such as smoking, harmful use of alcohol, drug abuse and eating disorders, which in turn predispose individuals to NCDs, such as cardiovascular diseases, cancer and chronic respiratory diseases. In another example, many NCDs, including cardiovascular diseases and chronic respiratory diseases, are directly or indirectly linked to infectious diseases. In LMICs, for instance, infections are estimated to cause one fifth of cancers. Strong population-level infectious disease services will thus reduce the burdens of both communicable and noncommunicable diseases.

Importantly, in LMICs some NCDs are major causes of preventable mortality, morbidity and disability among adolescents, because of late diagnosis or lack of access to appropriate treatment. Those adolescents who are fortunate to survive often experience significant hardship and disability as a result of living with a chronic health condition that is not optimally managed.

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A3.6.1.
Overweight, physical inactivity and tobacco interventions in-depth

Behavioural risk factors for NCDs often begin in early childhood or adolescence and continue into adulthood (74). For example, if adolescents spend a substantial portion of their time watching television or computer screens, their physical activity is likely to be reduced, while the effect of advertising will contribute to an increase in their calorie consumption. Research has found that food marketing to children and adolescents is extensive, largely promotes foods high in salt, sugar or fat, and influences food preferences and consumption pattern at young ages (193). Children and adolescents also have little control over exposure to passive cigarette smoke, and adolescents may become smokers themselves. The nature and prevalence of such risk factors and outcomes can differ by country, ethnicity, socioeconomic group and sex. For instance, Cho and colleagues (2007) hypothesized that higher rates of binge drinking and smoking among 15-to 19-year-old in the Republic of Korea in lower socioeconomic groups contributed to their higher rates of cardiovascular death while still adolescents, relative to their counterparts in higher socioeconomic groups (194).

Multisectoral, population-based approaches are needed to reduce the prevalence of modifiable NCD risk factors among adolescents and in the general population. A combination of fiscal policies, legislation, changes to the environment, and raised awareness of health risks works best for promoting healthier diets and physical activity and discouraging tobacco use (195). These efforts aim not only to reduce risk factors for NCDs, but also to shape the broader environments in which people live, eat, study, work and play, so that healthy choices are accessible and easy to make (e.g. Case study A3.19). Schools provide a particularly important opportunity to address adolescent NCD risk factors with quality and on a large scale. Several WHO documents provide guidance on how governments can best utilize this opportunity, including School Policy Framework: Implementation of the WHO Global Strategy on Diet, Physical Activity and Health (196), and issues of the WHO Information Series on School Health, which focused on promoting nutrition and physical activity and reducing tobacco use (101); (107); (109).

Annex 3. Additional information about evidence-based interventions

Case Study A3.19.

Samoa's family programme to improve health and combat noncommunicable diseases

Half of all adults in Samoa are at high risk of developing major NCDs, including heart disease, diabetes and cancer. In response to this public health threat, PEN (Package of Essential NCD interventions) Fa'a Samoa was initiated in November 2014 in several demonstration sites. PEN Fa'a Samoa (literally meaning PEN the Samoan way) has three main pillars: early detection of NCDs, NCD management, and increased community awareness. The model takes advantage of existing community structures in which extended families play a significant role in daily life and culture. Each village in Samoa has a women's committee representative whose role is to liaise with government agencies to facilitate early NCD detection.

In communities where the pilot has been implemented, more than 92% of the target population has been reached. Members of the community with abnormal results for blood glucose are referred to a district health facility where they are seen by a physician who discusses a management and treatment plan with them, and prescribes medication and behaviour changes. Trained women in the community then help patients carry out their treatment plans. The Ministry of Health and the National Health Service aim to replicate PEN Fa'a Samoa and to achieve full implementation nationally by the end of 2016.

Source: (197).

Overweight

The prevalence of adolescent obesity is rising alarmingly in many countries around the world, although rates may be plateauing in some settings (114). WHO defines adolescent overweight and obesity in terms of body mass index (BMI) for age relative to the WHO growth reference for adolescents. Specifically, "overweight" is one or more standard deviations above the reference (equivalent to BMI 25 kg/m2 at 19 years), and "obesity" is two or more standard deviations above the reference (equivalent to BMI 30 kg/m2 at 19 years) (198); (199). In absolute numbers, there are more children who are overweight and obese in LMICs than in HICs. In many LMICs, however, malnutrition due to both under- and overweight are great burdens in adolescent populations. In the South-East Asia Region, for example, thinness in 15- to 19-year-old females is estimated to range from 24% to 47%, while overweight in the same population ranges from 2% to 24% (200).

Physical Inactivity

Physical activity has many positive health benefits for adolescents. Appropriate levels of physical activity contribute to the development of healthy musculoskeletal tissues (i.e. bones, muscles and joints) and cardiovascular systems (i.e. heart and lungs); neuromuscular awareness (i.e. coordination and movement control); and maintenance of a healthy body weight (95).

Physical activity can include play; games; sports; transportation (e.g. cycling); chores; recreation; physical education or planned exercise in the context of broader family; and school and community activities. For older adolescents it can also include appropriate occupational activity. Physical activity can also psychologically benefit adolescents by improving their control over anxiety and depression symptoms, and providing them with opportunities for self-expression; confidence-building; leadership; community contribution; and social interaction and integration.

Despite the benefits of physical activity, inactivity is alarmingly common among adolescents: 84% of adolescent girls and 78% of adolescent boys do not meet recommended minimum requirements for physical activity (195). The prevalence of physical inactivity is highest in HICs, where it is almost double that of LICs. Among WHO regions, the Eastern Mediterranean Region has the highest prevalence of inactivity in both adults and adolescents. In many cultures, boys have far more opportunity than girls to engage in sports or play outside, and they may also be far more mobile away from their home for school, work and other activities. Conversely, girls may be expected to stay inside their homes and have minimal physical activity, in accordance with modesty norms. This may be even more pronounced as girls reach their older adolescent years, suggesting that targeted interventions to promote physical activity with adolescent girls, and particularly older adolescent girls, may be beneficial (e.g. Case study A3.20).

Case Study A3.20.

Pakistan's promotion of physical activity for girls

In 2003, through the collaborative efforts of the NGOs Insan Foundation-Pakistan and Right to Play, a physical activity programme promoting inclusion of girls in play and sport activities was implemented in 14 Afghan schools and in two schools of Afghan and Pakistani children in Pakistan. The programme focuses on the inclusion of girls who had previously been culturally restricted from participating in sports and physical activity.

Through consultation with community elders, play sites were modified and girls-only events were organized. The project was well received by teachers and students, and girls' physical activity is now an integral part of these schools. This programme is an example of how NGOs can support the implementation of policies that promote physical activity in culturally sensitive ways.

Source: (196).

More in-depth guidance on adolescent physical activity can be found in several resources published by WHO or UNESCO, including Promoting Physical Activity in Schools: An Important Element of a Health-Promoting School (107), Global Recommendations on Physical Activity for Health (201), and Quality Physical Education (QPE): Guidelines for Policy Makers (202).

Tobacco use

Exposure to tobacco smoke can be both a behavioural and an environmental risk factor for cerebrovascular disease and many other NCDs, depending on the extent to which an individual smokes or is exposed to second-hand smoke. In 2010, the global Health Behaviour in School-Aged Children survey found that, among 15 year olds, 15% of boys and 13% of girls smoked tobacco daily. In contrast, in 2013 the global Adolescent Health and Lifestyle Survey found much lower reports of any tobacco use among 14-year-old boys (4%) and girls (6%) (203). Imagery in motion pictures continues to give misleadingly positive impressions of tobacco use. Such images have been identified
as a cause of smoking initiation among adolescents (204).

School-based tobacco-prevention programmes that identify the social influences prompting youth to smoke and teach them skills to resist those influences have demonstrated consistent, significant reductions or delays in adolescent smoking (109). These programmes usually target young adolescents, when smoking experimentation and initiation is most common (e.g. Case study A3.21). Effectiveness of school-based programmes is strengthened by school policies and community-wide programmes that involve community organizations, parents, mass media and youth. Some of the WHO regions have developed youth tobacco intervention guidelines and recommendations for their populations that address such broad interventions. For example, the Pan American Health Organization produced a tobacco-free youth life-skills primer that outlines comprehensive policy efforts, prevention programming, school-based programmes, life-skills training and the WHO life-skills initiative (205).

Annex 3. Additional information about evidence-based interventions

Case Study A3.21.

Costa Rica's life-skills programme to prevent adolescent alcohol and tobacco use

In 1995, a study conducted with the in-school adolescent population in Costa Rica found that, in the previous year, 51% of the students had consumed alcohol, 15% had smoked and fewer than 1% had consumed illegal substances. The age of substance use initiation averaged around 13 years old. In response, the government's National Center on Drug Abuse and the Ministry of Education developed a national substance-use prevention programme based on a life-skills teaching approach. The first version involved weekly sessions for seventh graders, and included cognitive, decision-making, stress-management, communication and self-directed behaviour-change components.

Process evaluation found there was generally a high acceptance of the programme by both participants and facilitators, but implementation was limited by several factors, including some facilitators having insufficient time, training or materials. The evaluation identified several ways to improve future implementation of the scaled-up national programme, including working more with school directors to increase their understanding and commitment to the programme; having teachers volunteer rather than be appointed to teach it; and ensuring they have adequate and sufficient training and resources to implement it fully, particularly in resource-poor schools.

Source: (205).

Interventions to reduce adolescent tobacco use or exposure should be implemented by the government through relevant legislation and regulations. These are included in the WHO Framework Convention on Tobacco Control, an international treaty with 180 Parties (179 countries and the European Union) and promoted by WHO as very cost-effective demand reduction measures (137); (168).

Stroke

Although stroke is a leading cause of adolescent mortality in some countries, there are controversies in screening adolescents for cardiovascular risk factors, because body fat distribution, blood pressure and lipids are all affected by puberty and normal growth (75). Early diagnosis of stroke in adolescents is also challenging because of limited awareness and its relative infrequency compared with other health problems that have similar signs and symptoms as stroke (207). Adolescents are less likely to seek emergency assistance in a timely way, and emergency services often delay or misdiagnosis adolescent stroke victims because they do not recognize the risk of stroke in young people. Management can also be difficult because of the diversity of underlying risk factors and the absence of a uniform treatment approach (207); (208).

Adolescents with stroke have remarkable differences in presentation compared with older patients, limiting the applicability of recommendations developed for adults. Nonetheless, research on adolescent stroke has been very limited and has mainly taken place in HICs – even though rates of adolescent mortality due to stroke are highest in African, European and Eastern Mediterranean LMICs (208); (143). Prognosis is also an important issue in adolescent stroke because of the longer expected survival compared with older people with stroke (207).

A3.6.2.
Interventions to prevent and treat adolescent undernutrition

Undernutrition in low-resource settings

Most programmes addressing undernutrition focus on children under the age of 2 years, because that is the age when undernutrition has the greatest impact on a child's health, growth and brain development (210). Increasingly, however, adolescents are recognized as a neglected group at risk of chronic malnutrition and deficiency of micronutrients (e.g. iron, vitamin A and iodine) in LICs, and also at risk of acute malnutrition and deficiency of other micronutrients (thiamine, niacin and vitamin C) in emergencies (e.g. famine) or when living with particular medical conditions (e.g. AIDS or TB) (79); (211).

Girls are particularly vulnerable to malnutrition, because preferential treatment based on gender can result in differing feeding practices and food intake, and their malnutrition can be worsened by high rates of adolescent pregnancy (212). Up to half of all adolescent girls are stunted in some countries (213). There is some evidence that early growth deficits can be treated (i.e. that catch-up growth for height can occur) in adolescents, provided that a high-quality diet is sustained, although there is no evidence of similar recovery of other deficits associated with stunting, such as cognitive deficits (210); (214). In addition to such potential catch-up, diverse nutrition is needed for the rapid growth that takes place during adolescence itself, when up to 45% of skeletal growth occurs, and between 15% and 25% of adult height is achieved (79).

Despite concerns about adolescent undernutrition, a recent literature search identified only a handful of single-nutrient supplementation interventions in adolescence, and no comprehensive supplementation studies (214). International guidance on malnutrition programming specific to adolescents is also very limited, so some countries have developed their own guidelines for it (215); (216). In 1999, WHO published guidelines on management of severe malnutrition in children, adolescents and adults, but little information is provided specific to adolescents (217). The main criteria of severe malnutrition in adolescents is a BMI below the fifth percentile of the reference population for age, or the presence of nutritional oedema; unlike for small children, anthropometric thresholds (e.g. mid-upper arm circumference to monitor growth) have not been established for adolescents (218). In the 1999 guidelines, treatment of severe malnutrition in adolescents is not considered to be very different from that in younger children, involving an initial (or acute) treatment phase of liquid feeds and a rehabilitation phase of progressive integration of traditional solid foods once appetite returns. In contrast to younger children, however, the guidelines note that adolescents may be reluctant to take the liquid formula feeds in the initial phase of treatment, unless they perceive these as medicine.

More generally, policies to address the underlying causes of malnutrition include those focused on gender, food insecurity, poverty (e.g. conditional cash transfers), hygiene (e.g. hand-washing promotion) and poor health (e.g. deworming and malaria-prevention or treatment) (219). The 2005 WHO Nutrition in Adolescence report outlines an overall strategy for nutrition intervention in adolescence, including school-based and community-based nutrition programmes in general adolescent populations; case management of adolescent nutritional problems in routine health -care; and prevention and management of severe malnutrition of adolescents in emergency situations (79). Schools offer many opportunities to promote healthy dietary patterns for children, including through health education; feeding programmes; the physical environment; school health services; and community and family outreach (101). However, a recent WHO survey of 123 countries found that, although most countries reported nutrition activities in primary and secondary schools, schools are not sufficiently used to deliver nutrition interventions (219). Training of staff in nutrition and health was the most commonly reported activity. Provision of safe water and hygiene promotion were also frequently reported, except in the countries of the African Region. Provision of milk or fruit and vegetables in schools was reported by half of the countries in most regions, with the exceptions being the African Region and the South-East Asia Region, where this was less common.

Both fortification and supplementation can be implemented on a large scale to address iron-deficiency anaemia. For instance, in 2002 Jordan began a national programme to fortify wheat flour with iron and folic acid (220). In 2006, the fortification programme was expanded to include niacin, zinc and vitamins A, B1, B2, B6 and B12. In 2010, the government added vitamin D. Currently, the only subsidized brand of flour in Jordan is fortified in these ways, constituting 93% of all wheat flour production in the country. A recent survey of Jordanian school children showed improvements in serum ferritin levels, indicating a reduction in iron-deficiency anaemia. In another example, a programme of weekly iron and folic acid supplementation for adolescent girls was piloted in 52 districts in 13 Indian states, reaching both school-attending and non-attending adolescent girls. Evaluation of the pilot programme indicated a 24% reduction in the prevalence of anaemia after one year of implementation. In 2013, India then introduced national implementation of weekly iron and folic acid supplementation for approximately 120 million adolescent girls (220).

Annex 3. Additional information about evidence-based interventions

Eating disorders

Eating disorders often have an onset in adolescence, particularly among girls, although boys can also experience them (79). Eating disorders include abnormal eating behaviour, as well as preoccupation with food, body weight and shape concerns. Two important examples are anorexia nervosa (an obsessive desire to lose weight by restricting food intake) and bulimia (an obsessive desire to lose weight, in which bouts of out-of-control overeating are followed by inappropriate compensatory behaviours aimed at preventing weight gain, e.g. self-induced vomiting, misuse of laxatives or enemas, or strenuous exercise.

The onset of anorexia nervosa usually occurs between 14 and 18 years, while the onset of bulimia usually occurs somewhat later, around the time of transition from adolescence to early adulthood (i.e. late teens or early twenties). Studies in HICs have found that, among adolescent girls and young women, anorexia nervosa has a prevalence of 1% and bulimia has a prevalence of 1–4%. An additional 5–13% of this group suffers from partial syndrome eating disorders (221). Although the prevalence of these conditions is relatively low, the physical and mental health outcomes can be very serious. Eating disorders show high levels of comorbidity with depressive, substance abuse and anxiety disorders, and they may contribute to cognitive deficits, dental damage and cardiac abnormalities.

To date, most eating-disorder prevention interventions have been targeted at elementary, middle and high-school students; professional schools with at-risk populations (e.g. ballet dancers, athletes, fashion models and cookery students); or adolescent girls who are showing unhealthy dieting behaviour at subclinical levels (221). The first generation of traditional educational programmes was focused on improving knowledge about eating problems and dieting behaviour, and changing related attitudes. In general, they showed an increase in knowledge but were not successful in changing disturbed attitudes and behaviours.

A more recent generation of multidimensional programmes has integrated traditional health education approaches within broader mental health promotion strategies, with more promising outcomes. In some studies, preventive effects have been found for eating-related attitudes, internalization or acceptance of societal ideals of appearance, feelings of ineffectiveness, body dissatisfaction and dieting behaviour. For instance, an Australian study of an interactive programme targeting self esteem, eating attitudes and eating behaviour in young adolescents found that, 12 months after the programme, participants showed improved body satisfaction, more positive self esteem and social acceptance, and a lower drive for thinness (222). In addition, adolescents at high risk showed an increase in body weight, while control at-risk students showed a decrease.

A3.7.
Additional information about mental health interventions

The WHO Mental Health Gap Action Programme (mhGAP) has developed an intervention guide for training non-specialized health workers (223). The adolescent module describes three broad conditions of particular concern to adolescent mental health, as follows:

- **Developmental disorder** is an umbrella term covering disorders such as intellectual disability and autism spectrum disorders. These conditions usually have a childhood onset; impairment or delay in functions related to central nervous system maturation; and a steady course rather than the remissions and relapses that tend to characterize many other mental disorders.

- **Behavioural disorder** is an umbrella term that includes specific disorders, such as attention deficit hyperactivity disorder and conduct disorders. Behavioural symptoms of varying severity are very common in the general population, but only adolescents with a moderate to severe degree of psychological, social, educational or occupational impairment should be diagnosed as having behavioural disorders.

- **Emotional disorders** are manifested as prolonged, disabling distress involving sadness, fearfulness, anxiety and/or irritability. They result in considerable difficulty with daily functioning in personal, family, social, educational, occupational or other areas. Adolescents often present with symptoms of more than one condition, and sometimes the symptoms overlap.

More broadly, common presentations of emotional disorders in adolescence include excessive fear, anxiety or avoidance of specific situations or objects (e.g. separation from caregivers; social situations; certain animals or insects; heights; closed spaces; sight of blood or injury); changes in sleeping and eating habits; diminished interest or participation in activities; and oppositional or attention-seeking behaviour (223). Early adolescents (10–12 years) may also experience recurrent, unexplained physical symptoms (e.g. stomach ache, headache or nausea); reluctance or refusal to go to school; and extreme shyness or changes in functioning (e.g. new wetting or soiling behaviour or thumb sucking). Adolescents of 13 years and older may experience problems with mood, anxiety or worry (e.g. irritable, easily annoyed, frustrated or depressed mood; extreme or rapid and unexpected changes in mood; emotional outbursts), excessive distress, and changes in functioning (e.g. difficulty concentrating; poor school performance; often wanting to be alone or stay home).

An overview of adolescent mental health services at different levels of a health system are shown in Table A3.7.

Annex 3. Additional information about evidence-based interventions

Table A3.7. Examples of an optimal mix of adolescent mental health services across different levels of a health system

TRIER	SITE	PERSONNEL	SERVICES
Informal community care	• Family • Schools • Prisons • Children's homes • NGOs	• Non-health workers • Volunteers	• Focus of services at this level to be on promotion of mental health and primary prevention of mental disorders
Primary health-care	• Clinics • District hospital • Maternity services • Family services	• Health workers • Doctors • Nurses	• Parental and youth education about general health and mental health issues • Screening for mental health problems (including suicidal tendencies) • Identification of young people at risk of mental health problems • Short-term counselling services for young people and their families • Basic management of behavioural disorders; follow-up and support for young people with chronic conditions
Community mental health-care	• Community mental health teams • Child guidance clinics • Child abuse units • Educational support services	• General mental health specialists, e.g. psychiatrists, psychologists, nurses, social workers • Multidisciplinary teams with additional training in child and adolescent mental health	• Investigation and treatment of severe problems referred from primary health-care services • Consultation, supervision and training of staff at primary health-care level • Link with other local and provincial sectors and NGOs in cross-sectoral prevention and promotion initiatives
General or paediatric hospitals	• Academic health complexes • Regional hospitals	• General mental health specialists, e.g. psychiatrists, psychologists, nurses, social workers • Child and adolescent mental health specialists • Mulidiscipliniary teams with additional training in child and adolescent mental health	• Investigation and treatment of severe problems referred from community mental health services • Consultation, supervision and training to community mental health service personnel • Links with other local and provincial sectors and NGOs in cross-sectoral prevention and promotion initiatives
Long-stay facilities and specialist services	• Chronic care institutions • Child and family units • Eating disorder units • Adolescent units • Abuse units • Private sector	• Child and adolescent mental health specialists	• Highly specialized diagnostic and treatment services • Support consultation and training to all levels of service • Rehabilitation services for subgroups such as autistic children and youth and those with psychotic disorders

Source: (113).

A3.7.1.
Guidance for health workers in non-specialized health settings

The 2016 WHO mhGAP intervention guide outlines how non-specialized health workers should assess, communicate and advise adolescents and their parents on different mental health issues, including general well-being; the home environment; developmental disorders; depression; behavioural improvement; and substance use disorders. Each of these is summarized below.

A3.7.1.1.
Psychoeducation to promote adolescent well-being and functioning

The health-care provider should encourage the parent to:

• Spend time with the adolescent in enjoyable activities. Provide opportunities for the adolescent to talk to you.

• Listen to the adolescent and show understanding and respect.

• Protect them from any form of maltreatment, including bullying and exposure to violence in the home, at school and in the community.

• Anticipate major life changes (such as puberty, starting a new school, or birth of a sibling) and provide support.

The health-care provider should encourage and help the adolescent to:

• Get enough sleep. Promote regular bed routines and remove any TV or other electronic devices with screens from the sleeping area or bedroom.

• Eat regularly. All adolescents need three meals (breakfast, midday and evening) and some snacks each day.

• Be physically active. If they are able, adolescents aged 10–17 years should do 60 minutes or more of physical activity each day through daily activities, play or sports.

• Participate in school, community and other social activities as much as possible.

• Spend time with trusted friends and family.

• Avoid the use of drugs, alcohol and nicotine.

A3.7.1.2.
Clinical assessment of an adolescent's home environment

Adolescents should always be offered the opportunity to be seen on their own during a clinical assessment, without carers present, although in most cases it is important to have the carer's consent. When assessing an adolescent's home environment, clinicians should ask the adolescent questions directly if developmentally appropriate and safe to do so (e.g. not in the presence of a carer who may be suspected of having committed maltreatment).
Red flags for adolescent maltreatment include both clinical features and aspects of carer interaction with the adolescent, as outlined below:

Clinical features:

Physical abuse

• injuries (e.g. bruises, burns, strangulation marks or marks from a belt, whip, switch or other object)

• any serious or unusual injury without an explanation or with an unsuitable explanation.

Sexual abuse

• genital or anal injuries or symptoms that are medically unexplained

• STIs or pregnancy

• sexualised behaviours (e.g. indication of age-inappropriate sexual knowledge).

Neglect

• being excessively dirty, or wearing unsuitable clothing

• signs of malnutrition or very poor dental health.

Emotional abuse and all other forms of maltreatment

• any sudden or significant change in the behaviour or emotional state of the adolescent that is not better explained by another cause, such as:

• unusual fearfulness or severe distress (e.g. inconsolable crying)

• self-harm or social withdrawal

• aggression or running away from home

• indiscriminate affection seeking from adults.

Aspects of carer interaction with the adolescent:
• persistently unresponsive behaviour (e.g. not offering comfort or care when the adolescent is scared, hurt or sick)
• hostile or rejecting behaviour
• using inappropriate threats (e.g. to abandon the adolescent) or harsh methods of discipline.

Annex 3. Additional information about evidence-based interventions

A3.7.1.3.
Parental psychoeducation for an adolescent with developmental delay or disorder

The health-care provider should understand that persons with developmental disorders may have associated behavioural problems that are difficult for the carer to manage.

The provider should encourage the parent or guardian to:

- Learn what the adolescent's strengths and weaknesses are and how they learn best; what is stressful to the adolescent and what makes him or her happy; and what causes problem behaviours and what prevents them.
- Learn how the adolescent communicates and responds (using words, gestures and nonverbal expression and behaviours).
- Help the adolescent develop by engaging with her or him in everyday activities and play. Children and adolescents learn best during activities that are fun and positive.
- Involve the adolescent in everyday life, starting with simple tasks, one at a time. Break complex activities down into simple steps so that the adolescent can learn and be rewarded one step at a time.
- Make predictable daily routines by scheduling regular times for eating, playing, learning and sleeping.
- Keep the environment stimulating – avoid leaving the adolescent alone for hours without someone to talk to, ensure the adolescent spends time outdoors, and limit time spent watching TV and playing electronic games.
- Keep the adolescent in the school setting for as long as possible, attending mainstream schools even if only part-time.
- Use balanced discipline and positive parenting strategies. When the adolescent does something good, offer a reward.
- Never resort to threats or physical punishments when the behaviour is problematic. Physical punishment can harm the adolescent-carer relationship; it does not work as well as other methods and can make behaviour problems worse.
- Avoid institutionalization of the adolescent. Promote adolescent access to health information and services, schooling and other forms of education, occupations and participation in family and community life.

A3.7.1.4.
Psychoeducation for adolescent depression and other emotional disorders

For the adolescent and/or carer, as appropriate:

- Address any stressful situation in the family environment, such as parental discord or a parent's mental disorder. With the help of teachers, explore possible adverse circumstances in the school environment.
- Provide opportunities for quality time with the carer and the family.
- Encourage and help the adolescent to continue (or restart) pleasurable and social activities.
- Encourage the adolescent to practise regular physical activity, gradually increasing the duration of sessions.
- Consider training the adolescent and carer in breathing exercises, progressive muscle relaxation and other cultural equivalents.
- Make predictable routines in the morning and at bedtime. Promote regular sleep habits. Schedule the day with regular times for eating, playing, learning and sleeping.
- For excessive and unrealistic fears:
  - praise the adolescent or give small rewards when they try new things or act bravely;
  - help the adolescent practise facing the difficult situation one small step at a time (e.g. if the adolescent is afraid of doing oral presentations at school, support the adolescent to practise giving presentations over time, first for one person, then a small group, then the teacher, then the teacher and a few students, and finally the whole class);
  - acknowledge the adolescent's feelings and worries and gently encourage them to confront their fears; and
  - help the adolescent create a plan to enable them to cope in case a feared situation occurs.
- Explain that emotional disorders are common and can happen to anybody. The occurrence of emotional disorders does not mean that the person is weak or lazy.
- Emotional disorders can cause unjustified thoughts of hopelessness and worthlessness. Explain that these views are likely to improve once the emotional disorders improve.
- Make the person aware that, if they notice thoughts of self-harm or suicide, they should tell a trusted person and seek help immediately.

A3.7.1.5.

Parental psychoeducation to improve adolescent behaviour

The health-care provider should encourage the parent or guardian to:

- Give loving attention to the adolescent, including spending time with the adolescent in enjoyable activities every day. Provide opportunities for the adolescent to talk to you.

- Be consistent about what your adolescent is allowed and not allowed to do. Give clear, simple and short instructions on what the adolescent should and should not do.

- Give the adolescent simple daily household tasks to do that match their ability level and praise them immediately after they do the task.

- Praise or reward the adolescent when you observe good behaviour and give no reward when behaviour is problematic.

- Find ways to avoid severe confrontations or foreseeable difficult situations.

- Respond only to the most important problem behaviours and make punishment mild (e.g. withholding rewards and fun activities) and infrequent compared to the amount of praise.

- Put off discussions with the adolescent until you are calm. Avoid using criticism, yelling and name-calling.

- Never resort to threats or physical punishment, and never physically abuse the adolescent. Physical punishment can harm the adolescent-carer relationship; it does not work as well as other methods and can make behaviour problems worse.

- Encourage age-appropriate play (e.g. sports, drawing or other hobbies) for adolescents and offer age-appropriate support in practical ways (e.g. with homework or other life skills).

A3.7.1.6.

Assessment and psychoeducation for adolescent substance-use disorders

How to assess the adolescent:

- Clarify the confidential nature of the health-care discussion, including in what circumstances the adolescent's parents or carers will be given any information.

- Ask what else is happening in the adolescent's life. Identify the most important underlying issues for the adolescent. Keep in mind that adolescents may not be able fully to articulate what is bothering them.

- Open-ended questions may be helpful in eliciting information in the following areas: home, education/employment, eating, activity, drugs, sexuality, safety, and suicidal thinking/depression (HEADSSS). Allow sufficient time for discussion. Also assess for other priority mental health conditions.

Psychoeducation for the adolescent:

- Provide the adolescent and their parents with information on the effects of alcohol and other substances on individual health and social functioning.

- Encourage a change in the adolescent's environment and activities, rather than focusing on the adolescent's behaviour as being a problem. Encourage participation in school or work and activities that occupy the adolescent's time. Encourage participation in group activities that are safe and facilitate the adolescent's building of skills and contribution to their community. It is important that adolescents take part in activities that interest them.

- Encourage parents and/or carers to know where the adolescent is, who they are with, what they are doing and when they will be home, and to expect the adolescent to be accountable for their activities.

Annex 3. Additional information about evidence-based interventions

Suicide interventions in-depth

More information about adolescent suicide

As noted in Section 2, self-harm was the third leading cause of death among adolescents globally in 2015, and adolescents are also the age group at greatest risk of deliberate self-harm behaviour without suicidal intent (143); (224). Adolescents who harm themselves experience more frequent and more negative emotions, such as anxiety, depression and aggressiveness, than those who do not self-harm (224).

Self-harm presentations become increasingly common from age 12 years onwards, particularly in girls – such that between ages 12 and 15 years the girl-to-boy self-harm ratio is as high as five or six to one (225). The sex difference decreases with age in late adolescence as the behaviour becomes increasingly common in males and levels off in females. Judging from hospital statistics, self-harm has greatly increased in frequency in adolescents in the past few decades. This may be due to multiple factors, including greater availability of medication; more stress experienced by adolescents; increased alcohol and drug consumption; and social transmission of the behaviour, particularly through the media and more recently the internet (225); (226).

Adolescents who have experienced childhood and family adversity (e.g. physical violence; sexual or emotional abuse; neglect; maltreatment; family violence; parental separation or divorce; institutional or welfare care) have a much higher risk of suicide than others (83). Psychosocial stressors associated with suicide can arise from different types of trauma (including torture, particularly in asylum seekers and refugees), disciplinary or legal crises, financial problems, academic or work-related problems, and bullying. In addition, although reliable data on the scale of the problem are not available, pregnancy is increasingly recognized as a reason for suicide among pregnant girls (227). Suicide is particularly prevalent among indigenous youth, and particularly among young males. Native Americans in the USA, First Nations and the Inuit in Canada, Australian aboriginals, and the MZori in New Zealand all have rates of suicide that are much higher than those of the rest of the population (83).

It is estimated that the ratio of attempted suicide to actual suicide is 20 to one (228). Having engaged in one or more acts of attempted suicide or self-harm is the single most important predictor of death by suicide. A large number of those who die by suicide have had contact with primary health-care providers within the month prior to the suicide. However, without appropriate training, health workers may not have adequate skills in self-harm assessment and management, including mental health literacy and experience, cooperation with psychiatrists, and interviewing skills (83).

The 2012 WHO framework Public Health Action for the Prevention of Suicide outlines a step-wise approach to developing a national suicide-prevention strategy, i.e. identifying stakeholders; undertaking a situation analysis; assessing the availability of needed resources; achieving political commitment; addressing stigma; and increasing awareness (229). The 2014 WHO report Preventing Suicide: A Global Imperative in turn describes evidence-based suicide-prevention interventions that have been developed for general populations at different levels of the ecological model, all of which are also applicable to adolescents (83).

Targeting vulnerable adolescents

Suicide-prevention efforts should target vulnerable adolescents who may be at relatively high risk of suicide with appropriately tailored interventions. Depending on the particular context, vulnerable adolescents may include those who have experienced abuse, trauma, conflict or severe natural disaster; those who are bereaved or who have been affected by suicide; and those who are indigenous, refugees, migrants, prisoners, in conflict with the law, or lesbian, gay, bisexual, transgender or intersex (LGBTI) (83); (230). For instance, adolescents who have survived a conflict or natural disaster may be less isolated and prone to suicidal thoughts if the ties to their communities are supported and strengthened.

Among indigenous groups, territorial, political and economic autonomy are often infringed and native culture and language negated. These circumstances can generate feelings of depression, isolation and discrimination, accompanied by resentment and mistrust of state-affiliated social and health-care services, especially if these services are not delivered in culturally appropriate ways. Community prevention initiatives, gatekeeper training, culturally tailored educational interventions, and interventions with high levels of local control and involvement of indigenous communities should be prioritized to prevent suicide among indigenous adolescents (e.g. Case study A3.22).

Case Study A3.22.

New Zealand's multisectoral programmes to reduce suicide among Māori youth

New Zealand has some of the highest youth suicide rates among HICs, particularly among indigenous Māori youth, who have two-and-a-half times higher rates of suicide than non-Māori youth. The Government of New Zealand has developed multiple initiatives to prevent suicide in these vulnerable groups. For example, the ministries of education, health, and youth development collaborated to produce, and nationally disseminate, resources for teachers that outline the roles and responsibilities of school personnel in suicide prevention. They also offer guidance about best prevention practices, and provide criteria that schools can use to assess the quality of suicide-prevention

programmes. In addition, the Towards Well-Being programme is a highly structured initiative that straddles the welfare and education sectors and assists in identifying and managing young people who are at risk of suicide and may need to be referred to mental health services. Most recently, in the New Zealand Suicide Prevention Action Plan 2013–2016, the government prioritized collaboration with Māori communities in national suicide-prevention efforts, including targeted capacity building, information and resource sharing, training, and provision of more accessible support services.

Source: (231).

An example of an online intervention targeting vulnerable adolescents is the ReachOut programme, which was established in 1996 in response to Australia's growing youth suicide rates. ReachOut provides practical self-help to all young people aged 14–25 years and their carers. It includes an online youth discussion and support forum with dedicated moderators and staff members who can provide crisis support to young people seeking help (232). ReachOut particularly targets youth who have insufficient access to appropriate services, including those who are male, LGBTI, or living in regional and remote areas.

Restricting access to means

Structural, environmental and organizational interventions to restrict access to the means to commit suicide are critical, and particularly effective at preventing impulsive suicide because they give those contemplating suicide more time to reconsider (83). Globally, the most common means of suicide are self-poisoning with pesticides, hanging and jumping. Suicide by pesticide ingestion primarily occurs in rural areas of LMICs in Africa, Central America, South-East Asia, and the Western Pacific. Interventions to prevent suicide by pesticide include: ratifying, implementing and enforcing relevant international conventions on hazardous chemicals and wastes; legislating to remove locally problematic pesticides from agricultural practice; enforcing regulations on the sale of pesticides; reducing access to pesticides through safer storage and disposal by individuals or communities; and reducing the toxicity of pesticides (e.g. Case study A3.23).

Case Study A3.23.

Sri Lanka's targeted pesticide bans

Suicide rates in Sri Lanka increased eightfold between 1950 and 1995, with more than two thirds of suicides involving pesticide poisoning. From 1991, imports of WHO Class 1 (highly or extremely hazardous) pesticides were gradually reduced until a total ban on their import and sale was implemented in 1995. The ban was followed by a sharp decrease in suicide mortality. However, the number of hospital admissions for pesticide self-poisoning increased, as did the in-hospital mortality rate for pesticide poisonings. This occurred because the 1995 ban prompted farmers to switch to the Class 2 (moderately hazardous)

insecticide endosulfan, which led to an increase in self-poisoning with endosulfan, a substance that results in conditions that are more difficult to treat than poisoning by more toxic Class 1 pesticides. Endosulfan was itself banned in 1998, a move associated with further decreases in suicide mortality, including in-hospital mortality. There were almost 20 000 fewer suicides from 1996–2005 compared to 1986–1995. Other factors were not associated with reduced suicide rates, and the pesticide bans were not associated with losses in agricultural output.

Source: (233).

Annex 3. Additional information about evidence-based interventions

Self-poisoning with medication is the second or third most common method of suicide and suicide attempt in most European countries (83). To prevent this possibility, health-care providers should restrict the amount of medication dispensed, inform patients and their families about the risks of treatment with medicines, and stress the importance of adhering to prescribed dosages and disposal of excess unused tablets. Legislative and pragmatic changes to domestic gas at national and regional levels have substantially reduced suicide by intentional carbon monoxide poisoning, but charcoal-burning poisoning by toxic gas is a method that has recently become common in China and its special administrative region of Hong Kong. Removing charcoal packs from open shelves into a controlled area in major store outlets in Hong Kong and other parts of China has significantly reduced such deaths (83).

Suicides by hanging or jumping (e.g. from bridges or high buildings, or in front of trains) are common in part because they are easily accessible methods in many settings (83). Making changes to structures to restrict access to high places are effective in preventing suicides by jumping. Attempted suicide by firearms is highly lethal, accounting for the majority of suicides in some countries, such as the USA. Legislation restricting firearm ownership has been associated with reduced firearm suicide rates in many countries. These restrictions include tightening rules on the availability of firearms in private households and procedures for obtaining licences and registration; limiting personal gun ownership to hand guns; extending the waiting period for purchases; enforcing safe storage requirements; decreeing a minimum age for firearm purchase; and implementing criminal and psychiatric background checks for firearm purchases.

Gatekeeper interventions

Gatekeepers are people who are in a position to identify whether an adolescent may be contemplating suicide. They include parents; primary, mental and emergency health providers; teachers and other school staff; community leaders; police officers, firefighters and other first responders; military officers; social workers; spiritual and religious leaders or traditional healers; and human resource staff and managers. Some multicomponent suicide-prevention initiatives include training of gatekeepers in suicide crisis management (e.g. Case study A3.24). A WHO review found that school-based suicide prevention programmes that include mental health awareness training and skills training (e.g. problem solving, or coping with stress) can reduce suicide attempts and suicide deaths among students (234). The authors note, however, that potential harms may result if there is a lack of health-care and community resources to provide care for at-risk adolescents who seek help.

Case Study A3.24.

Hong Kong's (China SAR) initiatives to prevent suicide among youth and adults

In Hong Kong, a special administrative region of China, multiple governmental and nongovernmental initiatives focus on reducing suicide among young people and adults. The Hospital Authority runs an early assessment service for young people with psychosis that involves screening, early detection, emergency and fast-track treatment services, and follow-up care. Hong Kong also has a suicide crisis intervention centre, run by Samaritan Befrienders, that provides an outreach service to identify people at moderate to high risk of suicide, and to offer them crisis intervention and intensive counselling.

In addition, the Hong Kong Jockey Club Centre for Suicide Research and Prevention hosts a highly acclaimed website known as The Little Prince is Depressed (www.depression. edu.hk). This is designed to educate the community in general and young people in particular about depression and its treatment, with a view to reducing the stigma surrounding the condition and increasing the likelihood that those who need help will seek it. The Centre has also supported projects in Hong Kong to train secondary school teachers in suicide crisis-management skills.

Source: (231).

WHO has published a series of resource booklets on preventing suicide that target relevant social and professional groups, including teachers and other school staff; physicians; primary care health-care workers; first responders; counsellors; media professionals; and survivors. The school resource book explains protective and risk factors, how to identify adolescents in distress and at possible risk of suicide, and how to manage them at school (235). Guidelines for management, for instance, include general prevention (e.g. strengthening students' self-esteem; promoting emotional expression; preventing bullying and violence at school;

and providing information about care services); intervention when a suicide risk is identified (e.g. trustworthy communication; improving school staff skills; referral to professionals; removing means of suicide from the proximity of distressed and suicidal adolescents); and actions when suicide has been attempted or committed (e.g. how to inform school staff and schoolmates).

Box A3.4 summarizes the WHO recommendations for management of self-harm and suicide in nonspecialized health settings (236).

Box A3.4. WHO recommendations for management of self-harm and suicide ideation in nonspecialized health settings

At initial assessment, and periodically as required, health-care providers should ask individuals over 10 years of age about thoughts or plans of self-harm in the last month, or acts of self-harm in the last year, if they are suffering from depression; bipolar disorder; schizophrenia; epilepsy; alcohol use disorders; illicit drug use disorders; dementia; or other mental disorders; or if they present with chronic pain or acute emotional distress associated with current interpersonal conflict, recent loss or another severe life event. The adolescent, family and relevant others should be advised to restrict access to the means for self-harm as long as the individual has thoughts, plans or acts of self-harm.

Regular contact (e.g. telephone contact, home visits, letter, contact card, or brief intervention) with the nonspecialized health-care provider is recommended for adolescents with acts of self-harm in the last year. Such regular contact should also be considered for adolescents who volunteer thoughts of self-harm, or who are identified as having had plans of self-harm in the last month.

A structured problem-solving approach should be considered as a treatment for adolescents who have had acts of self-harm in the last year, if there are sufficient human resources (e.g. supervised community health workers).

Use of social support from available informal and/or formal community resources should be facilitated for adolescents who volunteer thoughts of self-harm, or who are identified as having had plans of self-harm in the last month, or acts of self-harm in the last year.

Hospitalization in nonspecialized services of general hospitals, with the goal of preventing acts of self-harm, is not routinely recommended for adolescents with self-harm. However, admission to general hospital for management of medical consequences of an act of self-harm may be necessary. In these cases, close monitoring of the adolescent's behaviour will be necessary to prevent subsequent self-harm in the hospital. In situations where a health worker is concerned about imminent risk of serious self-harm (e.g. when an adolescent is violent, extremely agitated or uncommunicative), urgent referral to a mental health service should be considered. However, if such a service is not available, family, friends, concerned individuals and other available resources should be mobilized to ensure close monitoring of the individual as long as the imminent risk persists.

Sources: (228); (236).

Annex 3. Additional information about evidence-based interventions

A3.8.
Interventions in humanitarian and fragile setting

WHO and partners have produced numerous guidelines to address specific health burdens associated with humanitarian and fragile settings. These general population interventions also benefit adolescents, e.g. Environmental Health in Emergencies and Disasters (237), Food and Nutrition Needs in Emergencies (244), Food Safety in Natural Disasters (238), Emergency Sanitation Planning (239), Communicable Diseases Following Natural Disasters (240), Humanitarian Charter and Minimum Standards in Humanitarian Response (241), and Guidance Note on Disability and Emergency Risk Management for Health (242). An online database on humanitarian health action provides access to WHO and other

agencies' technical guidelines and guidance notes (http://www.who.int/hac/techguidance/guidelines/en/)(243).

Sections 3.8.1–3.8.6 focus on health burdens with particular implications for adolescents in humanitarian emergencies, organized under the categories of nutrition; disability and injury; violence; sexual and reproductive health; WASH; and mental health. Some of these burdens and their interventions are closely interrelated, e.g. appropriate response to sexual violence includes both SRH and mental health services.

A3.8.1.
Nutrition

The 2004 guide Food and Nutrition Needs in Emergencies – which was published by the United Nations Refugee Agency (UNHCR), UNICEF, the World Food Programme and WHO – provides detailed guidance on this topic and is the source of all information in this section, unless otherwise specified (244). In humanitarian and fragile settings, stakeholders concerned with food and nutrition should assess conditions and determine adequate rations for different population groups according to age, gender, weight, physical activity levels and other key factors. Adolescent females and 15- to 19-year-old males are generally estimated to have the highest energy (kcal/day) requirements for their respective sexes. The specific requirements for emergency-affected populations are: 2040 kcal/day (10- to 14-year-old females), 2120 kcal/day (15- to 19-year-old females), 2370 kcal/day (10- to 14-year-old males), and 2700 kcal/day (15- to 19-year-old males). For a pregnant or lactating female in an emergency setting, requirements increase by 285 kcal/day if she is in her second or third trimester of pregnancy, and by 500 kcal/day during the first six months of the lactating period. Energy needs also increase during periods of nutritional rehabilitation and recovery from severe illness, requiring an upward revision of the basic ration level for individuals of that age and sex.

For example, this would be required for a population that has

suffered severe prolonged food shortages that caused high levels of malnutrition, or for a population affected by a widespread epidemic.

Possible micronutrient deficiencies also need to be assessed to determine rations provided to adolescents in emergency settings. Older adolescents have higher requirements for some vitamins and minerals (i.e. thiamine, riboflavin, niacin equivalents and folic acid) than young adolescents of the same sex, while male adolescents overall have higher requirements for the same micronutrients than same-age females who are neither pregnant nor lactating. Iron is the one exception to this pattern by sex, as adolescent females have higher iron needs than their same-aged male counterparts, as described in Section 2.6. This difference is not great for 10- to 14-year-old adolescents, but the iron requirement for 15- to 19-year-old females is more than twice that of 15- to 19-year-old males. To address specific micronutrient deficiencies, supplements or fortified foods can be considered, involving interventions similar to those described in Section 3 (241).

A3.8.2.
Disability and injury

People with disabilities – including adolescents with disabilities – are among the most vulnerable and neglected in any type of emergency, and as a result they experience some of the highest rates of mortality and morbidity (242). People with visual, hearing or intellectual impairments and severe mental health conditions, and those who are socially excluded or living in institutions, may be unprepared for events that lead to emergencies, and may not know or understand what is happening. People with disabilities may also be less able to escape from hazards, may lose essential assistive devices such as spectacles, hearing or mobility aids and/or medications, or may be left behind when a community is forced to evacuate a location. In addition, they may have greater difficulty accessing basic needs, such as food, water, shelter, latrines and health-care services. The vulnerability of adolescents with disabilities becomes even more acute during emergencies when they are separated from their families, and traditional caring mechanisms in the community such as the extended family and neighbours break down. They face high risks associated with safety, protection and dignity, and they may be particularly vulnerable to violence, exploitation and sexual abuse.

In 2013, WHO and partners published the Guidance Note on Disability and Emergency Risk Management for Health, a short, practical guide for people working in health that addresses general emergency risk assessment, prevention (including hazard and vulnerability reduction), preparedness, response, recovery and reconstruction (242). The guidance note briefly describes core health services to support children with disabilities in an emergency, including ensuring essential medicines are available in the appropriate dosages and formulations, e.g. for the treatment of epilepsy and juvenile diabetes.

In addition to assessing and responding to the special needs of disabled adolescents in humanitarian and fragile settings, consideration should be given to the particular needs of adolescents who are injured and disabled during the emergency itself. The 2005 WHO Emergency Surgical Care in Disaster Situations summarizes guidelines for both adults and children. This includes some adolescent-specific content, e.g. antibiotic prophylaxis and treatment dosages, and age-appropriate treatment of fractures, amputations, burns and female genital injury (245).

A3.8.3.
Violence

As noted above, different kinds of violence may occur in humanitarian crises, particularly in conflict settings. Forms of sexual violence that may be especially widespread include:

- Sexual exploitation by anyone who can provide safe passage, food or other basic needs. In other words, sex with women and children is traded for goods and services.
- Sexual violence, including sexual slavery, against civilian women and girls by soldiers or members of armed factions seeking to brutalize and humiliate the perceived enemy. This is used as a strategy of war and as a means to gain political power, and may also be a tool of so-called ethnic cleansing.
- Violence against adolescent girls and women by a husband or intimate partner, including in camps for refugees or internally displaced persons (246).

Other forms of sexual violence may also be more likely to occur during armed conflicts or in refugee camps than in other settings, such as rape or sexual coercion of men and boys (247). However, this has not been researched well and the scale of the problem is not clear.

Community-based psychosocial programmes that address sexual violence in conflict settings can play a critical role in promoting good practices and reducing harmful ones (248). Assessment and action to support people affected by sexual violence should be guided by a survivor-centred approach, which is based on survivors' rights, including the right to be treated with dignity and respect rather than victim-blaming attitudes; the right to choose what to do rather than feel powerless; the right to privacy and confidentiality rather than shame and stigma; the right to non-discrimination rather than differential treatment based on gender, ethnicity or other factors; and the right to information rather than being told what to do. Box A3.5 outlines approaches and actions that should be done in planning and implementation of programmes for survivors of sexual violence in conflict-affected settings.

Annex 3. Additional information about evidence-based interventions

Box A3.5. Guidance for providing community-based psychosocial support to survivors of sexual violence in conflict-affected settings

- Provide adolescent survivors with useful, accurate information on available services that is easily understood, presented in the relevant local language and delivered with compassion.
- Train and support first responders to provide a safe, calm environment; listen supportively; demonstrate compassion and non-judgment; provide reassurance without making false promises; and promote access to medical care and other support.
- Identify a first contact or appropriate case manager who is trained in case management and psychological first aid, and can provide basic support and help survivors to access needed services.
- Design programmes that offer survivors and other vulnerable women and girls the opportunity to participate in non-stigmatizing community-based activities that reduce their isolation.
- Consider establishing or supporting safe spaces for women, girls and boys to promote interaction, education and referral to relevant services.
- Consider whether and how to establish or link with financial support services that support survivors' recovery.

- Seek to strengthen access to clinical mental health-care, ensuring that clinical referral services are available for those whose distress is so overwhelming that it interferes with their ability to carry out work, school or domestic activities.
- Work with communities to spread anti-stigma messages, enabling discussions of how to prevent and respond to sexual violence, engaging women's and men's support groups and dialogue groups, and linking with community education and advocacy efforts.
- Engage women, men, girls and boys affected by sexual violence in decisions about the design, delivery and evaluation of interventions.
- Consider how programming can be culturally sensitive, and promote positive gender and cultural norms, while also challenging potentially harmful attitudes and practices.
- Ensure that all relevant actors in the community know what their specific roles and responsibilities are in ensuring that interventions are implemented in a manner that protects the safety and security of women and children.

Source: (248).

©Hanalie Albiso
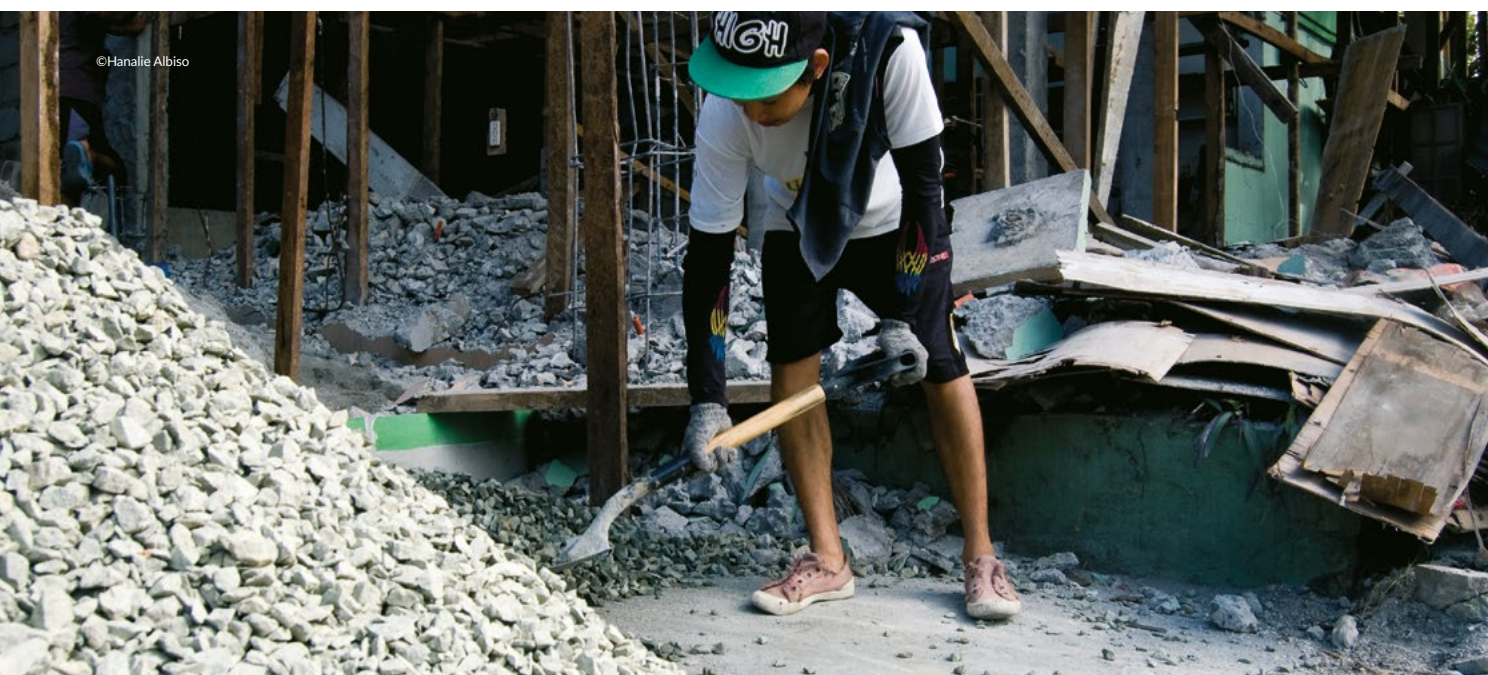
The 2004 WHO Clinical Management of Rape Survivors: Developing Protocols for Use with Refugees and Internally Displaced Persons includes specific recommendations for care of child and adolescent survivors, e.g. performance of physical and genital examinations; presumptive treatments for different STIs, including postexposure prophylaxis of HIV infection; and development of protocols in accordance with local laws and reporting procedures.

Medical professionals should understand the need for thorough, but sensitive, medical screening of former child soldiers at the earliest possible opportunity (247). This may be at the time of formal demobilization, but may also occur when child soldiers are captured, escape or otherwise leave service. Screening may need to be carried out in stages, addressing the most vital problems first and then proceeding to more sensitive issues, such as sexual abuse. Health professionals may also play a valuable educational role in helping prevent children being recruited into armies (including as volunteers), by raising awareness among children and adolescents who are at risk – as well as among their families and communities – and by stressing the associated dangers, including the severe damage to psychological and mental health.

Adolescents may experience other forms of violence in emergency settings, including violence related to increased stress and trauma during and after natural disasters. The WHO and colleagues (2016)

report, INSPIRE: Seven Strategies for Ending Violence Against Children, describes intervention strategies for general populations, but notes that these are also applicable in conflict, post-conflict and other humanitarian settings, such as those affected by natural disaster. These include strategies focused on implementation and enforcement of laws (e.g. to prevent alcohol misuse); norms and values (e.g. bystander interventions); safe environments (e.g. addressing violence hotspots); parent and caregiver support (e.g. training and support delivered in groups in community settings); income and economic strengthening (e.g. cash transfers); response and support services (e.g. counselling and therapeutic approaches); and education and life skills (e.g. life and social skills training). In principle, because these interventions do not depend upon intact social systems and functioning governance structures, interventions delivered through self-contained programmes can be delivered in any context, including in humanitarian and fragile settings. For example, the International Rescue Committee conducted parenting programmes with migrant and displaced families on the border between Myanmar and Thailand, as well as with very poor communities in rural Liberia. The programmes mainly consisted of parenting group support, combined with a limited number of home visits. Randomized controlled trials that evaluated those interventions found they reduced harsh physical and psychological punishment, increased positive strategies to manage children's behaviour, and enhanced the quality of caregiver-child interactions (52).

A3.8.4.
Sexual and reproductive health

In 2005, the Inter-Agency Standing Committee, which brings together key United Nations and non-United Nations humanitarian partners to coordinate global humanitarian assistance, appointed WHO as the lead agency of its Global Health Cluster. The Global Health Cluster subsequently recommended content for SRH/HIV responses within humanitarian and fragile settings, from minimum initial relief interventions to comprehensive, longer-term recovery activities. These are summarized in Figure A3.1 (249).

Annex 3. Additional information about evidence-based interventions

Figure A3.1. Sexual and reproductive health interventions for general populations in humanitarian and fragile settings, from a minimal initial service package to a comprehensive response

Source: (249).
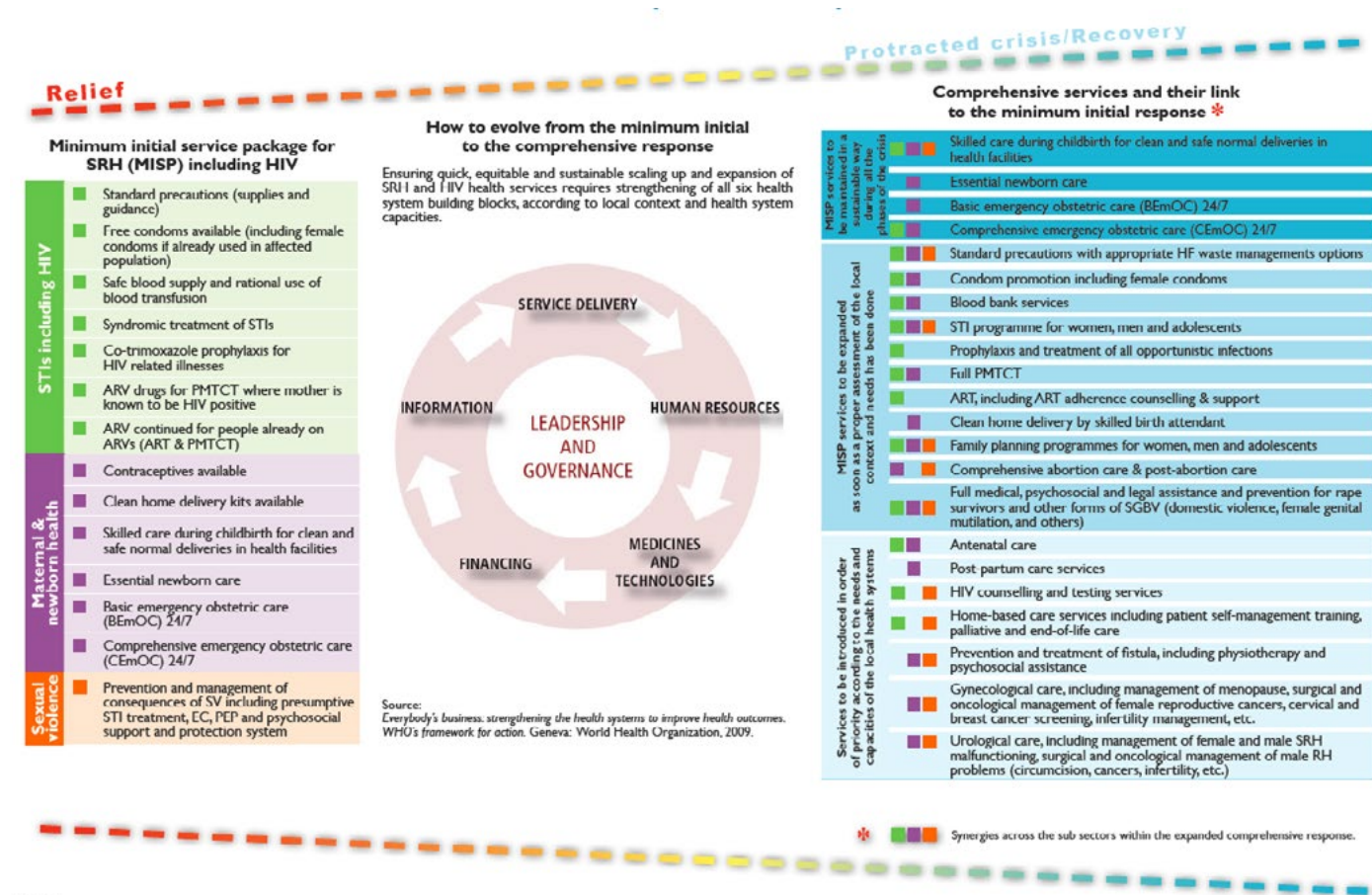
Several other major international collaborations have produced additional guidance documents on the management of SRH in humanitarian and fragile settings, all of which are relevant to adolescents (e.g. Inter-Agency Working Group on Reproductive Health in Crises (250); WHO and partners. (251); Women's Refugee Commission (252); EWEC Technical Content Workstream Working Group on Humanitarian Challenges (91). For example, the EWEC Working Group on Humanitarian Challenges specifies that adolescent interventions should include:

- **preventive care** – including contraception; condoms; emergency contraception; gender-based violence (GBV) prevention; mental health; sexuality education; and life skills;
- **treatment** – including treatment of STIs; comprehensive abortion care; adolescent-friendly health facilities; clinical care for survivors of sexual violence; emergency contraception; nutrition; and trauma surgery;

- **delivery models** – including flexible and integrated adolescent SRH services; community-based, mobile and temporary clinics; provision of comprehensive SRH services for adolescents at a single site; home-based care, education and outreach through non-health facilities; safe spaces (e.g. Case study A3.25); and an adolescent lens applied to MISP and assessment;
- **kits** – including those for menstrual hygiene (dignity kits), post-rape, STI and contraception. (91)

Case Study A3.25.

Nigeria's safe spaces for girls and women displaced by the militant group Boko Haram

In the six years since the conflict with the militant Boko Haram group began in north-east Nigeria, more than 2.2 million people have been internally displaced, 20 000 civilians killed, and as many as 7000 women and girls abducted. An estimated 92% of internally displaced persons live within host communities and 8% in camp settings. More than 500 000 of them (53%) are girls and women of reproductive age, with more than 81 000 pregnancies expected during 2016.

With support from UNFPA, the United States Agency for International Development (USAID) and the Government of Japan, nine safe spaces for women and girls fleeing Boko Haram have been established since August 2015 in some of the most populated camps for the displaced in north-east Nigeria. The safe spaces serve several purposes, including building the resilience of girls and women by offering them opportunities to acquire livelihood skills and engage with others to rebuild community networks (253). They are also a confidential and non-stigmatizing entry point for reproductive health information and services, including family planning and psychosocial counselling for GBV. Between August 2015 and March 2016, 10 230 adolescent girls were reached through the camps, including 4379 who received psychosocial support (individual and group); 4322 who participated in information and awareness raising; 1105 who benefited from outreach on GBV prevention; 314 who gained livelihood skills; and 110 who received referral support as GBV survivors.

Source: (253).

The Inter-agency Field Manual on Reproductive Health in Humanitarian Settings further notes that an initial emergency response should:

- make condoms – both male and female – available in places where adolescents meet, preferably in private, accessible locations where they can access them without being observed;
- ensure adolescent girls are safe when carrying out household tasks such as collecting firewood, water or food;
- ensure pregnant adolescent girls have access to emergency obstetric care services and referral mechanisms when necessary; and
- establish clinical care and referral services for survivors of sexual violence that are sensitive to adolescent needs and respect confidentiality.

 (250)

In addition, several adolescent-specific SRH resources have been produced for emergency settings, including Adolescent Programming Experiences During Conflict and Post-conflict (254); Adolescent Sexual and Reproductive Health Toolkit for Humanitarian Settings (255); Adolescent Sexual and Reproductive Health Programs in Humanitarian Settings (256); and Adolescent Girls in Disaster and Conflict (257). For example, the Save the Children and UNFPA toolkit outlines key interventions for different sectors responding to adolescent SRH needs; those considered essential for minimal preparation and response are summarized in Table A3.8 (255). The toolkit also provides participation tools for adolescents, parents and broader communities; assessment tools (e.g. an adolescent SRH emergency situation analysis); facility-based tools (e.g. an adolescent SRH checklist); and community-based distribution and peer education tools to help operationalize adolescent SRH interventions during and immediately after a crisis.

Annex 3. Additional information about evidence-based interventions

Table A3.8. Minimal interventions to prepare for and respond to adolescent sexual and reproductive health needs during emergencies

FUNCTIONS AND SECTORS	MINIMUM EMERGENCY PREPAREDNESS	MINIMUM RESPONSE (TO BE CONDUCTED DURING THE EMERGENCY)
Coordination	• Determine coordination mechanisms and responsibilities • Mainstream adolescent sexual and reproductive health (ASRH) in preparedness and contingency	• Advocate with the Global Health Cluster (the global humanitarian emergency response coordinating body) to ensure ASRH services are accessible to adolescents during implementation of the MISP • Identify the most-at-risk adolescents and ensure that they have access to ASRH services
Assessment and monitoring	• Advocate for inclusion of ASRH questions in rapid assessment tools	• Identify the most-at-risk subgroups of adolescents • Advocate for the inclusion of ASRH and adolescent demographic questions
Facility-based ASRH services	• Train health staff on rapid response of ASRH and working with at-risk adolescents	• Ensure adolescent-friendly health services during MISP implementation • Ensure adolescents have access to ARV treatment when needed
Community-based ASRH services	• Identify where adolescents receive ASRH services (outside of health facilities)	• Establish adolescent-friendly distribution points for condoms • Provide sanitary materials to adolescent girls
Protection and human rights	• Review or establish a code of conduct on sexual exploitation and abuse and train local and international humanitarian actors	• Ensure that all stakeholders are aware of the rights of adolescents • Strictly enforce a zero-tolerance policy for sexual exploitation and abuse
Information, education and communication	• Agree on the best communication channels to reach adolescents at the onset of emergencies	• Provide adolescents with information about what ASRH services are available and where they can be accessed

Source: (255).

As an emergency situation stabilizes, whether in the form of a protracted crisis or societal recovery, more focus should be given to re-establishing comprehensive adolescent health services, including non-health interventions that influence determinants and support SRH delivery (e.g. Case study A3.26) (257). These include:

• ensuring schooling options through targeted support (e.g. safe passage; financial support to families);

• comprehensive sexuality education and life-skills education, in and out of schools;

• protection of girls from child marriage;

• systems for adolescents' participation in decision-making (including specifically girls' participation) at community, provincial and national levels; and

• strengthening programme linkages and referral pathways, and coordination among sectors – including protection, education and livelihoods – for a holistic, multisectoral response.

(91)

Case Study A3.26.

Malawi's youth clubs for adolescent girls and boys displaced by floods

Malawi suffered its worst flooding in decades in January 2015 when the southern region received 400% higher rainfall than average, and floodwaters submerged more than 63 000 hectares. Nearly 250 000 people were forced to seek shelter in schools, churches and temporary sites. Adolescent girls and boys were left largely idle, and girls and women said they feared walking to the toilets located at far reaches of the camps due to the threat of rape.

UNFPA, Youth Net and Counselling, and the Centre for Victimized Women and Children, responded to this need by establishing clubs in displacement camps for adolescent girls and boys. From January to June 2015, the 32 youth clubs provided services to more than 18 000 internally displaced adolescents. The clubs provided a variety of activities for entertainment and education, including games, sporting activities such as football and netball games, and traditional dance, drama competitions, song, poetry and art. Activities

were initiated to keep adolescents and youth positively engaged during the displacement period and to provide psychosocial support. At the same time, the youth clubs served as an entry points for provision of adolescent SRH information and services with counselling and peer education addressing contraceptives, HIV prevention and GBV. Young people's GBV issues were addressed through collaboration between the youth clubs and women's safe spaces. Condoms were distributed free of change and were dispensed in strategic areas easily accessed by adolescents and youth. Condom uptake was high within the clubs compared to general condom uptake in the camps. The youth-friendly approach also contributed to uptake in use of modern contraceptives, with the oral pill the preferred contraceptive method among most of the adolescent girls referred by their youth clubs for family-planning services. Cases of STIs decreased as access to condoms and family planning services increased.

Source: (257).

A3.8.5.
Water, sanitation and hygiene (WASH)

WASH needs for populations during humanitarian emergencies include safe access to, use and maintenance of toilets; access to water and soap or ash for handwashing at critical times; the hygienic collection and storage of water for consumption and use; hygienic food storage and preparation; and efficient waste management (181). A major effect of not meeting these WASH needs is increased diarrhoeal illnesses, which also compromise nutritional status. Poor nutritional status further increases children's risk of contracting other diseases, such as pneumonia, leading to a vicious cycle of comorbid conditions, which can continue to worsen health and cause malnutrition.

WASH interventions are also critical for adolescent girls, as they face particular challenges managing menstruation in humanitarian and fragile settings (e.g. Case study A3.27, Box A3.6) (241); (250); (258). These challenges may include losing their familiar coping strategies for managing menstruation, such as access to their usual sanitary protection materials or products and a place to wash, dry or dispose of them. If displaced, they may have to leave behind their

clothes or possessions, such as sanitary cloths, soap, non-food items and underwear. They may have to live in unusually close proximity to men and boys, both their relatives and strangers. They may not have access to money for sanitary products if they do not control the family finances. And – because menstruation is a taboo subject – it may not be easy to discuss it with a male head of the household (123). In conflict situations, girls can experience additional difficulties accessing water supplies, sanitation and hygiene items. For example, water sources may be targeted for the planting of landmines and by sniper or cross-fire. There may be a risk of being attacked when travelling even short distances. And usual water supplies may break down due to lack of spare parts, lack of fuel, or the death or displacement of the technical personnel who run the systems. In a natural disaster such as earthquake or flooding, a girl may be injured or disabled and not be able to manage menstrual hygiene in her usual way. Particular challenges exist for girls living in seclusion or in societies where it is difficult for them to interact with or speak to men, as emergency-response teams are often mostly male.

Annex 3. Additional information about evidence-based interventions

Case Study A3.27.

Ethiopia's refugee camp distribution of menstrual hygiene kits to promote girls' school attendance

During the 1998–2000 border war between Eritrea and Ethiopia, approximately 4000 members of the pastoralist Kunama ethnic group fled Eritrea. Ethiopia settled the refugees in a camp where the population subsequently swelled to more than 13 000 Eritreans of different ethnicities. In 2001, after most children in the camp had been out of school for two years, the International Rescue Committee began working with local government officials, camp leaders and parents to launch an emergency education programme. Teachers and administrators were hired and trained, and within six months nearly 550 children were enrolled in formal schooling, vocational training, sports, and recreational activities and social clubs.

When the education programme started, girls' enrolment and attendance rate in the primary school was very low. Focus-group discussion with schoolgirls found that the lack of protection during their menstrual cycles was one of the main reasons for their low enrolment and high drop-out rates. To address this barrier, UNHCR donated fabrics for the production of sanitary napkin kits, and the International Rescue Committee worked with women graduates of their tailoring programme to design, produce and distribute sanitary napkin kits within the broader vocational training programme. Now each 13- to 49-year-old female in the camp is provided with four pairs of underwear, 12 re-usable pads, and 12 bars of soap per year. Distribution of these items has promoted greater enrolment and retention of girls in school.

Source: (123).

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Box A3.6 summarizes good practice design for menstrual-hygiene-friendly water, sanitation and hygiene facilities in emergencies.

Box A3.6. Good practice design for menstrual-hygiene-friendly water, sanitation and hygiene facilities in emergencies

Water supply

- In a safe location, accessible to women and girls, including those with disabilities or limited mobility.
- Of adequate quantity on a daily basis, and ideally provided inside latrine and bathing cubicles – or if this is not possible, near to these facilities.
- With drainage, so water point is hygienic and so the users can collect the water with ease.

Latrines

- In a safe location and private (with internal locks and screens in front of the doors or separately fenced off with a female caretaker).
- Lit where possible (if latrines cannot be lit at night, wind-up torches or batteries and torches should be provided in each family's non-food items kit).
- Adequate numbers (in line with Sphere minimum standards, UNHCR standards, or the host government's standards) and segregated by sex.
- Accessible to women and girls, including those with limited mobility or disabilities; at least some larger units to allow for changing menstrual protection materials or supporting children.

Bathing units

- Bathing units should provide privacy, safety and dignity for women and girls bathing and managing their menses.
- In a safe location and always with locks on the inside of doors.
- Putting a fence around the unit with a single entrance provides an additional level of privacy and allows other facilities such as washing slabs and drying lines to also be incorporated.
- Include a seat for girls and women with limited mobility or disabilities.
- Include hooks for hanging clothes and drying towels while bathing.
- Discrete drainage, so any water with menstrual blood in it is not seen outside the unit.

Disposal facilities for menstrual hygiene materials

- Discrete and appropriate disposal facilities located inside the latrines. Can be a container with a lid or, for more established facilities during later emergency stages, a chute direct from the latrine unit to an incinerator outside.
- If containers are provided, a regular and sustained process for collection and disposal of contents in an incinerator or pit must be established. This requires appropriate training and the provision of protective equipment (gloves) for those managing collection and disposal.
- In cases where incinerators are available in medical facilities, collaboration is an option. Alternatively, separate facilities may need to be constructed.

Facilities for washing and drying sanitary cloths and underwear

- In a private, sex-segregated location; for example, the provision of a screened laundry area as part of integrated toilet and bathing facilities, ideally with a water supply also inside the unit.
- Discrete drainage, so waste water with menstrual blood in it is not seen outside of the washing unit.
- Drying facilities provided, such as sex-segregated private drying lines within a screened bathing and latrine unit, or a publicly available charcoal iron that can be used to dry cloths.

Operation, cleaning and maintenance of all facilities

- Operation, cleaning and maintenance routines should be established for all water, sanitation and hygiene facilities, which are appropriate to the context and expected length of the emergency.

Source: (123).

Annex 3. Additional information about evidence-based interventions

A3.8.6.
Mental health

During the acute emergency phase of a humanitarian crisis – when focus will generally be on acute needs such as the organization of food, shelter, clothing, primary health-care and the control of communicable diseases – WHO advises conducting mostly social mental health interventions (259). Past the acute phase, stakeholders and communities should encourage the organization of normal recreational activities for adolescents, and encourage re-starting their schooling, even partially. If possible, both adults and adolescents should be involved in concrete, purposeful common-interest activities (e.g. constructing shelter; coordinating family tracing; distributing food; organizing vaccinations; teaching children).

Health-care providers and other field workers can advise parents of adolescents how to manage their stress, improve their well-being, and provide appropriate care for their children in humanitarian and fragile settings. For example, the WHO and colleagues (260) Psychological First Aid guide for field workers explains how they can give humane, supportive responses to people who may need them during an emergency, including guiding parents to:

- give adolescents their time and attention;
- help them to keep regular routines;
- provide facts about what happened and explain what is going on now;
- allow them to be sad, and not expect them to be tough;
- listen to their thoughts and fears without being judgmental;
- set clear rules and expectations;
- ask them about the dangers they face, support them and discuss how they can best avoid being harmed; and
- encourage and allow opportunities for them to be helpful. (260)

For adolescents aged 10–11 years, emotional reactions after a disaster may include fear and anxiety about danger and loss of possessions, as well as irritability, disobedience, depression and headaches (261). Other reactions include school avoidance, difficulty concentrating and grieving – which can include emotions such as shock, sadness, anger, fearfulness, anxiety or numbness – and difficulty engaging with social or other activities.

Among adolescents aged 12–17 years, the impact of a disaster may depend on the degree of disruption of both family and community. Fear of loss of family may revive fears more typical of earlier development, such as being alone, darkness or separating from caregivers. Disasters may also cause families to pull together and become extraordinarily close, so that an older adolescent may lose, or not gain, the independence from family that is typical for their age. Common reactions in this age group are withdrawal and isolation, psychosomatic conditions (e.g. headaches and stomach aches), suicidal thoughts, antisocial behaviours (e.g. stealing or aggression), sadness, decline in school performance, and sleep problems (e.g. nightmares or night terrors). Other reactions relate to death (e.g. grieving), confusion, and isolation from peers (e.g. boredom). In some contexts, older adolescents may find themselves as head of a household after a humanitarian emergency, and may not allow themselves to grieve. Feelings of helplessness, hopelessness and worthlessness can be strong indicators of suicidal thoughts.

Some adolescents will need long-term, professional mental health-care after a humanitarian crisis. Adolescent survivors of violence may suffer from a range of psychological consequences, both in the immediate period after the violence and over the longer term. For male and female survivors of sexual violence, this can include guilt; anger; anxiety; depression; post-traumatic stress disorder; sexual dysfunction; somatic complaints; sleep disturbances; withdrawal from relationships; and attempted suicide (247). Former child soldiers may also have mental and psychosocial health issues, including nightmares; intrusive memories; flashbacks (i.e. feeling as if the traumatic event were happening again); and hallucinations (i.e. seeing and hearing things that other people cannot – often sights or sounds of the traumatic event). They may experience poor concentration and memory; chronic anxiety; regression in behaviour; increased substance abuse as a coping mechanism; a sense of guilt and refusal to acknowledge the past; poor control of aggression; obsessive thoughts of revenge; and feelings of estrangement from others. The militarized behaviour of the children may lead to a low level of acceptance of the norms of civilian society. Their rehabilitation constitutes one of the major social and public health challenges in the aftermath of armed conflict.

In 2015, WHO and UNHCR published an mhGAP Humanitarian Intervention Guide, with first-line management recommendations for mental, neurological and substance-use conditions for non-specialist health-care providers in humanitarian emergencies (262). The guide outlines general principles for care of people in humanitarian settings, including those related to communication; assessment; management; reducing stress and strengthening social support; protection of human rights; and overall well-being. It also has modules focused on acute stress; grief; moderate to severe depressive disorder; post-traumatic stress disorder; psychosis; epilepsy/seizures; intellectual disability; harmful use of alcohol and drugs; suicide; and other significant mental health complaints (including, for adolescents, behavioural problems). Some content specifically addresses adolescents, e.g. if a potentially traumatic event has occurred within the last month, providers are advised to check for changes in adolescent risk-taking behaviours. If adolescents have lost their parents or other carers, providers should address any need for protection and ensure the adolescents receive consistent, supportive care.

At a health-system level, emergencies – despite their tragic nature and adverse effects on mental health – are also unparalleled opportunities to improve the lives of large numbers of people through mental-health reform. In 2013, WHO published Building Back Better: Sustainable Mental Health Care After Emergencies. This has the goal of guiding individuals, societies and countries recovering from natural disasters, armed conflicts, or other hazards in how they might create mental health reform and system improvements in the aftermath of such crises (263). The document provides detailed accounts from 10 diverse emergency-affected areas, each of which built better-quality and more-sustainable mental health systems despite challenging circumstances.

The situation in Iraq provides one example. In recent decades many Iraqis suffered from intense psychological distress due to dictatorship; the war between the Islamic Republic of Iran and Iraq; economic sanctions; the Gulf wars; the invasion in 2003; and the subsequent violent insurgency. Prior to 2003, mental health services in Iraq were provided by fewer than 100 psychiatrists, basic services were often unavailable to the general population, and child and adolescent psychiatry was almost non-existent. However, mental health reform has been underway in Iraq since 2004. At that time, a National Mental Health Council was established, and a national mental health strategy and plan were drafted. Despite ongoing violence and instability, significant progress was made to create a community-based mental health system. By 2011, the country had successfully established 25 new mental health units, including new inpatient beds for children and adolescents in paediatric hospitals, and 34 new units offering outpatient-only services – including four units specifically for children and adolescents (263).

Annex 4. Additional information about setting national priorities

A4.1.
Additional resources to support national priority-setting

Additional resources exist to support national governments conducting adolescent health needs assessments, landscape analyses and prioritization exercises. For example, the WHO Regional Office for the Western Pacific (WPRO) has published a manual for health planners and researchers conducting a rapid assessment of adolescent health needs (264). Similarly, the WHO Regional Office for the Eastern Mediterranean (EMRO) has developed several tools to assist member countries in prioritizing adolescent-health interventions, including regional guides on: conducting an adolescent health situation analysis (265); core indicators for adolescent health (266); and adolescent health programme review (267). Box A4.1 outlines the needs assessment and landscape analysis content that EMRO recommends be covered in a country's adolescent health situation analysis report.

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Box A4.1. Content of a country-level adolescent health situation analysis report

The WHO Regional Office for the Eastern Mediterranean recommends that Member States include the following sections in their adolescent health situation analysis reports, noting that additional sections can be added if relevant. Examples are provided under each section heading below; a more comprehensive list of desirable content is available in the regional guide.

Introduction
- Definition of adolescence; government commitment in policies, plans and agreements; issues related to current adolescent health policies and approaches (such as scattered activities or duplication of efforts); and rationale and main objectives of the situation analysis.

Geographical, political and administrative issues
- Distances and communications; nature of terrain and seasonal and climatic changes facilitating disease occurrence; administrative division of the health system; unstable or insecure situations.

Demographic indicators
- Structure of general and adolescent population by age and sex; population distribution and growth or projections for adolescents; existing population and development policies and strategies; vulnerable and at-risk groups of adolescents (e.g. by geographical region, or urban-rural residency).

Economic indicators
- Poverty rate; gross national income and share of income; housing conditions; and employment, particularly as relevant to adolescents (such as impact of the economic situation on adolescent quality of life, diet, housing and health services; and the proportion of people who are unemployed in late adolescence, disaggregated by sex).

Sociocultural indicators
- Urbanization; literacy rate; school enrolment rate; level of education achieved; gender issues; social norms; and multicultural environment – ideally disaggregated by age, sex and geographical distribution and describing how they affect adolescent health, including vulnerable and at-risk groups of adolescents (e.g. sex workers).

Leisure time and recreational facilities
- Time spent watching television; playing computer games; talking with friends and doing other sedentary activities – by sex and age group and with consideration of related attitudes, behaviours and norms.

Health indicators
- Disaggregated by age group and sex, indicators related to morbidity and mortality; nutrition; physical activity; maternal and reproductive health; injuries and violence; mental health; immunization; oral health; communicable diseases; noncommunicable diseases; tobacco use and substance use.

Programmatic response
- Description of the health system, including national standards; human and financial resources; adolescent health programming and related interventions and services; information, supervisory and referral systems; and linkages between the health system, community and adolescents.

Evaluation
- From the health information system, demographic and health systems and multiple indicator cluster surveys.

Partners
- Ministries representing different sectors, as well as nongovernmental organizations, civil society organizations, United Nations organizations, communities and adolescents.

Main potential channels and sources of information
- Availability and impact of the internet, television and radio.

Attitudes and perceptions of adolescents
- Studies that describe the attitudes and perceptions of adolescents and how governments, religious leaders, communities and parents think about adolescents.

Relevant laws and legislation affecting adolescent health
- All policies that specifically affect adolescent health either directly or indirectly, in all sectors.

Conclusions and recommended actions
- Recommended actions identified by the situation analysis and guided by priorities.

Source: (265).

Annex 4. Additional information about setting national priorities

The EMRO adolescent health situation analysis guide provides detailed questions and instructions for each of the categories in Box A4.1, to assist countries moving through the process. Taking the example of nutrition, the guide recommends that countries describe and analyse the underlying factors that influence adolescent nutrition (e.g. poverty; employment; food availability; dietary habits; physical activity; social behaviours; self-esteem; body image; dieting), as well as adolescent habits that have an impact on nutrition, including what they eat for breakfast, smoking and substance use. It further recommends analysis of the role of the media and other communication channels (e.g. the internet) in influencing adolescent nutrition. Finally, it details questions to guide a review and description of existing adolescent nutrition interventions in the country, and concludes with a prioritization process highlighting the most important issues that need to be focused on related to adolescent nutrition.

A meeting in 2011 of government representatives from nine of the 21 countries in the Eastern Mediterranean Region reviewed progress in implementing such country-level adolescent health situation analyses (267).

The meeting found that – although the countries differed in the structure of their adolescent health programmes within ministries and the legal frameworks designed to protect and promote adolescents – Member States had reached broadly similar conclusions about the major adolescent health concerns, including mental health, tobacco and substance abuse, injuries and NCDs.

An additional resource for reviewing national health programmes to ensure no adolescents are left behind is the Innov8 technical handbook, which identifies ways to take concrete, meaningful and evidence-based programmatic action to address in-country inequities (268). The Innov8 approach could be used better to understand the subpopulations of adolescents who may be missed in a particular context; the barriers they face; the reasons the barriers exist; and the role of other sectors and social participation in responding to them.

A4.2.
A theoretical example of country-specific prioritization

Figure A4.1 shows the leading 25 causes of adolescent death for the 50 most populous countries as estimated in the 2013 Global Burden of Disease Study (269). These data and those of the 2015 Global Health Estimates that were described in Section 2 can be used to illustrate the prioritization exercise described in Section 4.3. The following description explains how individual countries might use one variable – adolescent mortality rates – to prioritize conditions to target within their particular adolescent health programming. Importantly, however, this involves simple interpretation for illustrative purposes only. Numerous other variables and concerns would need to be taken into consideration in an actual national adolescent health prioritization exercise.

Figure A4.1. Leading 25 causes of adolescent death in the 2013 Global Burden of Disease Study, for the 50 most populous countries

Key: Colours correspond to the ranking of the leading causes of mortality, with dark red as the most common cause and dark green as the least common cause for the location indicated. The numbers inside each box indicate the ranking.

Location	Road Injuries	HIV/AIDS	Self-Harm	Drowning	Intestinal Infectious	Interpersonal Violence	Lower Respiratory Infe	Diarrheal Diseases	Malaria	Tuberculosis	Maternal Disorders	Hemoglobinopathies	Congenital Anomalies	Leukemia	Meningitis	Ischemic Heart Disease	Fire and Heat	Cerebrovascular Disea	Other Neoplasms	Falls	Mechanical Forces	Epilepsy	Other Unintentional	Chronic Kidney Disea	Leishmaniasis
Global	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Developing	1	2	3	4	5	6	7	8	9	10	11	12	14	15	13	16	17	18	21	19	20	22	23	24	25
Afghanistan	1	102	13	3	9	5	4	14	10	7	6	15	8	19	16	23	22	18	29	11	12	17	2	20	91
Algeria	1	95	19	2	3	20	4	36	84	27	37	12	9	11	17	6	21	5	10	28	45	15	23	7	97
Angola	2	1	8	6	13	14	4	3	11	9	5	10	15	37	7	47	23	18	20	21	12	16	28	19	81
Argentina	1	38	2	4	59	3	9	51	124	36	17	29	10	6	21	13	24	11	8	31	5	23	12	19	127
Bangladesh	4	84	1	3	2	10	20	24	101	32	9	27	11	7	22	16	64	21	6	17	40	8	12	18	14
Brazil	2	31	4	3	9	1	5	42	94	37	13	27	8	6	14	12	36	10	7	16	17	23	15	18	82
Cameroon	2	1	12	10	9	14	6	7	3	11	4	8	15	46	5	26	35	22	31	17	24	23	30	16	127
China	1	48	3	2	46	10	16	57	108	28	39	23	5	4	29	9	33	8	11	6	7	15	14	17	124
Colombia	2	45	3	4	12	1	6	35	70	32	13	31	8	5	20	11	33	9	7	15	10	14	19	16	108
Cote d'Ivoire	2	1	13	10	8	61	5	7	3	9	6	11	14	44	4	26	31	18	27	16	21	19	32	17	127
Democratic Republic of the Congo	4	2	10	11	12	13	5	3	7	8	9	1	18	35	6	53	23	20	22	25	17	16	34	21	27
Egypt	1	105	11	3	6	25	7	34	108	46	44	18	5	9	38	4	35	2	14	17	23	22	16	13	85
Ethiopia	2	1	10	11	9	8	6	3	14	4	5	24	16	46	7	45	25	44	22	20	26	12	30	18	15
Ghana	2	1	10	17	8	19	6	11	4	15	7	3	14	36	5	18	34	20	29	21	24	26	40	13	126
India	3	14	1	5	2	19	8	4	9	6	10	33	18	28	26	11	7	20	22	17	16	35	25	50	21
Indonesia	1	64	17	2	5	25	6	4	24	3	11	21	7	8	9	35	40	18	34	19	33	12	23	14	124
Iran	1	110	2	3	5	9	12	41	103	43	37	15	6	7	26	8	4	14	21	18	11	24	10	22	109
Iraq	2	68	11	4	7	1	12	28	-	26	23	18	5	10	22	8	14	13	16	20	6	25	3	9	19
Kenya	3	1	12	10	8	11	6	2	7	4	13	16	15	23	5	49	21	33	19	18	24	9	27	17	47
Madagascar	5	8	18	14	10	25	4	3	2	13	7	22	19	38	6	58	37	11	24	35	32	15	53	26	1
Malaysia	1	32	5	2	8	6	4	43	91	37	40	17	9	7	19	15	35	10	11	29	16	23	36	22	124
Mexico	1	57	3	4	12	2	9	25	124	36	17	31	7	5	32	13	40	16	8	14	11	15	28	6	121
Morocco	1	81	4	3	6	14	7	31	104	19	24	29	12	10	17	5	27	8	9	21	13	16	32	15	88
Mozambique	3	1	14	13	11	10	6	5	2	7	8	19	17	38	9	46	20	43	18	22	23	12	28	16	4
Myanmar	2	16	14	3	6	11	5	13	1	9	12	18	7	4	10	55	19	25	15	8	17	20	34	23	123
Nepal	2	37	1	4	3	10	12	5	24	8	7	30	18	9	23	19	16	26	15	17	33	20	11	40	6
Niger	3	9	24	12	10	29	6	1	5	8	2	7	17	46	4	27	32	36	28	21	19	23	33	20	125
Nigeria	2	3	64	12	8	26	6	10	4	9	5	1	15	45	7	32	36	28	25	11	22	13	20	21	127
Pakistan	2	83	13	8	1	5	12	6	25	4	3	20	24	10	11	15	32	19	27	26	35	14	7	16	30
Peru	1	53	3	8	14	7	2	33	103	11	18	30	13	4	22	5	34	9	12	25	10	16	32	15	113
Philippines	2	34	12	3	4	5	1	18	61	9	24	23	7	8	11	10	53	14	15	25	40	22	20	16	125
Saudi Arabia	1	37	7	2	4	17	8	38	70	24	49	13	3	16	34	10	20	14	18	6	9	11	15	12	121
South Africa	3	1	4	10	14	2	5	8	57	6	19	34	20	24	13	32	18	23	17	27	7	9	33	22	103
Sudan	1	14	10	9	6	15	4	12	5	19	3	18	8	13	22	11	35	7	21	23	16	20	37	25	2
Tanzania	6	1	14	12	9	11	7	3	2	5	8	17	15	41	10	42	23	44	18	20	25	13	30	21	4
Thailand	1	27	4	2	12	3	6	36	55	46	43	26	11	8	18	13	37	7	15	17	10	20	9	14	124
Turkey	1	93	2	8	4	6	7	41	122	39	57	19	16	3	38	17	29	10	13	14	5	9	20	21	121
Uganda	2	1	104	11	10	9	4	7	3	5	8	16	17	23	6	42	45	37	19	86	20	13	110	18	41
Uzbekistan	3	77	2	1	56	12	4	46	-	23	40	31	17	5	15	21	18	30	14	9	19	6	10	7	113
Venezuela	2	44	3	4	10	1	9	27	88	36	12	25	7	6	20	16	30	15	8	17	5	14	13	11	115
Vietnam	1	47	5	2	9	6	8	33	25	15	24	19	4	3	27	71	43	22	12	14	16	10	7	28	123
Yemen	1	65	12	5	7	9	3	8	2	14	4	18	10	13	22	11	16	6	21	25	15	19	20	24	28
Developed	1	42	2	4	33	3	12	57	123	45	40	31	6	7	26	21	20	19	5	14	15	17	24	30	119
France	1	53	2	8	24	11	20	45	-	61	51	30	5	4	33	23	26	18	3	14	19	13	25	38	120
Germany	1	76	2	13	52	11	15	42	-	82	54	32	3	5	23	19	24	21	4	18	17	9	25	30	-
Italy	1	32	2	8	21	11	18	67	-	61	69	17	5	4	28	16	31	15	3	12	13	19	26	25	115
Japan	2	110	1	5	22	15	7	47	-	60	85	18	6	4	34	10	20	16	3	12	21	14	52	29	-
Russia	2	37	1	3	33	4	10	73	-	28	44	61	7	9	27	24	14	20	11	6	16	21	15	34	-
South Korea	2	96	1	3	27	7	15	53	122	26	55	22	8	4	36	14	16	13	5	12	17	10	33	21	-
United Kingdom	1	106	2	15	22	18	12	45	-	64	42	36	4	6	20	32	25	21	3	13	11	10	43	31	-
United States	1	40	2	5	42	3	15	49	-	83	32	27	6	8	29	18	16	19	7	20	12	23	37	30	-

Source: (269), (reproduced with permission).

Annex 4. Additional information about setting national priorities

National governments need to narrow down a list of dozens of adolescent-health concerns to a small number that they can target over a certain period of time. There are some conditions that universally cause major adolescent burdens in almost all countries, so their prioritization within adolescent health programming seems very likely. As noted in Section 2, for instance, in 2015 road traffic injuries were the leading or second leading cause of adolescent mortality in all but the African LMICs, and in that region the rate of mortality was greater than in all other regions (143). These findings suggest that all regions and most countries will want to prioritize evidence-based road traffic injury interventions within their adolescent health programming; WHO-recommended examples are detailed in Section 3.

Adolescent health education and services related to sexual and reproductive health and nutrition are other areas that are very important to the well-being of general adolescent populations in all countries, whether immediately or as an investment for health across the future life course. As a result, implementation of such evidence-based, multisectoral interventions should be prioritized in all country adolescent health programmes. However, in some settings ASRH problems may be particularly pronounced and thus require even more intensive interventions. One example is the need for large-scale adolescent HIV prevention, care and treatment interventions in the 10 African countries where HIV is estimated to be the leading cause of adolescent mortality (Figure A4.1). A second example is interventions to prevent and respond to early pregnancy in countries where adolescent maternal disorders are highly prevalent. For instance, in Niger, Pakistan, Sudan, Yemen and Cameroon, maternal disorders are ranked as the second, third or fourth leading cause of mortality among all adolescents, indicating that they have approximately double the rate of mortality among adolescent females alone (Figure A4.1).

Self-harm is also a leading cause of adolescent mortality in almost all WHO regions, so this is likely to be something that most countries will want to target within their national adolescent health programming (143). Self-harm is the second leading cause of adolescent mortality in LMICs in South-East Asia – including in Bangladesh, India, Nepal and the Republic of Korea (Figure A4.1) – so those countries may especially prioritize implementing self-harm related interventions. However, this should not be prescriptive for all countries in South-East Asia. For example, self-harm is estimated to be only the fourteenth leading cause of adolescent mortality in Myanmar, where the leading five causes are malaria, road traffic injuries, drowning, leukaemia and lower-respiratory infections (Figure A4.1). Therefore, the national government may wish to prioritize major interventions targeting those conditions and others, before those targeting self-harm. In addition, there are individual countries outside of South-East Asia where self-harm is also a great cause of adolescent mortality, e.g. it is the leading cause of adolescent mortality in Japan and in the Russian Federation; and

the second leading cause in Argentina; France; Germany; Italy; the Islamic Republic of Iran; Turkey; the United Kingdom; the United States; and Uzbekistan (Figure A4.1).

There are many conditions that have a prominent role in specific countries and regions, but not in others. For example, drowning is the second leading cause of adolescent mortality in Western Pacific LMICs (143), including in China; Indonesia; the Philippines; and Viet Nam (Figure A4.1); so those countries may prioritize drowning prevention and response interventions within their national adolescent health programmes. Drowning is also a leading cause of adolescent mortality in some countries outside of the Western Pacific, e.g. it is the leading cause in Uzbekistan, and the second leading cause in Algeria; Indonesia; Saudi Arabia; and Thailand; so those countries may also wish to prioritize it within their national adolescent health programming (Figure A4.1). The important consideration here is the ranking of a cause of adolescent mortality within a country, and not the absolute rate relative to other countries. For example, the rate of adolescent mortality due to drowning in African LMICs is almost twice that of Western Pacific LMICs (i.e. eight versus five deaths per 100 000 adolescents) (143), but other burdens have so much greater impact on adolescent mortality in African LMICs that drowning generally has a relatively low rank within countries (e.g. it is the tenth or eleventh leading cause of mortality in Cameroon; Côte d'Ivoire; the Democratic Republic of the Congo; Ethiopia; Kenya; South Africa; and Uganda). Clearly, national governments have very difficult decisions to make in prioritizing adolescent health interventions – especially countries that have such very high burdens and very limited resources.

As described in Section 2, interpersonal violence is a major cause of adolescent mortality in some American countries (143), and indeed it is among the leading three causes of adolescent mortality in Argentina; Brazil; Colombia; Mexico; Bolivarian Republic of Venezuela; and the United States (Figure A4.1). This burden is ranked as highly in Iraq, South Africa, and Thailand. All of those countries thus might prioritize evidence-based interventions targeting interpersonal violence, including possibly tailored interventions to reduce youth violence between adolescent males, as well as those to reduce sexual and intimate partner violence, which is usually perpetuated by males against females.

WASH-related mortality is among the leading five causes of adolescent deaths in 19 populous countries; Africa (nine), the Eastern Mediterranean (two), South-East Asia (five), the Western Pacific (two), and Europe (one). Specific causes are: intestinal infectious diseases in Algeria; Bangladesh; India; the Islamic Republic of Iran; Iraq; Nepal; Pakistan; Saudi Arabia; South Africa; and Turkey; and diarrhoeal diseases in Angola; the Democratic Republic of the Congo; Ethiopia; Indonesia; Kenya; Madagascar; Mozambique; Myanmar; Niger; and the United Republic of Tanzania (Figure A4.1). In contrast, leukaemia and/or other neoplasms rank

relatively high as a cause of adolescent death in upper middle-income and high-income countries (143), e.g. they are the third to fifth leading causes of adolescent deaths in China; France; Germany; Italy; Japan; Peru; the Republic of Korea; and Turkey (Figure A4.1), where national adolescent health programmes may wish to prioritize adolescent cancer prevention and/or treatment.

In concluding these examples of possible country-specific prioritization of interventions to target causes of adolescent mortality, it is important to re-emphasize that a country's ranking of such causes is only one of many important factors to consider when deciding how to prioritize interventions within national adolescent health programming.
However, even such limited data illustrate how countries may vary in their priorities. For instance, in addition to general SRH and

nutrition interventions, Egypt might choose to target road traffic injury, cerebrovascular disease, drowning, ischaemic heart disease, and congenital anomalies, because those are estimated to be the five leading causes of adolescent death in Egypt, whereas HIV and malaria rank at numbers 105 and 108 respectively (Figure A4.1). In contrast, in addition to general SRH and nutrition interventions, Cameroon might choose to target HIV, road traffic injuries, malaria, maternal disorders, and meningitis, as those are estimated to be the leading five causes of adolescent death in Cameroon, whereas cerebrovascular disease and ischaemic heart disease are ranked at numbers 22 and 26 respectively.

A4.3.
Sources and data in the Ethiopian adolescent health needs assessment

Recently, the Government of Ethiopia conducted a needs assessment that drew on several sources to compile a rough overview of the key risk factors and burdens currently experienced by Ethiopian adolescents. Their main findings are summarized below. Unless otherwise indicated, the data source was the 2011 Ethiopian Demographic and Health Survey (DHS) (270); (271):

- **Early sexual debut** – In Ethiopia, early sexual debut happens primarily in the context of marriage. The median age of first sexual intercourse is 16.6 years, and 7% of adolescent girls and 9% of adolescent boys report ever having had sex. 60% of unmarried sexually active and 76% of married girls report no contraceptive use, despite the majority of both married and unmarried adolescents saying they do not want a child within two years.
- **Child marriage and early pregnancy** – One in five girls marry before the age of 15 years, and 40% by the age of 18 years. The poorest, least educated girls living in rural areas are most affected. 22% of rural girls aged 15–19 years are married, compared with 8% of their urban peers. Early marriage is strongly associated with early childbearing. The proportion of older adolescent girls (aged 15–19 years) who are already mothers or pregnant with their first child declined from 16% in the 2005 DHS to 12% in the 2011 DHS.
- **Unsafe abortion** – Anecdotal evidence suggests that, among adolescents, there is a high rate of mortality due to unsafe abortions. However, there is no reporting system to quantify the magnitude of the problem systematically.
- **HIV** – The HIV prevalence among adolescents in Ethiopia is <1%. Among females, it rises from 0.2% (15–19 years), to 0.6% (20–24 years), to 2.9% (25–29 years). For males, the comparable rise is from <0.1%, to 0.2%, to 2.0%.

- **Malnutrition** – As many as 13% of girls and 18% of boys aged 15–19 years are anaemic. Moreover, in the same age group, nearly two fifths of girls (36%) and two thirds of boys (66%) are underweight (BMI<18.5kg/m2).
- **Substance use** – The most common addictive substances used by adolescents and youth in Ethiopia are tobacco, alcohol and khat. Nearly half (46%) of Ethiopian adolescents and youth report consuming alcohol more than six times in a month. Tobacco smoking is also practised by some male adolescents and youth, with a prevalence of 4%.
- **Mental health problems** – These often relate to alcohol and substance use, schizophrenia, seizure disorder and bipolar disorder, and affect an estimated 1–1.5% of the Ethiopian population (273).
- **Noncommunicable diseases** – in 2001, NCDs were estimated to account for 30% of all deaths in Ethiopia across all age groups. 9% of all deaths were attributed to cardiovascular diseases, 6% to cancers, and 3% to respiratory diseases (271).
- **Road traffic injuries** – In 2013, Ethiopia had 377 943 registered vehicles, and reported 2581 road traffic fatalities (43).
- **Gender-based violence** – In the 2005 Ethiopia DHS, 81% of married women agreed to a statement that a husband beating his wife is justified (273). This had only decreased to 68% in the 2011 Ethiopia DHS.
- **Female genital mutilation** – In the 2005 Ethiopia DHS, the prevalence of FGM in girls and women (aged 15–49 years) was 74%. This represented a 6% decline from a prevalence of 80% in the 2000 Ethiopia DHS.

These data, combined with the findings of a landscape analysis, were used to inform Ethiopia's Adolescent and Youth Health Strategic Plan (2016–2020) (272).

Annex 5. Additional information about national programming

Data from the Global Maternal, Newborn, Child and Adolescent Health Policy Indicator Surveys (2009–10; 2011–12; 2013–14; 2016)

Figure A5.1. Number of Countries with Laws and regulations that allow minor adolescents to seek the following services without parental/spousal consent: Contraceptive services except sterilazation
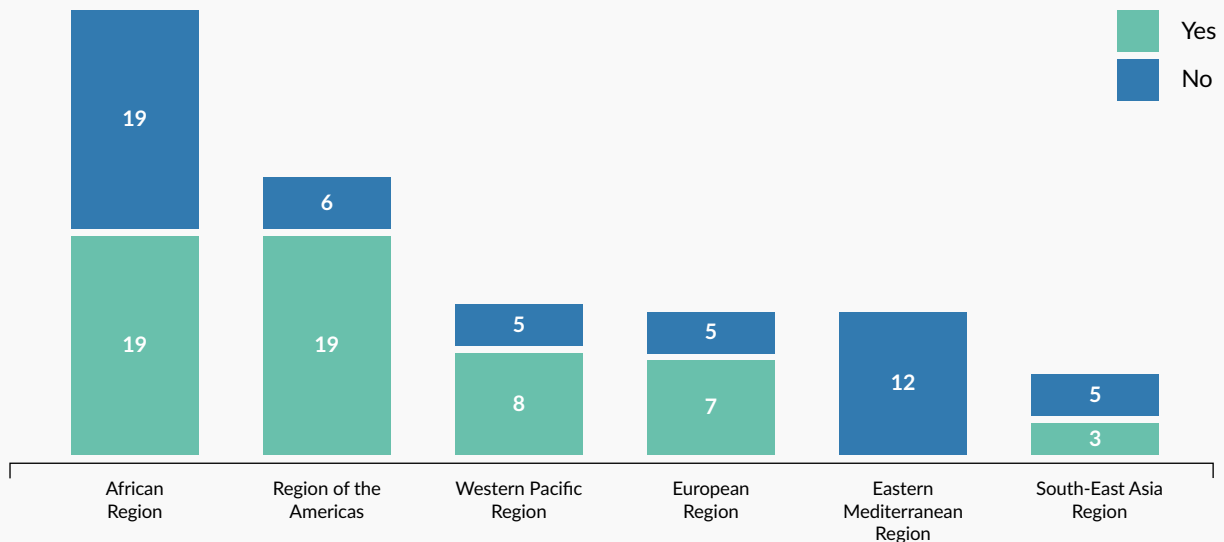
Source: Information from countries that responded to the Global Maternal, Newborn, Child and Adolescent Health Policy Indicator Surveys (2009–10; 2011–12; 2013–14; 2016) undertaken by the Department of Maternal, Newborn, Child and Adolescent Health; World Health Organization (274)

Figure A5.2. Number of countries with a national policy for a user fee waiver for adolescents in public health facilities
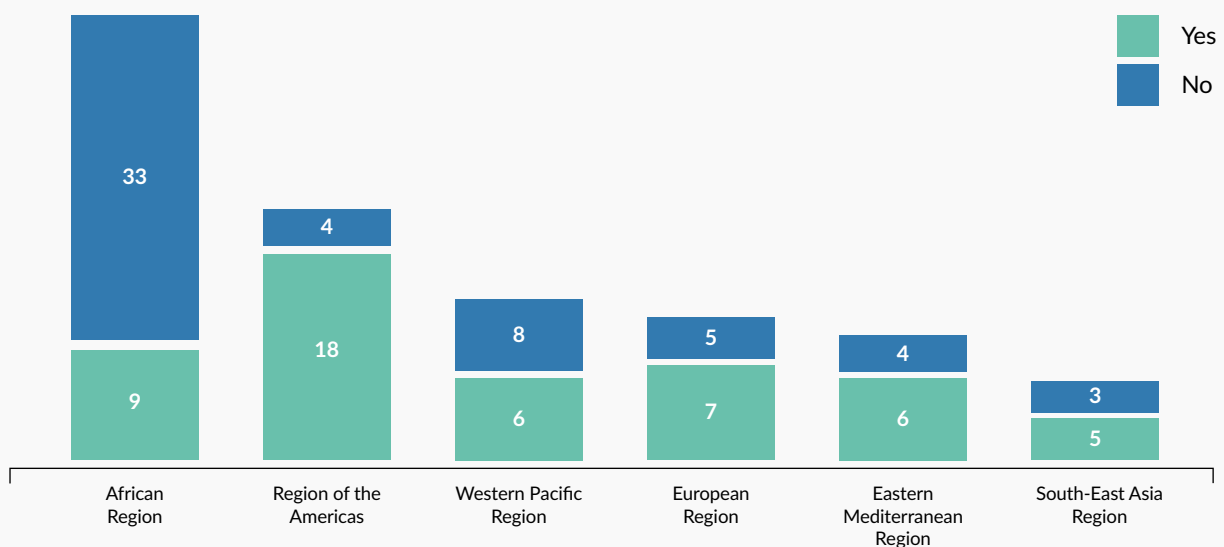
Source: Information from countries that responded to the Global Maternal, Newborn, Child and Adolescent Health Policy Indicator Surveys (2009–10 2011–12; 2013–14; 2016) undertaken by the Department of Maternal, Newborn, Child and Adolescent Health; World Health Organization (274)

Figure A5.3. Number of countries reporting having national standards for delivery of health services specifically for young people (ages 10–24)
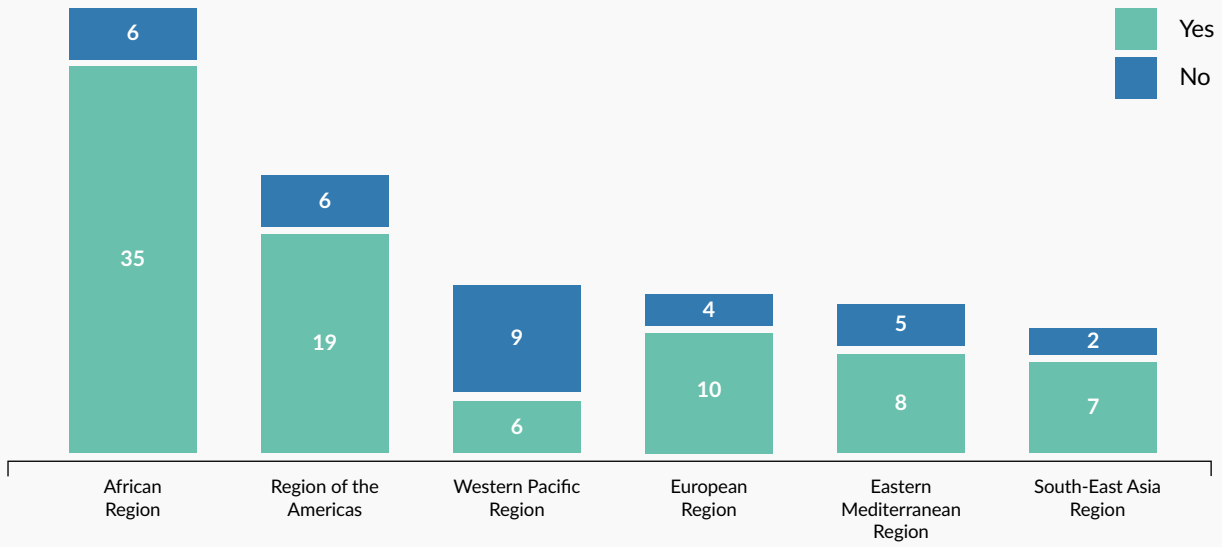
Source: Information from countries that responded to the Global Maternal, Newborn, Child and Adolescent Health Policy Indicator Surveys (2009–10; 2011–12; 2013–14; 2016) undertaken by the Department of Maternal, Newborn, Child and Adolescent Health; World Health Organization (274)

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Annex 5. Additional information about national programming

Additional case studies of national programming

Case Study A5.1.

Nepal's transition from projects to a national adolescent sexual and reproductive health programme

The Nepal Health Sector Programme (NHSP) II (2010–2015) aimed to introduce 1000 adolescent-friendly services in Nepal by 2015. Towards this end, the Government of Nepal is implementing the National Adolescent Sexual and Reproductive Health (ASRH) Programme.

In 2008, the Family Health Division and Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH (GIZ, previously GTZ) started to discuss possible government interventions in Nepal to improve the ability of adolescents to protect their sexual and reproductive health (SRH). Up until then, adolescent-specific health services and information had mainly been provided by nongovernmental and private health-care providers. The Family Health Division conducted a pilot study for the introduction of adolescent-friendly services into the existing network of public health facilities, in line with a rights-based approach to health. The National Adolescent Sexual and Reproductive Health (ASRH) Programme was subsequently designed based on the findings of the pilot study. The Programme was conceptualized in line with the objectives of the National Adolescent Health and Development Strategy 2000, which are to:

- increase the availability of, and access to, information about adolescent health and development and provide opportunities to build the skills of adolescents, service providers and educators
- increase the accessibility and utilization of adolescent health and counselling services
- create safe and supportive environments for adolescents in order to improve their legal, social and economic status.

Cooperating with other actors in the field of SRH (including schools) is one of the components of the programme, although the mid-term evaluation showed that this coordination needs to be strengthened in order to impart information about ASRH issues effectively, and to sensitize adolescents about the availability of adolescent-friendly services at health facilities.

The scaling-up process was funded directly by the Government of Nepal and different partner organizations working in the ASRH sector, such as GIZ, UNFPA, Save the Children, WHO and UNICEF. By November 2012, the National ASRH Programme had been scaled up to 516 health facilities in 36 districts. If the target of introducing 1000 adolescent-friendly services in the public health system by 2015 was to be achieved, coverage would reach about 25% of all government health facilities.

Source: (275).

Case Study A5.2.

The USA's school health services programme

The Centers for Disease Control and Prevention (CDC) Healthy Schools programme supports all 50 states and the District of Columbia (DC) in the USA. It aims to reduce the risk factors associated with childhood obesity, manage chronic conditions in schools, and promote the well-being and healthy development of all children and youth. The Healthy Schools programme supports the implementation of evidence-based school health strategies by funding state health departments, providing technical assistance, and developing specialized tools and resources to facilitate collaboration between state health and education agencies. This funding facilitates collaboration across sectors through memoranda of agreement between state public health and education agencies.

The programme funds two components: the basic component, which provides base-level funding to all 50 states and DC; and the enhanced component, which provides additional resources to 32 states for more intensive school-based interventions and improved health outcomes. For example, the school health services programme in the state of Colorado is run by the

Department of Education and the Department of Health-Care Policy and Financing. The programme contains many components, including the provision of psychology, counselling, audiology, nursing and physician services, as well as social support and targeted case management. Any educational institution with students in kindergarten through twelfth grade (up to the age of 20 years) may participate. Institutional participation in the programme is conditional on fulfilment of enrolment criteria, including:

- an assessment of the health needs of students in the district
- community input into the health services to be delivered to students
- an approved local services plan completed by the district
- a contract for reimbursement of health services by Medicaid, a programme that was created by the federal government but is administered by the state to provide payment for medical services for low-income citizens.

Sources: (276); (277).

Case Study A5.3.

Portugal's healthy schools programme

The Healthy Schools Programme of the General Directorate of Education (Ministry of Education and Science) in Portugal aims to facilitate the implementation of structural and integral health-promoting activities in schools. The work started in 1994 with 10 schools and four health centres in the national health service. By the end of 2000, the network had extended to 1957 health-promoting schools and 255 health centres. By 2002, the number had grown to 3407 schools.

The programme has a national coordinator, who is also responsible for the coordination and development of projects on health education and promotion in schools. The programme has dedicated funding that supports and finances school projects. To date, the vast majority of

participating schools have developed projects in healthy eating and physical activity (99%), drug prevention (98%), sex education (98%), and mental health and violence prevention (94%).

It has been reported that part of the success of this programme is due to the partnership between the Ministry of Health and the Ministry of Education and Science. The partnership is structural and well established at all three levels: national, regional and local. The partnership between schools and health centres is particularly key. Both ministries have also developed, in partnership, two manuals with health-promoting school guidelines for teachers and health professionals.

Source: (278).

Annex 5. Additional information about national programming

Case Study A5.4.

Turkey's multisectoral action on drug dependence

In Turkey, children in educational institutions and out-of-school children are among key target groups for the national Anti-Drug Emergency Action Plan, which promotes strategies to address supply, demand, and communication policies in relation to substance use. Under the leadership of the Deputy Prime Minister and under the coordination of the Ministry of Health, a Higher Anti-Drug Board has been established to administer and implement anti-drug efforts within the scope of the Anti-Drug Emergency Action Plan. The Higher Anti-Drug Board coordinator is the Minister of Health, and the board is composed of the ministers of: justice, family and social policies; labour and social security; youth and sports; customs and trade; the interior; and national education;

as well as the head of the Commission on Health, Family, Labour and Social Affairs of the national assembly.

The Higher Anti-Drug Board determines the basic anti-drug policies, monitors activities at a high level, and gives instructions for these activities. An Anti-Drug Technical Board composed of experts from relevant ministries works on the technical implementation of anti-drug activities. Anti-Drug Provincial Coordination Boards follow anti-drug efforts to ensure that activities specified in the action plan are carried out in cooperation and coordination with the relevant institutions and organizations, and to monitor the whole process at provincial level.

Source: (279).

Case Study A5.5.

Sierra Leone's involvement of children in the truth and reconciliation commission

During 10 years of civil war, the children of Sierra Leone were deliberately and routinely targeted, and witnessed widespread and systematic acts of violence and abuse. Many were abducted and forcibly recruited as child soldiers and were the victims of rape, mutilation, forced prostitution and sexual exploitation. Child combatants, themselves victims, took part in atrocities. Many were threatened with death if they did not do this, or were desensitized with drugs and alcohol.

The Truth and Reconciliation Commission (TRC) for Sierra Leone originated from the peace agreement and was established by an Act of the Sierra Leonean Parliament in February 2000. The main objective of the Sierra Leonean

TRC was to create an impartial record of human rights violations. It was charged with recording those violations that occurred between 1991 and 1999 and making recommendations to the government to prevent future conflicts. What was unique about the mandate of the TRC in Sierra Leone was the attention it gave to the experiences of children affected by the armed conflict. It aimed to involve children throughout the process and adopted child-friendly procedures for children's participation. The TRC sought to build children's confidence and restore their sense of justice in the social and political order while, at the same time, establishing a mechanism of accountability for crimes committed against them.

Source: (254).

Case Study A5.6.

Argentina's municipal budgeting for youth participation

The Municipality of Rosario in Argentina undertakes an annual participatory process to decide on the allocation of the youth budget, engaging youth from across its six districts in democratic processes to select representatives and decide upon budget allocations for youth services. An initial pilot in 2004 was funded by the German Technical Cooperation Agency, but the necessary funds are now drawn from the municipal budget. Young people are able to have a say in the design of city youth services, and in the allocation of resources to support them. A representative of the municipal government said, "Where local young people are involved in budgetary decisions there is the potential to develop creative solutions to issues that can result in cost savings and better value for money. Local young people are often very conscious of spending and allocating public money and can therefore be very careful about how they spend it."

Source: (6).

Case Study A5.7.

Colombia's reduction of youth violence

The city of Medellín is now well recognized for its investments in improving safety and living conditions for the poor. A series of urban investments during the 2000s included constructing a metrocable and escalators to the poor hillside neighbourhoods; cultivating public spaces; building libraries and schools; and establishing social programmes to reduce violence and improve conditions for young people (280). For example, in the Montecristo neighbourhood, youth working with the local community-based organization, Corporación Vida para Todos (Corporation Life for All) or CoVida, managed to avoid violence, gang membership and crime (336). Residents living in neighbourhoods with both physical and social improvement programmes reported increased trust in their neighbours to intervene to break up fights among children, and in asking the police for help (281). Moreover, the rate of homicide in Medellín was reduced markedly from 185 per 100 000 people in 2002 (281) to 26 per 100 000 just five years later (280). The innovations in Medellín suggest that city development focused on bringing inclusive public transport to the urban poor can not only improve environmental conditions and residents' access to jobs, but also help reduce levels of youth violence and build increased collective trust among residents, which can ultimately act to improve everyone's health.

Source: (282).

Annex 5. Additional information about national programming

Case Study A5.8.

Malawi's cash transfer scheme as a vehicle to achieve public health objectives

Cash transfers are direct transfers of money given to eligible households or individuals – most often the poorest households. They may be unconditional or conditional. They can improve health outcomes through, for example, enabling recipients to manage risk better, contributing to economic growth, building social cohesion, and supporting human capital development through greater use of health and education services.

Cash transfers have shown promising results across many outcomes such as HIV, dietary quality, education, health-care utilization, and parenting skills. Cash-transfer programmes can increase the use of health services and improve nutritional outcomes and preventive behaviours in situations where there is adequate health-service

provision. For example, in Zomba, Malawi, cash transfers to adolescent girls and their households were associated with a 60% reduction in recipients' risk of HIV infection, against a background HIV prevalence of 22%. A variety of mechanisms might have contributed, including a reduction in early marriage and transactional sex, improved nutrition and health-care use and, notably, the increase in school attendance enabled by the cash transfers.

The effectiveness of cash transfer schemes is affected by factors such as conditionality, targeting and the relationship to other social-protection policies. It is important therefore to monitor closely the effect of these design features on the outcomes.

Source: (283); (151).

Case Study A5.9.

South Africa's national policy on informed consent for testing children for HIV

A child may give independent informed consent to an HIV test if he or she is:
- 12 years or older; or
- under 12 years of age but with sufficient maturity to understand the benefits, risks and social implications of a test.

If the child cannot give informed consent, it may be provided by:
- the parent or caregiver of the child;
- the provincial head of Social Development; or
- a designated child protection organization arranging placement for the child.

Where there is no parent, caregiver or designated child-protection organization, informed consent may be provided by:
- a superintendent or person in charge of a hospital.

Finally, where those listed above are unwilling or unable to consent, the Children's Court may consent to an HIV test where testing is in the best interests of the child.

Source: (284).

Annex 5. Additional information about national programming

Case Study A5.10.

Kyrgyzstan's youth-centred care

In 2008, the Ministry of Health of Kyrgyzstan, with support from UNFPA and WHO, developed national standards for youth-friendly services with the long-term aim of improving the quality of existing primary and referral-level services across the country. To collect baseline data on the quality of care in facilities that expressed their willingness to apply the standards, a quality-measurement survey was conducted in 2009. Findings from 10 health facilities (seven public and three private) from five regions and are summarized below.

Most health-care organizations – despite the high level of professionals and their extensive training, as well as the recognition of the importance of caring for adolescent health in general – are not ready to provide services to adolescents and young people in line with standards, including the extended package of services and referrals.

Explanations for the low uptake of services by young people include low health literacy and level of confidence in the service due to lack of confidentiality and insufficient professional training in working with adolescents.

Information materials for young people in all institutions are either scarce or missing. There are no information materials for community members, parents and teachers on adolescent health. Health workers lack the skills to work with the community.

While community members acknowledged that adolescents' need for support is worthy of public action, they do not see it as their role to provide support – be it with additional funding from the local budget or with other forms of assistance.

Parents, teachers and representatives of religious communities recognize the need for high-quality adolescent-centred care and are willing to cooperate in promoting such services.

Many of the managers and providers of health-care do not realize the importance of involving young people in promoting youth-friendly services, including promotion among vulnerable youth. Services for vulnerable youth and adolescents are usually provided by clinics operated by NGOs.

Health-care organizations need to implement additional interventions in order to become youth-friendly, such as creating friendly spaces; training health-care providers in adolescent counselling and principles of youth-friendly services; upgrading and supplementing equipment; and assuring a consistent supply of consumables.

A package of normative documents on youth-friendly services is needed to guide specialists and managers.

The survey identified areas for improvement against each standard, assisting facilities to move toward adolescent-centred care.

Source: (285).

Case Study A5.11.

Morocco's National Programme for School and University Health

In Morocco the National Programme for School and University Health covers a range of activities, including:

- routine medical check-ups
- screening for visual impairments
- control of communicable ophthalmia
- promotion of dental and oral health
- prevention of communicable and noncommunicable diseases
- inspection of hygiene conditions in educational establishments
- developing health education and promoting healthy lifestyles
- counselling and guidance
- helping people to stop smoking
- medical consultations on request
- management and monitoring of detected cases
- health surveillance of children's holiday camps.

The programme is managed by the Division of School and University Health. Services are planned and monitored by the regional health department and provincial/prefectural office through a unit, consisting of a physician and a nurse/facilitator, embedded in the Provincial Outpatient Infrastructure Action Service (SIAAP).

Frontline school health-care services are delivered by physicians and nurses on a full-time or a part-time basis.

These physicians must provide the following services:

- routine medical check-ups
- health inspections of preschool establishments and schools and their immediate environment through a routine, twice-yearly visit to all educational establishments
- physical education and sports
- routine medical visits to children's summer camps
- issuance of medical certificates
- education for health
- counselling and guidance.

Nurses are in charge of control of communicable ophthalmia; control of visual impairments; routine visits to educational establishments; education for health; education in dental and oral health and promotion of mouth rinsing with fluorine-based solutions. In addition, there is the University Medical Centre, with a full-time staff of physicians and nurses.

Services include:

- a complete physical examination for the purpose of early detection of health conditions (the results of the examination and any observations are recorded in the medical booklet, which is a technical document that must accompany the student throughout the course of his or her university career)
- medical consultations upon request, nursing care and referrals
- inspection of hygiene conditions at universities
- counselling and guidance
- health education
- immunizations.

Source: (351).

Annex 5. Additional information about national programming

Case Study A5.12.

India's contracting out of reproductive and child health services through the Mother NGO Scheme

A review of practices of contracting NGOs for health, education and basic sanitation found that in the health sector NGOs have competitively bid for, and won, contracts for management and service delivery in Cambodia, Nicaragua, Costa Rica, Pakistan and India, among other countries (286).

In India, the Mother NGO scheme was implemented to deliver reproductive and child health services in underserved areas (287). In 1997, the Ministry of Health and Family Welfare – in accordance with the Cairo International Conference on Population and Development, and in concurrence with the Ninth Five Year Plan (1997–2002) – initiated a Reproductive and Child Health (RCH) programme. This aimed to provide integrated health and family welfare services to meet the felt needs for health-care for women and children. The programme included male involvement; an adolescent component; issues associated with reproductive tract infections and sexually transmitted infections; and gender in the context of reproductive rights. In the same year, the Ministry introduced the Mother NGO (MNGO) scheme under the RCH programme, in which selected NGOs were identified and designated as MNGOs. MNGOs were selected based on strong RCH programme and training experiences; understanding of gender issues and advocacy skills; strong networking ability; and credibility in programme management and national status. These MNGOs were given grants to strengthen RCH services in selected districts. They in turn award grants to smaller NGOs called Field NGOs, to strengthen services at the grass-root levels.

MNGOs needed considerable capacity strengthening. For this purpose, the Government of India decided to establish regional resource centres, with financial assistance from UNFPA, to provide technical and programmatic support towards capacity building of MNGOs. The Mother NGO scheme is now part of the National Rural Health Mission scheme implemented by Government of India.

To enable successful relationships between the government and contracted NGOs, certain conditions are necessary. These include (286):

- The government department responsible for contracting has sufficient capacity to undertake the complex task of designing contracts and managing the process.

- The inclusion of the NGOs in programme design, contracting being conceived as part of a broader country strategy, with an emphasis on transparency and collaboration in the contract.

- The autonomy of the NGO to decide on its operational strategy. Providers are granted maximum operational flexibility.

- Government providing an enabling policy, a legal framework and a clear and fair regulatory environment. Long-term and predictable contracts.

Sources: (286); (287).

Case Study A5.13.

Multicountry mobile phone games to create HIV/AIDS awareness in Asia and Africa

Freedom HIV/AIDS is a large social initiative to fight HIV/AIDS using mobile phone games; it reaches more than 42 million users across the globe. The initiative aims to create awareness about HIV/AIDS to under-privileged communities of the world through the mobile games. Starting from four games – Safety Cricket, AIDS Messenger, Babu Quiz and Red Ribbon Chase – the initiative has developed 12 more games. Freedom HIV/AIDS teams works closely with local NGOs and knowledge organizations to develop new games and understand the social sensitivities of a region. The games and applications are designed and developed by a voluntary team of developers working on the project.

Games are disseminated through mobile networks and are deployed in the regions through local mobile operators and mobile content aggregators. Freedom HIV/AIDS management ensures that the games are pushed by the operators through regular viral SMS messages and

marketing. The management also ensures that the users are either not charged or are charged nominally for game downloads.

In Africa, the project has reached Uganda; Kenya; the United Republic of Tanzania; Malawi; Mozambique; and Namibia. The initiative is in the process of rolling out new games for Latin America, South-East Asia and Eastern Europe. Some of its most popular games have been Safety Cricket, AIDS Messenger, Babu Quiz, AIDS Safety Shoot-out and Game of Life. For example in India, one Safety Cricket game available on mobile phones clocked 10.3 million game sessions in 15 months. The game addresses sexual attitudes and behaviours, drawing analogies between cricket and real life, e.g. the analogy between no helmet/no cricket and no condoms/no sex, or "a risky shot in cricket can bowl you out" while "risky sex can bowl you out in real life".

Sources: (288); (289).

Case Study A5.14.

Australia's HPV Vaccination Programme

The free National HPV Vaccination Programme was introduced in Australia in 2007 because large trials had found that vaccinating young women was likely to significantly reduce Pap test abnormalities, cervical cancer diagnoses, and deaths from the disease. The vaccine also protects girls from some cancers of the vagina, vulva and anus. The decision to introduce the programme in Australia was made by the Government of Australia after in-depth consultations with epidemiologists and public health experts. Since 2013, boys have also been included in the school-based programme.

The HPV vaccine is provided free in schools for girls and boys aged 12–13 years; those who are not in school can obtain the vaccine free from their local immunization

provider or doctor. Almost all Australian schools have chosen to participate in the programme, and 77.4% of girls turning 15 years of age in 2015 had received all three doses of the vaccine. Research has shown early signs of the vaccine's success, including:

- a 77% reduction in the prevalence of the HPV types that are in the vaccine, which are responsible for about 75% of cervical cancers;
- almost a 50% reduction in the incidence of high-grade cervical abnormalities in girls in the state of Victoria under 18 years of age; and
- a 90% reduction in genital warts in heterosexual men and women under 21 years of age.

Source: (290).

Annex 5. Additional information about national programming

Case Study A5.15.

Chile's national programme for integrated adolescent and youth health

The Programa Nacional de Salud Integral de Adolescentes y Jóvenes seeks to improve health systems and the quality of comprehensive health services to meet the needs of adolescents, with an emphasis on the primary care level. The Minister of Health is the main person responsible for the implementation and development of the programme.

The responsibilities are shared between national, regional and local levels. Although the programme is focused on the health sector, nine strategic directions have been identified for the period 2012–2020 that emphasize the need for better advocacy and strengthening of intersectoral work; family, community and school-based interventions; adolescent participation; and the use of social media and networks.

Source: (291).

Case Study A5.16.

Wales' Cardiff Model of violence prevention

Violence prevention is an essential aspect of adolescent health, as violence is one of the leading causes of death among young people. The health sector has an important role to play in reducing violence among adolescents, as the Cardiff Model highlights.

The Cardiff Model (292), one of the leading programmes on violence prevention, was created by Jonathan Shepard, a professor at Cardiff University in Wales, United Kingdom. The Cardiff Model is an excellent example of cross-sectoral collaboration and the strategic use of information from the health sector to improve policing. This model has helped to reduce the incidence of violence by 40% in Wales since its full implementation in 2001. Shepard found a disconnect between, on one hand, the casualty data and violent acts known to police and, on the other hand, the violent acts recorded by hospital emergency room departments. For example, it was more likely that the police would know about an elderly person being attacked than about a young person presenting with injuries in the emergency room. This disconnect in information led to less efficient policing of areas of concentrated violence.

To address this gap, the core aspect of the Cardiff Model utilizes the sharing of anonymous health-sector information from emergency rooms with the police in real time. Crime and Disorder Reduction Partnerships have been created between the emergency room staffs and the police to share information about the location and time of violent acts, weapons used and other relevant demographic information. This information helps the police target violence prevention efforts. Police have new

information on where they should be patrolling and also which bars and nightclubs are hotspots for assault injuries. A TED Talk by Shepard provides a detailed explanation of the Cardiff Model and the use of emergency room information by the police (293).

The Cardiff Model exemplifies the strategic role that information from the health sector can play in reducing violence. As highlighted in Shepard's TED Talk, information-sharing with the police has led not only to more targeted policing of crime hotspots but also to changes in policy within the environments where violence is most likely. For example, it was emergency-room information that first identified drinking glasses as a weapon. As a result, the glasses used at bars in Cardiff were changed to a plastic material. The success of the Cardiff Model has led to its being transplanted to other settings within the United Kingdom and to South Africa and Latin America; it has proved cost-effective in the long term (294).

While the Cardiff Model highlights the potential for violence prevention for all the population, the model is particularly relevant for adolescents, since violence is a leading cause of their deaths. In order to prevent violence among adolescents, the information sharing between emergency room staff and police is a vital method to target hotspots for violence, analyse which weapons are resulting in injury in adolescents, and create appropriate policies to address the surrounding environment to reduce violence among youth.

Sources: (292-294).

Case Study A5.17.

Australia's mental health and resilience curriculum for parents, teachers and students

The HeadStrong curriculum was developed by the Black Dog Institute in Australia to make it easier for teachers educating high school students about a tough topic. HeadStrong is linked to the Health and Physical Education curriculum for Years 9–10, and includes five modules that are split into a series of ready-to-use classroom activities and teacher-development notes. It links directly to curriculum learning outcomes, and includes topics on depression and bipolar disorder, seeking help, helping others, and building well-being and resilience.

A range of free educational resources was developed to support teachers, including a mini webinar series that introduces teachers to HeadStrong and helps them bring it alive in the classroom.

An evaluation of the impact of the HeadStrong curriculum in a comprehensive research trial demonstrated the potential of HeadStrong to improve mental health literacy and reduce stigma (295).

Sources: (295); (296).

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Annex 5. Additional information about national programming

Case Study A5.18.

Scotland's youth pregnancy and parenthood strategy governance

The Pregnancy and Parenthood in Young People (PPYP) Strategy is the first strategy focused on pregnancy and parenthood among young people in Scotland, United Kingdom. It aims to drive actions that will decrease the cycle of deprivation associated with pregnancy in young people under 18.

In order to help achieve this, there will be cross-ministerial engagement for the strategy from the:
- Minister for Children and Young People
- Minister for Learning, Science and Scotland's Languages
- Minister for Public Health
- Minister for Sport, Health Improvement and Mental Health.

The Governance structure of the Strategy includes:

A national lead for Pregnancy and Parenthood in Young People

The Scottish Government's national lead for the Pregnancy and Parenthood in Young People Strategy will provide national strategic leadership in the implementation of the strategy. The national lead will be responsible for the overall delivery of the strategy, engaging with local and national organizations; ensuring the consideration of up-to-date evidence and policy; monitoring and reacting to progress; and enabling sharing of experience and best practice across Scotland. The lead will provide the national link across Scotland as well as providing advice and updates to ministers and an annual progress report to ministers, the Scottish Parliament and the independent advisory group on progress, both locally and nationally.

Community Planning Partnerships

The actions set out in the Pregnancy and Parenthood in Young People Strategy cover areas that can be most influenced by the Scottish Government in partnership with others from across the public sector. Community Planning Partnerships (CPP) in particular have a key role to play, with the Scottish Government providing support, advice and policy direction and linking with young people directly. CPPs will be expected to identify an accountable person to take on responsibility for ensuring the delivery of their responsibilities under this strategy.

Independent advisory group for the Pregnancy and Parenthood in Young People Strategy

In addition to the organizations and individuals involved within the governance structure for the strategy, there will also be an independent advisory group (IAG). This will consist of individuals from across sectors and organizations who may have a role in delivering the strategy, an academic interest, and/or an interest in decreasing inequality in young people. This group will the strategy and encourage work in this area. The group will also receive the annual progress report from the national lead on the progress of the strategy and may respond with their views on the implementation progress of the strategy, highlighting issues that they may feel requires ministerial attention. The Teenage Pregnancy Strategy for England had a similar group, which was described as a particular key strength of the English strategy.

Evaluation and monitoring

A national evaluation and monitoring group (EMG) has also been established to assess how well the strategy is being implemented and whether its outcomes are being met over time. Led by the national lead and Scottish Government's Health Analytical Service Division, the EMG will help to develop a monitoring and evaluation plan for the first five years of the strategy. It will take account of the recommendations of the assessment. Monitoring and evaluation outputs will support the formal annual process of reporting to ministers and the Scottish Parliament.

The strategy has several strands, including improving service provision by addressing delays in service provision, and barriers to access services. However, equally important in the strategy are interventions to create positive opportunities for young people by enabling and empowering them through:
- measures to maintain or re-engaging young people in education
- flexible provision of learning that is tailored to the needs of the individual
- developing self-esteem and self-confidence, and building toward a sense of equality of opportunity
- activities to improve social and emotional well-being: psychological well-being (self-efficacy; locus of control); confidence (self-concept; self-esteem); emotional well-being (anxiety, stress and depression; coping skills); and social well-being (good relations with others; emotional literacy; antisocial and prosocial behaviour; social skills).

Source: (297).

Case Study A5.19.

Mozambique's multisectoral adolescent sexual and reproductive health programme

The Programa Geracao Biz in Mozambique is a national multisectoral adolescent sexual and reproductive health programme. It started in 1999, aiming to improve sexual and reproductive health (SRH) and rights through the creation of enabling environments to improve knowledge, attitude and abilities of young people to adopt positive SRH behaviour and access services from youth-friendly clinics.

Geracao Biz involved three sectors: health, education, and youth and sports. Government staff from each of these sectors worked with community-based organizations, including youth organizations, and young people, to deliver three complementary but linked interventions: youth friendly clinical services; school-based education; and community-based outreach. To facilitate collaboration, a strong coordination mechanism was put in place at the national, provincial and district levels. Young people were active members of coordination committees at all three levels.

Between 1999 and 2009 the programme was funded by UNFPA and the Danish International Development Agency, with additional support from NORAD and SIDA. Pathfinder International provided ongoing on-the-ground technical support.

The results

The initiative was launched in 1999 in two pilot sites. Over the next 10 years it was scaled up to cover all the provinces of the country. According to an independent external evaluation of the initiative, since 2010 the programme has been implemented in 119 of the 128 districts of the country, reaches 56% of the country's youth (more than 4 million), and covers 54% (220) of the 408 administrative posts in the country.

Between 2005 and 2010 there was a decline in the number of reported pregnancies among students, while during the same period the number of participating schools increased from 283 to 710.

Lessons learned

Government leadership and support:
- There was support for the initiative from the highest level of the government. The availability of an enabling policy and a dedicated unit in the Ministry of Health meant that the initiative had the legitimacy to move ahead and had the leadership it needed.

Design:
- The initiative started with a good understanding of the epidemiologic situation and was well informed by a situation assessment, which demonstrated the need for multisectoral action.
- The objectives of the initiative were carefully thought through and set out clearly.
- The responsibilities of each sector were laid out clearly, and clear coordinating mechanisms were set up at the national, provincial and district levels.
- The brand was developed with through consultation with communities.

Pilot tests:
- Pilot projects were designed and implemented. There was substantial mentoring and coaching in the pilot phase. The pilot phase was externally evaluated, and the findings and lessons learned informed the planning of the subsequent phases.

Scale up and continuity:
- The initiative was designed from the outset for scaling-up. New partners were brought in to support expanded coverage of the programme.
- The initiative was designed for sustainability by being grounded within existing government structures (e.g. clinics and schools) and by institutionalizing activities such as training (e.g. by adding adolescent SRH content into existing training programmes), and including adolescent-specific indicators into the national health management information system).

Implementation:
- Serious attention was paid to implementation. Ongoing technical support was provided both on managerial and on technical issues. Capacity building was a major area of focus.
- There was considerable flexibility. The objectives of the initiative evolved with time as lessons were learned. The scope of the initiative was broadened in response to the needs and opportunities, and in response to evaluation findings. The key players involved in the initiative from the different sectors and the coordination mechanism also evolved over time.
- Adequate funds were generated to translate words into actions. Concerted efforts were made to bring new donors on board.

Challenges

The external evaluation of Geracao Biz recommended that, while building on its good work of providing adolescents with information, education and health services, the programme should also address the powerful social, economic and cultural factors that drive the decisions adolescents make, and which of their decisions they act upon.

Sources: (298-300).

Annex 5. Additional information about national programming

Case Study A5.20.

Ukraine's school-based substance-use-prevention curricula

In Ukraine, the State Standard for the Basic and Complete General Secondary Education stipulates that schools should deliver substance-use-prevention and healthy-lifestyle programmes through the mandatory subjects of Biology and Basics of Health. Introduced in 2000, the Basics of Health is a compulsory subject for grades 1–9 (one hour per week). It integrates topics related to healthy lifestyles and safe living, promotes responsible attitudes towards life and health, and develops essential social and psychological skills. In grade 2, children first learn about the harms of alcohol; in grade 3 they learn about the consequences of smoking; and in grade 4 they learn about the negative effects of drug use. Students in secondary school are given more information about substance use and its influence on human bodies. They also learn about health risks and the consequences of substance use for their health and well-being, and how to abstain from smoking and using alcohol and drugs. The course takes a positive approach, without intimidating students or spreading fear-based messages. Lessons to develop the skills for a healthy lifestyle are based on interactive learning techniques, and include exercises that model actual behaviours in various situations. The harmful effects of psychoactive substances on human bodies and future lives are also highlighted in the Biology course in grade 9. Special guidance materials have been developed for teachers and textbooks for students (for each grade from 1 to 9) to facilitate the delivery of the Basics of Health course. All materials are regularly updated and re-issued.

Substance-use prevention is also delivered in general and vocational schools as part of the optional component of the curriculum. Such optional prevention programmes include Young People for Healthy Lifestyle for grades 5–11; Preventing Bad Habits for grades 6–9; and Basics of Healthy Lifestyle for grades 8–9.

Research in 2004 and 2007 to assess the impact of school-based prevention on the rates of substance use demonstrated statistically valid changes in the behaviour and practices of young people. In particular, compared to 2004, in 2007 the proportion of 15- to 16-year-olds who had been drunk at least once in the previous month decreased by 26%; the proportion of boys aged 15–16 who smoked fell by 10%; and the proportion of girls aged 15–16 who smoked fell by 2%.

The Health Behaviour in School-Aged Children (HBSC) survey held in 2014 among students in grades 5–11 found a reduction in the prevalence of daily smoking in 2014, as compared to 2010, from 16% to 10% among boys and from 7% to 5% among girls. The proportion of non-smokers increased from 80% to 87.6%. According to studies of the European School Survey Project on Alcohol and Other Drugs from different years, alcohol use among 15- to 16-year-old students has been steadily decreasing since 2003.

Sources: (301-302).

Case Study A5.21.

Jordan's response to child marriage among Syrian refugees

As part of the Regional Response to the Syrian crisis, Save the Children is helping children in Syrian Arab Republic, Lebanon, Jordan, Iraq and Egypt to cope with the worst effects of the war. In Jordan, the organization runs community-awareness sessions on child marriage with children, adolescents and parents, with a focus on prevention of child marriage. Across the region, the organization's child-protection teams respond to issues related to child marriage and forced marriage, referring cases of gender-based violence to specialized agencies so that victims get specialist support. In Jordan, Save the Children has collaborated with other agencies to launch Amani, a campaign to raise awareness of the dangers of marriage and to spread the message "Our sense of safety is everyone's responsibility".

A taskforce on forced and early marriage was established in Jordan in 2014, co-chaired by the United Nations Refugee Agency (UNHCR) and the United Nations Population Fund (UNFPA). Its aims are to develop a joint action plan to reduce the risk and mitigate the consequence of child marriage and forced marriage in Jordan, and to build the capacity of local organizations to tackle this issue. A joined-up approach is critical to address the issue of child marriage. Proven strategies in these contexts include: empowering girls with information, skills and support networks; providing economic support and incentives to girls and their families; educating and rallying parents and community members; enhancing girls' access to a high-quality education; and encouraging supportive laws and policies.

"In the beginning, in Syria, they would make girls get married early, one way or another. But when events started to happen in Syria, parents were marrying their girls as soon as they turned 12 or 14. Families started doing it so quickly, especially when things happened and they started to worry about their daughters… Especially after war, this phenomenon has grown bigger in our society."

Older adolescent girl in Syrian Arab Republic

Source: (303).

Annex 5. Additional information about national programming

Case Study A5.22.

South Africa's participatory, same-sex health education programme

Stepping Stones aims to reduce HIV transmission, improve sexual health and build gender-equitable relationships. It involves a series of training sessions in which facilitators work with same-sex peer groups to question and explore issues of love; contraception; sexually transmitted infections; sexual health; gender-based violence; and communication between partners. The programme has been adapted to many contexts worldwide, including in Africa, Asia, Europe, Latin America and North America. This case study discusses its application in South Africa, where Stepping Stones was implemented in the Eastern Cape Province between March 2003 and March 2004.

The main objectives of Stepping Stones include:

- to reduce the incidence of HIV transmission
- to encourage men and women to explore gender issues, their emotional needs and their communication and behaviour towards each other
- to address the vulnerability of women and young people in decision-making about sexual behaviour
- to address and explore a range of behaviours that affect sexual health
- to improve sexual health by forming intimate partner relationships that involve gender equity and good communication.

The programme was conducted with young men and women aged 16–23 years. Thirteen sessions lasting three hours each were held with participants over several weeks. Participants were separated into all-male and all-female peer groups, creating a safe space for exploring and discussing sensitive issues. The issues discussed included sexual behaviour, unintended pregnancy and gender-based violence. Participatory methods such as activities involving drawing and role-play were used. Skills promoting assertiveness were taught. Participants also discussed the motivations behind sexual behaviour and the prospect of changing behaviour.

A cluster randomized controlled trial was conducted. Villages were randomized to receive the Stepping Stones intervention or an alternative intervention. The alternative intervention involved a single three-hour session promoting safer sex. The main outcome measured was the incidence of HIV infection. The incidence of herpes simplex virus infection, reported sexual behaviour, substance abuse, depression, and undesired pregnancies was also measured one and two years after the programme was implemented.

Two years after the programme was implemented, men reported less violent behaviour towards their intimate partners. Men also reported less transactional sex and less excessive drinking. The incidence of herpes simplex virus 2 infection was lower in the intervention arm during the two-year period, although the incidence of HIV infection was not significantly different in the intervention and control arms. Thus, while the programme did not reduce HIV incidence it did reduce self-reported risky behaviours that contribute to HIV transmission. Reported domestic violence, forced intercourse and transactional sex had all declined one to two years after Stepping Stones was implemented.

Source: (304).

Case Study A5.23.

El Salvador's intersectoral experience in the empowerment of adolescent girls

The Interagency Program for the Empowerment of Adolescent Girls (IPEAG) was established through a group of United Nations agencies (UNDP, UNFPA, FAO, UNICEF and PAHO) to promote intersectoral work in addressing the needs of adolescent girls. The Ministry of Public Health and Social Assistance of El Salvador had a history of support for social participation and intersectoral action, and it supported the initiative through the Integrated Care Unit for Adolescent Health. Support for adolescent girls was identified as an important health equity issue, with the aim of preventing young women from becoming marginalized and victims of systemic discrimination. Health-promotion strategies were supported through innovative activities such as a mural contest on the topic of birth control.

Adolescents were also responsible for the production of a variety of educational and audio-visual materials on sexual and reproductive health. Specialized integrated care units for adolescent health were established in 13 targeted communities, and were staffed by multidisciplinary personnel who were trained in adolescent care. Eleven revenue-generating enterprises, managed by adolescent girls, were also created.

A lack of baseline data unfortunately limited the systematic evaluation of the programme, although there is widespread acceptance that it has succeeded in empowering adolescent girls and young women in the affected communities. Although the programme was national in scope, a report on the programme emphasized the need for more intensive and sustained participation by local government.

Source: (305).

Case Study A5.24.

Australia's government funding of positive development approaches in programming

The Victorian Health Promotion Foundation (VicHealth) is pioneering health promotion in Australia on behalf of the government. The organization aims to design evidence-based interventions; fund health-promotion programmes; conduct research; and produce and support public campaigns to promote a healthier Victoria. VicHealth receives core funding from the Australian Department of Health, and most of the members of the VicHealth board are appointed by the Minister for Health. Funds are provided to deliver on five strategic objectives: promoting healthy eating; encouraging regular physical activity; preventing tobacco use; preventing harm from alcohol; and improving mental well-being.

Positive development approaches are central to VicHealth's work. As the Foundation states, "pinpointing and preventing the negative influences of ill-health, and championing the positive influences on good health, is central to our work". For example, through its Bright Futures Challenge projects, VicHealth is providing substantial grants to projects that aim to support the resilience, social connection and mental well-being of young Victorians.

Source: (306).

Annex 5. Additional information about national programming

Case Study A5.25.

Liberia's secure funding for priority interventions for adolescent health

Liberia is among the second wave of countries supported by the Global Financing Facility in support of Every Woman Every Child (GFF) to strengthen its health system and improve the delivery of reproductive, maternal, newborn, child and adolescent health (RMNCAH) services. In 2016, the Ministry of Health developed its RMNCAH investment case in close collaboration with development partners such as WHO, UNFPA and the World Bank. The government wanted to strengthen the adolescent component within the existing investment case by selecting a few focused adolescent health priorities and outlining the specific interventions to address these priorities. A technical working group involving the Ministry of Health, WHO, UNFPA and the World Bank followed a systematic process to strengthen the adolescent focus in the country's RMNCAH investment case.

Building on the data provided in the investment case, Liberia selected four adolescent health problems to prioritize: pregnancy-related mortality and morbidity, and rapid-repeat pregnancy; unsafe abortion and mortality from unsafe abortion; early and unintended pregnancy and STIs, including HIV; and gender-based violence, including female genital mutilation/cutting. Through a step-wise approach of prioritization, the team detailed population-wide and adolescent-specific activities, and discussed costing assumptions for each activity.

Once the outputs of the working group were endorsed by the Ministry of Health, the content was incorporated into different sections of the overall investment case. As a result, US$ 16 million were allocated for the population as a whole and an additional US$ 1 million for the adolescent health component. Currently the government plans to identify five counties to start with phased implementation.

Sources: (307); (337).

Case Study A5.26.

The Adolescent and Youth Constituency of The Partnership for Maternal, Newborn and Child Health: outcomes and lessons learned from the first year of establishment

Prior to 2015, The Partnership for Maternal, Newborn & Child Health worked with youth-led organizations through informal processes such as the Partners' Forum in 2014. In 2016, the Adolescent and Youth (AY) constituency was established. It has provided a multistakeholder platform, enabling many organizations to engage with and support youth-led organizations in advocating to improve the health and well-being of adolescents and young people. Members of the AY constituency are representatives of youth-led organizations and/or networks (aged 10–30 years) working in the development agenda for the Sustainable Development Goals SDG in general, and sexual, reproductive, maternal, newborn, child and adolescent health (SRMNCAH) in particular.

Following the Board decision in October 2015 to establish the AY constituency, and the Board decision in May 2016 granting the AY constituency two Board seats, the constituency is now officially operational. It has developed:

- An 18-month workplan, in order to contribute meaningfully to The Partnership' overall strategic objectives. The constituency has also established individual strategic objectives working groups to oversee and lead on implementation of the constituency workplan.
- AY constituency operational guidelines.
- Partner engagement strategy and outreach.
- A mentoring programme for piloting and implementation.
- An advocacy and accountability strategy for global, regional and country action.

The 18-month adolescent and youth constituency workplan aims to:

- Increase political visibility, policy commitments and resources allocated for adolescent health and well-being, in alignment with the Global Strategy for Women's, Children's and Adolescents' Health (2016–2030) and the Global Accelerated Action for the Health of Adolescents (AA-HA!) guidance to support country implementation.
- Increase meaningful engagement of adolescents and youth to influence policies and decision-making related to the SRMNCAH continuum of care.
- Improve monitoring of key indicators, analyse rate of progress, and act on evidence to accelerate results and deliver on accountability for the Global Strategy and the Sustainable Development Goals.

During its first year of establishment, the AY constituency members conducted an assessment of three areas: impact; lessons learned; leverage to advance adolescents' health and well-being.

Outcomes include:

- Reach – Increase in membership of youth-led organizations, including networks and communities, collaborating for collective and coordinated action to drive adolescent health and well-being.
- Capacity – Increase in knowledge and skills of young people, including advocacy, accountability, partner engagement, and public speaking, among others.
- Access to information/ services and sharing of best practices within the youth movement.
- Ripple effect – Given the nature of The Partnership, more young people are reached than ever before. Members are focal points of organizations or networks.
- Greater interaction – Between young people and other constituencies (i.e. donors, service providers, United Nations agencies).
- Branding – within a few months the AY constituency has become the preferred platform for youth engagement in health and development, i.e. delivering on youth engagement for the Global Accelerated Action for the Health of Adolescents (AA-HA!) initiative.

- Advocacy – Increase in dialogues with governments and young people, together identifying best practices and lessons for meaningful youth engagement for adolescent health and well-being. Increase in youth engagement in accountability platforms, including the Global Strategy Progress Report and the Independent Accountability Panel.
- Funding – The donor community's growing interest in supporting the AY constituency enables more investments to adolescent health and well-being, including support to youth-led organizations.

Lessons and actions moving forward:

- Partner engagement – The constituency is implementing a partner engagement strategy, which aims to attract more members and networks and increase the quality and depth of engagement. A mapping of stakeholders is currently underway that will define the communities underrepresented and to inform the partners engagement strategy.
- A coordinated AY platform – The AY constituency reached out to its peer AY platforms in other organizations and initiatives to ensure alignment and coordination for AY engagement.
- Constituency governance – A formal governance structure has been developed. In this context, the constituency will benefit from learning lessons on how best to organize itself and integrate into the work of the Partnership's other constituencies.
- Advocacy at all levels – The effectiveness of the constituency to influence important health issues for adolescents and other young people will enhance the advocacy capacity of its leadership and membership, with investments in youth-led organizations to deliver at country level.

Source: (338).

Annex 5. Additional information about national programming

A5.3.
Other additional examples about national programming.

Box A5.1. Using human rights for sexual and reproductive health: improving legal and regulatory frameworks

WHO has developed a tool to support countries in conducting an assessment of legal and regulatory frameworks for compliance with internationally recognized and accepted human rights principles and standards. This tool aims to improve awareness and understanding of states' human rights obligations. It includes a method for systematically examining the status of vulnerable groups, involving non-health sectors, fostering a genuine process of civil society participation and developing recommendations to address regulatory and policy barriers to sexual and reproductive health with a clear assignment of responsibility.

In relation to adolescent health-care, an assessment of legal and regulatory frameworks could look at whether legislation:

- incorporates international human rights commitments relevant to adolescent health
- places a statutory obligation on the state to provide the services, programmes, human resources and infrastructure needed to realize adolescents' right to health and health-care, including those considered core obligations under the Convention on the Rights of the Child, Article 24
- recognizes adolescents as rights holders and defines the scope of their rights relating to health and health-care based on international human rights obligations
- clarifies what services adolescents are entitled to claim, and disseminates that information
- provides a statutory entitlement to essential, adolescent-friendly, high-quality health services, irrespective of ability to pay
- regulates public and private services and medications relating to adolescent health to ensure that they cause no harm and are of good quality
- enables adolescent participation and dialogue in legislative processes
- provides a framework for access to effective, adolescent-friendly legal remedies, both judicial and non-judicial, in the case of human rights violations in relation to adolescent health.

Countries that have conducted such assessments (e.g. Tajikistan, Republic of Moldova, Mozambique, and Sri Lanka) have been able to highlight where current legislative measures were sufficient, where amendments or repeal were needed and where legislative gaps existed that needed to be filled. As a result, government ministries and, in some cases, professional associations were held accountable, for instance to revise ethical standards to ensure sufficient protection of privacy and confidentiality in family planning services. Making these recommendations and responsibilities public lends them a certain weight and legitimacy. In Mozambique the recommendations were used for development of the integrated maternal, neonatal and child health package of care; in Sri Lanka application of the tool is accompanying ongoing effort by the Ministry of Health to design and make services available and accessible for adolescents; in the Republic of Moldova and in Tajikistan, the tool is being used as part of Ministry of Health efforts to harmonize their laws on sexual and reproductive health issues. In Tajikistan it is also linked to the reporting process of the Committee on the Rights of the Child. In the decentralized federalist health system of Brazil, use of the tool led to recommendations about the need to educate and inform state (rather than federal) governments and professional organizations about their human rights obligations.

In addition, the health outcomes (knowledge, attitudes and practices) and impact (improved health status) that the programme is contributing to, need to be measured. The latter take considerable time to achieve and programmatic attribution can be a challenge.

Fourthly, adolescent sexual and reproductive health is a highly sensitive issue that almost inevitably leads to resistance from more conservative sectors of society. Proactive and ongoing efforts are needed to build support and to anticipate and address opposition. Building support and shared ownership for ASRH scale-up among a range of stakeholders is crucial. At the same time, one must be aware that political, cultural and religious conservatism may pose serious challenges that need to be anticipated and appropriately addressed. The ongoing effort needed to achieve and sustain normative change should not be underestimated.

Finally, ensuring sustainability is a challenge that all programmes face; the sensitivities associated with ASRH add to this challenge. This task requires deliberate investment of efforts in institutionalization, in building support, in assuring financial support, and in capacity development. Even well-established scaled-up programmes can collapse – for instance if they lose political or financial support – so ensuring their continuity should be an ongoing effort.

Source: (308).

Box A5.2. Common behavioural and structural impediments for intersectoral action

Collaboration with other sectors brings specific challenges. Effective intersectoral action will address the behavioural and structural elements that may inhibit such collaboration. Common behavioural impediments of individuals involved in intersectoral action include:

- lack of understanding of the political agendas and administrative imperatives of other sectors
- differences in the discourse between sectors in framing priorities and goals
- inadequate understanding of how addressing adolescent health contributes to each sector's goals
- wanting collaboration on own terms and being (or being perceived to be) too self-interested; creating parallel structures in order to "be in charge"
- diverse expectations about the scope and objectives of the intersectoral action, and responsibilities
- inability or unwillingness to take responsibility for delivery of basic services.

Common structural impediments to intersectoral collaboration include:

- conflicts between the goal of equity in health and goals in other policy fields, especially economic policies, and competing agendas
- lack of experience with approaches that promote adolescent leadership
- different competency levels between sectors in addressing health issues in general, and adolescent health in particular
- lack of regular platforms for dialogue and problem solving with other sectors, and lack of political and management mechanisms that would enable intersectoral programmes to function sustainably
- imbalance of power between sectors, either within government, across government and/or outside government, or within communities
- frequent changes in senior ministry personnel and changes in ministry structures
- difficulty in aligning budget allocations within each sector with the budget lines needed for intersectoral action.

Sources: (309-312).

Box A5.3. Learning from the first generation of scaled-up adolescent sexual and reproductive health (ASRH) programmes in low- and middle-income countries

In April 2016, WHO organized a global consultation to draw out lessons learned from the first generation of scaled-up adolescent sexual and reproductive health (ASRH) programmes. This brought together 14 low- and middle-income countries and four high-income ones with comprehensive sexuality education (CSE) programmes and/or adolescent-health friendly health services (AFHS) programmes. These programmes had been scaled-up over an entire country (or province/state in the case of large countries) and sustained for at least three years. WHO organized the meeting in conjunction with Implementing Best Practices; USAID; UNFPA; Evidence to Action Project; Pathfinder International; and the Bill and Melinda Gates Foundation. The objectives of the meeting were to draw out the lessons learned from their experiences, to identify possible options for disseminating the conclusions and recommendations of the meeting, and to support their application.

Five implications for action were identified, from the first generation of scaled-up ASRH programmes.

Firstly, ASRH scale-up must be placed on the national agenda. For this, strong political commitment needs to be built and sustained. Building this commitment requires internal and external change agents to work together, using windows of opportunity that arise or creating new opportunities through advocacy.

Secondly, careful planning for scale-up can ensure that it is effective and sustained, and also help avoid many pitfalls. Scaling-up requires attention to both vertical and horizontal factors, as well as securing national and local ownership of the programme. The time and effort needed to institutionalize policies and strategies should not be underestimated. The intervention to be scaled-up needs to be clearly defined. It must be made as simple as possible, with careful attention to resource needs (managerial, technical, funds and materials) at national and subnational levels in order to execute scale-up. Delivery should be integrated into existing systems for capacity building, supervision, monitoring etc., and used to strengthen them. Finally, regular monitoring and evaluation and strategic documentation of results are essential from early on in the scale-up process, and should be planned in advance.

Thirdly, effective and efficient management of scale-up requires ensuring that the right players are on board with clear responsibilities; that the resources needed for programme scale-up are secured; that there is a shared understanding of the level of quality to be achieved and sustained; and that there is a shared commitment to scaling-up with quality and equity. The success of ASRH scale-up relies on these efforts, and also requires gathering and using data to ensure that decisions are based on sound and up-to-date information.

In order to ensure that the right players are on board, effective multisectoral collaboration and buy-in are best achieved by bringing in all key players from the start in order to develop a common sense of commitment and ownership. In most countries, national government bodies with the authority to mandate actions from others are likely to play leading roles, with international NGOs, indigenous NGOs and academic institutions providing critical expertise. Organizations and networks of young people should also be involved in this. Ensuring adequate resources over an extended period of time – including staff, materials to provide CSE and AFHS, and funds – is central to programme scale-up.

In terms of quality, it is essential that programmes meet pre-set minimum quality standards as they scale up – both for CSE and for AFHS. This requires a sound understanding by all partners of the evidence-informed criteria to be achieved, and sustained commitment to achieving and measuring them. Programmatic inputs and outputs need to be monitored, and data should be used to inform the implementation effort. This is especially relevant when the scale-up effort is rapidly expanding into new geographic areas and new players at national and subnational levels are being brought on board. Programmes need to ensure that their scale-up objectives match the available resources, in order to implement all key aspects of programmes with sustained quality.

It is important to find a balance between meeting the needs of all adolescents and those who are most likely to face health and social problems, and least likely to benefit from health and development efforts. Without a deliberate effort, vulnerable and marginalized adolescents are likely to be passed over. Reaching these groups will take additional effort and expense, but is both important from the perspectives of human rights and public health.

As mentioned above, programmatic inputs and outputs need to be monitored and used to inform implementation. In addition, the health outcomes (knowledge, attitudes and practices) and impact (improved health status) that the programme is contributing to, need to be measured. The latter take considerable time to achieve and programmatic attribution can be a challenge.

Fourthly, adolescent sexual and reproductive health is a highly sensitive issue that almost inevitably leads to resistance from more conservative sectors of society. Proactive and ongoing efforts are needed to build support and to anticipate and address opposition. Building support and shared ownership for ASRH scale-up among a range of stakeholders is crucial. At the same time, one must be aware that political, cultural and religious conservatism may pose serious challenges that need to be anticipated and appropriately addressed. The ongoing effort needed to achieve and sustain normative change should not be underestimated.

Finally, ensuring sustainability is a challenge that all programmes face; the sensitivities associated with ASRH add to this challenge. This task requires deliberate investment of efforts in institutionalization, in building support, in assuring financial support, and in capacity development. Even well-established scaled-up programmes can collapse – for instance if they lose political or financial support – so ensuring their continuity should be an ongoing effort.

Source: (339).

Box A5.4 Characteristics of nutrition programmes targeting adolescent girls

Out of a total of 53 programmes identified through the literature and internet searches, 10 targeted adolescent girls specifically. The most common programmatic approaches among this group included community-based platforms for nutrition education and promotion; the direct distribution of micronutrients, food and/or cash; and the capacity building of health workers (or other service-delivery agents). The most common priority practice was intake of iron and folic acid followed by improved eating practices and the consumption of a diverse diet.

Activities that are unique to adolescent girls include sensitization of government and religious leaders surrounding the risks associated with early marriage, and the benefits associated with delaying pregnancy until early adulthood. Government leaders may impact legislation surrounding child and adolescent marriage, while religious leaders can provide education and counselling within their clergy and among the community. This can work to discourage early marriage and delay child bearing until the adolescent girl has completed puberty, optimizing the health potential for herself and her child.

Use of the interpersonal communication/nutrition education approach among adolescent girls is common, given the convenience of accessing girls within the academic setting. Most often, teachers and affiliated education professionals were trained to provide nutrition education and/or direct supplementation to adolescent girls attending school. To reach out-of-school girls, in-school girls receiving a nutrition education and iron and folic acid supplementation intervention were trained to provide similar services to their out-of-school female counterparts (313).

Other approaches involved mass-media campaigns targeting adolescents to improve their general nutritional intake and intake of iron and folic acid supplements, and to delay early marriage and pregnancy. Media campaigns took place during national Adolescent Health Weeks, in which adolescents were encouraged to attend health services. National/regional government strengthening approaches included mentoring government officials to adapt clinics to provide adolescent-friendly services.

Some programmes, such as the Adolescent Girls' Anaemia Control Programme in India (313), and the Nutrition Intervention Programme in Nicaragua (314), have demonstrated positive impact on nutritional outcomes. The Adolescent Girls' Anaemia Control Programme reached 27.6 million adolescent girls in India, of whom 16.3 million were school-going and 11.3 million were out-of-school (315). The authors reported a 21.5% reduction in anaemia prevalence (from 74.7% to 53.2%, $p < 0.05$, total N=5826) and improvements in haemoglobin in 80% of girls (from 110.8 ± 14.2 to 117.2 ± 12.7, $p < 0.05$, total N=5826 (313).

Sources: (209); (313-315).

Annex 5. Additional information about national programming

Box A5.5. Registries of evidence-based mental health and substance-use disorder programmes

Blueprints for Healthy Youth Development is a registry that identifies evidence-based programmes to help young people reach their full potential through interventions to reduce bullying in schools; youth violence; teen substance abuse; antisocial or aggressive behaviour; childhood obesity; school failure; delinquency; youth depression/anxiety; and in other areas (164).

The Substance Abuse and Mental Health Administration in the USA maintains the National Registry of Evidence-Based Programs and Practices. Its purpose is to help the public and professionals find methods and programmes that have been proven to be useful in the prevention and treatment of mental health and substance use disorders (128).

The Suicide Prevention Resource Center and the American Foundation for Suicide Prevention jointly created the Best Practice Registry. This registry provides information about suicide prevention and intervention programmes that have shown positive outcomes. It also provides summaries of current suicide prevention knowledge, and provides a listing of strategies that follow standards (316).

The European Monitoring Centre for Drugs and Drug Addiction provides details on a wide range of evaluated prevention, treatment and harm-reduction interventions, as well as interventions within the criminal justice system (317).

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Box A5.6. Key areas for programming in humanitarian and fragile settings

Adolescent-protective laws and policies

1. Ensure that policies and practices in humanitarian and fragile settings promote, protect and support essential services and interventions for adolescents' health, education and social protection, based on context and need.
2. Ensure that policies are in place to protect girls and boys from child labour, in particular in circumstances related to or made worse by the emergency.
3. Put in place policies for free access to essential interventions and services across sectors (e.g. health services, learning and schooling) for all adolescents, and enact policies to promote inclusion.
4. Put in place policies that prevent family separation. For unaccompanied minors, orphans and other vulnerable children, put in place specific protection measures to ensure that their best interests are protected and that they are not subjected to unnecessary procedures.
5. For adolescents who have lost their parents or carers, establish policies as needed to ensure adolescents have consistent, supportive caregiving.
6. Ensure that policies and practices in humanitarian and fragile settings serve adolescents' best interests and respect their right to dignity, safety, autonomy and self-determination, in line with their evolving capacity. All considerations outlined in key areas for programming 19–32 fully apply, and should inform policies and procedures in humanitarian and fragile settings.
7. Establish standard operating procedures that clearly describe arrangements for maintaining an adolescent's confidentiality. Consult child rights, ethics or protection experts if needed during development of the procedure. For example, if immediate protection needs become apparent, it may not be possible to honour an adolescent's confidentiality and also serve his or her best interest; this possibility should be addressed within the standard operating procedures.
8. Ensure that policies and procedures for consent for services and data-gathering activities comply with existing local and national laws and policies, and take into account adolescents rights to autonomy and self-determination.
9. If adolescents are to be subject of information-gathering, ensure that additional safeguards are in place, in line with WHO recommendations (246).
10. Ensure that human-resource policies include measures to protect girls and boys from exploitation and abuse by humanitarian workers.

Build an adolescent-competent workforce

11. Build provider capacities in adolescent-centred approaches and the principles of confidentiality, safety and security, respect and non-discrimination. This should be done across all sectors (e.g. for police, child units, probation officers, health workers, social workers, lawyers and judges).
12. Build provider understanding of sexual violence issues and sensitivity to adolescent-specific gender and sexuality concerns.
13. Build health-provider capacity in line with WHO core competencies for adolescent health, i.e. adolescent development stages and implications for service delivery; age- and gender-sensitive interviewing; communication and counselling skills; adolescents' evolving capacity and autonomous decision-making
14. Ensure that teachers and other education personnel receive periodic, relevant and structured training according to need and circumstances.

Adolescent-responsive service delivery

15. Ensure that the basic package of health services for adolescents includes the interventions described in Section 3.8 and below, including:
a. Mental health;
b. Nutrition;
c. Sexual and reproductive health –see Figure A3.1 on minimal interventions to prepare for and respond to adolescent sexual and reproductive health needs during emergencies;
d. Disability and injury;
e. Violence;
f. Water, sanitation and hygiene;
g. Child protection – include child protection services in line with minimum standards for child protection in humanitarian action (318);
h. Education – In consultation with all relevant stakeholders including education authorities and community members, determine education options for children and youth and establish, as appropriate, temporary learning centres as a first response to children's and adolescents' right to education. Ensure that educational activities are planned to extend beyond the emergency context into the early recovery period and longer-term development. Ensure access to education for all adolescents is in line with the INEE Minimum Standards for Education: Preparedness, Response, Recovery (319). Examples of national contextualization of INEE Minimum Standards for Education from Afghanistan, Somalia, Viet Nam, South Sudan, Lebanon and other countries may be found at http://www.ineesite.org/en/minimum-standards/contextualization (320).

Annex 5. Additional information about national programming

16. For children associated with armed forces or armed groups, ensure that release and reintegration services are available in line with minimum standards for child protection in humanitarian action (318).
17. Ensure that goods and services deployed, including the minimum initial service package, are fairly distributed and reach all adolescents in need of such goods and services. Identify and address the causes and means of exclusion or inequitable distribution.
18. If needed, ensure that age-appropriate adaptations are made to interventions (e.g. providing adequate rations for adolescents based on age-specific requirements for caloric intake, as well as taking into consideration factors such as gender, weight, physical activity levels, pregnancy and lactation).
19. Establish procedures for making confidential referrals for follow-up care and support of adolescents, with their consent. Make sure that there is a referral system between all sectors, including education, protection, livelihood, health and psychosocial support providers
20. Establish, as appropriate, adolescent-friendly spaces as a first response to adolescent needs for protection, psychosocial well-being and non-formal education. See Case studies A3.25. from Nigeria and A3.26 from Malawi on establishing safe spaces for displaced adolescents and girls. Make sure that these spaces adhere to guidelines to ensure that recreational and learning environments are safe, secure and inclusive, and promote the protection and mental and emotional well-being of adolescents (321).
21. Ensure that strategies for scaling-up services after an acute crisis provide adolescents with access to services they need, both in terms of scope and coverage. It is important that the basic health packages that guide health service implementation in protracted crises and recovery adequately incorporate core services, and that they further include clear guidance on how adolescents will access them.
22. Ensure that economic recovery programmes have a focus on working-age boys and girls and that they have access to adequate support to strengthen their livelihoods.

Ensure supply, technology and infrastructure for service delivery

23. Ensure that medicine, supplies, medical equipment and technology are fairly distributed and equitably used, and particularly that adolescents are not denied access to medicine (e.g. contraceptives) or health technologies for non-medical reasons.
24. Ensure safe access to, use and maintenance of toilets, and materials and facilities for menstrual hygiene management. See Box A3.6. on Good practice design for menstrual hygiene-friendly water, sanitation and hygiene facilities in emergencies, and Case study A3.27 from Ethiopia.

Build management and information systems that make adolescents visible

25. Ensure that the humanitarian needs and risk assessments approach facilitates improved understanding of adolescents unique needs and strengths, and identifies priority needs across sectors (e.g. health, educational and social-protection needs).
26. Ensure that monitoring activities capture the evolving health, education, child protection and other needs of affected adolescents, and that they inform programme adjustments as communities transit from acute crisis to protracted and recovery phases.
27. Ensure that assessments of a programme's social, political and psychological consequences have an adolescent focus. Outcome indicators across sectors should be measured and analysed in age- and sex-disaggregated groups to enable analysis of adolescent subgroups.
28. Measure and record the unintended negative consequences of programmes on adolescents through monitoring and evaluation. Ensure that programmes do not put adolescents at risk due to excessive targeting leading to stigmatization; aggressive questioning; being "over-researched" by multiple partners; undermining of existing supports; or the use of stigmatizing labelling.
29. Because the evidence base regarding the effectiveness and sustainability of diverse interventions in humanitarian and fragile settings is weak in general, and with regards to adolescents in particular, ensure an adolescent focus in actions that aim to strengthen intervention research, evaluation and collaborative learning.

Engage community to build support for adolescent access to and use of services

30. Implement community-awareness actions to reduce stigma and promote adolescents' access to services.
31. 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 caregiving.
32. Implement community-mobilization activities to provide adolescent-friendly spaces, to determine emergency education options for boys and girls, and to establish temporary learning centres.
33. Implement self-help and resilience initiatives, such as adolescent support groups, dialogue groups, and community education and advocacy.
34. Ensure that affected communities actively participate in assessing adolescents' educational needs, and that community resources are identified, mobilized and used to implement education programmes and other learning activities in schools or other settings.

35. As the situation stabilizes, develop programmes for adolescent socioeconomic empowerment, such as village savings and loan associations.

Promote adolescent participation in leadership and governance arrangements for accountability, implementation, and multisectoral action

36. Facilitate adolescent participation in governance arrangements for planning and implementation of humanitarian action, and their recognition as key agents for constructive social change, recovery, reconciliation, peace-building and development.
37. Ensure that adolescents are involved in establishing monitoring and evaluation systems, and mechanisms of accountability (see Case study A5.5 in Annex 5).
38. As the situation stabilizes, engage adolescents in community work, for example in assisting younger adolescents and the community in various activities, including health awareness and service provision. See Case study 9 on youth peer-to-peer counselling during a protracted crisis in the West Bank and Gaza Strip.

39. Establish a transparent coordination mechanism for emergency education activities, including effective information sharing between stakeholders.

Mobilize financing and build adolescent-mindful financial-protection systems

40. When health systems and service delivery are disrupted during a crisis, and contracting is used in response, make the terms of the contract conducive, and even explicitly designed, to assure adolescent access to key health, education and social-protection services.

Sources: (91); (248); (251); (254); (318); (319); (321-327).

Annex 6. Additional information about monitoring, evaluation and research

A6.1.
Global Strategy indicators related to adolescent health

Table A6.1 is a summary of the 12 key and 31 additional indicators that relate to adolescent health, plus the 17 indicators that require further development, that were proposed by the Indicator and Monitoring Framework for the Global Strategy for Women's, Children's and Adolescents' Health (2016–2030) (3).

KEY:
Bold text = key indicator;
normal text = additional indicator;
italic text = indicator for further development

Table A6.1. Global Strategy indicators related to adolescent health

INDICATOR (TYPE)		
Covers adolescents, including specified age range	Covers adolescents if age disaggregated (no specified age range)	Applicable to all (including adolescents)
TARGET: **Reduce global maternal mortality to less than 70 per 100 000 live births**		
Proportion of women aged 15–49 who received four or more antenatal care visits (Outcome)	**Maternal mortality ratio (Impact)** Proportion of births attended by skilled health personnel (Outcome) Proportion of women who had a postpartum contact with a health provider within two days (Outcome) *Maternal cause of death (direct/indirect) (Impact)* *Proportion of women with obstetric complications due to abortion (Impact)*	
TARGET: **End epidemics of HIV, tuberculosis, malaria, neglected tropical diseases and other communicable diseases**		
Number of new HIV infections per 1000 uninfected population, disaggregated by age and sex (Impact) Percentage of people living with HIV who are currently receiving antiretroviral therapy (ART), by age and sex (Outcome) *Human papillomavirus (HPV) vaccine coverage among adolescents (Outcome)*		Malaria incident cases per 1000 persons per year (Impact) Proportion of households with at least one insecticide-treated net (ITN) for every two people and/or sprayed by indoor residual spray (IRS) within the last 12 months (Outcome)
TARGET: **Reduce by one third premature mortality from noncommunicable diseases and promote mental health and well-being**		
Adolescent mortality rate, by sex (Impact) Age standardized prevalence of current tobacco use among persons 15 years and older, disaggregated by age (Outcome) *Adolescent cause of death (Impact)* *Harmful use of alcohol among adolescents (Outcome)*	Suicide mortality rate, by age and sex (Impact) *Prevalence of depression, by age and sex (Impact)*	
TARGET: **End all forms of malnutrition, and address the nutritional needs of adolescent girls, pregnant and lactating women and children**		
Prevalence of insufficient physical activity among adolescents (Outcome) Prevalence of anaemia in women aged 15–49, disaggregated by age and pregnancy status (Impact)		
TARGET: **Ensure universal access to sexual and reproductive health-care services (including for family planning) and rights**		
Percentage of women of reproductive age (15–49) who have their need for family planning satisfied with modern methods (Outcome) **Adolescent birth rate (10–14, 15–19) per 1000 women in that age group (Impact)** Proportion of women aged 15–49 who make their own informed decisions regarding sexual relations, contraceptive use and reproductive health-care (Outcome) **Number of countries with laws and regulations that guarantee women aged 15–49 access to sexual and reproductive health-care, information and education (Output)** Proportion of men and women aged 15–24 with basic knowledge about sexual and reproductive health and rights (SRHR) (Impact) *Proportion of secondary schools that provide comprehensive sexuality education (CSE) (Outcome)*		

INDICATOR (TYPE)		
Covers adolescents, including specified age range	**Covers adolescents if age disaggregated (no specified age range)**	**Applicable to all (including adolescents)**
TARGET: **Substantially reduce pollution-related deaths and illnesses**		
		Mortality rate attributed to household and ambient air pollution, by age and sex (Impact) **Proportion of population with primary reliance on clean fuels and technology (Outcome)**
TARGET: **Achieve universal health coverage, including financial risk protection and access to quality essential services, medicines and vaccines**		
		Coverage of essential health services, including reproductive, maternal, newborn, child and adolescent health (RMNCAH) (Outcome) Proportion of the population with financial protection (Output) **Current country health expenditure per capita (including specifically on RMNCAH) financed from domestic sources (Input/Process) Out-of-pocket expenditure as percentage of total health expenditure (Input/Process)**
TARGET: **Eradicate extreme poverty**		
		Proportion of population below international poverty line, by sex, age and employment (Impact)
TARGET: **Ensure that all girls and boys complete free, equitable and good-quality secondary education**		
Proportion of children and young people: (a) in grades 2/3; (b) at the end of primary; and (c) at the end of lower secondary achieving at least a minimum proficiency level in (i) reading and (ii) mathematics, by sex (Impact) *Indicator of youth disenfranchisement (Impact)*		
TARGET: **Eliminate all harmful practices and all discrimination and violence against women and girls**		
Percentage of women aged 20–24 who were married or in a union before age 15 and before age 18 (Impact) **Proportion of ever-partnered women and girls aged 15 and older subjected to physical, sexual or psychological violence by a current or former intimate partner, in the last 12 months, by form of violence and by age group (Impact)** Proportion of women and girls aged 15–49 who have undergone female genital mutilation/cutting (FGM/C), by age (Impact) Whether or not legal frameworks are in place to promote, enforce and monitor equality and non-discrimination on the basis of sex (Output) **Proportion of young women and men aged 18–29 who experienced sexual violence by age 18 (Impact)**	*Percentage of the population reporting having personally felt discriminated against or harassed within the last 12 months on the basis of a ground of discrimination prohibited under international human rights law, disaggregated by age and sex (Impact)*	Proportion of rape survivors who received HIV postexposure prophylaxis (PEP) within 72 hours of an incident occurring (Outcome) *Health-sector specific indicator on discrimination (Outcome)*
TARGET: **Achieve universal and equitable access to safe and affordable drinking water and to adequate sanitation and hygiene**		
		Percentage of population using safely managed sanitation services including a hand-washing facility with soap and water (Outcome) Percentage of population using safely managed drinking-water services (Outcome)
TARGET: **Enhance scientific research, upgrade technological capabilities and encourage innovation**		
		Research and development expenditure as a proportion of gross domestic product (GDP), disaggregated by health/RMNCAH (Input) *Proportion of countries that have systematic innovation registration mechanisms in place for women's, children's and adolescents' health and are reporting the leading three domestic innovations on an annual basis (Input/Process) Proportion of countries that have mechanisms to review innovations using effective Health Technology Assessment approaches (Input/Process)*

Annex 6. Additional information about monitoring, evaluation and research

INDICATOR (TYPE)		
Covers adolescents, including specified age range	Covers adolescents if age disaggregated (no specified age range)	Applicable to all (including adolescents)
TARGET: **Provide legal identity for all, including birth registration**		
		Proportion of countries that (a) have conducted at least one population and housing census in the last 10 years; and (b) have achieved 100% birth registration and 80% death registration (Outcome)
TARGET: **Enhance the global partnership for sustainable development**		
		Number of countries reporting progress in multistakeholder development effectiveness monitoring frameworks that support the achievement of the SDGs (Input/Process) Governance Index (voice, accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law, control of corruption) (Impact) Does the national RMNCAH strategy/plan of action specify that there should be community participation in decision-making, delivery of health services and monitoring and evaluation? (Input/Process) *Proportion of countries that address young people's multisectoral needs within their national development plans and poverty reduction strategies (Input/Process)* *Participation measures- women's groups, youth, civil society etc. (Output)* Implementation rate of commitments to the Global Strategy (Output)
TARGET: **Equity, humanitarian and human rights as cross-cutting considerations**		
		Proportion of indicators at the national (regional, global) level with full disaggregation when relevant, for Global Strategy indicators (Input/Process) Ratification of human rights treaties related to women's, children's and adolescents' health (Output) Humanitarian Response Index (Outcome) *Health-sector specific indicators on anti-corruption and transparency (Outcome)* *Percentage of programmes in humanitarian settings based on health needs assessments of women, children and adolescents (Input/Process)* *Funding gap in the transition from humanitarian aid to sustainable development (Input/Process)*

Source: (3).

A6.2.
Elements needed to monitor implementation of a programme to reduce adolescent pregnancies

In this section, one intervention recommended by the Global Strategy (1) (see Section 3) is used as an illustration of the indicators; their measurement; data sources; reporting frequency; baselines; targets; and results. These are important components of monitoring progress towards successful programme implementation. The example provided below in Table A6.2 shows suggested examples of potential indicators for each level of the IHP+ common monitoring and evaluation framework (impact, outcomes, outputs, inputs and processes) (328); (329).

KEY:
CRVS Civil registration and vital statistics
DHS Demographic and health surveys
MICS Multiple indicator cluster surveys
NA Not available

Table A6.2.
Elements needed to monitor implementation of a programme to reduce adolescent pregnancies

Global Strategy adolescent health intervention							
Information, counselling and services for comprehensive sexual and reproductive health, including contraception							
Indicator descriptors							
IMPACT	INDICATORS	MEASUREMENT	DATA SOURCE	REPORTING FREQUENCY	BASELINE	TARGET	RESULTS
Reduce the adolescent birth rate	Adolescent birth rate (10–14, 15–19 years) per 1000 women in that age group	**Numerator**: number of live births to women 10–14, 15–19 years **Denominator**: exposure to childbearing by women 10–14, 15–19 years	CRVS, census and household surveys	1–5 years	Specific for year of start of intervention	Contribution to global target	To be reported
Reduce obstetric complications in adolescents	Proportion of adolescent girls and young women with obstetric complications due to abortion	**Numerator**: number of women 15–19 years with obstetric complications due to abortion Denominator: total number of pregnant women 15–19 years	National health surveys and administrative records	1 year	Specific for year of start of intervention	National target	To be reported
Outcomes							
Contraceptive services available with modern methods	Percentage of adolescent women who have their need for family planning satisfied with modern methods	**Numerator**: number of women 15–19 years who report using modern contraceptive methods **Denominator**: number of women 15–19 years who report being sexually active	DHS, MICS and reproductive health surveys	3–5 years	Specific for year of start of intervention	National target	To be reported
	Proportion of adolescent women who make their own informed decisions regarding sexual relations, contraceptive use and reproductive health care	**Numerator**: number of women 15–19 years who report making their own informed decisions regarding sexual relations, contraceptive use and reproductive health-care **Denominator**: number of women 15–19 years who report being sexually active	DHS and other national surveys	3–5 years	Specific for year of start of intervention	National target	To be reported
Sexuality education provided in secondary schools	Proportion of secondary schools that provide comprehensive sexuality education	Measurement of indicator is under development	Administrative data (survey of formal education) and household surveys	1–5 years	Specific for year of start of intervention	National target	To be reported
	Proportion of men and women 15–24 years with basic knowledge about sexual and reproductive health services and rights	Measurement of indicator is under development by Guttmacher Institute, UNFPA	NA	NA	Specific for year of start of intervention	National target	To be reported

Annex 6. Additional information about monitoring, evaluation and research

Global Strategy adolescent health intervention							
Information, counselling and services for comprehensive sexual and reproductive health, including contraception							
Indicator descriptors							
IMPACT	**INDICATORS**	**MEASUREMENT**	**DATA SOURCE**	**REPORTING FREQUENCY**	**BASELINE**	**TARGET**	**RESULTS**
Legal protection for adolescent girls and young women	Proportion of women 20–24 years who were married or in union before age 15 and before age 18	**Numerator**: number of women 20–24 years who were married or in union before age 15 and before age 18 **Denominator**: number of women 20–24 years	DHS, MICS, other nationally representative surveys and occasionally census	3–5 years	Specific for year of start of intervention	National target	To be reported
	Proportion of women 20–24 years who report sexual debut before age 15 and before age 18	**Numerator**: number of women 20–24 years who report sexual debut before age 15 and before age 18 **Denominator**: number of women 20–24 years	DHS, MICS, other nationally representative surveys	3–5 years	Specific for year of start of intervention	National target	To be reported
Outputs							
Laws and regulations	Number of countries with laws and regulations that guarantee adolescent girls and young women (15–19 years) access to sexual and reproductive health-care, information and education	Measurement of indicator is under development by UNFPA, UN Women and WHO	Self-reporting by governments	NA	NA	NA	To be reported
Health-care providers provide information and services for comprehensive sexual and reproductive health, including contraception to adolescents	Number and percentage of health-care providers trained in the provision of health services to adolescents	**Numerator**: number of health-care providers trained in the provision of health services to adolescents **Denominator**: total number of health-care providers	Administrative data (survey of formal education) and household surveys	1–5 years	Specific for year of start of intervention	National target	To be reported
	Proportion of target education and training institutions that have their faculty trained in recommended approaches to adolescent health education and training	**Numerator**: number of target education and training institutions that have their faculty trained in recommended approaches to adolescent health education and training **Denominator**: total number of target education and training institutions in the country	Administrative data (survey of formal education) and household surveys	1–5 years	Specific for year of start of intervention	National target	To be reported
Pregnancy reduction messages shared	Proportion of target audiences for adolescent pregnancy reduction messages reached	**Numerator**: number of adolescents reached with pregnancy reduction messages (15–19 years) **Denominator**: total number of 15- to 19-year-olds	National surveys	NA	Specific for year of start of intervention	National target	To be reported
Inputs & Processes							
Programme funding for reducing adolescent pregnancy	Source of funding	Donor name, US$ amount	Administrative data from programme	1–5 years	Specific for year of start of intervention	National target	To be reported
	Number of health workers per 10 000 population by category, geographic area	**Numerator**: number of health workers **Denominator**: number of people in country	Self-reported by governments; UNFPA	1–5 years	Specific for year of start of intervention	National target	To be reported
Appropriate processes in place to support the programme	Mechanisms in place to ensure that health systems are adolescent-responsive (including provision of contraceptive services to adolescents)	Measurement of indicator to be developed by programme	Self-reported by governments	NA	NA	NA	To be reported
	Mechanisms in place for information, education and communication about reducing adolescent pregnancies	Measurement of indicator to be developed by programme	Self-reported by governments	NA	NA	NA	To be reported

A6.3.
Additional case studies of monitoring, evaluation and research

The potential value of institutionalized monitoring and periodic evaluations of adolescent health programmes is illustrated by the Teenage Pregnancy Strategy for England, which is summarized in Case study A6.2 (330); (331) and by the use of routinely collected data to monitor the effects of a Year of Sobriety in Lithuania in 2008 (332), summarized in Case study A6.1.

Case Study A6.1.

Lithuania's use of routine data to monitor the effect of a Year of Sobriety

Routine clinic-attendance data proved very useful in detecting the effects of a national Year of Sobriety that was implemented in 2008. The rate of clinic attendances for treatment of toxic effects of alcohol in 7- to 14-year-olds had increased consistently year-on-year from 2000 to 2007. However, there was a substantially lower rate in 2008. A similar pattern was seen for road traffic accidents, injuries and deaths.

Source: (332).

Case Study A6.2.

England's monitoring and evaluation of its national teenage pregnancy strategy

The 10-year Teenage Pregnancy Strategy for England, launched in 1999, was a nationally led, locally implemented, evidence-based programme developed by the United Kingdom Government. The main objective of the strategy was to halve the under-18 conception rate. An independent advisory group on teenage pregnancy was created to monitor progress and advise ministers. One hundred and fifty local governments received a supplementary grant to add to their existing funding to develop local plans aligned to the government's strategy. Progress was monitored through quarterly and annual conception data and through annual reports. The coverage of the programme was monitored through an annual tracking survey. In 2005, monitoring revealed that the under-18 conception rate had declined by 11% but that wide variation in progress across local authorities remained.

A mid-course evaluation showed that areas with lower under-18 conception rates had developed their strategies fully in line with the national guidance, involving all relevant agencies to create a whole-systems approach. The high-performing areas had strong senior leadership to prioritize the strategy and had continuous monitoring of their progress. Ten key factors for success were identified. These ranged from education and provision of products and services to training health professionals and supporting parents. These findings translated into new national guidance, which included strengthening local areas to improve on the 10 key factors for an effective local plan, and a self-assessment tool to help local areas identify and address gaps in their plans. The success of the strategy was shown by the achievement of a 51% reduction in the under-18 conception rate between 1998 and 2014.

Sources: (330); (331).

Annex 6. Additional information about monitoring, evaluation and research

An example of an evaluation of a reproductive and sexual health programme in Jharkhand State, India (333) is given in Case study A6.3.

Case Study A6.3.

India's evaluation of an adolescent sexual and reproductive health services project

The Tarunya project in Jharkhand State, India, was launched in 2008 by EngenderHealth with support from the David and Lucile Packard Foundation. The main objective of the project was to improve the quality of adolescent sexual and reproductive health services (ASRH). The project aimed to provide ASRH training to government staff, to strengthen outreach activities to enhance community engagement, and to institutionalize necessary changes in state policies to achieve this. The project was initiated in 12 districts, and in 2011 it was scaled up to all 24 districts of the state.

After five years of implementation, internal and external evaluations were carried out. Three main components of the ASRH programme were evaluated:

- the project's strategy to improve and expand ASRH service provision to adolescents
- the quality of ARSH services for adolescents and whether this had improved
- utilization of health services by adolescents.

The evaluation was conducted in 34 health facilities in 19 of the 24 districts, using individual interviews and focus-group discussions, observations in the facilities, and household surveys. A composite index for the quality of service provision (including 20 indicators) was developed to measure the health facility and individual health-care worker performance in ASRH services. Each health facility was then assigned to one of the categories of performance (high, medium or low).

The evaluation reported that the project had carried out a number of activities to improve the quality of ASRH services to adolescents, including the development of problem-solving tools. A significant improvement in quality of ASRH services was noted to be linked to the intensity of the project's intervention. However, there was no consistent association between the facility's quality ranking and the client's perception of quality of health- service delivery. In addition, the team's assessment revealed that there was only a limited increase in service use by adolescents. These results were used to highlight the need for continued staff training, institutionalization of monitoring and data management and further research, better to understand adolescents' health-service needs.

Source: (333).

Case study A6.4 gives an example of a review of previously published adolescent-friendly health services programme evaluations that had been conducted in India (328).

Case Study A6.4.

India's adolescent-friendly health services: a review of 15 years of evaluation research

A literature review was conducted of articles published in the 15 years from 2000 to 2014 that reported on evaluations of initiatives to improve health services for adolescents in India. Thirty such reports met the inclusion criteria and were reviewed in detail. The great majority of the evaluations were conducted either by nongovernmental agencies (14) or academic institutions (11), with only one each being conducted by the government or a multilateral agency. Eighteen evaluations used a cross-sectional (after-only) design with measurements only being collected after the implementation of the intervention and without there being any comparison group. Eight used a before-after (repeated cross-sectional) study design. In addition to quantitative methods, 15 evaluations used qualitative methods such as key informal interviews, in-depth interviews and focus-group discussions. Other methods such as facility checklists or attendance record reviews, or provider and/or client interviews were also used by a minority of studies.

Only one study used the powerful mystery-client approach in which a young person attended a clinic posing as a client requesting services and the quality and adolescent-friendliness of the service they received was assessed. Only four evaluations explicitly reported on the seven standards of quality provision of adolescent-friendly health services specified by the Ministry of Health and Family Welfare of India. The evaluations primarily measured programme outputs (such as service quality and utilization) and/or health behavioural outcomes (such as self-reported condom use).

The review concluded that most evaluations reported improvements in service quality and utilization.

The findings of the review have been shared with the Ministry of Health and Family Welfare and other partners, and will be discussed at a meeting to review progress within the national adolescent health programme, and to identify how best to scale-up the programme.

Source: (328).

Annex 6. Additional information about monitoring, evaluation and research

A6.4.
Priority areas for future research

Tables A6.3 and A6.4 show the five top-ranked SRH research questions in each of the seven domains of adolescent sexual and reproductive health (334) (Table A6.3), and the eight other areas of adolescent health (335) (Table A6.4) that were included in recent research priority-setting exercises coordinated by WHO.

Table A6.3. Research priorities related to adolescent sexual and reproductive health

HEALTH CATEGORY		TYPE OF QUESTION
Maternal health		
1	What strategies can improve the use of antenatal care, skilled birth attendants, prevention of mother-to-child transmission (PMTCT) and postnatal care by adolescents in resource-poor settings?	Development: operations research/scaling-up of existing interventions
2	What factors (including barriers and facilitators) are associated with the utilization of maternal health services (antenatal, intrapartum, postpartum) and neonatal care by adolescents in different settings?	Descriptive: epidemiological research/evaluation of existing interventions
3	What pregnancy outcomes (maternal and neonatal) among adolescents are related to mode of delivery, presence of a skilled birth attendant at delivery and care of infants up to 6 months of age?	Descriptive: epidemiological research/evaluation of existing interventions
4	Do programmes that promote postnatal family planning for adolescent mothers reduce subsequent unwanted pregnancies in this group?	Descriptive: epidemiological research/evaluation of existing interventions
5	Do adolescent girls and adult women receive different antenatal, delivery and postnatal care? If so, how and why?	Descriptive: epidemiological research/evaluation of existing interventions
Contraception		
1	What strategies can delay first births among married adolescents?	Descriptive: epidemiological research/evaluation of existing interventions
2	Through what mechanisms can the provision of regular and emergency contraceptives to adolescents be financed or subsidized?	Development: operations research/scaling-up of existing interventions
3	What strategies can increase consistent and effective condom use among both male and female adolescents?	Development: operations research/scaling-up of existing interventions
4	What barriers do health-care providers face when trying to offer contraception services to unmarried adolescents?	Descriptive: epidemiological research/evaluation of existing interventions
5	In settings with high rates of pregnancy in adolescence, what factors protect adolescents from unwanted and/or unsafe pregnancy?	Descriptive: epidemiological research/evaluation of existing interventions
Gender-based violence		
1	How do programmes that aim to keep girls in school longer through measures such as conditional cash transfers affect the prevalence of gender-based violence?	Descriptive: epidemiological research/evaluation of existing interventions
2	What interventions can be integrated into community settings (e.g. schools) to address gender-based violence and its related reproductive outcomes?	Development: operations research/scaling-up of existing interventions
3	What strategies might reduce gender-based violence among adolescent sex workers?	Development: operations research/scaling-up of existing interventions
4	How feasible, effective and sustainable is the training of community-based health workers on identification and referral of cases of gender-based violence?	Development: operations research/scaling-up of existing interventions
5	What is the impact of "healthy schools" initiatives on the reduction in gender-based violence?	Descriptive: epidemiological research/evaluation of existing interventions
HIV treatment and care		
1	What factors facilitate uptake, retention and adherence, and minimize treatment failure among adolescents?	Development: operations research/scaling-up of existing interventions
2	How do user fees affect access to, use of and retention in treatment among adolescents living with HIV?	Development: operations research/scaling-up of existing interventions
3	What factors influence the disclosure of HIV status to others among adolescents?	Descriptive: epidemiological research/evaluation of existing interventions
4	What proportion of young women who test positive for HIV in antenatal or delivery care: (i) receive and take drugs for PMTCT; (ii) are assessed to determine if they need lifelong highly active antiretroviral therapy (HAART); (iii) are started on lifelong HAART if clinically indicated?	Descriptive: epidemiological research/evaluation of existing interventions
5	What aspects of the delivery of HIV testing and counselling services are most important from the perspective of adolescents: the speed of the results; confidentiality and anonymity; the social and health services offered; the counselling offered; whether or not they are integrated into the health system?	Development: operations research/scaling-up of existing interventions

HEALTH CATEGORY		TYPE OF QUESTION
Abortion		
1	How does the provision of contraceptive methods (especially long-acting, reversible methods) as part of postabortion care affect unintended pregnancy and repeat abortion rates among adolescents?	Descriptive: epidemiological research/evaluation of existing interventions
2	What interventions are effective for informing adolescents about the availability and safe use of misoprostol?	Development: operations research/scaling-up of existing interventions
3	How does cost influence adolescents' abortion-seeking behaviour?	Development: operations research/scaling-up of existing interventions
4	How much awareness of abortion law, access to safe abortion services and postabortion care exists among adolescents?	Descriptive: epidemiological research/evaluation of existing interventions
5	What do adolescents know about less-invasive procedures for pregnancy termination and postabortion care (e.g. misoprostol), and to what extent do they have access to them or use them?	Descriptive: epidemiological research/evaluation of existing interventions
Family planning and HIV service integration		
1	What modalities for delivering integrated HIV/family planning services to adolescent boys work best?	Development: operations research/scaling-up of existing interventions
2	Does the provision of comprehensive sex education at school: (i) reduce adolescent pregnancies, (ii) increase health-care seeking behaviour among adolescents, or (iii) reduce the incidence of STIs, including HIV infection?	Descriptive: epidemiological research/evaluation of existing interventions
3	What are the most effective and affordable models for delivering integrated contraception and HIV services and information to young married couples?	Development: operations research/scaling-up of existing interventions
4	What female-controlled methods for preventing both STIs and pregnancy can be developed and tested?	Discovery: new interventions
5	How much do young female sex workers and injecting drug users need and use contraceptives?	Descriptive: epidemiological research/evaluation of existing interventions
Sexually transmitted infections (STIs) and human papillomavirus (HPV) infection		
1	What alternative dosing schedules can facilitate HPV vaccine delivery in low-resource settings?	Discovery: new interventions
2	How can school-based and community-based programmes for STI counselling and testing, HPV vaccination and sex education be scaled-up?	Development: operations research/scaling-up of existing interventions
3	What are the most effective, efficient and sustainable ways to deliver vaccination against HPV?	Development: operations research/scaling-up of existing interventions
4	How can adolescents who do not use available STI services (e.g. conditional cash transfers, mobile clinics) be reached?	Development: operations research/scaling-up of existing interventions
5=[2]	What is the cost-effectiveness of HIV/STI screening programmes among adolescents at highest risk?	Development: operations research/scaling-up of existing interventions
5=	How can the incorporation of syphilis testing in SRH and maternal health services be optimized to ensure that all adolescents, including pregnant girls, get screened and treated?	Development: operations research/scaling-up of existing interventions

Source: (334).

[2]Two questions received exactly the same score and so were ranked 5=.

Annex 6. Additional information about monitoring, evaluation and research

Table A6.4. Research priorities in eight areas of adolescent health

HEALTH CATEGORY		TYPE OF QUESTION
Communicable diseases prevention and management		
1	What are the key barriers faced by adolescents to access TB and TB/HIV diagnostic and treatment services in high- and low-income countries, and how can these be overcome?	Intervention: Delivery/implementation
2	What are treatment adherence rates, and what are the risk factors for non-adherence or default, among adolescents on long-term treatment for TB?	Descriptive epidemiology
3	What is the potential contribution of peer-led interventions for improving retention in care among adolescents with TB and/or HIV?	Intervention: Delivery/implementation
4	Which programmatic interventions developed to improve adolescent retention in care and treatment adherence for other communicable diseases (i.e. HIV) would be useful for application in TB programmes?	Intervention: Delivery/implementation
5	What is the incidence and burden of TB among young (10–14 years) and older (15–19 years) adolescents in the world by sex, particularly among adolescents with HIV, and what proportion of the adolescents have drug-resistant TB?	Descriptive epidemiology
Injuries and violence		
1	What are the barriers and facilitators to increasing compliance with motorcycle helmet legislation?	Intervention: Delivery/implementation
2	What are the risk and protective factors at various levels (individual, family, peer/social, community) for injuries and violence among adolescents in low- and middle-income countries (LMICs)?	Descriptive epidemiology
3	How best can school-based "safe routes to school" initiatives be scaled-up to include larger numbers of schools and to be incorporated with community-based initiatives?	Intervention: Delivery/implementation
4	To what extent do strategies that have been shown to reduce one form of violence (e.g. bullying) effectively prevent other forms of violence that youth experience (e.g. partner violence, sexual violence, suicidal behaviour)?	Intervention: Development/testing
5	What types of communication strategies work best to actually change the key behaviours that put adolescents at increased risk of injuries?	Intervention: Delivery/implementation
Mental health		
1	What would be the most cost-effective, affordable and feasible package of interventions for promotion of mental health and prevention of mental health disorders among adolescents?	Intervention: Development/testing
2	What are effective interventions to prevent and treat mental health problems of adolescents that can be delivered at primary care level in LMICs?	Intervention: Development/testing
3	What are effective interventions addressing self-harm/suicide in adolescent girls in LMICs?	Intervention: Development/testing
4	What are the costs and benefits of integrating management of child and adolescent mental disorders with other child and adolescent health-care delivery platforms?	Intervention: Delivery/implementation
5	How can mental health and psychosocial support (including identification, support and basic management of relevant conditions) be integrated with adolescent-friendly services, general health, reproductive health etc.?	Intervention: Delivery/Implementation
Noncommunicable disease management		
1	Can a low-cost rapid antigen test for diagnosis of streptococcal pharyngitis (which can lead to rheumatic heart disease) be developed that is suitable for use in low-resource settings?	Intervention: discovery
2	Can interventions for the management of noncommunicable diseases (NCDs) that have been shown to be effective in adults be used directly in adolescents?	Intervention: Development/testing
3	How do interventions devised for the management of NCDs in high-income countries be used for adolescents in LMICs translate globally?	Intervention: Delivery/implementation
4	What are the mortality and morbidity rates and their causes among adolescents with diabetes in LMICs?	Descriptive epidemiology
5	What proportion of children born with sickle-cell disease survive into and through adolescence?	Descriptive epidemiology
Nutrition		
1	What are the causes of anaemia among adolescent girls and how does this vary by region?	Descriptive epidemiology
2	What are the relationships between early pregnancy and stunting, anaemia, and NCD risk (overweight, diabetes, hypertension)?	Descriptive epidemiology
3	What social and behaviour change communication platforms are the most effective to reach adolescents to help them to improve their diet?	Intervention: Development/testing

HEALTH CATEGORY		TYPE OF QUESTION
4	How does the burden of disease from nutritional causes for adolescent boys and girls vary by country and within countries, and by socioeconomic status?	Descriptive epidemiology
5	What is the prevalence of adolescent undernutrition and overnutrition by risk/protective factors such as sex, urban/rural residence, schooling, access to green spaces, access to food and socioeconomic strata in different world regions?	Descriptive epidemiology
Physical activity		
1	Considering comprehensive theoretical models and variables from different levels/systems/contexts (e.g. Socioecological Model), which variables predict, at an individual or population level, the different patterns of physical activity in adolescents living in LMICs?	Descriptive epidemiology
2	What is the best (feasibility, cost, acceptability, effectiveness, sustainability) design of a school-based intervention that aims to engage and gain the support of students, parents and teachers for young people to take the recommended 60 minutes of physical activity daily, and to ensure that there are at least two physical education (PE) classes within schools per week, with at least 50% of the time for PE classes spent in moderate-to-vigorous-intensity physical activity)?	Intervention: discovery
3	What are the policy and/or environmental changes that influence physical activity among adolescents in LMICs?	Intervention: Delivery/implementation
4	How best can the capacity of the education sector be improved to deliver high-quality physical education programmes within schools?	Intervention: Delivery/implementation
5	How does one best implement a sustainable, structured physical activity programme for adolescents in schools and out of schools in LMICs?	Intervention: Delivery/implementation
Substance use		
1	What prevention and treatment services related to substance use are acceptable to adolescents?	Intervention: discovery
2	What are the risk factors contributing to adolescents' substance use in the different world regions?	Descriptive epidemiology
3	What is the effectiveness of implementation of youth-friendly services interventions on substance use?	Intervention: Delivery/implementation
4	What is the efficacy and effectiveness of a screening instrument linked to a brief intervention for alcohol use among adolescents for use in primary care settings?	Intervention: Development/testing
5	Are there distinct patterns of and factors leading to substance use (tobacco and other substances) among in- and out-of-school female adolescents and male adolescents? (these include: context of use, preferred substance, use related practices, among others).	Descriptive epidemiology
Adolescent health: policy, health and social systems		
1	What platforms and strategies are most effective to reach and help the most vulnerable adolescents (e.g. those not in school, slum dwellers and/or those in poor families)?	Intervention: Delivery/implementation
2	What are the most cost-effective interventions to decrease multiple health-risk behaviours and conditions and promote healthy behaviours?	Intervention: Development/testing
3	How can primary health-care services be designed to most effectively meet the unique health needs of adolescents?	Intervention: Delivery/implementation
4	How can new technologies such as cell phones and the internet be used effectively to provide information, referral and treatment for adolescents?	Intervention: Delivery/implementation
5	What is the coverage of primary health-care services for adolescents?	Descriptive epidemiology

Source: (335).

Appendices

Appendix I.
The Global Strategy for Women's, Children's and Adolescents' Health (2016–2030) – action areas, its operational framework's ingredients for action and implementation objectives.

Sources: (1); (3).

Action area 1. Country leadership
Reinforce leadership and management links and capacities at all levels; promote collective action.
Ingredient for action 1. Country leadership.
Implementation objectives:
1. a strong multistakeholder country platform for women's, children's and adolescents' health
2. national and subnational SDG targets
3. a single prioritized, costed, national plan for women's, children's and adolescents' health
4. effective stewardship and monitoring of implementation across sectors.

Action area 2. Financing for health
Mobilize resources; ensure value for money; adopt integrative and innovative approaches.
Ingredient for action 2. Aligning and mobilizing financing.
Implementation objectives:
1. identification of funding requirements and mobilization of all potential sources and support for funding
2. coordination of funding flows
3. strengthened financing capacity at decentralized level.

Action area 3. Health system resilience
Provide good-quality care in all settings; prepare for emergencies; ensure universal health coverage.
Ingredient for action 5. Strengthening health systems.
Implementation objectives:
1. a strong health workforce
2. reliable supply, access and availability of commodities
3. effective health management information systems
4. quality health services delivered at scale with resilience.

Action area 4. Individual potential
Invest in individuals' development, support people as agents of change; address barriers with legal frameworks.
Ingredient for action 7. Establishing priorities for realizing individual potential.
Implementation objectives:
1. an evidence and planning base for programming
2. participation of adolescents
3. priorities for adolescent programming
4. priorities for early childhood development programming.

Action area 5. Community engagement
Promote enabling laws, policies and norms; strengthen community action; ensure inclusive participation.
Ingredient for action 3. Supporting community engagement, participation and advocacy.

Implementation objectives:
1. a supportive environment for community engagement, participation and social accountability
2. strong advocacy and communication platforms
3. integration of service delivery by communities into national systems.

Action area 6. Multisector action
Adopt a multisector approach; facilitate cross-sector collaboration; monitor impact.
Ingredient for action 6. Enhancing mechanisms for multisectoral action.
Implementation objectives:
1. governance to enable multisectoral action
2. structures to support multisectoral collaboration.

Action area 7. Humanitarian and fragile settings
Assess risks, human rights and gender needs; integrate emergency response; address gaps in the transition to sustainable development.
Ingredient for action 8. Strengthening capacity for action in humanitarian and fragile settings.
Implementation objectives:
1. humanitarian and fragile settings as core business of national health and social systems;
2. a core emphasis on neonatal survival and sexual and reproductive health in humanitarian and fragile settings
3. emphasis on human rights.

Action area 8. Research and innovation
Invest in a range of research and build country capacity; link evidence to policy and practice; test and scale-up innovations.
Ingredient for action 9. Fostering research and innovation.
Implementation objectives:
1. strengthened implementation research capacity
2. an effective global innovation marketplace.

Action area 9. Accountability
Harmonize monitoring and reporting; improve civil registration and vital statistics; promote independent review and multistakeholder engagement.
Ingredient for action 4. Reinforcing global, regional and national accountability mechanisms.
Implementation objectives:
1. robust accountability processes
2. effective civil registration and vital statistics systems.

The Global Strategy's broader interventions that are important to adolescent health

Source: (1).

This list summarizes additional, essential, evidence-based policies and interventions, which should be included within national strategies for adolescent health and which relate to multiple sectors, as identified in the Global Strategy for Women's, Children's, and Adolescents' Health (2016–2030).

A. Special needs in humanitarian and fragile settings

1. In the event of humanitarian emergency, ensure deployment of essential health interventions, such as sexual and gender-based violence prevention; contraceptives (short-acting and long-acting emergency contraceptives); postexposure prophylaxis.
2. In the event of humanitarian emergency, ensure that policies and practices promote, protect and support breastfeeding and other essential interventions for women's, children's and adolescents' health, based on context and need.

B. Broader health systems

Health systems policies and interventions [all 58 essential recommendations], as relevant to adolescents. These fall under 10 broad categories:

1. Constitutional and legal entitlements; human rights-, equity- and gender-based approaches – e.g. universal access to health-care and services, including sexual and reproductive health information, services, goods and rights.
2. Strategies and plans – e.g. prioritized and well-defined health targets and indicators for adolescents.
3. Financing – e.g. sustainable financing of adolescents' health with effective and efficient use of domestic and external resources.
4. Human resources – e.g. adequate recruitment, training, deployment and retention of health personnel.
5. Essential health infrastructure – e.g. functional health facilities well-equipped to deliver anticipated services.
6. Essential medicines and commodities – e.g. quality assurance and measures to maintain supplies at required levels.
7. Service equity, accessibility and quality – e.g. adolescents' health services defined by level of health service delivery (primary, secondary, tertiary).
8. Community capacity and engagement – e.g. community engagement in learning programmes to increase health literacy and careseeking behaviours.
9. Accountability – e.g. annual independent national and subnational adolescents' health / health sector review.
10. Emergency leadership and governance; health workforce; medical products, vaccines and technology; health information; health financing; and service delivery – e.g. emergency medical services system and mass-casualty management.

C. Multisectoral interventions

Finance and social protection
1. Reduce poverty, including through the use of gender- and child-sensitive cash transfer programmes designed to improve health.
2. Implement social protection and assistance measures ensuring access for adolescents.
3. Strengthen access to health insurance to decrease the impact of catastrophic out-of-pocket health spending, and to insurance related to other essential services and goods.

Education
4. Enable girls and boys to complete quality primary and secondary education, including by removing barriers that suppress demand for education.
5. Ensure access to education in humanitarian settings and in marginalized and hard-to-reach areas, including for individuals with disabilities.

Gender
6. Promote women's social, economic and political participation.
7. Enforce legislation to prevent violence against women and girls and ensure an appropriate response when it occurs.
8. Promote gender equality in decision-making in households, workplaces and communities and at national level.
9. Prevent discrimination against women in communities, education, political, economic and public life.

Protection: registration, law and justice
10. Strengthen systems to register every birth, death and cause of death and to conduct death audits.
11. Provide protection services for adolescents that are age- and gender-appropriate.
12. Establish and enact a legal framework for protection, ensuring universal access to legal services (including to register human rights violations and have recourse to remedial action against them).

Water and sanitation
13. Provide universal access to safely managed, affordable and sustainable drinking water.
14. Invest in education on the importance of safely managed water use and infrastructure in households, communities, schools and health facilities.
15. Provide universal access to improved sanitation facilities and hygiene measures and end open defecation.
16. Encourage implementation of sanitation safety plans.

Agriculture and nutrition
17. Enhance food security, especially in communities with a high poverty and mortality burden.
18. Protect, promote and support optimal nutrition, including legislation on marketing of breast milk substitutes and of foods high in saturated fats, trans-fatty acids, sugars or salt.

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The Global Strategy's broader interventions that are important to adolescent health

Environment and energy

19. Reduce household and ambient air pollution through the increased use of clean energy fuels and technologies in the home (for cooking, heating, lighting).
20. Take steps to mitigate and adapt to climate changes that affect the health of adolescents.
21. Eliminate non-essential uses of lead (e.g. in paint) and mercury (e.g. in health-care and artisanal mining) and ensure the safe recycling of lead- or mercury-containing waste.
22. Reduce air pollution and climate emissions and improve green spaces by using low-emissions technology and renewable energy.

Labour and trade

23. Expand opportunities for productive employment.
24. Ensure gender equality.
25. Enforce decent working conditions.
26. Provide entitlements for parental leave and for childcare for working parents, and promote incentives for flexible work arrangements for men and women.
27. Detect and systematically eliminate child labour.
28. Create a positive environment for business and trade with regulations to protect and promote the health and well-being of individuals and populations.

Infrastructure, information and communication technologies and transport

29. Build health-enabling urban environments for adolescents, through improved access to green spaces and walking and cycling networks that offer dedicated transit, safe mobility and physical activity.
30. Develop healthy, energy-efficient and durable housing that is resilient to extremes of heat and cold, storms, natural disasters and climate change.
31. Ensure that home, work and leisure spaces are accessible to adolescents with disabilities.
32. Ensure adequate health, education and work facilities and improve access by building roads.
33. Provide safe transportation to health, education and work facilities, including during emergencies.
34. Improve access to information and communication technologies, including mobile phones.
35. Improve road safety, including through mandatory wearing of seat-belts and cycle and motorcycle helmets.
36. Improve regulation and compliance of drivers, including introduction of a graduated driving licence that restricts driving options for inexperienced drivers.

Appendix III.
WHO region and country income status as used in the 2015 Global Health Estimates

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	
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	
Seychelles	
Sierra Leone	
South Africa	
South Sudan	
Swaziland	
Togo	
Uganda	
United Republic of Tanzania	
Zambia	
Zimbabwe	

WHO AMERICAS REGION LMICS	
Argentina	
Belize	
Bolivia (Plurinational State of)	
Brazil	
Colombia	
Costa Rica	
Cuba	
Dominica	
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)	

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Appendix III. (continued)
WHO region and country income status as used in the 2015 Global Health Estimates

WHO EASTERN MEDITERRANEAN REGION LMICS	
Afghanistan	
Djibouti	
Egypt	
Iran (Islamic Republic of)	
Iraq	
Jordan	
Lebanon	
Libya	
Morocco	
Pakistan	
Somalia	
Sudan	
Syrian Arab Republic	
Tunisia	
West Bank and Gaza Strip	
Yemen	

WHO EUROPEAN REGION LMICS	
Albania	
Armenia	
Azerbaijan	
Belarus	
Bosnia and Herzegovina	
Bulgaria	
Georgia	
Hungary	
Kazakhstan	
Kyrgyzstan	
Montenegro	
Republic of Moldova	
Romania	
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	
Cook Islands	
Fiji	
Kiribati	
Lao People's Democratic Republic	
Malaysia	
Marshall Islands	
Micronesia (Federated States of)	
Mongolia	
Nauru	
Niue	
Palau	
Papua New Guinea	
Philippines	
Samoa	
Solomon Islands	
Tonga	
Tuvalu	
Vanuatu	
Viet Nam	

ALL HICS	WHO REGION
Andorra	European
Antigua and Barbuda	Americas
Australia	Western Pacific
Austria	European
Bahamas	Americas
Bahrain	Eastern Mediterranean
Barbados	Americas
Belgium	European
Brunei Darussalam	Western Pacific
Canada	Americas
Chile	Americas
Croatia	European
Cyprus	European
Czech Republic	European
Denmark	European
Equatorial Guinea	African
Estonia	European
Finland	European
France	European
Germany	European
Greece	European
Iceland	European
Ireland	European
Israel	European
Italy	European
Japan	Western Pacific
Kuwait	Eastern Mediterranean
Latvia	European

ALL HICS	WHO REGION
Lithuania	European
Luxembourg	European
Malta	European
Monaco	European
Netherlands	European
New Zealand	Western Pacific
Norway	European
Oman	Eastern Mediterranean
Poland	European
Portugal	European
Puerto Rico	Americas
Qatar	Eastern Mediterranean
Republic of Korea	Western Pacific
Russian Federation	European
Saint Kitts and Nevis	Americas
San Marino	European
Saudi Arabia	Eastern Mediterranean
Singapore	Western Pacific
Slovakia	European
Slovenia	European
Spain	European
Sweden	European
Switzerland	European
Trinidad and Tobago	Americas
United Arab Emirates	Eastern Mediterranean
United Kingdom	European
United States of America	Americas
Uruguay	Americas

Appendices

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Appendix IV.
List of case studies of adolescent health interventions or programmes

Section 3:
Case study 1. India's national menstrual hygiene management programme for rural adolescent girls
Case study 2. Thailand's driving education and training programmes for young novice motorcycle drivers
Case study 3. Brazil's programme to reduce alcohol-related violence among high-risk youth
Case study 4. Nicaragua's voucher programme to increase access to sexual and reproductive health-care among underserved adolescents
Case study 5. Mozambique's peer support groups to promote treatment adherence among adolescents living with HIV
Case study 6. Bangladesh's community initiatives to stop open defecation
Case study 7. The Republic of Korea's promotion of healthy diets through schools
Case study 8. Bhutan's project to enhance skills and capacities of parents of adolescents
Case study 9. West Bank' and Gaza Strip' youth mentoring and counselling during a protracted crisis

Section 4:
Case study 10. Zambia's adolescent health situation analysis and strategic plan
Case study 11. Scotland's action framework and policy landscape analysis to improve young people's health
Case study 12. Mongolia's adolescent health situation analysis and programme priority-setting
Case study 13. Bhutan's comprehensive national adolescent health programming

Section 5:
Case study 14. England's teenage pregnancy strategy
Case study 15. The USA's expansion of minors' access to STI services
Case study 16. The Republic of Moldova's addressing of adolescent health and development in state medical university curricula
Case study 17. Argentina's national programme for integrated adolescent health
Case study 18. Rwanda's comprehensive school health policy
Case study 19. The Sahel region's initiatives to empower girls

Section 6:
Case study 20. South Africa's evaluation of standards to improve the quality of adolescent services in clinics

Annex 3:
Case study A3.1. Egypt's youth-friendly health services and health education in schools
Case study A3.2. Zimbabwe's youth-friendly health services to reduce unintended pregnancies
Case study A3.3. The Islamic Republic of Iran's school mental health promotion project
Case study A3.4. Sweden's national programme to provide school meals to all students
Case study A3.5. Brazil's experience with curriculum-based sex education in schools
Case study A3.6. Brazil's improvement of road safety legislation
Case study A3.7. Iraq's post-conflict innovative emergency medical services
Case study A3.8. Viet Nam's promotion of child motorcycle helmet use
Case study A3.9. Colombia's upgrading of low-income urban neighbourhoods
Case study A3.10. The Russian Federation's mentoring programme
Case study A3.11. The former USSR's strict alcohol regulation
Case study A3.12. The USA's home visits to prevent rapid repeat adolescent pregnancies
Case study A3.13. South Africa's reduced age of consent for HIV testing
Case study A3.14. Namibia's strengthened linkage of testing and support services for adolescents living with HIV
Case study A3.15. The United Republic of Tanzania's drop-in centre for young people who sell sex or inject drugs
Case study A3.16. Nepal's approach to improved food hygiene
Case study A3.17. Mauritania's improvement of water quality, sanitation and hygiene in vulnerable schools
Case study A3.18. Papua New Guinea's school WASH facilities designed by adolescent girls
Case study A3.19. Samoa's family programme to improve health and combat noncommunicable diseases
Case study A3.20. Pakistan's promotion of physical activity for girls
Case study A3.21. Costa Rica's life-skills programme to prevent adolescent alcohol and tobacco use
Case study A3.22. New Zealand's multisectoral programmes to reduce suicide among Māori youth
Case study A3.23. Sri Lanka's targeted pesticide bans
Case study A3.24. Hong Kong's (China SAR) initiatives to prevent suicide among youth and adults
Case study A3.25. Nigeria's safe spaces for girls and women displaced by the militant group Boko Haram
Case study A3.26. Malawi's youth clubs for adolescent girls and boys displaced by floods
Case study A3.27. Ethiopia's refugee camp distribution of menstrual hygiene kits to promote girls' school attendance

Annex 5:

Case study A5.1. Nepal's transition from projects to a national adolescent sexual and reproductive health programme

Case study A5.2. The USA's school health services programme

Case study A5.3. Portugal's healthy schools programme

Case study A5.4. Turkey's multi-sectoral action on drug dependence

Case study A5.5. Sierra Leone's involvement of children in a truth and reconciliation commission

Case study A5.6. Argentina's municipal budgeting for youth participation

Case study A5.7. Colombia's reduction of youth violence

Case study A5.8. Malawi's cash transfer scheme as a vehicle to achieve public health objectives

Case study A5.9. South Africa's national policy on informed consent for testing children for HIV

Case study A5.10. Kyrgyzstan's youth-centred care

Case study A5.11. Morocco's national programme for school and university health

Case study A5.12. India's contracting out of reproductive and child health services through the Mother NGO Scheme

Case study A5.13. Multicountry mobile phone games to create HIV/AIDS awareness in Asia and Africa

Case study A5.14. Australia's HPV vaccination programme

Case study A5.15. Chile's national programme for integrated adolescent and youth health

Case study A5.16. Wales' Cardiff Model of violence prevention

Case study A5.17. Australia's mental health and resilience curriculum for parents, teachers, and students

Case study A5.18. Scotland's youth pregnancy and parenthood strategy governance

Case study A5.19. Mozambique's multisectoral adolescent sexual and reproductive health programme

Case study A5.20. Ukraine's school-based substance-use-prevention curricula

Case study A5.21. Jordan's response to child marriage among Syrian refugees

Case study A5.22. South Africa's participatory, same-sex health education programme

Case study A5.23. El Salvador's intersectoral experience in the empowerment of adolescent girls

Case study A5.24. Australia's government funding of positive development approaches in programming

Case study A5.25. Liberia's secure funding for priority interventions for adolescent health

Case study A5.26. The Adolescent and Youth Constituency of The Partnership for Maternal, Newborn and Child Health: outcomes and lessons learned from the first year of establishment

Annex 6:

Case study A6.1. Lithuania's use of routine data to monitor the effect of a Year of Sobriety

Case study A6.2. England's monitoring and evaluation of its national teenage pregnancy strategy

Case study A6.3. India's evaluation of an adolescent sexual and reproductive health services project

Case Study A6.4. India's adolescent-friendly health services: a review of 15 years of evaluation research

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