# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>SECTION</th>
<th>Page no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>0. FRONT MATTER [To be inserted at a later date]</td>
<td>---</td>
</tr>
<tr>
<td>Foreword</td>
<td>---</td>
</tr>
<tr>
<td>Acknowledgements</td>
<td>---</td>
</tr>
<tr>
<td>Executive Summary</td>
<td>---</td>
</tr>
<tr>
<td>1. INTRODUCTION</td>
<td>3</td>
</tr>
<tr>
<td>1.1. Adolescent Health and Development</td>
<td>3</td>
</tr>
<tr>
<td>1.2. Why Invest in Adolescent Health?</td>
<td>5</td>
</tr>
<tr>
<td>1.3. Global Accelerated Action for the Health of Adolescents (AA-HA!): Implementation Guidance</td>
<td>8</td>
</tr>
<tr>
<td>1.4. Key Concepts in Adolescent Health Programming</td>
<td>10</td>
</tr>
<tr>
<td>References [Section 1]</td>
<td>11</td>
</tr>
<tr>
<td>2. ADOLESCENT HEALTH</td>
<td>13</td>
</tr>
<tr>
<td>2.1. Positive Development and Wellbeing</td>
<td>13</td>
</tr>
<tr>
<td>2.2. Leading Causes of Mortality and Morbidity</td>
<td>18</td>
</tr>
<tr>
<td>2.3. Humanitarian and Fragile Settings</td>
<td>30</td>
</tr>
<tr>
<td>References [Section 2]</td>
<td>32</td>
</tr>
<tr>
<td>3. EVIDENCE-BASED INTERVENTIONS</td>
<td>36</td>
</tr>
<tr>
<td>3.1. Positive Development Interventions</td>
<td>36</td>
</tr>
<tr>
<td>3.2. Unintentional Injury Interventions</td>
<td>39</td>
</tr>
<tr>
<td>3.3. Violence Interventions</td>
<td>41</td>
</tr>
<tr>
<td>3.4. Sexual and Reproductive Health Interventions, including HIV Interventions</td>
<td>44</td>
</tr>
<tr>
<td>3.5. Communicable Disease Interventions</td>
<td>50</td>
</tr>
<tr>
<td>3.6. Noncommunicable Disease, Nutrition, and Physical Activity Interventions</td>
<td>54</td>
</tr>
<tr>
<td>3.7. Mental Health, Substance Use, and Self-Harm Interventions</td>
<td>59</td>
</tr>
<tr>
<td>3.8. Humanitarian and Fragile Setting Interventions</td>
<td>64</td>
</tr>
<tr>
<td>References [Section 3]</td>
<td>66</td>
</tr>
<tr>
<td>4. NATIONAL PRIORITIZATION</td>
<td>72</td>
</tr>
<tr>
<td>4.1. Needs Assessment</td>
<td>74</td>
</tr>
<tr>
<td>4.2. Landscape Analysis</td>
<td>77</td>
</tr>
<tr>
<td>4.3. Prioritization Exercise</td>
<td>78</td>
</tr>
<tr>
<td>References [Section 4]</td>
<td>81</td>
</tr>
<tr>
<td>5. NATIONAL PROGRAMMING</td>
<td>82</td>
</tr>
<tr>
<td>5.1. A Logical Framework for Translating Priorities into Plans and Programmes</td>
<td>83</td>
</tr>
<tr>
<td>5.2. Five Pathways for National Adolescent Health Programming and Intersectoral Action</td>
<td>85</td>
</tr>
<tr>
<td>5.3. Leadership within the Ministry of Health and across the Government</td>
<td>87</td>
</tr>
<tr>
<td>5.4. Financing Adolescent Health Priorities in National Health Plans</td>
<td>89</td>
</tr>
<tr>
<td>5.5. Adolescent Participation in Health Programming</td>
<td>90</td>
</tr>
<tr>
<td>5.6. Programming for Adolescent-Responsive Health Systems</td>
<td>92</td>
</tr>
<tr>
<td>5.7. Programming for Adolescent Health in All Policies (AHiAP)</td>
<td>100</td>
</tr>
<tr>
<td>5.8. Adolescent-Specific Programmes within the Health Sector</td>
<td>105</td>
</tr>
</tbody>
</table>
5.9. Intersectoral Programmes 107
5.10. Programming in Humanitarian and Fragile Settings 110
5.11. Positive Development Approaches in Programming 115
References [Section 5] 117
6. MONITORING, EVALUATION, AND RESEARCH 122
6.1. Monitoring Adolescent Health Programmes 122
6.2 Evaluation of Adolescent Health Programmes 134
6.3. Priority Areas for Future Research 136
References [Section 6] 137
7. CONCLUSION [To be inserted at a later date] ---

ANNEX 1. Additional Information about the Global AA-HA! Implementation Guidance Document ---
ANNEX 2. Additional Information about Adolescent Health ---
ANNEX 3. Additional Information about Evidence-Based Interventions ---
ANNEX 4. Additional Information about National Prioritization ---
ANNEX 5. Additional Information about National Programming ---
ANNEX 6. Additional Information about Monitoring, Evaluation, And Research ---
1. INTRODUCTION

KEY MESSAGES [Section 1]:

1. Adolescents (aged 10-19 years) make up one-sixth of the world’s population and are extremely diverse, but share key developmental experiences, such as rapid physical growth, hormonal changes, sexual development, new and complex emotions, and an increase in intellectual capacities.

2. Adolescent health is affected by positive physical, neurological, and psychosocial development, as well as a diverse array of possible burdens, including unintentional injury, interpersonal violence, sexual and reproductive health (SRH) concerns, communicable diseases, non-communicable diseases, and mental health issues.

3. In addition, numerous important risk factors for health problems start or are consolidated during adolescence and may continue over the life course, such as tobacco use, inadequate nutrition, physical inactivity, and alcohol and drug use.

4. There are strong demographic, public health, economic, and human rights reasons to invest in the health and the development of adolescents. For example, investing in adolescent health will benefit adolescents now, adolescents in their future lives, and also the next generation.

5. Three critical, overarching concepts in adolescent health programming are universal health coverage, quality of care, and positive development.


7. The Global Accelerated Action for the Health of Adolescents (AA-HA!) Implementation Guidance document has been developed to support the Global Strategy and to provide countries with a basis for developing a coherent national plan for the health of adolescents. Specifically:
   - Section 2 reviews adolescent positive development and major disease burdens;
   - Section 3 describes the 27 Global Strategy adolescent health interventions in detail;
   - Section 4 outlines how a country can prioritize health interventions for its particular adolescent population;
   - Section 5 describes important aspects of successful national adolescent health programming; and
   - Section 6 reviews adolescent health monitoring, evaluation, and research guidelines and priorities.

1.1. ADOLESCENT HEALTH AND DEVELOPMENT

There are 1.2 billion adolescents (aged 10 to 19 years) in the world today, representing more than one-sixth (18%) of the global population (UNICEF 2011a). As would be expected for a population that size, adolescents are extremely diverse. They differ in culture, income status, urban/rural residency, education, family and household composition, and many other ways which can have a great impact on their health and wellbeing. Nonetheless, across all societies and settings, adolescents share key developmental experiences as they transition from childhood to adulthood. These include rapid physical growth, hormonal
changes, sexual development, new and complex emotions, an increase in intellectual capacities, moral development, and evolving relationships with peers and families (UNESCO 2014).

Adolescents have unique, fundamental needs related to their health and wellbeing. For example, the onset of menstruation during puberty means that adolescent girls need to be prepared and assisted to manage their menstrual hygiene, including having access to safe latrines, hygiene materials, clean water, soap, and adequate sanitation and disposal mechanisms (UNESCO 2014). In addition, a diverse array of injuries and diseases can occur during the adolescent years, although the likelihood of each may vary greatly with setting and subpopulation. These include:

- **unintentional injuries**, particularly those caused by road injury, drowning, and fire and heat;
- **interpersonal violence**, including child maltreatment, youth violence, gender-based violence, intimate partner violence, sexual assault, and violence against lesbian, gay, bisexual, transgender, or intersex (LGBTI) individuals;
- **sexual and reproductive health concerns**, particularly HIV, other sexually transmitted-infections, contraceptive needs, and maternal disorders;
- **other communicable diseases**, such as diarrheal diseases, meningitis, and lower respiratory infections;
- **non-communicable conditions**, such as congenital anomalies, leukemia, cerebrovascular disease, lower back and neck pain, asthma, and iron-deficiency anemia;
- **mental health conditions**, such as self-harm and depressive, conduct disorder, anxiety, and substance use disorders.

Many of these conditions are preventable or treatable, but are neglected and need more sustained focus and investment. Numerous important risk factors for health problems start or are consolidated during adolescence and may continue over the life course. According to Lim and colleagues (2012), five health-compromising behaviours that usually start between the ages of 10 and 24 years were among the leading twenty global causes of lost disability-adjusted life-years (DALYs) in 2010, i.e. tobacco use (ranked 2nd), diet low in fruits (4th), alcohol use (5th), physical inactivity (10th), and drug use (19th). In addition, the authors note that unprotected sex and lack of access to contraception among adolescents “would probably account for a large fraction of the global health burden”, but did not meet their criteria for inclusion in the review. Two nutrition-related conditions that usually have their origins before or during adolescence also ranked in the leading twenty causes of DALYs lost globally, i.e. high body mass index (6th) and iron deficiency (13th).

One way to conceptualize the range of factors which influence adolescent health and development is through an ecological model that considers health determinants at macro, structural, environment, organizational, community, interpersonal, and individual levels. Determinants are factors which affect the health of individuals and communities, such as the social and economic environment, the physical environment, and an adolescent’s individual characteristics and behaviours, e.g. income and social status, education, social support networks, genetics, health services, and gender (WHO 2016a). Figure 1.1 illustrates how determinants may work at different levels of an ecological framework. Such a model can help identify levels at which interventions can effectively target risk or protective factors affecting adolescent health burdens.
1.2. WHY INVEST IN ADOLESCENT HEALTH?

There are strong demographic, public health, economic, and human rights reasons to invest in the health and the development of adolescents. Each of these is described briefly below.

1.2.1. POPULATION DISTRIBUTION AND TRENDS

Adolescent demographics provide a compelling justification to invest in their health and wellbeing. Adolescents comprise almost one-fifth of the world’s population, and often they are an even larger and growing proportion of populations in low- and middle-income countries (LMICs), particularly in sub-Saharan Africa (UN Population Division 2015). An epidemiological and demographic transition occurs as a country moves from a pre-industrial to an industrialized economic system, reflected in lower birth and death rates. If a country first succeeds in reducing infant mortality, but mothers still have a high fertility rate, a disproportionately large youth population (a “youth bulge”) can result. This phenomenon is sometimes associated with an increased risk of political violence (UN Population Division 2012).

Many of the countries that will see the largest increases in the number of adolescents and youth between 2015 and 2030 are already struggling to address their health needs, particularly with respect to reproductive health (UN Population Division 2015). Investment in the education and health of the current and coming generation of adolescents will benefit the entire society as the population ages. This is likely to take place through improved productivity, reduced health costs, and enhanced social capital through increased capacity of the society to cope with unexpected shocks (UNFPA 2010).
1.2.2. PUBLIC HEALTH

Protection and improvement of the health of general populations also provides a strong argument for investing in adolescent health and development. Adolescence provides critical opportunities to:

- **Build on health investments**, that is, to maintain and expand upon successful health interventions which children benefited from in early (0-4 years) and middle (5-9 years) childhood, e.g. prenatal and safe delivery care, vaccinations, and nutrition interventions.
- **Rectify earlier health deficits**, specifically to address developmental or health shortfalls which children may have experienced during those earlier years (e.g. emotional, cognitive, and nutritional).
- **Create a triple dividend.** Two-thirds of premature deaths and one-third of the total disease burden in adults are associated with conditions or behaviours that began in youth, such as tobacco use, unhealthy diets, physical inactivity, and harmful use of alcohol (World Bank 2007). Improving the health of adolescents can result in a triple dividend (Figure 1.2). A few examples follow:
  - **For adolescents now**: Promotion of positive and healthy behaviours, and prevention and treatment of substance use disorders, mental disorders, injuries, and sexually-transmitted infections can immediately benefit adolescents’ health and wellbeing.
  - **For adolescents in their future adult lives**: Prevention of obesity, alcohol use, and tobacco use in early adolescence not only promotes adolescent health and development, but are also will reduce morbidity, mortality, and disability later in life.
  - **For the next generation**: Nutritional deficiencies, early pregnancy, pregnancies in close succession, and female genital mutilation can have profound effects on an adolescent or her later pregnancies, including outcomes related to foetal and infant development, neonatal and early childhood mortality, and stunting in childhood.
Adolescent health and development problems have great economic costs (UNFPA 2010). For example, a study of fourteen LMICs found that the cost of adolescent pregnancy as a share of gross domestic product ranged from 1% to 30% over a girl’s lifetime, depending on the assumptions used to calculate the losses (World Bank 2011). In general, preventative programs can be substantially more cost-effective and equitable than acute treatments, so investment in women’s, adolescents’, and children’s health can secure high economic returns (Deogan et al. 2012; Stenberg et al. 2014). For instance, it has been estimated that an increase of health expenditure of just five US dollars per person per year up to 2035 in 74 high-burden countries could yield up to nine times that value in economic and social benefits (Stenberg et al. 2014).

In addition, returning to the question of demographic and epidemiological transitions, improved adolescent health in LMICs that results in declines in mortality and fertility rates will contribute towards accelerated economic growth. With fewer births each year, a country’s young dependent population grows smaller in relation to the working-age population (aged 15–64 years), creating a window of opportunity for rapid economic growth (Population Reference Bureau 2012). Currently, the working-age population is believed to have reached its peak in Asia, Latin America, and the Caribbean, and it is declining in Europe, North America, and Oceania, but the proportion of the African population in this age group is expected to increase between 2015 and 2030 (UN Population Division 2015).

### 1.2.4. HUMAN RIGHTS

Adolescents not only have basic needs but also fundamental rights to life, survival, maximum development, health, and access to health services (UN 1989; UN CRC 2003; UN CRC 2016). A rights-based argument for investment in adolescent health focuses on the
obligations of governments and other duty-bearers (e.g. according to existing international agreements); equity; interventions and policies that are needed but are culturally sensitive and controversial (e.g. sexuality education and informed consent); and listening to and engaging with adolescents (WHO 2014). The primary instrument for protecting and fulfilling these rights is the United Nations Convention on the Rights of the Child (CRC) (UN 1989). The CRC reflects the international consensus on standards for ensuring the overall wellbeing of all children up to the age of 18 years. In 2003, the UN CRC also specifically addressed adolescent health and developmental needs in its General Comment No. 4 (UN CRC 2003).

In all countries, there are certain subpopulations of adolescents who experience greater exposure and vulnerability to risk factors, lesser access to health services, worse health outcomes, and greater social consequences as a result of ill health. Inequities are often seen among groups characterized by sex, income, education, rural/urban residence, and other factors (WHO 2016b). Consideration of adolescent health rights thus fundamentally includes examination of equity, and specifically which adolescents might be most vulnerable and at-risk in different settings. These might include adolescents who are living with disabilities or chronic illnesses (e.g. sickle cell anaemia; HIV); those living in remote areas or caught up in social disruption from natural disasters or armed conflicts (e.g. refugees); and those who are stigmatized and marginalized because of sexual orientation or ethnicity, who are institutionalized or exposed to domestic violence or substance abuse in the family, who do not have access to education, health services or social protection (e.g. poor urban and rural residents), and/or who are exploited and abused (e.g. homeless adolescents) (UNFPA 2010; Sonenstein 2014; Global Early Adolescent Study 2015; WHO 2016b).

A critical issue to consider within human rights and equity 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 (WHO 2016c). Gender norms, roles, and relations often contribute to enhanced vulnerability of adolescent girls adolescent girls. For instance, marginalized adolescent girls bear burdens of discrimination and human rights violations that often affect their health and wellbeing, including girls who are affected by harmful traditional practices; do not have adequate protection; or are excluded from education (UN Interagency Taskforce on Adolescent Girls 2009). 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) (UNFPA 2010). 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 (WHO 2000).

1.3. GLOBAL ACCELERATED ACTION FOR THE HEALTH OF ADOLESCENTS (AA-HA!): IMPLEMENTATION GUIDANCE

The Global Strategy for Women’s, Children’s and Adolescents’ Health (2016-2030) lists many evidence-based interventions separately for women, children, and adolescents (EWEC 2015). As an age group, however, adolescents (10-19 years) overlap with both children (0-17 years) and women (18-19 years), and indeed many of the interventions identified specifically for children or women in the Global Strategy also address major adolescent injury and disease burdens. For example, maternal health interventions categorized in the list for women are equally relevant to pregnant adolescent girls, and numerous interventions categorized in the list for children address major adolescent health concerns (e.g.
comprehensive care of adolescents infected with HIV; or prevention and management of malaria, meningitis, and diarrhoea). Section A1.1 in Annex 1 describes more about the Global Strategy, including the 26 Global Strategy interventions for children and adolescents which are directly relevant to adolescent health, and the one composite intervention that represents the 48 maternal health interventions.

This Global Accelerated Action for the Health of Adolescents (AA-HA!) Implementation Guidance document was developed to support the Global Strategy by providing countries with a basis for developing a coherent national plan for the health of adolescents. Global AA-HA! development was initiated and led by the WHO Department of Maternal, Newborn, Child and Adolescent Health. From October 2015 to February 2017, the Global AA-HA! Implementation Guidance document was developed, reviewed, and refined based on the input of many stakeholders. Consultations included:

- On-going draft review and feedback from key WHO departments.
- On-going draft review, and a global meeting involving an external advisory group of thirty non-WHO members representing: Ministries of Health of selected Member States in the six WHO Regions; UN 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 workshops conducted with young and/or vulnerable adolescents in the six WHO Regions.
- Secondary data analysis of health themes in the Global Early Adolescent Study.
- An initial online and in-person survey conducted early in the Global AA-HA! development process.
- A global consultation on the penultimate draft of the Global AA-HA! Implementation Guidance document, including a second online survey.

Section A1.2 in Annex 1 describes more about the Global AA-HA! Implementation Guidance development process, including: the initial online and in-person survey; assessment of adolescent health based on the 2012 Global Health Estimates; review and selection of evidence-based interventions; and adolescent participation.

The remainder of this document addresses the following topics:

- Section 2 reviews adolescent positive development and major disease burdens;
- Section 3 describes the 27 Global Strategy adolescent health interventions in detail;
- Section 4 outlines how a country can prioritize health interventions for its particular adolescent population;
- Section 5 describes important aspects of successful national adolescent health programming; and
- Section 6 reviews adolescent health monitoring, evaluation, and research guidelines and priorities.

In total, 64 country case studies are provided across Sections 3-6 and their accompanying Annexes. These illustrate key actions for adolescent health at different levels of the ecological model, and how individual countries have achieved them. The full list is provided Section A1.2.5 in Annex 1.
1.4. KEY CONCEPTS IN ADOLESCENT HEALTH PROGRAMMING

There are many ways to conceptualize, structure, or approach adolescent health interventions and programming. Three critical, overarching, and inter-related concepts are universal health coverage, equity, quality of care, and positive development, each of which is described briefly below. Section A1.3 in Annex 1 provides a glossary of other key terms used in this document.

1.4.1. UNIVERSAL HEALTH COVERAGE

Two fundamental concepts make up the goal of universal health coverage for adolescents: first, all adolescents should receive the quality health services they need, and second, they should not suffer stigma or financial hardship in the process (WHO 2013a). To achieve this goal, several factors must be in place, including: affordability; access to essential medicines and technologies; social and community support for adolescent health; sufficient capacity of well-trained, motivated health workers; and a strong, efficient, cohesive, and accessible health system that meets priority adolescent health needs through prevention, early detection, treatment, and rehabilitation. Universal health coverage positions equity as a central issue in health and directly reflects two of the Sustainable Development Goals (SDGs), that is: SDG no. 3, which focuses on ensuring healthy lives for all, and SDG no. 10, which calls for a reduction in inequality within and between countries to promote the inclusion and empowerment of all.

1.4.2. QUALITY OF CARE

The WHO “quality of care” framework broadly identifies key elements in the provision of adolescent-friendly health care. Such services should be:

- **Equitable**: All adolescents, not just certain groups, are able to obtain the health services they need.
- **Accessible**: Adolescents are able to obtain the services that are provided.
- **Acceptable**: Health services are provided in ways that meet the expectations of adolescent clients.
- **Appropriate**: The right health services that adolescents need are provided in ways that account for issues such as privacy, confidentiality, non-stigmatization, and gender-responsiveness.
- **Effective**: The right health services are provided in the right way, and make a positive contribution to the health of adolescents. (WHO 2006; WHO 2012).

In 2015, WHO and UNAIDS published much more detailed guidelines on global standards for quality health care services for adolescents, focusing on standards and criteria, implementation, measurement tools, and scoring sheets (WHO and UNAIDS 2015a; WHO and UNAIDS 2015b; WHO and UNAIDS 2015c; WHO and UNAIDS 2015d). These are practical resources for countries. For example, the implementation guidelines recommend specific actions at the national, district, and facility level related to governance, workforce capacity, financing, and drugs, supplies and technology (WHO and UNAIDS 2015b).
1.4.3. POSITIVE DEVELOPMENT

Adolescent health and wellbeing is based on positive physical, neurological, and psychosocial development (WHO 2004; UNICEF 2011b; WHO 2014). Positive physical health in adolescence includes pubertal development, having adequate sleep, being injury-free, having a nutritious diet, being fit, and not having unwanted pregnancies, HIV, or other sexually-transmitted infections (STIs). Positive neurological development in adolescence is facilitated by: constructive forms of risk-taking; learning and experiences to stimulate brain connections; opportunities to make decisions and develop values; and cultivation of social skills and concern for justice through group activities. Positive psychosocial health in adolescence includes: a sense of identity and self-worth; sound family and peer relationships; an ability to learn and be productive; and a capacity to use cultural resources to maximize development.

A positive approach to adolescent development recognizes adolescents as sources of opportunity rather than problems (UNICEF 2014). For example, programs which promote positive adolescent psychosocial development employ strategies to build social-emotional and life skills, foster positive behaviour, discourage negative behavior, promote engagement in civil society, and enhance the wellbeing of adolescents as they transition to adulthood (USAID 2013). This approach builds developmental skills which have been associated with adaptive behaviors, such as school achievement and pro-social engagement. Although the emphasis of such programs is on promoting the healthy adjustment of all youth through effective and empowering learning environments, some programs specifically target marginalized and excluded youth who have fewer skills, opportunities, and resources available to them.

References [Section 1]:


UNFPA. 2010. The case for investing in young people as part of a National Poverty Reduction Strategy.


WHO and UNAIDS. 2015c. Global standards for quality health-care services for adolescents: A guide to implement a standards-driven approach to improve the quality of health care services for adolescents. Volume 3: Tools to conduct quality and coverage measurement surveys to collect data about compliance with the global standards.


WHO. 2014. Health for the world’s adolescents: A second chance in the second decade.


WHO. 2016b. Innov8 approach for reviewing national health programmes to leave no one behind: technical handbook.


2. ADOLESCENT HEALTH

KEY MESSAGES [Section 2]:

1. Positive physical health in adolescence includes pubertal development, having adequate sleep, being injury-free, having a nutritious diet, being fit, and not having unwanted pregnancies, HIV, or other sexually-transmitted infections (STIs).

2. Positive neurological development in adolescence is facilitated by: constructive forms of risk-taking; learning and experiences to stimulate brain connections; opportunities to make decisions and develop values; and cultivation of social skills and concern for justice through group activities.

3. Positive psychosocial health in adolescence includes: a sense of identity and self-worth; sound family and peer relationships; an ability to learn and be productive; and a capacity to use cultural resources to maximize development.

4. There are great disparities in adolescent health globally. In 2012, over two-thirds of adolescent deaths occurred in African low- and middle-income countries (LMICs) (43%) and Southeast Asian LMICs (27%), two areas which have both large adolescent populations and high rates of adolescent mortality.

5. Some conditions are major adolescent burdens across most regions, including road injury, self-harm, lower respiratory infections, drowning, and unipolar depression. Some are major burdens for both sexes and age groups (10-14 and 15-19 year olds), including road injury, HIV/AIDS, and unipolar depression.

6. When data are analysed for their relative importance within (not between) groups, some adolescent burdens rank highly within specific regions:
   - American LMICs: interpersonal violence and asthma.
   - Eastern Mediterranean LMICs: collective violence and legal intervention, and iron-deficiency anaemia.
   - European LMICs: stroke, anxiety disorders, and back and neck pain.
   - Southeast Asian LMICs: self-harm, diarrhoeal diseases, and iron-deficiency anaemia.
   - Western Pacific LMICs: leukaemia, congenital anomalies, back and neck pain, and alcohol use disorders.
   - High-income countries: interpersonal violence, alcohol use disorders, and back and neck pain.

7. Similarly, some adolescent burdens have a particularly high ranking among males (drowning, interpersonal violence) or females (maternal causes, anxiety disorders), or among younger adolescents (diarrheal diseases, iron-deficiency anaemia) and older adolescents (self-harm).

8. Key adolescent health concerns in humanitarian and fragile settings are: malnutrition; disability; unintentional injury; violence; SRH needs (including early pregnancy, HIV/AIDS and other STIs, and unsafe abortion); water, sanitation, and health needs (including menstrual hygiene management); and mental health.

2.1. POSITIVE DEVELOPMENT AND WELLBEING

Adolescence is one of the most rapid phases of human development. Much physical, cognitive, social, emotional, and ethical growth takes place between the ages of 10-19 years. Both the characteristics of an individual (e.g. sex) and broader factors (e.g. nutrition and a safe environment) influence these changes (WHO 2014a). Several key aspects of healthy
adolescent physical, neurological, and psychosocial development and wellbeing are described here.

Happiness and health have a lot to do with each other. Because if you are happy, you probably are also psychologically well. And if you are psychologically well, your body works properly. And then you reflect what you feel towards others, which helps others to feel well, because of the same happiness that you feel.

- Young adolescent boy from Columbia

2.1.1. PHYSICAL DEVELOPMENT

The initial growth spurt in early adolescence (10-14 years) is soon followed by further development of the sex organs and secondary sexual characteristics (UNICEF 2011). For boys, the growth spurt takes place about 12-18 months later and over a longer period than for girls (WHO 2014a). During puberty, hormonal changes lead girls to experience their first menstruation (menarche), while boys will have their first ejaculation (semenarche) (UNESCO 2014). Both external changes and less obvious ones can be a source of anxiety as well as excitement or pride for the individual whose body is undergoing the transformation (UNICEF 2011). The physical growth of puberty is accompanied by new and complex sensations and emotions, including sexual desire and gender identity (UNESCO 2014).

Of the many changes during puberty, UNESCO considers menstruation to have the most pronounced effect on the quality and enjoyment of education (UNESCO 2014). In low-income settings, menarche normally occurs between the ages of 8 and 16 years, with a median of around 13 years (Sumpter et al. 2013). Menstruation is a natural and beneficial monthly occurrence in healthy adolescent girls. Positive development related to menstruation involves a learning component as well as elements affected by the environment and infrastructure (UNESCO 2014). These include access to menstrual hygiene materials, toilet facilities, places to change, safe water and sanitation, and good hygiene practices.

My mom taught me about it before it came, so I already knew what to do. I was in pain. My mom knew that I could get over it, and she helped me and made me smile. Yeah, it got better.

- Young adolescent girl in the USA

Physical characteristics of healthy adolescent development include getting adequate sleep, being injury-free, having a nutritious diet, having age-appropriate blood pressure and cholesterol levels, being physically fit, and not having unwanted pregnancies, HIV, or other STIs (WHO 2004a). Exploring the example of physical fitness a bit further, 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 (WHO 2010a). Physical activity can include play, games, sports, transportation (e.g. cycling), chores, recreation, physical education or planned exercise in the context of broader family, 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, and social interaction and integration.

### 2.1.2. NEUROLOGICAL DEVELOPMENT

In the early adolescent years, the brain undergoes a tremendous burst of electrical and physiological development (UNICEF 2011). The number of brain cells almost double in the course of a year, while neural networks are radically reorganized in ways that have impacts on emotional, physical, and mental ability. Developments take place in regions of the brain, such as the limbic system, that are responsible for pleasure seeking, reward processing, emotional response, and sleep regulation (WHO 2014a). At the same time, changes take place at a somewhat slower rate in the pre-frontal cortex, the area responsible for decision-making, organization, impulse control, and planning for the future (Figure 2.1). These developments start later and take longer in boys than girls, so boys’ tendencies to act impulsively and to be uncritical in their thinking generally lasts longer than in girls (UNICEF 2011). This is not to suggest that young adolescents, and particularly young adolescent boys, are incapable of decision-making or planning for their futures (WHO 2014a). In fact, some of the changes in social and emotional processing that take place during adolescence may increase adolescents’ ability to adjust to changing social contexts.

![Figure 2.1. Patterns of neurological development and select mental health problems over the early life course.](image)

Neurological development has implications for the exploration, experimentation, and risk-taking that often takes place during adolescence. In adolescence, biological maturity precedes psychosocial maturity and, to some extent, there is a disconnect between adolescents’ physical capacities, their sensation seeking, and their capacity for self-control. Nonetheless, most adolescents are able to explore and experiment in ways that contribute to their positive development and do not take up behaviours that undermine their health.
By late adolescence, young people are more capable of abstract thinking, analysis, reflection, and rational judgement (UNICEF 2011; WHO 2014a).

---

I think getting older is kind of fun, because you get to do new things, and you get to learn new things that you are not supposed to do.

- Young adolescent boy from the USA

There are many activities which can contribute to positive neurological development and wellbeing in adolescents, including:

- positive forms of risk-taking, e.g. sports, theatre, and outdoor adventure;
- learning and experiences to stimulate brain connections and new pathways, e.g. academic pursuits, arts, and music;
- opportunities to make decisions and develop their own values, e.g. debate, advocacy, and community service; and
- cultivation of social skills and concern for justice through group activities, e.g. clubs, student government.

2.1.3. PSYCHOSOCIAL DEVELOPMENT

Early adolescence should be a time when children live in a safe environment where they can come to terms with their cognitive, emotional, sexual, and psychological transformations. During this time, they should not be encumbered by the need to fully assume adult roles, such as parenting or economic responsibilities, and they should have the full support of nurturing adults at home, at school, and in the community (UNICEF 2011). Early adolescents begin to develop their own values and morals, have an interest in fairness and justice, and may test limits. They may seek greater independence and responsibility, and may want to disengage from parental control and to assert more autonomy over their decisions, emotions, and actions. As they increasingly move outside of the confines of their families and start taking independent decisions—ranging from who they spend time with to what food they eat—it is important to give them information about the changes they are experiencing, and how they can protect themselves from risks (UNICEF 2011; WHO 2014 HWA). Awareness and concern about peer opinions tend to be particularly important in early adolescence (WHO 2014a).

In older adolescence, the importance of peer group influence diminishes as adolescents gain more clarity and confidence in their own identity and opinions, and they may begin to value intimate relationships more (UNICEF 2011). Older adolescents often develop more complex and philosophical understandings of ethics and social issues and deeper interests in human rights. Youth may be involved in political movements in the later teen years, consistent with a growing development of values, ethics, and concern for their communities. Late adolescence can be a time of opportunity, idealism, and promise as young people settle on their own identities and world views, and start to engage actively in shaping the world around them (WHO 2014a).

Adolescent mental health has been described as an adolescent’s capacity to achieve and maintain optimal psychological functioning and wellbeing (WHO 2005a). It includes a sense of identity and self-worth; sound family and peer relationships; an ability to be productive
and to learn; and a capacity to use developmental challenges and cultural resources to maximize development. Lerner and colleagues (2011) have described positive adolescent psychosocial development in terms of six “C”s: competence, confidence, connection, character, caring, and contribution. These are detailed more in Table 2.1.

Table 2.1. The six ‘C’s of positive youth development: Competence, confidence, connection, character, caring, and contribution.

<table>
<thead>
<tr>
<th>No.</th>
<th>Attribute</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Competence</td>
<td>A positive view of one’s actions 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).</td>
</tr>
<tr>
<td>2</td>
<td>Confidence</td>
<td>An internal sense of overall positive self-worth and self-efficacy.</td>
</tr>
<tr>
<td>3</td>
<td>Connection</td>
<td>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.</td>
</tr>
<tr>
<td>4</td>
<td>Character</td>
<td>Respect for societal and cultural rules, possession of standards for correct behaviors, a sense of right and wrong (morality), and integrity.</td>
</tr>
<tr>
<td>5</td>
<td>Caring / Compassion</td>
<td>A sense of sympathy and empathy for others.</td>
</tr>
<tr>
<td></td>
<td><strong>Together these five result in no. 6:</strong></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Contribution</td>
<td>Contributions to self, family, community, and to the institutions of a civil society.</td>
</tr>
</tbody>
</table>

Source: Lerner et al. 2011.

Similarly, the Search Institute has identified 40 “building blocks” or “developmental assets” for healthy adolescent development, which fall into eight domains: support, empowerment, boundaries and expectations, constructive use of time, commitment to learning, positive values, social competencies, and positive identity (Search Institute 2007).

**Happiness for me, basically, is being with my mother. I’m really attached to her. I go everywhere with her. I believe everybody wants to hide out with their mom, and I totally do. I’m taking care of her for everything. I do it with care, because I’m afraid I’ll lose her.**

- Adolescent girl from Columbia

Many of the attributes described above contribute to an adolescent’s positive psychosocial development, and as such can be identified as protective factors. Generally, protective factors function upstream from health conditions and may influence wellbeing in multiple ways. Internal attributes which have been found to be protective factors include having a positive attitude towards school, and having spiritual beliefs (WHO 2001). External protective factors include having a positive school environment, positive relationships with parents and other adults in the community, and parents who encourage self-expression and provide structure and boundaries. The role of parents is especially important. The WHO report “Helping Parents in Developing Countries Improve Adolescents’ Health” (2007a) describes five key dimensions of positive parenting: connection, behaviour control, respect for individuality, modelling of appropriate behaviour, and provision/protection.
The rapid expansion of digital media in many countries in recent years has raised questions about the different ways it may be influencing adolescent development both positively and negatively. Section A2.1 in Annex 2 describes current research on the impact that digital media exposure has on adolescent development, health, and wellbeing.

### 2.2. LEADING CAUSES OF MORTALITY AND DALYS LOST

Building on the review of positive adolescent development above, Section 2.2 will describe major health burdens which detrimentally affect adolescent wellbeing. A burden was included in this section if either (a) it was in the top five global or regional causes of adolescent mortality and DALYs lost, as identified in the 2012 Global Health Estimates, and/or (b) the Global Strategy specified it within a recommended adolescent health intervention (WHO 2014a; EWEC 2015). Section A2.2 in Annex 2 lists the risk factors which are believed to have the greatest overall impact on adolescent health globally, while Section A2.3 in Annex 2 describes risk factors for specific adolescent disease and injury burdens.

Table 2.2 lists the leading five causes of global adolescent mortality by sex and age group. This table highlights major disease burdens which are experienced across all sexes and age groups (e.g. road injury, HIV/AIDS), as well as some of those which have a particularly high ranking among males (e.g. drowning) or females (e.g. maternal causes), or among younger or older adolescents (e.g. diarrheal diseases and self-harm, respectively).

<table>
<thead>
<tr>
<th>Rank</th>
<th>Global Causes of Death</th>
<th>10-14 year olds</th>
<th>15-19 year olds</th>
<th>10-19 year olds</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Total</td>
</tr>
<tr>
<td>2</td>
<td>Road injury</td>
<td>Diarrhoeal diseases</td>
<td>Diarrhoeal diseases</td>
<td>Inter-personal violence</td>
</tr>
<tr>
<td>3</td>
<td>Drowning</td>
<td>Lower respiratory infection</td>
<td>Road injury</td>
<td>Self-harm</td>
</tr>
<tr>
<td>4</td>
<td>Lower respiratory infection</td>
<td>Road injury</td>
<td>Lower respiratory infection</td>
<td>HIV/AIDS</td>
</tr>
<tr>
<td>5</td>
<td>Diarrhoeal diseases</td>
<td>Meningitis</td>
<td>Drowning</td>
<td>Drowning</td>
</tr>
</tbody>
</table>


Table 2.3 shows adolescent population sizes and overall rates of mortality and DALYs lost. Notably, in 2012 over two-thirds of adolescent deaths occurred in African LMICs (43%) and Southeast Asian LMICs (27%). Two critical, overarching patterns of adolescent disease burden explain this disproportionate impact. First, regions with large adolescent populations - i.e. LMICs in Southeast Asia (29%), the Western Pacific (19%), and Africa (17%) - experience a disproportionately higher amount of the overall global adolescent disease burden than regions with smaller populations of adolescents. For example, the 7/100,000 mortality rate from diarrheal diseases in Southeast Asian LMICs represented 23,402 adolescent deaths, which is over eight times more deaths than the same mortality rate (7/100,000, or 2,770...
deaths) for road injury in European LMICs, because of different population sizes (WHO 2014a).

The second critical pattern of adolescent disease burden reflected in Table 2.3 is that regions with high overall rates of adolescent mortality and DALYs lost experience a disproportionately high share of the global adolescent disease burden, in comparison to regions with lower rates. For example, the highest rate of adolescent mortality is seen in African LMICs (282 deaths per 100,000), followed by Eastern Mediterranean LMICs, which have with less than half of the African rate of adolescent mortality (118/100,000). The lowest mortality rates are one-sixth to one-ninth of those in African LMICs, i.e. 44/100,000 in Western Pacific LMICs and 31/100,000 in HICs.

Table 2.3. Adolescent population sizes, and overall rates of mortality and DALYs lost, globally and by modified WHO Region.

<table>
<thead>
<tr>
<th>Adolescents (10-19 years old)</th>
<th>Global</th>
<th>African LMICs</th>
<th>American LMICs</th>
<th>Eastern Mediterranean LMICs</th>
<th>European LMICs</th>
<th>Southeast Asian LMICs</th>
<th>Western Pacific LMICs</th>
<th>High-Income Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population in millions (%)</td>
<td>1,190</td>
<td>202</td>
<td>108</td>
<td>118 (10)</td>
<td>40 (3)</td>
<td>348 (29)</td>
<td>224 (19)</td>
<td>146 (12)</td>
</tr>
<tr>
<td>Deaths in thousands (%)</td>
<td>1317</td>
<td>571 (43)</td>
<td>83 (6)</td>
<td>140 (11)</td>
<td>23 (2)</td>
<td>356 (27)</td>
<td>98 (7)</td>
<td>45 (3)</td>
</tr>
<tr>
<td>Mortality rate (deaths per 100,000 adolescents)</td>
<td>111</td>
<td>282</td>
<td>77</td>
<td>118 (10)</td>
<td>57</td>
<td>102</td>
<td>44</td>
<td>31</td>
</tr>
<tr>
<td>DALYs lost in millions (%)</td>
<td>181 (100)</td>
<td>61 (34)</td>
<td>13 (7)</td>
<td>19 (11)</td>
<td>4 (2)</td>
<td>51 (28)</td>
<td>19 (10)</td>
<td>12 (7)</td>
</tr>
<tr>
<td>DALY rate (DALYs lost per 100,000 adolescents)</td>
<td>15,221</td>
<td>30,024</td>
<td>12,504</td>
<td>16,513</td>
<td>11,066</td>
<td>14,806</td>
<td>8,445</td>
<td>8,398</td>
</tr>
</tbody>
</table>


The major conditions contributing to such great regional differences in adolescent disease burden are detailed in Table 2.4, which shows the top five causes of adolescent deaths globally and in each of the seven modified WHO Regions. Table 2.4 illustrates important differences in conditions and mortality rates across modified WHO Regions, but it also shows that some major disease burdens are common among most of them, i.e. road injury, self-harm, lower respiratory infections, and drowning.

This table highlights that some conditions are major causes of mortality across most or all regions (e.g. road injury, self-harm, lower respiratory infections, and drowning), while others are particularly high-ranking burdens in specific regions, e.g. HIV/AIDS and meningitis in African LMICs; diarrheal diseases in Southeast Asian and African LMICs; interpersonal violence in American LMICs; collective violence and legal intervention in Eastern Mediterranean LMICs; stroke in European LMICs; and congenital anomalies and leukaemia in Western Pacific LMICs.
Table 2.4. Leading causes of adolescent death, globally and by modified WHO Region.

<table>
<thead>
<tr>
<th>Cause of Mortality</th>
<th>Global Rank (Deaths Per 100,000 Adolescents)</th>
<th>African LMICs</th>
<th>American LMICs</th>
<th>Eastern Mediterranean LMICs</th>
<th>European LMICs</th>
<th>Southeast Asian LMICs</th>
<th>Western Pacific LMICs</th>
<th>High-Income Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road injury</td>
<td>1 (10)</td>
<td>5 (16)</td>
<td>2 (12)</td>
<td>2 (12)</td>
<td>1 (7)</td>
<td>2 (9)</td>
<td>1 (8)</td>
<td>1 (6)</td>
</tr>
<tr>
<td>HIV/AIDS</td>
<td>2 (8)</td>
<td>1 (44)</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Self-harm</td>
<td>3 (7)</td>
<td>4 (7)</td>
<td>3 (4)</td>
<td>4 (4)</td>
<td>2 (6)</td>
<td>1 (14)</td>
<td>3 (2)</td>
<td>2 (5)</td>
</tr>
<tr>
<td>Lower respiratory infection</td>
<td>4 (5)</td>
<td>2 (18)</td>
<td>5 (2)</td>
<td>3 (7)</td>
<td>5 (3)</td>
<td>5 (4)</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Interpersonal violence</td>
<td>5 (5)</td>
<td>11 (11)</td>
<td>1 (21)</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>3 (2)</td>
</tr>
<tr>
<td>Collective violence and legal intervention</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Meningitis</td>
<td>--</td>
<td>3 (18)</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Diarrhoeal diseases</td>
<td>--</td>
<td>4 (17)</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>3 (7)</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Drowning</td>
<td>(5)</td>
<td>(8)</td>
<td>4 (3)</td>
<td>5 (4)</td>
<td>3 (3)</td>
<td>4 (6)</td>
<td>2 (5)</td>
<td>4 (1)</td>
</tr>
<tr>
<td>Cerebrovascular disease (stroke)</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>4 (3)</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Leukaemia</td>
<td>--</td>
<td>--</td>
<td>(2)</td>
<td>(2)</td>
<td>(2)</td>
<td>--</td>
<td>4 (2)</td>
<td>--</td>
</tr>
<tr>
<td>Congenital anomalies</td>
<td>(2)</td>
<td>(2)</td>
<td>(2)</td>
<td>(2)</td>
<td>(2)</td>
<td>(2)</td>
<td>5 (2)</td>
<td>5 (1)</td>
</tr>
</tbody>
</table>

**Source:** WHO 2014a.

**Key:** A shaded cell indicates a top five cause of mortality globally or within a modified WHO Region. In unshaded cells, an italicized number indicates a mortality rate that is not among the leading five causes in that modified WHO Region, but is higher than a rate in another modified WHO Region where it is in the top five.

Table 2.5 shows the leading five causes of global adolescent DALYs lost, by sex and age group. This table highlights some of the conditions which are major causes of DALYs lost in all sexes and age groups (e.g. unipolar depression), as well as some which have a particularly high ranking among males (e.g. interpersonal violence) or females (e.g. anxiety disorders), or among younger or older adolescents (e.g. iron-deficiency anaemia and self-harm, respectively).

Table 2.5. Leading causes of adolescent DALYs lost, globally and by sex and age group.

<table>
<thead>
<tr>
<th>Rank</th>
<th>10-14 year olds</th>
<th>15-19 year olds</th>
<th>10-19 year olds</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Total</td>
</tr>
<tr>
<td>1</td>
<td>Iron-deficiency anaemia</td>
<td>Unipolar depression</td>
<td>Unipolar depression</td>
</tr>
<tr>
<td>4</td>
<td>Road injury</td>
<td>Diarrhoeal diseases</td>
<td>Diarrhoeal diseases</td>
</tr>
<tr>
<td>5</td>
<td>Asthma</td>
<td>Asthma</td>
<td>Road injury</td>
</tr>
</tbody>
</table>

Global Accelerated Action for the Health of Adolescents (AA-HAI) Implementation Guidance, 15Dec2016 DRAFT
Table 2.6 lists the leading five causes of adolescent DALYs lost globally and for the seven modified WHO Regions. This table highlights some conditions which are major causes of DALYs lost across all regions (e.g. depressive disorders and road injury). In addition, several of the conditions which were high-ranking causes of adolescent mortality in particular regions (Table 2.4) also were high-ranking causes of DALYs lost in those regions (Table 2.6). Other high-ranking regional patterns of adolescent DALYs lost include self-harm in Southeast Asian LMICs; lower respiratory infections in African LMICs; asthma in American LMICs; and alcohol use disorders in HICs and Western Pacific LMICs.

Table 2.6. Leading causes of adolescent DALYs lost, globally and by modified WHO Region.

<table>
<thead>
<tr>
<th>Cause of DALYs Lost</th>
<th>Global Rank (DALYs Lost Per 100,000 Adolescents)</th>
<th>African LMIC Rank</th>
<th>American LMIC Rank</th>
<th>Eastern Mediterranean LMIC Rank</th>
<th>European LMIC Rank</th>
<th>Southeast Asian LMIC Rank</th>
<th>Western Pacific LMIC Rank</th>
<th>High-Income Countries Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depressive disorders</td>
<td>1 (1024)</td>
<td>1 (1078)</td>
<td>2 (1074)</td>
<td>1 (1474)</td>
<td>1 (1178)</td>
<td>3 (959)</td>
<td>1 (808)</td>
<td>1 (995)</td>
</tr>
<tr>
<td>Road injury</td>
<td>2 (887)</td>
<td>5 (1340)</td>
<td>3 (971)</td>
<td>3 (1054)</td>
<td>2 (686)</td>
<td>4 (819)</td>
<td>2 (693)</td>
<td>4 (592)</td>
</tr>
<tr>
<td>Iron-deficiency anaemia</td>
<td>3 (661)</td>
<td>(1153)</td>
<td>--</td>
<td>4 (757)</td>
<td>5 (515)</td>
<td>2 (969)</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>HIV/AIDS</td>
<td>4 (660)</td>
<td>1 (3484)</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Self-harm</td>
<td>5 (529)</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Interpersonal violence</td>
<td>--</td>
<td>--</td>
<td>1 (1599)</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Meningitis</td>
<td>--</td>
<td>2 (1449)</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Diarrheal diseases</td>
<td>--</td>
<td>3 (1414)</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>5 (577)</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Lower respiratory infection</td>
<td>--</td>
<td>4 (1372)</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Collective violence &amp; legal intervention</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>2 (1336)</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Alcohol use disorders</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>(425)</td>
<td>--</td>
<td>4 (416)</td>
<td>4 (386)</td>
<td>2 (639)</td>
</tr>
<tr>
<td>Back and neck pain</td>
<td>(490)</td>
<td>(468)</td>
<td>(460)</td>
<td>(529)</td>
<td>4 (550)</td>
<td>(457)</td>
<td>3 (450)</td>
<td>3 (636)</td>
</tr>
<tr>
<td>Asthma</td>
<td>--</td>
<td>(659)</td>
<td>4 (626)</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>5 (555)</td>
</tr>
<tr>
<td>Anxiety disorders</td>
<td>--</td>
<td>--</td>
<td>5 (518)</td>
<td>5 (624)</td>
<td>3 (593)</td>
<td>--</td>
<td>--</td>
<td>(536)</td>
</tr>
<tr>
<td>Drowning</td>
<td>(382)</td>
<td>(614)</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>(461)</td>
<td>5 (362)</td>
<td>--</td>
</tr>
</tbody>
</table>


Key: A shaded cell indicates a top five cause of mortality globally or within a modified WHO Region. In unshaded cells, an italicized number indicates a mortality rate that is not among the leading five causes in that modified WHO Region, but is higher than a rate in another modified WHO Region where it is in the top five.

2.2.1. UNINTENTIONAL INJURY

ROAD INJURIES were the leading cause of adolescent mortality for both sexes combined, resulting in 121,603 adolescent deaths in 2012 (Table 2.2). All sex, age, and regional adolescent sub-groups were affected, but older adolescent boys and men experienced the greatest burden. Road injury also was the highest or second highest cause of adolescent mortality in absolute numbers in six of the seven modified WHO Regions. The only exception was African LMICs, where other disease burdens (i.e. HIV/AIDS, lower respiratory infection,
meningitis, and diarrheal diseases) were so great that road injury only ranked as the fifth highest cause of adolescent mortality, even though the African LMICs rate of road injury mortality (16/100,000) was higher than in any of the other modified WHO Regions. The next highest adolescent road injury mortality rates were in the Eastern Mediterranean LMICs and American LMICs (both 12/100,000) (Table 2.4). Most young people killed in road crashes are “vulnerable road users”, i.e. pedestrians, cyclists, motorcyclists, and passengers of public transport (WHO 2007b).

Road injuries also ranked highly as a cause of DALYs lost among adolescents, following a similar pattern to those described for mortality. Traumatic brain injuries are the leading cause of traffic-related deaths and injuries in HICs and LMICs, although other head injuries and limb injuries are also common among youth injured in traffic crashes (WHO 2007b).

**DROWNING** was in the top five causes of adolescent mortality in almost all of the modified WHO Regions in 2012 (Table 2.4). Again the exception was African LMICs, which had the highest rate of drowning mortality (8/100,000) among all modified WHO Regions, but drowning did not rank among the leading five causes there because other disease burdens had even greater impacts on adolescent health. Drowning was the second highest cause of adolescent death in the Western Pacific LMICs, where the rate of 5 deaths/100,000 resulted in 10,408 deaths. Drowning was most prominent as a cause of mortality and DALYs lost among adolescent boys and men, especially younger ones. Adolescents tend to be less supervised than smaller children, and are more likely to engage in risky behaviour around water, including consuming alcohol (WHO SEARO 2014).

**BURNS** also contribute to the global adolescent disease burden (WHO 2008a; WHO 2014a). In 2012, African, Southeast Asian, and Eastern Mediterranean LMICs had the highest rates of adolescent mortality due to fire, heat, and hot substances, experiencing 7, 4, and 3 such deaths per 100,000 adolescents, respectively. Among females aged 15-29, the highest rates of fire-related deaths are recorded in Southeast Asia, where rates are estimated to be as high as 17 deaths per 100,000 population per year (WHO 2008b).
**2.2.2. VIOLENCE**

**INTERPERSONAL VIOLENCE** is the intentional use of physical force or power, including by firearm, sharp object or other means, against another person with a high likelihood of resulting in injury, death, psychological harm, mal-development, or deprivation. It occurs between family members, intimate partners, friends, acquaintances, and strangers, and includes child maltreatment, youth violence, intimate partner violence, and sexual assault (WHO 2014c). “Youth violence” is a term that is commonly used to describe interpersonal violence involving 10-29 year olds that peaks in late adolescence and early adulthood, including homicide, assault, fighting, bullying, dating violence, and emotional abuse (WHO 2015a). Importantly, some forms of violence are more readily reported or documented than others. For example, gang violence, which disproportionately affects male adolescents, may be relatively visible and also more likely to result in fatality or hospitalization for major injury than some other forms of violence, such as abuse of adolescents, sexual assault, or violence by intimate partners, the latter two of which disproportionately affects females (WHO 2014c). Abuse of adolescents refers to physical and emotional mistreatment, sexual abuse, neglect and negligent treatment, or commercial or other exploitation, often by an adult in authority, such as a parent, another family member, a caregiver, a teacher, or an employer (WHO 2006a; WHO et al. 2016).

Worldwide, women and girls disproportionately bear the burden of violence that is often less visible in international statistics and that which occurs largely in the house and by persons who are known and trusted by them. Such violence has important consequences on their physical, sexual, and psychological abuse and neglect (WHO 2014c). They suffer a host of negative health and social consequences from these acts of violence which often last a lifetime and are not captured in official statistics. Sexual violence can occur at any age, but is believed to have highest prevalence after the onset of puberty (WHO 2002). The Global Strategy estimates that around one in ten girls (120 million) under age 20 has been a victim of sexual violence (EWEC 2015). Intimate partner violence against women begins in adolescence and occurs most often in the context of marriage or cohabitation, although among adolescent girls it also includes dating relationships. It usually includes physical, sexual and emotional abuse as well as controlling behaviours (WHO 2010a). Both sexual violence and intimate partner violence are mainly perpetrated by men and boys against girls and women, but boys and men may also be victims (WHO 2014a). Globally, the lifetime prevalence of childhood sexual abuse of girls is estimated to be 18%, while for boys it is estimated to be 8% (WHO 2014c). While very limited data are available, primarily from a few HICs, intimate partner violence may be perpetrated by women against men and can occur in the context of same-sex relationships (WHO 2002).

Interpersonal violence was ranked fifth as a cause of adolescent mortality in 2012 (Table 2.2). Regionally, interpersonal violence was the top cause of mortality and DALYs lost in American LMICs, with a high mortality rate of 21 deaths per 100,000 adolescents resulting in 22,817 adolescent deaths in that modified WHO Region in 2012 (Table 2.4). It was also a prominent cause of mortality in African LMICs, where it resulted in 11 deaths per 100,000 adolescents (approximately 12,000 deaths), and it was the third highest cause of adolescent mortality in high-income countries (3,282 deaths).

*Last night I was supposed to fill water. I get very tired filling water, but my mother says, “It’s your work, so you should finish it and not do useless*
"Still, I went to the circus and did not complete any of my work. When I came back, I was badly beaten by my mother."

- Young adolescent girl in India

**COLLECTIVE VIOLENCE** refers to the instrumental use of violence by members of a group against another group, in order to achieve political, economic or social objectives. It includes coups, rebellions, revolutions, terrorism, and war. **LEGAL INTERVENTION** refers to injuries inflicted by law-enforcing agents while arresting lawbreakers, suppressing disturbances, maintaining order, and other legal action. Collective violence and legal intervention are major concerns in specific regions and in localized humanitarian and fragile settings. In 2012 in Eastern Mediterranean LMICs, for example, collective violence and legal intervention combined were the number one cause of adolescent mortality (20,651 deaths) (Table 2.4), and the number two cause of adolescent DALYs lost (Table 2.6). The mortality rate for 15-19 year old boys and men in that region was very high, followed by 10-14 year old boys and all adolescent girls and women (39, 18, and 8 deaths per 100,000, respectively).

### 2.2.3. SEXUAL AND REPRODUCTIVE HEALTH, INCLUDING HIV

**HIV/AIDS** was the second leading cause of mortality among adolescents globally in 2012, resulting in 98,530 deaths (Table 2.2) it was also the fourth cause of adolescent DALYs lost (Table 2.5). These global rankings are largely influenced by the massive impact that HIV/AIDS continues to have in sub-Saharan Africa. The rate of adolescent mortality due to HIV/AIDS in African LMICs (44 deaths per 100,000 adolescents) is several times higher than adolescent mortality due to any other cause in that or any other modified WHO Region (Table 2.4). Globally, and in Africa, HIV/AIDS mortality has been increasing, while mortality in all other ages has been declining (UNAIDS 2016). Younger adolescent girls and boys in African LMICs have a higher rate of HIV/AIDS mortality than older ones, i.e. 46.3/100,000 among 10-14 year old girls and 45.9 among 10-14 year old boys, compared to 41.8 among 15-19 year old males, and 40.5 among 15-19 year old females.

The vast majority of adolescents who died of AIDS-related illnesses in 2013 acquired HIV during their mothers’ pregnancies or deliveries, or in the first months of life (UNICEF and UNAIDS 2015). The remaining 20% of adolescents living with HIV were infected as adolescents. More than 250,000 15-19 year olds are estimated to have been newly infected with HIV in 2013. In that age group, girls account for two out of three new HIV infections globally. In sub-Saharan Africa, that number jumps to nearly eight out of ten. Adolescents are less likely than adults to be tested for HIV and less likely to be linked to services, whether they test positive or negative (WHO 2013b).

**OTHER SEXUALLY-TRANSMITTED INFECTIONS (STIs)** can facilitate the sexual transmission of HIV, cause cellular changes that precede some cancers, reduce male and female fertility, and have an adverse effects on the overall wellbeing of individuals. However, data on STIs are limited and inconsistent between and within regions and countries, particularly data disaggregated by age and sex, which obscures the actual burden and compromises the global response. Globally, there are an estimated 357 million new cases of four curable STIs among people aged 15–49 years each year, specifically: Chlamydia trachomatis (131 million), Neisseria gonorrhoeae (78 million), syphilis (6 million), and Trichomonas vaginalis (142 million) (WHO 2016b). The prevalence of some incurable viral STIs is similarly high, with an estimated 417 million people infected with herpes simplex type 2 (HSV-2), and
approximately 291 million women infected with the human papillomavirus (HPV). Globally, there are great regional differences in STI prevalences, e.g. in 2012, genital HSV-2 prevalence was highest in Africa (31%), followed by the Americas (14%) (WHO 2016d).

Sexually active adolescents have a particularly high risk of STIs compared to other age groups, for multiple reasons, including biological susceptibility to infection and relatively poor use of health services (WHO 2004c). For example, in 2012 the highest numbers of people of any age group who were newly-infected with HSV-2 were adolescents (WHO 2016c; WHO 2016d). In many countries, STI health services have limited quality and accessibility for the general population, but this is particularly pronounced for adolescents. As a result, large proportions of adolescents at high risk for STIs do not use prevention methods and services effectively, remain undiagnosed, or do not use or adhere to treatment therapies (WHO 2016c).

**MATERNAL CONDITIONS** include haemorrhage, sepsis, hypertensive disorders, obstructed labour, complications of abortion, indirect maternal deaths, late maternal deaths, and maternal deaths aggravated by HIV/AIDS and other infections or noncommunicable diseases. Globally, 11% of all births are to 15-19 year old girls and women (WHO 2014e), and in 2012 maternal conditions were the second highest cause of death in this group, causing 9.7 deaths per 100,000 (Table 2.2). The rate of maternal mortality among 15-19 year old girls and women was very high among African LMICs (34 per 100,000), followed by the Eastern Mediterranean, Southeast Asian, and American LMICs (10, 9, and 4 deaths per 100,000, respectively) (Table 2.4).

For both pregnant adolescents and pregnant adult women, three kinds of delay in receiving care can contribute to maternal mortality, specifically: delay in deciding to seek care on the part of the individual, family, or both; delay in reaching an adequate health-care facility; and delay in receiving adequate care at an existing facility (WHO 2007a). In addition, pregnant adolescents face maternal health challenges that are specific to their physical and psychological immaturity and limited autonomy, so they require specialized interventions. Adolescents may be more likely than older women to delay seeking maternal health care because they do not recognize complications, or because they are constrained in making decisions about their use of medical care (e.g. by in-laws) (YouthNet 2004). Prenatal care is important to prevent, identify, and treat iron deficiency and anaemia in adolescents, and also to identify and treat pregnancy-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 (WHO 2007a).

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 (YouthNet 2004). 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, 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. Care during and soon after childbirth is also critical for reducing levels of maternal mortality. Because adolescents have a higher risk of difficult labour than do older women, they may be at increased risk for postpartum infections.
Adolescent girls and women also suffer a significant and disproportionate share of deaths and disability from unsafe abortion practices (WHO 2007c; WHO 2015d). Globally, the number of abortions globally among adolescents is estimated to be between 2.2 and 4 million annually. Because of legal and social restrictions on access to safe abortion in many parts of the world, adolescents often resort to unsafe procedures administered by unskilled providers and/or in unsafe conditions. Recent estimates suggest that 14% of all unsafe abortions in developing countries involve adolescent girls and women aged 15–19 years (WHO 2007c), while globally 11% of all births take place in this group (WHO 2014e). Of these unsafe abortions in developing countries, Africa accounts for 26%, while Latin America and the Caribbean account for a further 15%.

**FEMALE GENITAL MUTILATION (FGM)** comprises procedures to partially or totally remove external genitalia or otherwise injure the female genital organs for non-medical reasons (OHCHR et al. 2008). No form of FGM has health benefits. To the contrary, the removal of or damage to healthy genital tissue interferes with the natural functioning of the body and may cause severe immediate and long-term health consequences (WHO 2006c). FGM is mostly carried out on girls between the ages of 0 and 15 years. The practice is prevalent in 30 countries in Africa and in a few countries in Asia and the Middle East, but now is also present across the globe due to international migration. In Africa, it is estimated that 12 million girls between the ages of 10 and 14 years have experienced health complications related to female genital mutilation, most notably in Ethiopia, Kenya, Nigeria, and Uganda (WHO 2014f).

**Other important SRH issues** with major impacts on adolescent health include early and/or forced marriage and inadequate access to contraception (WHO 2006a; WHO and UNAIDS 2015; WHO 2016a). These will be described more in Section 3.

### 2.2.4. COMMUNICABLE DISEASES

**LOWER RESPIRATORY INFECTIONS**, such as influenza, pneumococcal pneumonia, and *H influenzae* type B, were a major cause of adolescent mortality both globally and in almost all modified WHO Regions in 2012 (Table 2.4). They were particularly important in African LMICs, where they were the second highest cause of mortality and fourth highest cause of DALYs lost among adolescents. The lower respiratory infection mortality rate of 18 deaths per 100,000 adolescents in African LMICs reflected 35,670 deaths.

**DIARRHOEAL DISEASES** as defined here are caused by pathogenic bacteria, viruses, and protozoa, including cholera, shigellosis, *E coli* infections, campylobacter enteritis, cryptosporidiosis, rotaviral enteritis, aeromonas, *Clostridium difficile*, norovirus, typhoid, paratyphoid fever, and other foodborne bacteria. Most of these infections have a faecal-oral transmission route and the disease organisms are commonly ingested through contaminated food or water. Globally, in 2012, diarrhoeal diseases ranked fifth and second as a cause of death among young adolescent boys and girls, respectively (Table 2.2).

In 2008, WHO conservatively estimated the annual global incidence of typhoid fever at 21 million cases, of which 1-4% ended fatally (WHO 2008c). An estimated 90% of these deaths occurred in Asia, and school-aged children (aged 5–15 years) were disproportionately affected, compared to children under five years of age. In 2012, diarrhoeal diseases had the greatest impact on adolescent health in African and Southeast Asian LMICs, where they were the fourth and third leading causes of adolescent death, resulting in 35,077 and 23,402
Meningitis was the fifth highest cause of global adolescent mortality among young adolescent girls in 2012 (Table 2.2). Meningitis also ranked third as an overall cause of death among all adolescents in African LMICs (resulting in 35,427 deaths), and was the second highest cause of DALYs lost in that modified WHO region (Tables 2.4 and 2.6). Meningococcal meningitis cases occur throughout the world, but large, recurring epidemics constitute an enormous public health burden in the 26 African countries within the “Meningitis Belt” that spans Africa from Mauritania, Senegal, the Gambia, and Guinea Bissau in the west to Sudan, Eritrea, Ethiopia, Kenya and Tanzania in the east (WHO 2015e).

Malaria is largely experienced in the WHO African region, where 395,000 or 90% of all global malaria deaths occurred in 2015 (WHO 2015g). Almost all remaining malaria case occurred in the Southeast Asian region (32,000 or 7%) and the Eastern Mediterranean region (7,000 or 2%). In areas of very high transmission, malaria mortality rates begin to fall by around 2 years of age, with the incidence of acute febrile malaria falling later in childhood or adolescence with the acquisition of partial immunity resulting from repeated exposure to malaria infection (WHO 2016e). Success in lowering the level of malaria transmission in previously highly endemic areas in recent decades is expected to result in fewer children - including adolescents - acquiring immunity to malaria than has been the case in the past, and thus being more vulnerable to infection (Nankabirwa et al. 2014).

Tuberculosis, including HIV-related tuberculosis, is primarily experienced in Africa, Southeast Asia, and the Western Pacific (46, 24, and 14 per 100,000 in the general population, respectively) (WHO 2015h). Adolescence is a period of increased risk of developing tuberculosis (TB), especially adult-type disease (i.e. sputum smear-positive and highly infectious) (WHO 2013g). Tuberculosis in adolescents is believed to be inadequately recognized and underreported in child and adolescent health programmes, especially those which serve patients at high risk (e.g. malnourished adolescents, or those living with HIV).

2.2.5. NONCOMMUNICABLE DISEASES AND MALNUTRITION

Congenital anomalies such as neural tube defects (e.g. spina bifida), heart anomalies, Down’s syndrome, and sickle-cell anaemia generally have their largest effects in infants and younger children, but they also have a major impact on adolescent health (WHO 2015u). In 2012, congenital anomalies caused 1-2 deaths per 100,000 adolescents in each of the modified WHO regions, and this represented the fifth highest cause of mortality in HICs and Western Pacific LMICs (Table 2.4). Younger adolescents were more affected. Taking the example of sickle cell anaemia - a blood disease that is caused by mutant haemoglobin genes received from both, generally healthy, parents - many African countries have a sickle cell disease prevalence of 2%, with children under five years, adolescents, and pregnant women being the groups most vulnerable to complications, morbidity, and mortality (WHO AFRO 2010; WHO 2011g).
LEUKAEMIA also caused 1-2 deaths per 100,000 adolescents in each of the modified WHO regions in 2012, and this represented the fourth highest cause of mortality among adolescents in the Western Pacific LMICs. Adolescent boys and men, and especially those in the older adolescent years, experienced the most deaths due to leukaemia.

CEREBROVASCULAR DISEASE, which causes strokes, resulted in 2-3 deaths per 100,000 adolescents in African, European, and Eastern Mediterranean LMICs in 2012. This represented the fourth highest cause of adolescent mortality in European LMICs (Table 2.4). Cerebrovascular disease particularly affected older adolescents, and especially older adolescent boys and men. Cerebrovascular disease is cardiovascular disease caused by atherosclerosis, which is a complex pathological process involving the deposition of plaques of fatty material on the inner walls of arteries (WHO et al. 2011a). Eventually, a plaque can rupture, triggering the formation of a blood clot; if the blood clot develops in the brain, it can cause a stroke.

LOWER BACK AND NECK PAIN was ranked as the fifth highest cause of DALYs lost by older adolescents globally in 2012 (Table 2.5), and the third highest in HICs and Western Pacific LMICs (Table 2.6). These musculoskeletal problems were also an important cause of DALYs lost in all other modified WHO regions, in each of which the total DALYs lost were more than those lost in the Western Pacific LMICs. The prevalence of these conditions is expected to increase with increasingly sedentary and obese populations in many countries.

ASTHMA is a chronic respiratory disease that was ranked fifth as a global cause of DALYs lost in both boys and girls aged 10-14 years (Table 2.5), and ranked fourth and fifth for DALYs lost among all adolescents in the American LMICs and HICs, respectively (Table 2.6). In HICs, asthma is often better controlled than other chronic respiratory diseases (WHO 2007d). However, asthma still is believed to be under-diagnosed in HICs, particularly among children and adolescents, and many patients’ asthma is not well controlled (WHO 2007d). In LMICs, asthma is mostly under-diagnosed and under-treated, causing high morbidity and significant mortality.

IRON-DEFICIENCY ANAEMIA was ranked as the third highest cause of adolescent DALYs lost in 2012 (Table 2.5). Although iron-deficiency anaemia ranks higher as a cause of DALYs lost among young adolescent boys than among young adolescent girls, this is reversed in older adolescents in whom menstrual blood loss make postmenarcheal adolescent girls and women particularly vulnerable to iron deficiency. In a mild form, anaemia does not have symptoms. In the more severe forms, anaemia is associated with fatigue, weakness, dizziness and drowsiness. Without treatment, it can worsen and become an underlying cause of chronic ill health and poor reproductive outcomes. In 2012, the highest rates of adolescent DALYs lost due to iron-deficiency anaemia was experienced in African LMICs (1153/100,000 adolescents), followed by Southeast Asian LMICs (969/100,000 adolescents) (Table 2.6).

I think that those who are older than me do not like to move. They keep sitting all the time. They eat, drink, and stay where they are. They do not move. They do not play. If they play, they will be able to digest what they eat. They choose to keep sitting down.

- Young adolescent girl in the occupied Palestinian territories
Other important noncommunicable diseases that affect adolescents include ischaemic heart disease, skin and subcutaneous diseases, migraine, and sense organ diseases, such as vision and hearing loss (GBD Pediatric Collaboration 2016).

2.2.6. MENTAL HEALTH, SUBSTANCE USE, AND SELF-HARM

**SELF-HARM**, including suicide, was the third greatest cause of mortality in 2012, resulting in an estimated 83,173 adolescent deaths (Table 2.2). Self-harm also was the fifth greatest cause of adolescent DALYs lost (Table 2.5). Self-harm ranked in the top five causes of death in all modified WHO Regions except African LMICs, but the greatest burden was in Southeast Asia, where it was the number one cause of adolescent mortality and DALYs lost (Tables 2.4 and 2.6). Over half of adolescent mortality due to self-harm took place in Southeast Asian LMICs, where the large adolescent population and high mortality rate (14/100,000) resulted in 47,655 deaths. Recent nationals surveys of 13-15 year olds in Southeast Asia found rates of suicide planning and attempt as high as 19% and 13% in the Maldives, and 15% and 14% in Thailand, respectively; the rates were roughly similar between boys and girls (WHO SEARO 2016).

In 2012, self-harm also was the second highest cause of mortality in the HICs (6,934 deaths) and European LMICs (2,319 deaths). Suicide largely occurred among older adolescents, especially older adolescent girls and women, for whom it was the leading cause of mortality with a rate of 28 deaths per 100,000. Among 15-19 year old boys and men the mortality rate was lower, but still very high at 21/100,000; self-harm was the third leading cause of death in this group.

**UNIPOLAR DEPRESSIVE DISORDERS** are the leading cause of adolescent DALYs lost globally, while **ANXIETY DISORDERS** are the fourth leading cause of DALYs lost among adolescent girls and women (Table 2.5). Unipolar depressive disorders are in the top three causes of DALYs lost in each modified WHO Region, with the exception of African LMICs, where the rate of DALYs lost from unipolar depressive disorders is still double that of most other Regions. Anxiety disorders, including generalized anxiety disorders, social phobia, and post-traumatic stress disorder, rank third in the causes of adolescent DALYs lost in the European LMICs, and fifth in the Eastern Mediterranean LMICs and American LMICs (Table 2.6).

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 in sleeping and eating habits; diminished interest or participation in activities; and oppositional or attention-seeking behavior (WHO 2016b). Early adolescents (10-12 years) may also experience recurrent, unexplained physical symptoms (e.g. stomach ache, headache, 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). Older adolescents (13 years and above) 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).
**AUTISM SPECTRUM DISORDERS** such as autism, childhood disintegrative disorder, and Asperger syndrome consist of a range of conditions characterized by some degree of impaired social behavior, communication and language, and a narrow range of interests and activities that are both unique to the individual and carried out repetitively (WHO 2016f). Regional estimates of prevalence of autism spectrum disorders are only available for the WHO regions of Europe and the Americas; these do not differ statistically, i.e. 62 and 65 out of 10,000 children, respectively (WHO 2013f). Only a few studies of autism spectrum disorders have been conducted in LMICs, but based on the existing epidemiological studies, the prevalence of these disorders appears to be increasing globally (WHO 2016f).

**CONDUCT DISORDER** was estimated to be an important cause of adolescent DALYs lost in all modified WHO regions, but American LMICs had the highest rates among both males and females, while African LMICs had the lowest rates among adolescent females, and Southeast Asia had the lowest among adolescent males.

**ALCOHOL USE DISORDERS** were ranked as the fifth highest cause of DALYs lost among older adolescent boys and men globally in 2012 (Table 2.5). Alcohol use disorders also were the second highest cause of DALYs lost among all adolescents in HICs and the fourth highest in Western Pacific LMICs; American LMICs (425/100,000) and European LMICs (416/100,000) also reported high rates (Table 2.6).

Alcohol consumption during adolescence can adversely affect developmental changes, when the brain is developing in specialized ways (WHO WPRO 2015). Young people also have different reactions to alcohol than adults: they are less sensitive to sedation and mobility effects, but they are more sensitive to its social and rewarding effects. These reactions can make young people easily intoxicated, placing them at risk of physical, sexual, and emotional harm. Furthermore, young people can develop dependence on alcohol more quickly than adults, and persons who initiate drinking at early ages tend to develop alcohol problems later in life.

**DRUG USE DISORDERS**, include opioid, cocaine, amphetamine, cannabis use disorders. Regionally, the highest rates of mortality due to drug use disorder were 2 deaths per 100,000 adolescent males in HICs, and one in each of African LMICs, Eastern Mediterranean LMICs, American LMICs, and European LMICs.

---

**2.3. HUMANITARIAN AND FRAGILE SETTINGS**

Humanitarian and fragile settings include those experiencing armed conflict or post-conflict situations, natural disasters, epidemics, famines, and protracted socioeconomic and political instability (EWEC 2015). These crises can take place within one country or cross national borders. In such circumstances, health infrastructure is damaged, and health systems and service delivery are severely disrupted (WHO 2015j). These events have devastating impacts on human health, potentially causing hundreds of thousands of deaths, and illness and injury for millions of others. Health challenges in humanitarian and fragile settings are particularly acute among mobile populations, internally displaced communities, and those in refugee or temporary camps (EWEC 2015). Table 2.9 provides examples of the diverse ways that large-scale conflicts or natural disasters can directly impact on population health.
Table 2.9. Examples of the increased mortality, morbidity, and disability in humanitarian and fragile settings.

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

Globally, the worst rates of preventable mortality and morbidity among women, adolescents, and children occur in humanitarian and fragile settings (EWEC humanitarian TWG 2015). Many health burdens increase in such contexts, even as governance and infrastructures break down, so that needed protective social and health services become much less accessible for adolescents (EWEC humanitarian TWG 2015). Key health concerns which should be assessed and addressed for adolescents – particularly adolescent girls – in such settings include:

- malnutrition, e.g. starvation or micronutrient deficiencies;
- inadequate assistance, treatment, and care of adolescents with disability or injury;
- violence, e.g. as experienced by child soldiers who are primarily boys, and victims of sexual exploitation and abuse (including early or forced marriage, and FGM), who are primarily girls and women;
- early pregnancy, HIV/AIDS and other STIs, unsafe abortion, and general SRH needs, e.g. access to condoms and other forms of contraception;
- WASH needs, e.g. materials and facilities for menstrual hygiene management; and
- mental health concerns, e.g. anxiety or trauma.

(WHO 2002; UNHCR et al. 2004; WHO 2007e; Inter-Agency Standing Committee 2010; WHO et al. 2011b; WHO 2012b; WHO 2013e; EWEC humanitarian TWG 2015; WHO 2015k)
Some of these burdens are closely interrelated; for example, experience of sexual violence may have implications both for SRH and mental health. Adolescents in conflict settings may experience sexual violence that results in multiple burdens, including physical injury, STIs, unwanted pregnancy, non-pathological distress (e.g. fear, sadness, anger, self-blame, shame, sadness or guilt), anxiety disorders (e.g. posttraumatic stress disorder), depression, medically unexplained somatic complaints, alcohol and other substance use disorders, and suicidal ideation and self-harm. Social trauma can include stigma and its sequelae, including social exclusion, discrimination, and rejection by family and community (WHO 2012b).

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, and torture), and organized crime (e.g. banditry and gang warfare) (WHO 2002). 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 (EWEC humanitarian TWG 2015). Particularly vulnerable adolescents include those who are: young (aged 10-14 years); disabled; ethnic or religious minorities; child soldiers; other children associated with fighting forces; girl mothers (in non-combatant roles); orphans; heads of households; survivors of sexual violence, trafficking, and other forms of GBV; engaged in transactional sex; in same-sex sexual relationships; or HIV-positive (Inter-agency Working Group on Reproductive Health in Crises 2010).

An important way that adolescent boys may be affected by violence in conflict settings is as child soldiers who experience combat-related injuries, such as the loss of hearing, sight, or limbs (WHO 2002). These injuries partly reflect the greater sensitivity of children’s bodies and partly the ways in which they may be involved in conflicts, such as laying and detecting landmines. Child recruits are also prone to health hazards not directly related to combat, including injuries caused by carrying weapons and other heavy loads, malnutrition, skin and respiratory infections, and infectious diseases, such as malaria. Girl recruits, and to a lesser extent young boys, are often forced to have sex as well as fight. In addition, child recruits are often given drugs or alcohol to encourage them to fight, creating problems of substance dependency, apart from the other associated health risks. Adolescents recruited into regular government armies are usually subjected to the same military discipline as adult recruits, including initiation rites, harsh exercises, punishments, and denigration designed to break their will. The impact of such discipline on adolescents can be highly damaging mentally, emotionally, and physically.

References [Section 2]


EWEC Technical Content Workstream Working Group on Humanitarian Challenges. 2015. A global strategy for every woman every child in every setting, 21/03/2015.


Inter-Agency Standing Committee. 2010. Sexual and reproductive health (SRH) including HIV: From minimum initial response to comprehensive services.
Inter-Agency Working Group on Reproductive Health in Crises. 2010. Inter-agency field manual on reproductive health in humanitarian settings.


WHO et al. 2016. INSPIRE: Seven strategies for ending violence against children.


WHO SEARO. 2016. Noncommunicable diseases risk behaviours among youth in the South-East Asia Region: Findings from GSHS and GYTS.


WHO. 2004a. Risk and protective factors affecting adolescent reproductive health in developing countries.


WHO. 2007e. Ethical and safety recommendations for researching, documenting and monitoring sexual violence in emergencies.
WHO. 2013b. HIV and adolescents: Guidance for HIV testing and counselling and care for adolescents living with HIV: Recommendations for a public health approach and considerations for policy-makers and managers.
WHO. 2013g. Roadmap for childhood tuberculosis: Towards zero deaths.
WHO. 2015e. Meningococcal meningitis, countries or areas at high risk, 2014.
WHO. 2015k. Improving nutrition outcomes with better water, sanitation and hygiene: Practical solutions for policies and programmes.
3. EVIDENCE-BASED INTERVENTIONS

**KEY MESSAGES [Section 3]:**

1. There is a tremendous evidence base of adolescent health interventions which address diverse conditions, including positive development, unintentional injuries, violence, sexual and reproductive health, communicable diseases, non-communicable diseases, mental health, and humanitarian and fragile settings.

2. The main drivers of adolescent health are largely outside of the health system, so many interventions involve other sectors. The education sector is a particularly important because of the opportunity it provides to positively influence adolescent health through intensive, long-term, and large-scale initiatives implemented by professionals.

3. Some of the most effective interventions to reduce major adolescent health burdens are universal to general populations and function at structural and environmental levels. Examples are transportation policies and legislation to reduce road injury; water and sanitation systems to prevent diarrheal diseases; and air quality policies to reduce lower respiratory infections.

4. Some adolescent-specific health interventions are universal to all adolescents. These often function at organizational, community, interpersonal, and individual levels. Examples are school-based puberty education to promote positive development; adolescent-friendly health services to prevent early and unintended pregnancies; parenting programmes to support adolescents with emotional, behavioural, or developmental disorders; and community initiatives to reduce the availability of alcohol and create alcohol-free environments for youth.

5. Other effective adolescent health interventions target at-risk adolescent sub-populations. Examples are HIV testing, counselling, and linkage to services for adolescent key populations; iron supplementation for menstruating adolescents where iron-deficiency anaemia is highly prevalent; community-based initiatives to end female genital mutilation; and clinical management and psychosocial support to survivors of sexual violence in humanitarian and fragile settings.

### 3.1. POSITIVE DEVELOPMENT INTERVENTIONS

Interventions to promote and ensure positive adolescent development cross over many sectors and target different physical and psychosocial aspects of adolescent development. The main drivers of adolescent health are largely outside of the health system, e.g. education, labour markets, economic policies, legislative and political systems, food systems, and the built environment (iERG 2015). Education is especially important because of the great opportunity it provides to positively influence adolescent health through intensive, long-term, and large-scale initiatives.

*Good facilities in the school can improve your health and happiness. If you have all the instruments and equipment in your laboratory, that makes you happy to perform many experiments every day. And if we have a library*
where we can go any day to take any book we like to read, we learn more that we knew before, and that can make us happy and improve our health.

- Young adolescent boy from Nigeria

The following sections provide examples of key positive development interventions within health services, the education sector, and broader communities. These are summarized in Table 3.1 by ecological level. Detailed description of each of these interventions is provided in Section A3.1 in Annex 3, which also provides three additional country case studies.

**Table 3.1. Examples of adolescent positive development interventions.**

<table>
<thead>
<tr>
<th>Ecological Level</th>
<th>Intervention</th>
<th>Further Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structural and Organizational</td>
<td>Adolescent-friendly health services</td>
<td>Health care should be accessible and acceptable, promote adolescent health literacy, and provide an appropriate package of services.</td>
</tr>
<tr>
<td></td>
<td>Health-promoting schools, including health education</td>
<td>Make every school a health-promoting school, in line with WHO standards. Skills-based health education including puberty education, focuses on the development of knowledge, attitudes, values, and life skills needed to make, and act on, the most appropriate and positive decisions concerning health.</td>
</tr>
<tr>
<td></td>
<td>Comprehensive school nutrition services</td>
<td>Establish and implement standards for meals provided in schools, or foods and beverages sold in schools, which meet healthy nutrition guidelines. Implement school feeding programmes as needed.</td>
</tr>
<tr>
<td></td>
<td>School hygiene interventions</td>
<td>Safe water and sanitation facilities include lockable, single-sex, private toilets with water and soap for washing, as well as a suitable private space where girls can dry wet menstrual cloths and/or a closed bin or incinerator for used menstrual pads.</td>
</tr>
<tr>
<td></td>
<td>Child online protection</td>
<td>Develop and implement a national strategy for child online protection, including a legal framework, law enforcement resources and reporting mechanisms, and education and awareness resources.</td>
</tr>
<tr>
<td></td>
<td>eHealth and mHealth interventions</td>
<td>Explore the potential of adolescent eHealth and mHealth interventions focused on particular issues (e.g. chronic illness management; SRH education), and employing a variety of approaches (e.g. web-based learning, active video games, text messaging, and mobile phone or tablet software program apps).</td>
</tr>
<tr>
<td>Community and Interpersonal</td>
<td>Interventions to promoted the 5 ‘C’s</td>
<td>Interventions to promote adolescent competence, confidence, connection, character, and caring involve diverse approaches, including those focused on (a) increasing adolescent resilience (e.g. cognitive behaviour therapy; mentoring); and (b) building knowledge, skills, and resources (e.g. educational programmes for at-risk youth; vocational training).</td>
</tr>
<tr>
<td></td>
<td>Adolescent participation initiatives</td>
<td>Facilitation of adolescent participation may include involving them in programme design, implementation, governance, and monitoring and evaluation. Provide meaningful opportunities for adolescents to engage and lead.</td>
</tr>
<tr>
<td></td>
<td>Parenting interventions</td>
<td>Work with parents to promote positive, stable emotional connections with their adolescent children, e.g. WHO provides guidance to health workers in non-specialized health settings on how to provide psychoeducation to parents to promote adolescent wellbeing (Section A3.7.1.1 in Annex 3).</td>
</tr>
<tr>
<td>Individual</td>
<td>HEADS assessment</td>
<td>A HEADS assessment in primary care evaluates an adolescent’s home, education, employment, eating, activity, drugs, sexuality, safety, suicidal thinking, and depression status to prevent and respond to related concerns.</td>
</tr>
<tr>
<td></td>
<td>Brief, sexuality-related communication</td>
<td>Trained health workers should provide a brief, sexuality-related communication to promote adolescent sexual wellbeing, help them establish clear personal goals, and address gaps between intention and behavior.</td>
</tr>
</tbody>
</table>

I was in a UNICEF workshop for youth where they taught us to help the younger ones. And that made me very happy because I could help a lot of the little children from the neighbourhood, like telling them to stay out of trouble. And afterwards they met me and they thanked me. That made me super happy, and it was very satisfying.

- Older adolescent female from Columbia

CASE STUDY 1. India’s national menstrual hygiene management programme for rural adolescent girls.

In 2012, in response to concerns that rural Indian girls had very limited access to sanitary products and safe sanitary facilities, the Government of India introduced a national programme with objectives to:

- increase awareness among adolescent girls on menstrual hygiene, build their self-esteem, and empower them;
- increase access to and use of high quality sanitary napkins by adolescent girls in rural areas; and
- ensure safe disposal of sanitary napkins in an environment friendly manner.

To generate demand for quality sanitary napkins, educational outreach has also been conducted by community health workers and through other community mechanisms and school life skills courses. For example, community health workers hold monthly meetings for adolescent girls within the communities, and follow up with home visits to girls who are not able to attend those meetings.

To ensure the regular availability of reasonably priced, high quality sanitary napkins for girls and women, the Government of India developed a distribution framework. Responsibilities have been identified for the state, district, block, sub-centre, and village levels. In addition, special distribution of sanitary products for adolescent girls takes place within the monthly community meetings mentioned above and school-based services.

3.2. UNINTENTIONAL INJURY INTERVENTIONS

GLOBAL STRATEGY ADOLESCENT HEALTH INTERVENTION
No. 1: Prevention of injuries.
Examples: (a) ROAD INJURY, and (b) DROWNING

(a) ROAD INJURY: Examples of interventions to reduce adolescent road injury are summarized by broad objective below:

1. Reducing Speed
   • Setting and enforcing speed limits
   • Traffic calming measures
2. Wearing Helmets
   • Mandatory helmet laws
   • Helmet distribution among school children
   • Introducing a helmet standard
   • Helmet public awareness campaigns
3. Reducing Alcohol
   • Introducing laws on blood alcohol concentration
   • Enforcing blood alcohol limits
   • Restricting young or inexperienced drivers
   • Raising the legal drinking age
   • Introducing disincentives for drink-driving
   • Restricting availability of alcohol to young drivers
   • Implementing designated driver programmes
   • Mass media campaigns
4. Wearing Seat Belts
   • Seat belt legislation and enforcement
   • Ensuring vehicles are fitted with appropriate seat belts
   • Seat belt public awareness campaign
   • Community-based projects
5. Maximizing Conspicuity
   • Pedestrian interventions
   • Cyclist interventions
   • Motorized two-wheeler interventions
6. Providing Emergency Medical Services
   • Pre-hospital care
   • Hospital care
   • Rehabilitation
7. Reducing Phone Use While Driving
   • Banning mobile phone use
   (WHO 2007c; WHO 2013a)

Each of these interventions is described in more detail in Section A3.2 in Annex 3, which also provides three additional country case studies.
CASE STUDY 2. Thailand’s driving education and training programmes for young novice motorcycle drivers.

In Thailand, motorcycles are the most widely used mode of transportation and the main source of road traffic injury risk. Surveillance data from 26 Thai trauma centre hospitals in 2004 showed that 66% of traffic-related morbidity and 68% of traffic-related mortality among individuals younger than 15 years were related to motorcycles. Forty-eight percent of those fatal cases were drivers, while 52% were passengers. Thailand has implemented laws prohibiting children younger than 15 years from operating a motorcycle, and adolescents 15 to 18 years old are only permitted to drive motorcycles with an engine smaller than 110 cc. The country is also implementing a 15-hour “Safety Riding Training Programme” which caters to all eligible ages to teach drivers to operate motorcycles safely. It includes five hours of in-class instruction on laws and regulations, motorcycle checks, basic riding structure, a hazard perception test (a riding simulator), and principles of riding techniques. It also involves ten hours of riding skills development.

Source: WHO 2015b.

(b) DROWNING: Adolescent drowning can be prevented through strategies targeting the general population, including improved community infrastructure (e.g. water supply, bridges, levees), public awareness-raising, and appropriate policies and legislation (WHO 2014c). Effective policies and legislation which are achievable in low-income settings include: setting and enforcing safe boating, shipping, and ferry regulations; building resilience and managing flood risks locally and nationally; coordinating drowning prevention efforts with those of other sectors and agendas; and developing a national water safety plan.

Some community-based drowning prevention measures are also readily achievable in low-income settings, including: installing barriers controlling access to water; teaching school-aged children basic swimming, water safety, and safe rescue skills; training community members in safe rescue and resuscitation; and strengthening public awareness of adolescent vulnerability to drowning, because they tend to be less supervised than small children and are more likely to consume alcohol and engage in other risky behaviour around water. For example, in Bangladesh the Centre for Injury Prevention and Research established multiple interventions to reduce drowning among children of all ages, including street theatre and video-shows on water safety themes, booklets and posters distributed at schools, collaboration with relevant agencies to implement a survival swimming curriculum, and village meetings after any drowning fatality to identify the cause and prevent it in the future (WHO SEARO 2014).

GLOBAL STRATEGY ADOLESCENT HEALTH INTERVENTION
No. 2: Assessment and management of adolescents who present with unintentional injury, including alcohol-related injury.
Example: BURNS

Assessment and management of adolescents who report unintentional injury is necessary not only to provide appropriate medical care, but also to accurately identify the cause of the injury to ensure it does not occur again. For example, burns are one of the few forms of injury that have a higher burden in adolescent females than males, because worldwide approximately two billion people in LMICs – the vast majority female - cook on unsafe open
fires or very basic traditional stoves (WHO 2008a). In many LMICs, adolescent girls cook either for their own families, or as domestic workers in other people’s homes; due to their young age, they are on average less skillful and more prone to burns than adult women (WHO 2008b). Most burn prevention interventions have been developed in HICs and are specific to those settings (e.g. smoke alarms, residential sprinklers). Relatively few have been designed and implemented to address common burn risk factors in LMICs, and fewer still evaluated for evidence of effectiveness. Some promising approaches include the promotion of an improved wood stove with a chimney in Guatemala, and a safer paraffin stove in South Africa (WHO 2011b).

Careful assessment of the cause of adolescent injury is also important because some adolescents may falsely state that an injury was due to an accident when in fact it was due to self-harm or interpersonal violence. In some countries, for instance, so-called honour killings and death by fire account for a significant number of reported cases of familial or intimate partner violence against adolescent girls and women, and survivors of such assaults may be compelled by the perpetrators to claim their injuries were unintentional (WHO 2008a; WHO 2014d). Similarly, alcohol use is a major risk factor for many forms of injury, both when an adolescent is the drinker and when the drinker (e.g. a parent or an intimate partner) causes harm to an adolescent (Rehm et al. 2009; WHO 2010b). In these instances, mental health, alcohol use disorder, and/or legal interventions may be warranted; some examples are discussed later in this section.

Of course, younger adolescents are healthier, because they still get the full attention of their parents. The older ones tend to be careless, which then leads to bad alcohol drinking habits.

- Older, gay adolescent boy in Indonesia

### 3.3. VIOLENCE INTERVENTIONS

**GLOBAL STRATEGY ADOLESCENT HEALTH INTERVENTION**

No. 3: Prevention of violence.

**Example:** YOUTH VIOLENCE

Evidence-based interventions to prevent youth violence are summarized under four broad categories below:

1. Parenting and Early Childhood Development
   - Home visits
   - Parenting programmes
   - Early childhood development programmes

2. School-Based Academic and Social Skills Development
   - Life and social skills development
   - Bullying prevention
   - Academic enrichment
   - Dating violence prevention
   - Financial incentives to attend school
   - Peer mediation
• After-school and other structured leisure time activities

3. Intervention with Young People at Higher Risk, or Already Involved in Violence
   • Therapeutic approaches
   • Vocational training
   • Mentoring
   • Gang and street violence prevention programmes

4. Community- and Society-Level Interventions
   • Hotspot policing
   • Community- and problem-oriented policing
   • Reducing access to and harmful use of alcohol
   • Drug control programmes
   • Reducing access to and misuse of firearms
   • Spatial modifications and urban upgrading
   • Poverty de-concentration

(WHO 2015c; WHO et al. 2016)

These and other interventions to prevent and respond to youth violence are detailed in Section A3.3 in Annex 3, which also provides three additional country case studies.

CASE STUDY 3. Brazil’s programme to reduce alcohol-related violence among high-risk youth.

A community-wide strategy to reduce alcohol-related violence was implemented in Diadema, Brazil. Vocational training and work placements for high-risk youths were provided, alongside a vacation club that organized activities during school holidays (a peak period for youth crime), and a life skills training programme aimed at reducing illicit drug use. In addition, the city introduced a new law requiring bars to close by 23:00, and started the Integrated Operation Project, which made the Diadema municipal guard and state police force responsible for the surveillance of vehicles, bars, deserted areas, and other “at-risk” spaces. Security cameras were installed to monitor specific areas with high crime rates. The combination of these initiatives was found to decrease homicides from 389 cases in 1999 to 167 in 2003, and robberies from 5,192 cases in 1999 to 4,368 in 2003.

Source: WHO 2015c.

GLOBAL STRATEGY ADOLESCENT HEALTH INTERVENTION
No. 4: Prevention and response to child maltreatment.
Example: ABUSE OF ADOLESCENTS

Home visitation programmes for at-risk families and training programmes for parents may be effective in reducing abuse of adolescents in several ways, including: increasing parental knowledge about adolescent development; changing undesirable parental attitudes; positively modifying the interaction between parents and adolescents; and increasing professional surveillance of the family, leading either to the earlier detection of a problem, or preventing such a problem from taking place (WHO 2006a). However, the human and other resources for such programmes are often not present in many LMICs, and almost all of the evidence on the effectiveness of such programmes comes from HICs. It is also critical for countries to develop standards of health care and protection services for maltreated adolescents, e.g. standards for documentation of injuries, forensic assessment, psychosocial support, coordinated case management, court proceedings with adolescent witnesses, social
service interventions with families, and alternative placements for adolescents (WHO 2006a).

In addition to those broad principles and approaches, it is important to recognize that adolescents are at greater risk of maltreatment by a parent or caregiver than children aged 5-9 years (WHO 2014e), yet most child maltreatment interventions target pre-adolescent children in their design and implementation (Smith et al. 2005). WHO recommends that child abuse interventions should be multifaceted to better address the specific needs of adolescents, including: enhancement of professional training and education about the nature and impact of adolescent maltreatment; development and extension of prevention and treatment services for adolescent victims and their families; and systems that better assess and intervene with maltreated adolescents (Smith et al. 2005). Section A3.7.1.2 in Annex 3 lists signs of adolescent maltreatment to which clinicians in non-specialized health settings should be alert and responsive.

GLOBAL STRATEGY ADOLESCENT HEALTH INTERVENTION
No. 5: Prevention of and response to sexual and other forms of gender-based violence.
Example: GENDER-BASED VIOLENCE

In early adolescence, primary prevention strategies for intimate partner violence and/or sexual violence include: interventions for children exposed to such violence; school-based training to help children recognize and potentially avoid sexually abusive situations; school-based social and emotional skills development initiatives; and identifying and treating conduct and emotional disorders (WHO 2010c; WHO et al. 2016). For older adolescents, possible interventions include school-based programmes to prevent dating violence, and multi-component violence prevention programmes. Strategies which have been developed for all age groups include those to reduce access to and harmful use of alcohol, and those focused on changing social and cultural gender norms through interventions based on social norms theory, media awareness campaigns, and work with men and boys (WHO 2003e; WHO 2010d).

A recent review of randomized controlled trials assessing interventions to prevent primary or secondary perpetration and victimization of intimate partner violence among adolescents found that effective interventions were: based in multiple settings (i.e. school and community); focused on key adults in the adolescents’ environment (e.g. teachers and parents); addressed relationship skills; and measured more than one type of violence (e.g. physical and sexual) (De Koker et al. 2014). The two interventions which were not found to be effective were of shorter duration than the others, and only had a curriculum component – not also a community component.

Health workers who come into contact with adolescent victims of sexual violence are pivotal to the recognition of, and response to, individual cases of sexual assault. Generally, the services that are needed after sexual assault include provision of comprehensive post-rape care that includes:

- first-line support
- pregnancy testing and prevention (i.e. emergency contraception)
- abortion services (to the full extent of the law), HIV prophylaxis, other STI prophylaxis, treatment of injuries
- mental health care in accordance with WHO guidelines. (WHO 2013b)
The 2013 WHO clinical and policy guidelines “Responding to Intimate Partner Violence and Sexual Violence against Women” provides more detailed recommendations, particularly as relates to the different needs of survivors of intimate partner violence and survivors of sexual assault (WHO 2013b). In addition, the particular needs of adolescent victims should be taken into consideration. For example, adolescents are frequently shy or embarrassed when asked to talk about sexual matters, and may talk more freely if parents are not present, so they should be asked (ideally in the absence of the parent) if they want a parent present during history-taking. Adolescent age will also determine the nature of clinical examination (e.g. cervical specimens) and treatment (e.g. STI medication dosage), so age-appropriate guidelines should be consulted (WHO 2010e).

3.4. SEXUAL AND REPRODUCTIVE HEALTH INTERVENTIONS, INCLUDING HIV INTERVENTIONS

GLOBAL STRATEGY ADOLESCENT HEALTH INTERVENTION No. 6: Comprehensive sexuality education.
Example: UNSAFE SEX

According to UNESCO, CSE is “an age-appropriate, culturally relevant approach to teaching about sex and relationships by providing scientifically accurate, realistic, and non-judgmental information” (UNESCO 2009a; UNESCO 2009b). The most recent scientific evidence demonstrates that CSE, including education on safer sex and condom use, can help to delay the initiation and frequency of sexual activity, reduce the number of sexual partners, increase the use of condoms, and reduce sexual risk-taking (Fonner et al. 2014; UNESCO 2015). School-based CSE programs also have great potential to be scaled up because of their compulsory nature and use of existing infrastructure and capacity.

Characteristics of effective an 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, supplies).

- **Content**: creating a safe social environment for adolescent participants; focusing on prevention of HIV, other STIs, and/or early pregnancy; targeting specific sexual behaviours that lead to these health goals (e.g. abstaining from sex, reducing number of sexual partners, 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, 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, community organization); and implementation of virtually all curriculum activities with quality and fidelity. (WHO 2009b)
The health sector can support effective CSE at multiple ecological levels:

- **At the policy level**, the health sector should promote CSE in schools by advocating for clear, consistent, and evidence-based policies for safe and enabling environments, and for the inclusion of age-appropriate, skills-based SRH/HIV education in school curricula.

- **At the community level**, the health sector’s collective expertise and strong credibility make it a valuable ally for mobilizing partners, dispelling misperceptions, providing evidence-based arguments and encouraging the development of sound policies and practices for the promotion of SRH in schools.

- **At the school level**, in collaboration with the education sector, the health sector can promote CSE by:
  - facilitating teacher training and retraining through professional organizations;
  - jointly reviewing the accuracy of information and the appropriateness of skills-based training in primary and secondary school curricula;
  - providing inputs for the development of evidence-based, age-appropriate, and skills-based STI/HIV education in primary and secondary school curricula; and
  - encouraging the development, adaptation, and use of standards for SRH/HIV education curricula for adolescents.

### GLOBAL STRATEGY ADOLESCENT HEALTH INTERVENTION

No. 7: Information, counselling, and services for comprehensive sexual and reproductive health, including contraception.

**Examples: EARLY AND/OR UNINTENDED PREGNANCY**

In 2011, a WHO review assessed the effectiveness of intervention impact upon critical outcomes for adolescent maternal health (WHO 2011d). Based on that review, WHO made the following recommendations in order to reduce pregnancy before age 20:

1. Offer interventions that combine curriculum-based sexuality education with contraceptive promotion to adolescents in order to reduce pregnancy rates.
2. Offer and promote postpartum and post-abortion contraception to adolescents through multiple home visits and/or clinic visits to reduce the chances of second pregnancies among adolescents. (WHO 2011d)

The 2011 WHO review further recommended that, in order to increase the use of contraception by adolescents, stakeholders should:

1. Implement interventions to improve health service delivery to adolescents as a means of facilitating their access to and use of contraceptive information and services.
2. Implement interventions at scale that provide accurate information and education about contraceptives, in particular curriculum-based sexuality education, to increase contraceptive use among adolescents.
3. Implement interventions to reduce the financial cost of contraceptives to adolescents (WHO 2011d).
Section A3.4.1 in Annex 3 provides an in-depth description of interventions to prevent and respond to early and/or unintended adolescent pregnancy, including three additional country case studies.

CASE STUDY 4. Nicaragua’s voucher program to increase access to sexual and reproductive health care among underserved adolescents.

In disadvantaged areas of Managua, Nicaragua, the NGO Central American Health Institute partnered with several other NGOs to finance and distribute vouchers aimed at reducing barriers to sexual and reproductive health care among underserved adolescents. These vouchers were to be used for free access to such care at twenty selected health centres. The vouchers were distributed in a range of venues in 221 poor neighbourhoods, focusing on venues outside of school since attendance at secondary school among adolescent girls is relatively low in Managua and pregnancy may be a reason for dropping out. The vouchers entitled each adolescent to one consultation and one follow-up visit for counselling, family planning, pregnancy testing, antenatal care, STI treatment, or a combination of these services. In addition, clinic staff received training sessions on counselling, adolescence and sexuality, and sexual abuse. Adolescent girls who received a voucher were found to be more likely to utilise sexual and reproductive health care services, to use modern contraception, and to use condoms at the last sexual encounter.

Sources: Muewissen et al. 2006; WHO 2011d.

GLOBAL STRATEGY ADOLESCENT HEALTH INTERVENTION
No. 8: Prevention of and response to harmful practices, such as female genital mutilation and early and forced marriage.

Examples: (a) FEMALE GENITAL MUTILATION, and (b) EARLY AND/OR FORCED MARRIAGE

(a) FEMALE GENITAL MUTILATION: At a national level, introduction of anti-FGM laws and enforcement of such laws have reduced the practice of FGM (WHO 2006c; Crisman et al. 2016). Mass media initiatives through radio, music, storytelling, and poems have also contributed to positive behaviour change related to FGM (Population Reference Bureau 2013). At the community level, other behavioural change interventions are also proving to be successful, including communication for change projects, and alternative right-of-passage rituals (WHO 2006c).

Adolescent girls and women living with FGM have experienced a harmful practice and should be provided quality health care (WHO 2016c). The 2016 “WHO Guidelines on the Management of Health Complications from Female Genital Mutilation” detail recommendations for complications related to defibulation, mental health, and female sexual health. For example, for girls and women living with type III FGM, deinfibulation is recommended for: preventing and treating obstetric complications; facilitating childbirth; and preventing and treating urologic complications (e.g. recurrent urinary tract infections and urinary retention). For girls and women living with any form of FGM, cognitive behavioural therapy should be considered if they are experiencing symptoms consistent with anxiety disorders, depression, or post-traumatic stress disorder, and sexual counselling is recommended for preventing or treating female sexual dysfunction (WHO 2016c).

(b) EARLY AND/OR FORCED MARRIAGE:
Actions to prevent and reduce marriage before age 18 include: encouraging political leaders, planners, and community leaders to formulate and enforce laws and policies to prohibit it; implementing interventions to inform and empower girls, in combination with interventions to influence family and community norms; and increasing educational opportunities for girls through formal and non-formal channels (WHO 2011d).

Married adolescents also may be put at particular risk when a country has a legal age of marriage that is lower than the legal age at which contraception and family planning services can be provided. Maternal and child health services also often do not focus on young first-time mothers. Married adolescents do not require special services, but do need positive action to achieve equality of access. Some countries with high rates of adolescent marriage have developed special outreach services to address this. For example, in Rajasthan, India, the Action Research and Training for Health Program developed an outreach programme involving village women volunteers who get to know all first-time pregnant mothers, most of whom are adolescents, and then accompany them on their first visit to a clinic. The service also provides a 24-hour delivery service at home and at the health centre, including an obstetric flying squad comprising a nurse midwife and a male field worker on a motorbike (WHO 2006c; UNICEF 2014; UNFPA 2015).

GLOBAL STRATEGY ADOLESCENT HEALTH INTERVENTION

No. 9: Pre-pregnancy, pregnancy, birth, post-pregnancy, abortion (where legal), and post-abortion care [all 48 evidence-based interventions], as relevant to adolescents.

Example: MATERNAL CONDITIONS

Broad maternal health interventions which address these delays can reduce adolescent maternal disorders, including those detailed in the 2015 “WHO Recommendations on Health Promotion Interventions for Maternal and Newborn Health” and the 2013 “Guidelines on Maternal, Newborn, Child and Adolescent Health Approved by the WHO Guidelines Review Committee: Recommendations on Maternal and Perinatal Health” (WHO 2013b; WHO 2015f).

Maternal health interventions can specifically target pregnant adolescents to increase their use of skilled antenatal, childbirth, and postnatal care, e.g. expanding availability of such services and emergency obstetric care; informing adolescents and community members about their importance; and following up to ensure that adolescents, their families, and communities are well prepared for birth and related emergencies (WHO 2011d). Care for a pregnant adolescent should include: counselling about the option to abort during the first visit (where this is legal); social support (including home visits); nutritional support (including counselling and supplementation); systematic assessment of violence; a plan for birth; management of anaemia and malaria where it is endemic; and counselling for breastfeeding and postpartum contraception (WHO 2007e).

GLOBAL STRATEGY ADOLESCENT HEALTH INTERVENTION

No. 10: Prevention, detection and treatment of sexually transmitted and reproductive tract infections, including HIV and syphilis.

Example: SEXUALLY-TRANSMITTED INFECTIONS

Given large proportions of adolescent populations are at high risk of STIs, scale-up of effective STI prevention services for general populations are equally or even more urgent for
adolescent populations, including STI case management and counselling; syphilis testing and treatment of all pregnant girls and women; and delivery of HPV vaccinations (WHO 2013d). The “Global Health Sector Strategy on Sexually Transmitted Infections (2016-2021)” focuses on three STIs which require immediate action for control, and for which there are cost-effective interventions, i.e.: Neisseria gonorrhoeae, because of the rising risk of untreated gonorrhoea and the risk of co-infection with other STIs which may also be on the rise (e.g. Chlamydia trachomatis); Treponema pallidum, specifically the elimination of mother-to-child (congenital) syphilis; and Human papillomavirus, with an emphasis on vaccination towards the elimination of cervical cancer and genital warts (WHO 2016e).

Strategies to enhance the impact of STI prevention include integration of STI services into existing health systems, advocacy to fight the stigma of STIs, and measurement of STI burden. Development of new technologies to prevent STIs include STI rapid diagnostic tests, additional drugs for gonorrhoea, and STI vaccines and other biomedical interventions. The draft global STI strategy identifies numerous priority actions for adolescents, e.g. focusing combination (behavioural, biomedical and structural) prevention interventions on adolescents; providing them with comprehensive information and male and female condom programming for dual protection against STIs and early pregnancy; ensuring the HPV vaccine is a pillar of adolescent health programmes; and implementing strategies for detecting and managing asymptomatic infections, such as regular case testing or screening, with enhanced interventions for reaching sexual partners (WHO 2016e).

GLOBAL STRATEGY ADOLESCENT HEALTH INTERVENTION

No. 11: Voluntary medical male circumcision in countries with generalized HIV epidemics. Examples: HIV AND OTHER STIs

Voluntary medical male circumcision (VMMC) offers men lifelong partial protection against HIV infection, and is highly cost-effective intervention for preventing acquisition of HIV and other STIs (e.g. HSV-2 and HPV). WHO recommends strengthening the integration of VMMC into national health and HIV programmes, and ensuring strong national leadership, partnerships, and monitoring to reach and sustain at least 80% coverage (WHO 2015h; WHO 2016f). The 2016 WHO “Framework for Voluntary Medical Male Circumcision” aims to scale-up and accelerate efforts by promoting VMMC as part of an essential package of health services for men and boys, using approaches that are tailored for various age groups and locations (WHO 2016f). The Framework outlines several strategies, including:

- building on the natural demand for VMMC among adolescents;
- better reaching men at higher risk based on location and behaviour;
- adjusting policies to improve adolescent male access to VMMC and other health services;
- integrating service delivery models to address broader health needs of adolescent males; and
- employing service delivery approaches that attract large numbers of boys and men to undergo VMMC. (WHO 2016f)

Examples of the latter are: school-based campaigns that involve school leadership and parents, with early provision of information; static health clinics in urban settings where populations are big enough to attract large numbers of men and boys; and mobile services in settings with smaller populations that aim to attract boys and men in sufficient numbers to achieve efficiency and quality. Innovations with new methods for simple and safe male
circumcision include the use of prequalified male circumcision devices that enable mid-level health-care workers to perform the procedure, and collaboration with traditional practitioners to increase dialogue and understanding and improve practices through training and regulation (WHO 2009c).

**GLOBAL STRATEGY ADOLESCENT HEALTH INTERVENTION**

**No. 12: Comprehensive care of children infected with, or exposed to, HIV.**

**Example: LIVING WITH HIV**

WHO recommendations for adolescent HIV and testing in different epidemics is summarized as follows:

1. HIV testing and counselling, with linkages to prevention, treatment and care, is recommended for adolescents from key populations in all settings (generalized, low, and concentrated HIV epidemics).
2. In generalized epidemics, HIV testing and counselling with linkage to prevention, treatment, and care is recommended for all adolescents.
3. In low and concentrated epidemics, HIV testing and counselling with linkage to prevention, treatment, and care is recommended to be made accessible to all adolescents. In concentrated epidemics, physician-initiated testing and counselling should be offered for adolescent clients in clinical settings who present with symptoms or medical conditions that could indicate HIV infection, including presumed and confirmed TB cases.
4. Adolescents with HIV should be counselled about the potential benefits and risks of disclosure of their HIV status to others and empowered and supported to determine if, when, how and to whom to disclose.
5. Community-based approaches can improve treatment adherence and retention in care of adolescents living with HIV.
6. Training of health-care workers can contribute to treatment adherence and improvement in retention in care of adolescents living with HIV. (WHO 2013e)

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/mm$^3$ (WHO 2013f). To maximize the coverage and quality of adolescent HIV care, linkages and referral pathways should be established to ensure a comprehensive continuum of care, including for the transition from paediatric to adult HIV services. Service providers, adolescents, and key stakeholders should also be engaged to identify acceptable and feasible activities to promote adolescent HIV care and treatment, e.g. community-based service delivery, training for health workers, and interventions to support onward disclosure and to improve adolescent treatment literacy and mental health (WHO 2013e; WHO 2015i). It is also critical to address the needs and vulnerabilities of adolescents from key populations, including drug users, people who sell sex, males who have sex with males, and transgender people, including legal and policy constraints, service coverage and barriers to access, and approaches and considerations for services (WHO 2015j; WHO 2015k; WHO 2015l; WHO 2015m).

Section A3.4.2 in Annex 3 describes these and other adolescent HIV testing, counselling, care, and treatment interventions in depth, including three additional country case studies.
As you might know, there are a lot of fifteen-year-old adolescents who are sexually active, and are already facing symptoms of HIV/STIs, but they are unable to take the tests for them due to their too-young age. They also cannot ask for parental consent because it will become a big problem for them.

- Older, gay adolescent in Indonesia

CASE STUDY 5. Mozambique’s peer support groups to promote treatment adherence among adolescents living with HIV.

The Mozambique Ministry of Health and NGO partners provide clinical care in all districts in Maputo and Cabo Delgado provinces. In order to improve adolescent ART adherence and to improve retention of this group in care and treatment services, these stakeholders conducted special trainings on paediatric and adolescent psychosocial support for lay counsellors, psychologists, and psychiatry medical officers, including an explicit focus on adherence reinforcement and HIV disclosure to adolescents. At the same time, staff received training and improved skills in creating and supporting adolescent support groups. Support groups have been fully active in seven out of eight districts, with each group consisting of about 20 adolescents. Groups were provided with a range of materials, including job aids, an adherence flip chart, and a manual on support groups. The support groups seem to not only positively influence adherence but also self-esteem and coping with HIV more generally.

Source: WHO 2013e.

3.5. COMMUNICABLE DISEASE INTERVENTIONS

GLOBAL STRATEGY ADOLESCENT HEALTH INTERVENTION
No. 13: Prevention, detection and treatment of communicable diseases, including tuberculosis.
Example: TUBERCULOSIS

For tuberculosis (TB) prevention, recent modelling indicates that targeting adolescents with TB vaccines will reduce morbidity and mortality not only in adolescents, but also in infants and young children. This suggests that vaccinating adolescents would be a more effective strategy to protect small children from TB than direct vaccination of infants with a similar vaccine (WHO 2015n). This has shifted the focus of TB vaccine development to a diverse pipeline of new TB vaccine candidates for adolescents.

The 2013 WHO “Roadmap for Childhood Tuberculosis” outlines ten steps to reduce TB among children and adolescents, including developing specific policy guidance, training, and reference materials for health care workers, and not missing critical opportunities for intervention, such as the transition of adolescents from paediatric to adult TB services (WHO 2013g). In Kazakhstan, for example, the government developed an extensive infrastructure of paediatric TB services that focus on active case-finding among children and screening those who are contacts of someone with TB. Afterward, TB notification rates decreased among adolescents, from 161/100,000 in 2002 to 98/100,000 in 2011 (WHO 2013g).
TB and TB/HIV in adolescents and adults are largely similar in clinical presentation, anti-TB drug dosages, and disease management, so currently the treatment of TB in adolescents follows the same guidelines as for adults. However, adolescents with TB often face additional psychosocial challenges related to their autonomy and adherence, so they should receive special focus in treatment guidelines and services for TB (WHO 2013g). For example, individualized and family counselling and “brainstorming” on adherence strategies could be used to empower adolescents and motivate them to adhere to treatment (WHO 2014i). The 2014 WHO “Guidance for National Tuberculosis Programmes on the Management of Tuberculosis in Children” discusses the difference between TB in children, adolescents, and adults, and provides detailed recommendations related to TB prevention, diagnosis, and treatment in adolescents.

**GLOBAL STRATEGY ADOLESCENT HEALTH INTERVENTION**

No. 14: Routine vaccinations, e.g. human papillomavirus, hepatitis B, diphtheria-tetanus, rubella, measles

**Examples:** MULTIPLE INFECTIOUS DISEASES (e.g. LOWER RESPIRATORY INFECTIONS; DIARRHEAL DISEASES; SEXUALLY-TRANSMITTED INFECTIONS)

WHO recommends several vaccinations as routine for adolescents and/or adults in all immunization programmes, including those for tetanus (booster); HPV (for 9-13 year old girls); rubella (for adolescent girls and child-bearing aged women if not previously vaccinated); and hepatitis B (for high risk groups, if not previously immunized) (WHO 2016h). These recommendations are intended to assist the development of country-specific schedules which should also be based on local epidemiologic, programmatic, resource, and policy considerations.

In addition, for high-risk children, adolescents, or adults, WHO recommends vaccination against typhoid, cholera, meningococcal disease, Hepatitis A, rabies, and dengue, as well as some other vaccines in specific regions (tick-borne encephalitis) or in programmes with certain characteristics (seasonal influenza for pregnant girls and women; varicella in countries where the average age of acquisition is 15 years or older).

WHO encourages national immunization programmes to use school visits for assessment of adolescent vaccination status, administration of previously missed doses (e.g. meningococcal vaccine), and provision of boosters where there is waning immunity from infant doses (e.g. tetanus) (WHO 2012c; WHO 2015n; WHO 2016i). In areas where large numbers of adolescents (e.g. female, rural, or older adolescents) are missed in school-based vaccination campaigns, special campaigns or primary care health services may need to administer such vaccines at scale (WHO 2016i).

Introducing new vaccines (e.g. HPV) may create opportunities to reach underserved populations or age groups with other immunizations and health interventions that they would not otherwise receive. High demand for the new vaccine – spurred by effective communications and social mobilization activities – can bring in adolescents who have not previously been immunized or are behind in their immunization schedules. The 2014 WHO “Principles and Considerations for Adding a Vaccine to a National Immunization Programme” outlines practical considerations for deciding on the introduction of a vaccine, planning and managing its introduction, and monitoring and evaluating its progress (WHO 2014j). In addition, the WHO “Cervical Cancer Prevention and Control Costing (C4P) Tool” is a user-friendly computerized tool that estimates the incremental resources required to add HPV
vaccine to an existing immunization programme, e.g. cost per dose and cost per fully immunized girl (WHO 2012d). As well as recommending HPV vaccination for early adolescent girls, some countries now recommend it for early adolescent boys to prevent possible cancers of the mouth, throat, penis, and anus (Centers for Disease Control and Prevention 2015; Cancer Council Australia 2016).

GLOBAL STRATEGY ADOLESCENT HEALTH INTERVENTION
No. 15: Prevention and management of childhood illnesses, including malaria, pneumonia, meningitis and diarrhoea.

Example: (a) MALARIA, and (b) DIARRHEAL DISEASES

(a) MALARIA: Within the WHO Information Series on School Health, the “Malaria Prevention and Control” document outlines how individuals and groups can implement malaria prevention interventions, including:

- argue for increased local, district, and national support for malaria prevention interventions in schools;
- develop supportive environments through vector control, house spraying, and use of long-lasting insecticidal bed nets;
- modify and expand current health services to create more effective school health promotion programmes;
- identify skills that young people need to develop and maintain behaviours that reduce their risk of infection; and
- mobilize community action to implement and strengthen school programmes. (WHO 2007f)

Several studies have shown that school-age children use long-lasting insecticidal nets less frequently than other population groups (Nankabirwa 2014). Schools in malaria endemic areas provide an opportunity to teach adolescents simple but effective malaria prevention techniques, including:

- always sleep under insecticide treated nets;
- control environmental factors conducive to mosquito breeding;
- receive intermittent preventive treatment during pregnancy;
- recognize symptoms of malaria and seek early treatment, especially if a member of a risk group;
- request effective antimalarial drugs and finish the complete treatment cycle;
- learn at an early age, the seriousness of malaria and the danger that the disease poses to health and individual wellbeing; and
- use mosquito repellents, if available, and other locally recommended and available methods of personal protection. (WHO 2007f)

Antimalarial drugs are being used in different ways to control malaria in school-age children, including screening and treatment, and intermittent preventive treatment (Nankabirwa 2014). Some studies of chemoprevention in school-age children have shown reductions in anaemia and improved school performance. The 2015 WHO “Guidelines for the Treatment of Malaria” detail clinical recommendations related to chemoprevention, diagnosis, treatment, prevention of relapse, and national adaptation and implementation (WHO 2015o).
(b) DIARRHOEAL DISEASES: Many water, sanitation, and hygiene (WASH) interventions are effective in reducing diarrheal diseases in adolescents and broader populations, including:

- implementation of water safety plans and guidelines for drinking-water quality at a national level
- Implementation of water safety plans and guidelines for drinking-water quality
- Implementation of sanitation safety plans and guidelines for safe use and disposal of wastewater, greywater and excreta.
- policies and programmes to promote the widespread adoption of appropriate handwashing practices
- effective and consistent application of household water treatment
- safe storage of household water
- increased access to basic sanitation at the household level
- improved sanitation in households (e.g. flushing to a pit or septic tank, dry pit latrine with slab, or composting toilet)

(WHO 2014k; WHO 2014l; WHO 2015s; WHO 2016l; WHO 2016m)

In addition, adolescent-specific WASH interventions include:

- safe water and sanitation facilities in schools
- health and hygiene education in schools
- immunization of adolescents against specific diarrheal diseases (e.g. typhoid, cholera) in select in conditions, e.g. in affected urban slum or emergency settings

(WHO 1998a; WHO 1998e; WHO 2000b; WHO 2008c; WHO 2010g; UN Water and WHO 2014)

These and other WASH interventions to prevent and respond to adolescent diarrheal diseases are detailed in Section A3.5 in Annex 3, which also provides three additional country case studies.

CASE STUDY 6. Bangladesh’s community initiatives to stop open defecation.

At the turn of the millennium, access to latrines in rural areas of Bangladesh was less than 15%. Many international agencies and non-governmental organisations had been working to improve environmental sanitation by constructing subsidized latrines and toilets. However, even after three decades of such efforts, it was difficult to find 100 villages from amongst nearly 85,000 that were totally sanitised and free from open defecation. A new approach concentrated on empowering local people to analyse the extent and risk of environmental pollution caused by open defecation, and to construct toilets without any external subsidies. This community-led effort had a huge impact. Open defecation was completely stopped by the community in more than 400 villages in Bangladesh, and the methodology has since been adopted in parts of India and elsewhere in Asia and Africa.


The most important thing to me is water... If there is no water, we cannot live. The government can help us with that, or the village head or chief in our neighborhood. If they do that for us, we will have clean water to drink so that we will not be going far places to fetch water, and this will make us happy.
GLOBAL STRATEGY ADOLESCENT HEALTH INTERVENTION
No. 16: Case management of meningitis.
Example: MENINGITIS

Endemic meningitis occurs primarily in children and adolescents, with highest incidence in infants, and rates rising again in adolescence (WHO 2011e). The strategy to combat meningitis in such settings includes epidemic preparedness, prevention, and response. Preparedness focuses on surveillance, from case detection to investigation and laboratory confirmation. Prevention consists of vaccinating all 1-29 year-olds in the African meningitis belt with the meningococcal A conjugate vaccine. Epidemic response consists of prompt and appropriate case management with reactive mass vaccination of populations not already protected through vaccination (WHO 2015q). The 2015 WHO “Managing Meningitis Epidemics in Africa“ for health authorities and health-care workers provides guidance on planning and coordination at the district level, surveillance, treatment and care, vaccination, and post-epidemic follow-up (WHO 2015r).

In Canada and the United States, where rates of meningitis are relatively low, conjugate vaccine is only recommended for children aged 2 months through 10 years old who are at increased risk for meningococcal disease, but it is recommended for routine administration to all adolescents aged 11–18 years (WHO 2011e). In the United States, it is also recommended that all previously vaccinated adolescents receive a booster dose of quadrivalent conjugate vaccine at 16 years of age.

3.6. NON-COMMUNICABLE DISEASE, NUTRITION, AND PHYSICAL ACTIVITY INTERVENTIONS

Globally, four major NCDs (cardiovascular diseases, cancer, chronic respiratory diseases, and diabetes) are responsible for 82% of NCD deaths across all age groups (WHO 2014m). As shown in Section 2, some of the leading causes of adolescent mortality and DALYs lost in 2012 are examples of these major NCDs, namely stroke, leukaemia, and asthma. WHO identifies four major risk factors as contributing to the four major NCDs, specifically: metabolic/biological risk factors (i.e. BMI, overweight and obesity, blood glucose/diabetes, and blood pressure), physical inactivity, tobacco use, and harmful use of alcohol (WHO 2014m). Examples of these and a fifth major risk factor – air pollution - are among the leading global risk factors for adolescent mortality and DALYs identified in the 2013 Global Burden of Disease Study, i.e. high fasting plasma glucose, high blood pressure, low glomerular filtration, household air pollution, ambient particulate matter, occupational particulates, and alcohol use; see Annex 2 for more detail (WHO 2007g; Mokdad et al. 2016).

In addition to the four major NCDs describe above, there are other non-communicable diseases and conditions which are major adolescent disease burdens, e.g. congenital anomalies and iron-deficiency anemia.
Importantly, many adolescent NCD risk factors do not result in NCDs until adulthood. For example, tobacco smoking during the teen years may not have an obvious consequence at that time, but may be a strong contributing factor to develop cancer during adulthood. Indeed, many of the NCD risk factors and burdens seen in adults first began as risk behaviors in adolescence, underscoring the importance of intervening with adolescents to protect their health in both the short-term and the long-term. This section thus differs from some earlier sections in that it will not only focus on leading causes of NCDs in adolescence, but also adolescent risk factors for NCDs later in life.

**GLOBAL STRATEGY ADOLESCENT HEALTH INTERVENTION**

No. 17. Promotion of healthy behaviour (e.g. nutrition, physical activity, no tobacco, alcohol or drugs).

Examples: *STROKE*

Interventions which promote health nutrition and activity, and no tobacco, alcohol, or drug use among adolescents, help to prevent stroke and numerous other NCDs. Nutrition, physical activity, and tobacco use interventions are described in detail in Section A3.6.1 in Annex 3, which also provides three additional country case studies. Interventions to prevent and respond to harmful use of alcohol are described in detail in Sections 3.2, 3.3, and 3.7.

Briefly, interventions to promote adolescent health diets include those to:

- develop nutrient profiles
- restrict marketing of unhealthy foods and beverages
- reduce affordability of unhealthy foods and beverages
- promote accurate labeling
- conduct nutrition literacy campaigns
- create healthy food environments in schools and similar settings
- increase access to healthy food
- conduct campaigns to raise awareness of adolescent obesity
- educate patients to eat a healthy diet provide
  (PMNCH 2012; WHO 2010k; WHO 2013m; WHO 2014m; WHO 2016a; WHO 2016s)

Interventions to promote adolescent physical activity include those to:

- prioritize physical activity within urban planning policies
- ensure school and public facilities are adequate
- conduct public awareness programmes on physical activity
- implement good physical education curricula in schools
- encourage regular, structured sports activities
- educate younger adolescents on appropriate regular physical activity
- educate older adolescents on appropriate regular physical activity
  (WHO 2007a; WHO 2010k; WHO 2013m; WHO 2014m; WHO 2016a)

Interventions to reduce adolescent tobacco use or exposure include those to:

- reduce affordability of tobacco
- ensure smoke-free environments
- ban tobacco advertising
• conduct campaigns to raise awareness of the dangers of tobacco
• integrate tobacco prevention within school programmes
• educate and support patients to stop tobacco use
(WHO 1998d; WHO 2013m; WHO 2014m; WHO 2016a)

Although stroke is a leading cause of adolescent mortality in some countries, interventions to specifically screen for, diagnosis, and treat adolescent stroke are very limited. Current approaches also described more in Section A3.6.1 in Annex 3.

CASE STUDY 7. The Republic of Korea’s comprehensive approach to promoting healthy diets through schools.

The Republic of Korea has taken a systematic and comprehensive approach to improving the diets of children and adolescents nationally. Starting in 2002, the government developed a series of strategies that addressed student health, including the National Obesity Prevention Program and the Five-Year Policy for Children and Adolescents (2008-2012). In 2006, the School Meals Act was amended to incorporate nutrition education into school curricula. Since 2007, sugary drinks have been banned in schools, and in 2008 nutrition labelling was mandated for school meals. In 2009, the Special Act on the Safety Management of Children’s Dietary Life was implemented, establishing “Green Food Zones” within 200 meters of schools where the sale of high calorie foods with low nutritional value is prohibited. These zones are currently operational at over 10,000 schools nationwide. From 2005 to 2009, students reported an overall decline in weekly consumption of fast-food, instant noodles, confectionaries, and most notably carbonated beverages, which dropped from 78% to 67%.

Source: WHO WPRO 2016.

GLOBAL STRATEGY ADOLESCENT HEALTH INTERVENTION
No. 18. Prevention, detection and treatment of non-communicable diseases.
Examples: (a) LEUKEMIA, and (b) ASTHMA

WHO has developed a training package for health care providers to improve their capacity to diagnose, prevent, and manage leukemia, asthma, and other childhood diseases causally linked to the environment (WHO 2016o). Thirty modules on specific risk factors and health burdens are available, including those related to pediatric environmental history, the developmental and environmental origins of adult disease, indoor air pollution, outdoor air pollution, occupational risks, chemical exposure, global climate change, radiation, pesticides, persistent organic pollutants, second-hand smoke, electronic waste, respiratory diseases, and cancer.

Some fishermen release harmful substances in the water to kill fish, but in some villages people are using that water. They are drinking it, and the harmful substances in the water will affect their bodies.

- Young adolescent boy in Nigeria

(a) LEUKEMIA: WHO also provides detailed guidance on leukemia and other cancers in the series “Cancer Control: Knowledge into Action: WHO Guide for Effective Programmes”,

Global Accelerated Action for the Health of Adolescents (AA-HAI) Implementation Guidance, 15Dec2016 DRAFT
which consists of six publications on planning, prevention, early detection, diagnosis and treatment, palliative care, and policy and advocacy (WHO 2006d; WHO 2006e; WHO 2007h; WHO 2007i; WHO 2008d; WHO 2008e). Each of these documents provides examples of priority interventions and categorizes them according to the available level of resources, i.e. core (with existing resources); expanded (with a projected increase in, or reallocation of, resources); and desirable (when more resources become available). Taking the example of a low-resource country in which less than 20% of children with acute lymphatic leukaemia have access to full treatment and over 80% die within five years, these guides recommend:

- Include palliative care medication, chemotherapy drugs, and antibiotics used for treating paediatric acute lymphatic leukaemia in the national essential medicines list (core).
- Improve quality and coverage of diagnostic, treatment, and palliative care services for acute lymphatic leukaemia in children, and mobilize further social support for patients and their families (expanded).
- Develop special strategies for increasing the adherence to treatment of children with acute lymphatic leukaemia (desirable). (WHO 2007i)

(b) ASTHMA: In HICs, many patients’ asthma is not well controlled, while in LMICs asthma management typically emphasizes the treatment of acute episodes of exacerbations instead of care for the disease and the prevention of acute episodes of exacerbations (WHO 2007g). Interventions to improve clinical care of adolescents with asthma prioritize increasing access to medicines and other cost-effective interventions, and upgrading standards and accessibility of care at different levels of the health care system (WHO 2013j). In addition to improvement of clinical management, educational programmes for the self-management of asthma in adolescents have been found to reduce absenteeism from school and the number of days with restricted activity.

Key to primary prevention of asthma is reducing the level of exposure to common risk factors, particularly tobacco smoke, frequent lower respiratory infections during childhood, and air pollution (WHO 2013j). The 2005 "WHO Air Quality Guidelines" offer global guidance on thresholds and limits for key air pollutants that pose health risks (WHO 2005d). At a structural level, national policies and investments supporting cleaner and more energy-efficient transport, housing, power generation, and industry, as well as better municipal waste management, would reduce key sources of urban outdoor air pollution (WHO 2016q). Reducing outdoor emissions from household coal and biomass energy systems, agricultural waste incineration, forest fires, and certain agro-forestry activities (e.g. charcoal production) also would reduce key rural and peri-urban air pollution sources in LMICs.

WHO has produced several publications focused on reducing household air pollution, particularly in LMICs where cooking and heating with biomass fuels and coal produces high levels of small particles, carbon monoxide, and hundreds of other pollutants (WHO 2010h; WHO 2016r). Many low-cost or no-cost approaches can reduce adolescent and general population exposure to indoor air pollution while meeting household energy needs and decreasing the amount of fuel needed. These include:

- switching from wood, dung, or charcoal to more efficient, modern, and less polluting fuels;
- locating a stove outside of a home or in a well-ventilated area;
- ventilating cooking areas through the use of eaves and smoke hoods; and
• changing behaviours, such as keeping children away from the smoking hearths, drying fuel wood before use, using lids on pots to shorten cooking time, and improving ventilation by opening windows and doors. (WHO 2010h; WHO 2016r)

GLOBAL STRATEGY ADOLESCENT HEALTH INTERVENTION

No. 19. Prevention, detection and management of anaemia, especially for adolescent girls. Iron supplementation where appropriate.

Example: IRON-DEFICIENCY ANAEMIA

A key aspect of iron-deficiency anaemia prevention and control is promotion of diets containing adequate amounts of bioavailable iron. Poor nutrition associated with deficiencies in folic acid, vitamin A, or vitamin B12 is often a contributing factor in populations living in LMICs (WHO 2001). Another common nutritional factor is a diet that is monotonous but rich in substances (phytates) which inhibit iron absorption (e.g. nuts, edible seeds, beans, legumes, and grains), so that dietary iron cannot be utilised by the body.

Section A3.6.2 in Annex 3 describes broad interventions to prevent and treat adolescent undernutrition in general, including iron-deficiency anemia. Actions to specifically prevent and treat iron-deficiency anaemia often begin with identifying and intervening to correct underlying disease causes and processes. Depending on the context and circumstances, iron-deficiency anaemia prevention and control programmes may also include:

• malaria control in endemic areas (e.g. chemoprophylaxis/intermittent preventative treatment, insecticide-treated nets, and vector elimination);
• periodic treatment with anthelminthic medicines without previous individual diagnosis, for all girls and women of childbearing age living in endemic areas;
• early prevention interventions targeting adolescent girls, especially in areas with high adolescent birth rates and early marriages;
• WASH interventions, in order to reduce nutritional losses incurred by infection and also to reduce inflammation; and
• a baseline epidemiologic evaluation of both haemoglobin and iron indices in areas where haemoglobinopathies and other inherited red cell disorders are likely to be prevalent, to establish the relative contributions of iron deficiency and non-iron deficiency to the overall burden of anaemia (WHO 2014o).

WHO recommends daily iron supplementation as a public health intervention in menstruating adult women and adolescent girls living in settings where iron-deficiency anaemia is highly prevalent (≥40% anaemia prevalence) (WHO 2016s). This is a preventive strategy for implementation at the population level, but if a menstruating woman or adolescent girl is diagnosed with anaemia, national guidelines for the treatment of anaemia should be followed.

GLOBAL STRATEGY ADOLESCENT HEALTH INTERVENTION

No. 20. Treatment and rehabilitation of children with congenital abnormalities and disabilities.

Example: CONGENITAL ANOMALIES

There are many different kinds of congenital anomalies and disabilities. Broadly, they can be categorized by: eye, ear, face, and neck; nervous, circulatory, respiratory, digestive, urinary,
or musculoskeletal system; genital organs; integument; chromosomal anomalies; and other conditions (WHO 2015u). Taking the example of sickle cell disease: most national policies and plans are inadequate to address the disease in Africa, where it is most prevalent. Appropriate facilities and trained personnel are scarce; and adequate diagnostic tools and treatment are insufficient (WHO 2011h).

In 2010, the WHO Regional Office for Africa published a strategy for a set of public health interventions to reduce the sickle cell disease burden (WHO AFRO 2010). The interventions focus on improving multiple areas of health care, including protocol development, comprehensive management, technical facilities, and training of workers, and establishment of patient support groups. In addition to such broad interventions, the strategy identifies supportive activities for adolescents as a priority, including:

- financial packages for case management
- early diagnosis and treatment of complications
- special transfusion regimens
- surgery as needed
- immunization
- prophylactic antibiotics, folic acid, and antimalarials
- special programmes for prenatal care, psychosocial, and professional support
- adaptive educational interventions. (WHO AFRO 2010)

3.7. MENTAL HEALTH, SUBSTANCE USE, AND SELF-HARM INTERVENTIONS

GLOBAL STRATEGY ADOLESCENT HEALTH INTERVENTION
No. 21. Care for children with developmental delays.
Example: AUTISM SPECTRUM DISORDERS

For adolescents with autism spectrum disorders, evidence-based psychosocial interventions, such as behavioural treatment, can reduce difficulties in communication and social behavior (WHO 2016v). These adolescents have the same health problems that affect the general population, but they may be more vulnerable to developing chronic conditions because of behavioural risk factors such as physical inactivity and poor dietary preferences, and they are at greater risk of violence, injury, and abuse. The positive role of parents, other family members, or guardians who are raising a developmentally disabled adolescent is critical in ensuring optimal developmental outcomes (WHO 2015w). However, this role can be challenging and caregivers frequently report experiencing feelings of inadequacy. Section A3.7.1.3 in Annex 3 lists points that a health care provider should address while engaging in psychoeducation with caregivers of an adolescent with a developmental disorder.

Institutionalization of adolescents with autism spectrum disorder or other psychosocial disabilities – i.e. having them live in a group setting away from their community, family, and home environments - causes them harm and denies them their basic human rights (WHO 2015x). This practice is most common in LMICs, where parents who do not have the resources to provide for their children may become desperate or may be advised to institutionalize their children with psychosocial disabilities. However, institutions are negative environments for children, especially those with psychosocial disabilities. Importantly, community services and support offer these adolescents and their families better outcomes and have been shown to be more cost-effective than institutionalization. Countries which currently place children and adolescents in institutional settings should
therefore shift policies towards to providing them with a range of services and support in the community instead.

**GLOBAL STRATEGY ADOLESCENT HEALTH INTERVENTION**

No. 22. Responsive caregiving and stimulation.

Example: **ANXIETY DISORDERS**

Psychological interventions, such as cognitive behavioural therapy, interpersonal psychotherapy, and caregiver skills training may be offered for the treatment of emotional disorders such as depression and anxiety (WHO 2015z). Face-to-face psychological treatment or guided self-help psychological treatment are likely to have better outcomes than unguided self-help, but the latter may be suitable for adolescents who either (a) do not have access to face-to-face psychological treatment or guided self-help psychological treatment or (b) are not willing to access such treatments. The adolescent’s family should be involved in the intervention, whenever appropriate.

Another strategy that has proven to be effective in preventing anxiety disorders focuses on strengthening adolescents’ emotional resilience and the cognitive skills to avoid the development of anxiety disorders. An example of an effective programme for children aged 7 to 16 years is the Australian FRIENDS programme, which has been widely used in schools, health centres, and hospitals (WHO 2004c). FRIENDS is a cognitive-behavioural programme of ten sessions that teaches children skills to cope with anxiety more effectively and builds emotional resilience, problem-solving abilities, and self-confidence. Other promising interventions include cognitive–behavioural therapy as an early intervention method to prevent post-traumatic stress disorder, and short-term cognitive workshops for those who have experienced a first panic attack (WHO 2004c).

**CASE STUDY 8. 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. 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:** WHO 2005e.

**GLOBAL STRATEGY ADOLESCENT HEALTH INTERVENTION**

No. 23. Psychosocial support and related services for adolescent mental health and wellbeing.

Example: **UNIPOLAR DEPRESSIVE DISORDERS**

Universal interventions to prevent depression among adolescents include school-based programmes focused on cognitive, problem-solving, and social skills, and interventions to reduce child abuse, neglect, and bullying (WHO 2004c). Selective interventions with
adolescents who are at relatively high risk of depression include those focused on coping with major life events (e.g. parental death or divorce), or those seeking to block the transgenerational transfer of depression and related problems (e.g. adolescents with depressed parents). Indicated interventions for adolescents with elevated levels of depressive symptoms, but no depressive disorder, include group work with at-risk adolescents to promote positive thinking, to challenge negative thinking styles, and to improve problem-solving skills, as well as anxiety prevention programmes, as an indirect strategy to reduce the risk of depression (WHO 2004c).

For mild to severe depression, if the adolescent is younger than 12 years, their parents should be provided with psychoeducation, psychosocial stressors should be addressed, and regular follow-up should be offered, but the adolescent should not be prescribed antidepressant medication (WHO 2016b). Section A3.7.1.4 in Annex 3 lists psychoeducation content for adolescent depression and other emotional disorders that should be provided in a non-specialized health setting (WHO 2015y). If the adolescent is 12 years old or older, the same interventions should be provided, and if available, interpersonal psychotherapy, cognitive behavioural therapy, or behavioural activation should be considered. Also, if available, adjunct treatments such as a structured physical activity programme, relaxation training, or problem-solving treatment may be beneficial.

Medication for adolescents should be prescribed when clinically indicated, and generally as part of a more comprehensive management plan (WHO 2016b). For adolescents with moderate-severe depressive disorder, and for whom psychosocial interventions have proven ineffective, fluoxetine may be offered, but not other selective serotonin reuptake inhibitors or tricyclic antidepressants. The intervention should only be offered under supervision of a specialist who is trained in prescribing antidepressants, including side-effects monitoring. Adolescents on fluoxetine should be monitored closely for suicide ideas or behaviour.

Depressive disorders often have high levels of comorbidity with other mental health problems, such as eating disorders, so additional types of preventive interventions may be appropriate as part of a comprehensive programme. Section A3.6.2 in Annex 3 describes eating disorder prevention interventions.

GLOBAL STRATEGY ADOLESCENT HEALTH INTERVENTION

No. 24. Parent skill training, as appropriate, for managing behavioural disorders in adolescents.

Example: CONDUCT DISORDERS

Some challenging or disruptive behavior is appropriate in adolescence. For young adolescents (aged 10-12 years), this includes avoidance of or delay in following instructions, complaining or arguing with adults or other children, and occasionally losing their temper (WHO 2016b). For adolescents aged 13 and older, it includes testing rules and limits, saying the rules and limits are unfair or unnecessary, and occasionally being rude, dismissive, argumentative, or defiant with adults. Section A3.7.1.5 in Annex 3 outlines guidance for improving adolescent behavior which health care workers in non-specialized health settings can provide to parents. This guidance can be provided to all carers who are having difficulty with an adolescent’s behavior, even if a behavioural disorder is not suspected.

Behavioural interventions for adolescents, and caregiver skills training, may be offered for the treatment of behavioural disorders across a range of contexts, including the clinic,
home, or school (WHO 2015z). Additionally, behavioural and cognitive behavioural interventions can be effective in improving school performance (WHO 2015AA). There is value in intervening early to reduce adverse outcomes associated with behavioural disorders.

**GLOBAL STRATEGY ADOLESCENT HEALTH INTERVENTION**

*No. 25. Prevention of substance abuse.*

**Examples: ALCOHOL AND DRUG USE DISORDERS**

WHO’s 2010 Global Strategy to Reduce the Harmful Use of Alcohol outlines ten areas for policy and intervention, all of which are directly or indirectly relevant to adolescents (WHO 2010b). Some of these with particular relevance for adolescents are:

- Mobilize communities to prevent the selling of alcohol to, and consumption of alcohol by, under-age drinkers.
- Develop and support alcohol-free environments, especially for youth and other at-risk groups.
- Establish an appropriate minimum age for purchase or consumption of alcoholic beverages and other policies to prevent sales to, and consumption of, alcoholic beverages by those below the legal age, and introduce mechanisms for placing liability on sellers and servers.
- Implement an effective and efficient system for taxation matched by adequate tax collection and enforcement, because young people are sensitive to changes in the price of drinks.
- Protect young people from the content of alcohol marketing and the amount of their exposure; this is a particular concern in LMICs with a currently low prevalence of alcohol consumption that are being targeted as new markets.
- Reduce the density of alcohol outlets and the hours or days when alcoholic beverages can be sold, because for young people these initiatives are associated with decreased levels of alcohol consumption, assault, and other harm such as homicide, self-inflicted injury, and road traffic injuries.

In the absence of structural and environmental initiatives, educational interventions have been found to have little to no influence over adolescent use of alcohol or other psychoactive drugs, although they may be effective at increasing adolescent knowledge of related risks (WHO 2002c; WHO 2004c; WHO WPRO 2015). School-based educational programmes are most useful during the period when most students are experiencing initial exposure to psychoactive substances (WHO 2002c). Other possible educational programs include stand-alone mass media drink–driving campaigns (with no enforcement); placement of warning labels and signs, including on bottles; social marketing; and online education through social media and stand-alone websites (WHO WPRO 2015).

Potential community actions to prevent adolescent psychoactive drug use include community mobilization and awareness-raising, and intervention programmes for out-of-school adolescents who live or work on the streets. In 2000, WHO published a training package for people working with street children focused on substance use and SRH. Module 3 (“Understanding Substance Use Among Street Children”) explains the types of substances street children use (e.g. alcohol, nicotine, opioids, hallucinogens, cannabis, hypnosedatives, stimulants, and inhalants); the ways in which street children take them; and the short-term and long-term effects and consequences of their use.
GLOBAL STRATEGY ADOLESCENT HEALTH INTERVENTION
Examples: ALCOHOL AND DRUG USE DISORDERS

The 2016 WHO mhGAP intervention guide provides both emergency and general guidance on assessment and management of different patterns of alcohol and drug use (WHO 2016b). This guide outlines brief psychosocial intervention techniques for use in non-specialized health settings; the points that should be addressed for adolescents are summarized in Section A3.7.1.6 in Annex 3. Other WHO resources provide more in-depth guidance on this approach (WHO 2010l; WHO 2010m). The 2016 WHO mhGAP intervention guide also describes long-term alcohol and drug use interventions, e.g. self-help groups and harm-reduction strategies. Pharmacotherapy interventions are detailed, e.g. for management of withdrawal, continued treatment, and relapse prevention (WHO 2016b).

GLOBAL STRATEGY ADOLESCENT HEALTH INTERVENTION
Example: SELF HARM, INCLUDING SUICIDE

Some girls consume psychoactive drugs, and others cut themselves, and others end up killing themselves, because they believe that no one loves them, no one. They think, “They reject me at home, they reject me at school”, and they come up with this idea that no one loves them.

- Older adolescent girl in an urban settlement in Columbia

Interventions to prevent suicide among adolescents and the general population are summarized by ecological level below:

1. Structural and Organizational Levels:
   - Mental health policies
   - Policies to reduce harmful use of alcohol
   - Surveillance of suicide and suicide attempts
   - Improved access to health care
   - Restriction of access to means
   - Responsible media reporting
   - Electronic media strategies for service delivery
   - Raising awareness about mental health, substance use disorders, and suicide

2. Community and Interpersonal Levels:
   - Interventions for vulnerable groups with a higher risk of suicide
   - Gatekeeper training
   - Crisis helplines

3. Individual Level:
   - Assessment and management of suicidal behaviours
   - Assessment and management of mental and substance use disorders
   - Follow-up and community support
These and other interventions to prevent adolescent suicide are described in detail in Section A3.7.2 in Annex 3, which also provides three additional country case studies.

### 3.8. HUMANITARIAN AND FRAGILE SETTING INTERVENTIONS

The Global Strategy broadly defines two evidence-based health interventions for women’s, children’s and adolescents’ health which focus on humanitarian and fragile settings. These are:

1. Develop and use a health and humanitarian risk assessments approach to identify priority needs and focus interventions.
2. In the event of humanitarian emergency, ensure deployment of essential health interventions. Adapt, implement, and co-ordinate use of the minimum initial service package (MISP). (EWEC 2015)

Table 3.3 summarizes key adolescent health interventions in humanitarian and fragile settings. These interventions are described in more detail in Section A3.8 in Annex 3, which includes three additional country case studies.

Table 3.3. Key adolescent health interventions in humanitarian and fragile settings.

<table>
<thead>
<tr>
<th>Area of Intervention</th>
<th>Further Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nutrition</td>
<td>Assess conditions and ensure adequate rations for adolescent population groups according to age, gender, weight, physical activity levels, and other key factors, considering both energy and micronutrient requirements (UNHCR et al. 2004; Sphere Project 2011).</td>
</tr>
<tr>
<td>Disability and Injury</td>
<td>Ensure core health services to support adolescents with disabilities in an emergency, including essential medicines in the appropriate dosages and formulations (WHO 2013o).</td>
</tr>
<tr>
<td>Violence</td>
<td>Provide medical screening of former child soldiers, and clinical management and community-based psychosocial support to sexual violence survivors (WHO 2002e; WHO 2004e; WHO 2012g; WHO et al. 2016).</td>
</tr>
<tr>
<td>Sexual and Reproductive Health</td>
<td>Initially implement minimal initial SRH service package and build a more comprehensive response, including family planning and STI programmes for adolescents (Inter-Agency Standing Committee 2010).</td>
</tr>
<tr>
<td>WASH</td>
<td>Ensure safe access to, use, and maintenance of toilets; materials and facilities for menstrual hygiene management; water and soap or ash for handwashing; the hygienic collection and storage of water for consumption and use; hygienic food storage and preparation; and efficient waste management (House et al. 2012; WHO 2015CC).</td>
</tr>
<tr>
<td>Mental health</td>
<td>Promote normal recreational activities for adolescents, re-start of their schooling, and involvement in concrete, purposeful, common interest activities (WHO 2003f). Employ “Psychological First Aid” techniques to generally support adolescents and their parents (WHO et al. 2011d). For first-line management of adolescent mental, neurological, and substance use conditions by non-specialist health-care providers, follow “mhGAP Humanitarian Intervention Guide” (WHO and UNHCR 2015).</td>
</tr>
</tbody>
</table>

CASE STUDY 9. The occupied Palestinian territory’s youth peer-to-peer counselling during a protracted crisis.
The occupied Palestinian territory has experienced a protracted crisis for decades, which contributed to 1.9 million out of its 4.5 million population being in need of humanitarian assistance in 2015 (WHO 2015DD). Violence, closures, restrictions, and economic hardship are part of adolescents’ daily lives (UNICEF 2004). For some adolescents this has resulted in acute psychological problems, such as apathy, self-doubt, withdrawal, and a sense of hopelessness. However, Palestinian youth have very few opportunities for recreation or constructive participation in community development, which might help improve their mental health (UNICEF 2004).

In response to this situation, UNICEF and the Palestinian Youth Association for Leadership and Rights Activation developed a peer-to-peer counselling programme. University student volunteers were trained to provide psychosocial support, mentoring, and recreational activities for adolescents in schools and community centres. Following the eight-day training, the volunteers conducted a series of school-based psychosocial support sessions, working most closely with adolescents in violence-stricken areas. The school-based sessions provided a peaceful and reassuring outlet for participants to express their views, opinions, hopes, and fears, and to find ways to deal with their stress. Afterwards, adolescents were given the opportunity to express themselves in constructive and creative ways. For example, adolescents planned their own small-scale projects to improve their schools and neighbourhoods with the support of the volunteers. A telephone “hotline” operated by university students also was established to provide one-on-one psychosocial support to adolescents, especially during times of restricted mobility and curfews. The adolescents and university students also produced a Youth Times newspaper with a circulation of 100,000, and a weekly youth TV programme. Qualitative evaluation of the first years of the programme found it had a positive impact on both the volunteers and participants.


References [Section 3]


Centers for Disease Control and Prevention. 2015. HPV, also known as Human Papillomavirus: Diseases and the vaccines that prevent them, updated July 2015.


Inter-Agency Standing Committee. 2010. Sexual and reproductive health (SRH) including HIV: From minimum initial response to comprehensive services.


ITU. 2016b. Guidelines for parents, guardians and educators on child online protect.


UNFPA. 2007. UNFPA framework for action on adolescents and youth.


UNICEF and Save the Children. 2011. Every child’s right to be heard: A resource guide on the UN Committee on the Rights of the Child General Comment No.12.
WHO et al. 2016. INSPIRE: Seven Strategies for Ending Violence Against Children.
WHO WPRO. 2016. Be smart: Drink water: A guide for school principals in restricting the sale and marketing of sugary drinks in and around schools.
WHO. 2002e. World report on violence and health.
WHO. 2003c. Family life, reproductive health and population education: Key elements of a health-promoting school. WHO/NPH.
WHO. 2003e. Intervening with perpetrators of intimate partner violence: A global perspective.
WHO. 2003f Mental health in emergencies: Mental and social aspects of health of populations exposed to extreme stressors.
WHO. 2004e. Clinical management of rape survivors: Developing protocols for use with refugees and internally displaced persons.


WHO. 2005e. Child and adolescent mental health policies and plans.


WHO. 2006c. Married adolescents: No place of safety.


WHO. 2007c. Youth and road safety.


WHO. 2007f. Malaria prevention and control: An important responsibility of a health-promoting school.


WHO. 2010b. Global strategy to reduce the harmful use of alcohol.

WHO. 2010c. Strengthening care for the injured: Success stories and lessons learned from around the world.

WHO. 2010d. Preventing intimate partner and sexual violence against women: Taking action and generating evidence.


WHO. 2010h. Healthy environments for healthy children: Key messages for action.

WHO. 2010k. Global recommendations on physical activity for health.
WHO. 2001f. The Alcohol, Smoking and Substance Involvement Screening Test (ASSIST):
WHO. 2001m. The ASSIST-linked brief intervention for hazardous and harmful substance
WHO. 2011a. mHealth: New horizons for health through mobile technologies: Based on the
findings of the second global survey on eHealth.
WHO. 2011d. WHO guidelines on preventing early pregnancy and poor reproductive
outcomes among adolescents in developing countries.
WHO. 2011h. Community genetics services: Report of a WHO consultation on community
genetics.
WHO. 2012c. WHO recommendations for routine immunization: A user’s guide to the
summary tables, updated 4th October 2012.
WHO. 2012d. Cervical cancer prevention and control costing (C4P) tool user’s guide.
WHO. 2012g. Do’s and don’ts in community-based psychosocial support for sexual violence
survivors in conflict-affected settings.
WHO. 2013b. Responding to intimate partner violence and sexual violence against women:
WHO clinical and policy guidelines.
WHO. 2013d. Sexually transmitted infections (STIs): The importance of a renewed
commitment to STI prevention and control in achieving global sexual and reproductive
health.
WHO. 2013e. HIV and adolescents: Guidance for HIV testing and counselling and care for
adolescents living with HIV: Recommendations for a public health approach and
considerations for policy-makers and managers.
WHO. 2013f. Consolidated guidelines on the use of antiretroviral drugs for treating and
preventing HIV infection, 2016: Recommendations for a public health approach, second
edition.
WHO. 2013g. Roadmap for childhood tuberculosis: Towards zero deaths.
WHO. 2013m. Implementation tools: Package of essential noncommunicable (PEN) disease
WHO. 2014i. Guidance for national tuberculosis programmes on the management of
tuberculosis in children.
WHO. 2014j. Principles and considerations for adding a vaccine to a national immunization
programme: From decision to implementation and monitoring.
WHO. 2014k. Preventing diarrhoea through better water, sanitation and hygiene: Exposures
and impacts in low- and middle-income countries.
WHO. 2014l. Water safety plan: A field guide to improving drinking-water safety in small
communities.
WHO. 2014m. Global status report on noncommunicable diseases.
2014.
WHO. 2015CC. Improving nutrition outcomes with better water, sanitation and hygiene: Practical solutions for policies and programmes.
WHO. 2015i. What’s new in adolescent treatment and care, November 2015.
WHO. 2015k. HIV and young people who inject drugs: A technical brief.
WHO. 2015l. HIV and young men who have sex with men: A technical brief.
WHO. 2015m. HIV and young transgender people: A technical brief.
WHO. 2015s. Water, sanitation and hygiene in health care facilities: Status in low and middle income countries and way forward.
WHO. 2015w. mhGAP CH 1: Caregiver skills training for the management of developmental disorders [Updated 2015].
WHO. 2015y. mhGAP CH 3: Psychosocial interventions, treatment of emotional disorders [Updated 2015].
WHO. 2016c. WHO guidelines on the management of health complications from female genital mutilation.
WHO. 2016h. Table 1: Summary of WHO position papers - Recommendations for routine immunization (updated 21 May 2016).
WHO. 2016m. Sanitation safety planning: manual for safe use and disposal of wastewater, greywater and excreta.
WHO. 2016o. Children’s environmental health.
WHO. 2016r. Burning opportunity: Clean household energy for health, sustainable development, and wellbeing of women and children.
WHO. 2016s. Guideline: Daily iron supplementation in adult women and adolescent girls.
4. NATIONAL PRIORITIZATION

**KEY MESSAGES [Section 4]:**

1. Historically, most adolescent health services have been subsumed under those for children or adults. By the 1980s, some countries began developing and implementing adolescent-specific national health programming, mainly due to growing awareness of adolescent SRH problems. In recent decades, it has become increasingly evident that other adolescent health concerns also warrant adolescent-specific national programming.

2. The nature, scale, and impact of adolescent health needs differ between countries, so it is important for each country to assess its own particular adolescent health situation and resources before determining which conditions and interventions to prioritize within national programming. Three key steps in that process are an adolescent health needs assessment, a programme and policy landscape analysis, and prioritization exercises.

3. A needs assessment takes stock of the adolescent health situation, considering the current status as well as trends and inequities in exposure to risk factors, health, and health service access. It helps identify which conditions have the greatest impact on quality of life and injury and disease burdens, both among adolescents in general and among those most at risk for health problems.

4. A landscape analysis reviews existing adolescent health programmes and policies as well as related legislation, country capacity, and resources. It should also include review of current global guidance on which interventions are the most evidence-based and effective to address the conditions identified in the needs assessment.

5. Prioritization exercises identify (a) the highest priority adolescent conditions for focused efforts; and (b) the most evidence-based and feasible interventions and delivery mechanisms to address them. This process takes into consideration the most vulnerable adolescents, the urgency and scale of particular burdens, the existence of effective and appropriate interventions to reduce them, and the availability of resources and capacity to implement or expand priority interventions equitably.

6. Over time, it is important for countries to reassess national adolescent health programming priorities in this way at intervals, in order to best meet changing adolescent health needs.

Until recent decades, most adolescent health services were subsumed under those for children or adults in different sectors within countries, including adolescent health promotion, risk reduction, and clinical services (Millstein et al. 1994; Alderman et al. 2003). By the 1980s, however, countries began developing and implementing adolescent-specific national health programming, partly due to growing awareness of the great SRH problems faced by adolescent populations. The sensitive and sometimes controversial nature of puberty and adolescent sexuality meant that these issues often were inadequately addressed in existing child and adult services. Efforts varied greatly within and between countries and regions, but over the years many countries have succeeded in developing and implementing at least basic SRH education in schools at scale, and the provision of more limited youth-friendly SRH services and commodities, mostly through health facilities.
Adolescent SRH programming remains critically important in all countries, and will continue to be so in the future to best meet the needs of each new cohort of adolescents. However, in recent decades it has become increasingly evident that other adolescent health concerns also have been neglected and warrant country-level programming (WHO 1998). These include the causes of disease and injury outlined in Section 2, as well as broader social, educational, and economic issues related to adolescent health, development, and wellbeing. These issues may:

- be specific to adolescents (e.g. difficulties with psychosocial development),
- affect adolescents disproportionately (e.g. maternal mortality, STIs),
- have major implications for adolescents’ future health (e.g. tobacco use, poor diet), or
- affect adolescents less than small children, but more than adults (e.g. malnutrition, malaria). (WHO 1998)

Many governments have recognized that diverse and complex adolescent health needs require coordinated, multi-sectoral, country-level programming. Some have undertaken situation analyses to identify the most urgent adolescent health concerns and determinants, as well as the most at-risk adolescent populations within their countries, in order to prioritize the allocation of resources to better meet their needs (WHO EMRO 2012). To assist national governments in this process, EWEC has drafted a document entitled, “Technical Guidance for Prioritizing Adolescent Health Interventions” (EWEC Working Group #1 2016). That document outlines steps which should be the basis for strategic decision-making on national adolescent health programming, including:

- **Step 1: A needs assessment** takes stock of the adolescent health situation, considering the current status as well as trends and inequities in exposure to risk factors, health, and health service access. It helps identify which conditions have the greatest impact on adolescent disease burdens and quality of life in a particular country, both among adolescents in general and among those most at risk for health problems. It also accounts for differences between girls and boys and between younger and older adolescents.

- **Step 2: A landscape analysis** reviews existing adolescent health programmes and policies as well as related legislation, capacity, and resources within the country. It should also examine the barriers to services that vulnerable subpopulations of adolescents may face. In addition, the landscape analysis should review current global guidance on which interventions are the most evidence-based and effective to address the conditions identified in the needs assessment.

- **Steps 3: A prioritization exercise** identifies (a) the highest priority adolescent conditions for focused efforts; and (b) the most evidence-based and feasible interventions and delivery mechanisms to address them. This process takes into consideration the most vulnerable adolescents, the need for gender-responsive programming, the urgency and scale of particular burdens, the existence of effective and appropriate interventions to reduce them, and the availability of resources and capacity to implement or expand priority interventions equitably.

Time, human resource capacity, and funding often will dictate the level and depth that these steps will take. Each step is described more after the case study below.

In 2009, the Zambian Ministry of Health and its partners conducted an adolescent health situation analysis to support appropriate national policy, planning, and response. The needs assessment identified the main adolescent health determinants, risk factors, and disease burdens as general health problems (e.g. malaria; TB and other non-pneumonia respiratory infections; diarrhea; and undernutrition); HIV, syphilis, and other STIs; early and unprotected sex; sexual abuse; early marriage and pregnancy; drug and alcohol abuse; accidents and violence; unsafe cultural practices; and mental health problems. The landscape analysis also detailed existing government efforts to provide adolescent health services, such as development of a national youth policy; establishment of a youth ministry; introduction of legislation addressing sexual, drug, and alcohol abuse; establishment of adolescent-friendly health services in pilot districts; and strengthening of the adolescent health institutional framework within the Ministry of Health organizational structure. The adolescent health situation analysis report that summarized these findings became the basis for the Ministry of Health’s Adolescent Health Strategic Plan (2011-2015), which outlined strategies related to service delivery, health workforce, medical products, health information, healthcare financing, and leadership and governance. For example, the plan called for improved linkages between the ministries of health and education, especially related to health promotion in schools, as well as scale-up of the existing adolescent-friendly health service programme, including improved health worker training and supervision.


4.1. NEEDS ASSESSMENT

A national adolescent health needs assessment involves a systematic review of the health status and wellbeing of adolescents in that country (EWEC Working Group #1 2016). When possible, this assessment should include a review of available data disaggregated by sex, age subgroups, education level, school status, literacy level, marital status, location (e.g. urban vs. rural), living arrangements, and other variables that may be important within the local context, e.g. ethnicity. It is critical that the reviewers attempt to find and consider all possible data with an mind open to what the best evidence suggests, even if it goes against their preconceived ideas, or those which are widely reported. For example, if a researcher begins the process by limiting it to certain health conditions (e.g. SRH, nutrition, and unintentional injury), the search may miss other conditions which have equal or greater impact on adolescent mortality and morbidity (e.g. abuse or mental health problems).

Based on the most recent, accurate, and representative research, the needs assessment should identify the main causes of adolescent mortality and morbidity, disease prevalence, and contributing risk and protective factors. It should also consider relevant issues that may not be captured well in those measures and existing research, such as levels of female genital mutilation, non-HIV sexually-transmitted infections, employability, and household income. Specifically, the needs assessment should examine:

- the main health challenges affecting adolescents;
- the adolescent behaviors most proximately linked to these health challenges;
- the adolescent behaviors that could lead to and result in health problems in the future (e.g. risk factors including tobacco consumption, poor nutrition);
harmful practices affecting adolescents (e.g. levels of child marriage, female genital mutilation);

- the socio-cultural context of adolescents’ lives, including the protective and risk factors at various ecological levels and in different institutions (e.g. schools, health services, employment) that can influence the above issues;

- the influence of gender norms, roles, and relations on adolescent health of both girls and boys; and

- the supply and demand barriers experienced by adolescents with regard to access to quality services and financial protection. (EWEC Working Group #1 2016)

One important objective of the needs assessment is to identify subgroups of adolescents who may be in greatest needs of services and programmes. Section 2 of this document provides an example of an adolescent health needs assessment at a global level.

The government should provide safe places, like public libraries. I do not know why I always feel the government takes more care of boys than girls. It should carry out activities that are good for us also.

- Young adolescent girl in the occupied Palestinian territories

The methodology of a country’s adolescent health needs assessment can include desk review of available national and sub-national studies, peer-reviewed articles, and other country assessments; analysis of existing country-level disaggregated data; and focus group discussions and interviews with key stakeholders. Key stakeholders include adolescents and young adults, parents and families, community members, religious leaders, government representatives (e.g. from health, education, and social protection sectors), NGO and civil society representatives, UN technical organizations, and bilateral and donor organizations.

Figures 4.1 and 4.2 provide examples of data which can be compiled in a country-level adolescent health needs assessment, drawing on research in Nigeria from Global Burden of Disease studies between 1990 and 2013, and other sources (Patton et al. 2016). Figure 4.1 demonstrates that 10-24 year old Nigerian females carry a greater burden of SRH problems than their male counterparts, while the reverse is the case for unintentional injuries. In both groups, infectious diseases are declining over time, but still represent a great burden. The breakdown of specific results for those broad health categories highlight conditions which might be in greatest need of adolescent health programming in Nigeria, e.g. malaria and neglected tropical diseases predominate among infectious diseases, as maternal disorders do among female SRH problems. Figure 4.2 instead summarizes social determinants and risks related to adolescent health and wellbeing. It demonstrates that social determinants of health (e.g. early marriage and childbirth, under-education, and unemployment) have all improved over time, but the current levels remain unacceptably high, e.g. average years of education are below the ten recommended for basic education. Figure 4.2 also shows that, while some health risks are declining among 10-24 year olds (e.g. tobacco smoking), others have increased in recent decades (e.g. obesity and overweight; binge drinking). In addition, substantially higher proportions of Nigerian girls than boys report experience of sex before the age of 15 years, no condom use at last high risk sex, and intimate partner violence.
Figure 4.1. Disease burdens among 10-24 year old males and females in Nigeria, based on 1990-2013 GBD studies.

Key: (A) DALYs per 100,000 10-24 year olds, by cause and sex, 1990-2013. (B) Proportion of DALYs across nine categories by sex in 10-24 year olds, 1990-2013. (C) Deaths per 100,000 10-24 year olds per year, 1990-2013. (D) Causes of DALYs in 10-24 year olds, 2013, by sex. DALYs = disability-adjusted life-years. NTD = neglected tropical diseases. PEM = protein energy malnutrition.

Figure 4.2. An overview of Nigeria’s health profiles for 10-24 year olds.

Key: (A) Social determinants: (i) currently married females aged 15–19 years; (ii) birth rate in adolescent girls; (iii) mean years of education attained in 15–24 year olds; and (iv) unemployment in 15–24 year olds. (B) Health risks for 10-24 year olds: (i) overweight and obesity; (ii) daily tobacco smoking; (iii) binge drinking in the past 12 months; (iv) lifetime use of injectable drugs; (v) reporting sex before age 15 years (2004–14); (vi) reporting condom use at last occasion of high risk sex (2004–14); (vii) intimate partner violence (2013); and (viii) unmet need for contraception in females in a married or in civil union (2009–14). DALYs=disability-adjusted life-years. NCD=non-communicable diseases.


### 4.2. LANDSCAPE ANALYSIS

A national adolescent health landscape analysis fulfils several purposes:

- First, a landscape analysis should identify and map existing programmes, legislation, policies, and projects that address adolescent health and development, as well as the results and outcomes of these programmes. For example, this review should include laws about the age of marriage, and access to family planning by married and unmarried minors.

- Second, a landscape analysis should identify the stakeholders and organizations involved in planning, managing, implementing, and monitoring and evaluating these activities at the national and sub-national level. It should also identify the systems that are in place to support capacity development, supportive supervision, coordination, and other planning and management functions. Crucially, it should examine how adolescents and youth participate in and contribute to these efforts, and the systems or platforms in place for them to do so.
Third, the landscape analysis should identify existing and potential sources of financing (both domestic and international) and current budgetary allocations, especially considering how they meet the required needs.

Fourth, the landscape analysis should review current global adolescent health intervention recommendations, and particularly those which have a strong evidence base, so national governments can assess which existing programmes should be maintained or strengthened based on evidence of effectiveness, and which possibly should not be. (EWEC Working Group #1 2016)

At the country level, a landscape analysis assesses what is being done by the government, NGOs, and CSOs to improve adolescent health and to respond to social, economic, and other determinants of adolescents’ health problems. It should include coverage studies of the reach and quality of existing programmes and services. Like the needs assessment, the landscape analysis can involve a desk review, field visits, and interviews and focus group discussions with young people and other key informants. Key informants can explain existing programme challenges and successes, perceptions of needs and services, and the capacity and interest for expanded work on adolescent health.

The draft EWEC guidance document summarizes important questions to address in such a landscape analysis, including:

- the extent to which the national health plan integrates adolescents in its goals and programming;
- specific laws or policies that may impede adolescents’ access to health services;
- gaps in the delivery of programmes and services;
- scale, scope, coverage, and evidence of impact of existing adolescent health programmes in the country;
- how interventions in relevant sectors are targeted to reach particular groups of adolescents by age, sex, location, education level, and other sociodemographic variables;
- the level of funding to existing programmes and how available funds are allocated;
- whether currently-funded activities are aligned with evidence-based practices; and
- the extent to which youth are involved in the design, implementation, and monitoring of the specified programmes.

Returning to the example of Nigeria, a country adolescent health landscape analysis might highlight its low density of health workers and need for scale-up of health service coverage related to adolescent maternal health, contraception, HIV treatment, treatment for other infectious diseases, and chronic physical problems (Patton et al. 2016). The assessment might also note that certain conditions (e.g. road injury, obesity) are increasing in prevalence among adolescents and may require more targeted policy, legislative, and programmatic responses, and that education sector capacity-building and expansion could be critical to implementing adolescent health promotion efforts at scale.

### 4.3. PRIORITIZATION EXERCISE

Steps 3 of a country’s adolescent health situation analysis involves a prioritization exercise to identify which conditions to target, and which set of interventions to employ in targeting them (EWEC Working Group #1 2016). This process of strategically narrowing the focus of adolescent health interventions is necessary because young people aged 10-19 years represent such a large and diverse population with many needs. Given governments often
face significant resource constraints, they may need to make difficult choices to effectively address top priorities.

The prioritization process requires a systematic approach and should use a transparent set of criteria. All relevant stakeholders should be consulted in a structured manner. The draft EWEC guidance document suggests governments consider the following criteria and any others they deem important in identifying priority adolescent vulnerabilities and health issues:

1. **Magnitude of the issue**: Resources must be directed at the main causes of death and illness/injury, but also must go beyond this to address behaviours and exposures that could affect adolescents’ health now and in the future, using a life course approach.

2. **Groups of adolescents most affected**: All adolescents have health-related needs and can experience difficulties, but not all are equally vulnerable to health and social problems. Some adolescents have overlapping vulnerabilities that make them particularly at risk of the poorest health outcomes (e.g. low education, impoverishment, and living in communities with high rates of child marriage).

3. **Availability of effective interventions**: It is important that scarce resources be used to deliver interventions that have the highest chance of effectiveness for the subpopulations of adolescents that need them the most. Proposed interventions should be guided by the strongest available evidence, recognizing that research is on-going to identify the most effective interventions and ways to deliver them.

4. **Feasibility of delivering interventions**: Social, economic, and cultural constraints, including lack of recognition for adolescents’ rights, may make it difficult to deliver certain interventions. Priority setting must be based on a careful and pragmatic analysis of the feasibility of delivering interventions in the particular country with fidelity and at scale.

5. **Potential to go to scale**: An assessment of current and needed capacity to deliver the interventions is necessary. Strong government and community ownership and political will help drive expansion. Costing exercises can inform overall resource needs, and how plans can be implemented in a phased approach.

Returning to the Nigerian example described in Sections 4.1 and 4.2, possible priority health actions for 10–24 year olds include:

- sexual and reproductive health (e.g. CSE; promotion of condom use and voluntary medical male circumcision; contraception and maternal health services; HIV testing, treatment, and care; and enforcement of legislation prohibiting child marriage);
- infectious diseases (e.g. access to quality health services, vaccinations and bed net provision);
- improved WASH and nutrition (e.g. school health programmes);
- unintentional injury (e.g. legislation for graduated licensing, motorcycle helmet use, speed control, pedestrian safety measures, and alcohol and driving control; access to high quality trauma care); and
- physical disorders and non-communicable disease risks (e.g. adolescent-friendly health services; prevention of overweight through taxation of unhealthy foods, restriction of fast food advertising, and promotion of physical activity) (Patton et al. 2016).
The prioritization process should include development of a logic model that links planned interventions to the determinants, behaviours, and health outcomes they intend to affect within the particular country context (Kirby 2004). It should result in a strategy that includes and identifies a package of priority interventions, a set of mechanisms to deliver them, the means available to deliver them, and a monitoring and evaluation plan (EWEC Working Group #1 2016). The health sector alone cannot be responsible for all of the policies and programmes that will need to be implemented, but it can play a lead role in the multi-sectoral response, facilitating and mobilizing the essential actions of other sectors, strengthening technical support and coherence, and disseminating epidemiological information and the evidence base for action.

Critically, over time it is important for countries to re-visit this three step process of needs analysis, landscape analysis, and prioritization, in order to best meet changing adolescent health needs. In addition, there may be times when a country or region needs to implement rapid and focused adolescent health prioritization exercises, as in the event of a humanitarian crisis. Box 4.1 provides an example of how to conduct an adolescent SRH situation analysis in humanitarian and fragile settings.

**Box 4.1. Adolescent sexual and reproductive health situation analysis in humanitarian and fragile settings.**

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

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

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

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

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

**Source:** Save the Children and UNFPA 2009.
Annex 4 provides additional information for consideration in national prioritization of adolescent health programming. Specifically:

- **Section A4.1** describes additional resources to support national prioritization processes, including a manual for health planners and researchers conducting a rapid assessment of adolescent health needs (WHO WPRO 2001), and a regional guide on conducting an adolescent health situation analysis (WHO EMRO 2011).

- **Section A4.2** describes three additional case studies of countries which have implemented adolescent health needs assessments, landscape analyses, and/or prioritization exercises to inform their national programming.

- **Section A4.3** draws on country-specific adolescent mortality data to illustrate how individual countries - even neighbouring countries within the same region – may have very different priorities based on the available data.

---

**References [Section 4]**


5. NATIONAL PROGRAMMING

KEY MESSAGES [Section 5]:

1. Promoting an adolescent health focus in all policies as part of the routine strategic and operational planning of the health and other relevant sectors should be a key priority. Adolescent-specific projects should not replace the obligation of sectors to systematically, continuously, and sustainably improve their response to the needs of adolescents.

2. The health sector should systematically participate in the strategic and operational planning of other sectors to ensure that an “Adolescent Health in All Policies (AHiAP)” approach is being practiced in policy formulation, implementation, monitoring, and evaluation. AHiAP could be facilitated by establishing a national adolescent health interest group that includes youth-serving and youth-led advocates as well as representatives from the highest level of the government.

3. To guarantee on-going, dedicated attention to adolescent health issues within the health sector, countries may consider mandating an adolescent health focal point in the Ministry of Health, with responsibilities for championing adolescent health within the ministry, coordinating an adolescent health focus in all health programmes, and serving as a liaison person for intersectoral action.

4. In many countries, health systems may not be mature enough to routinely adopt an adolescent health focus in their work, so consideration may need to be given to establishing a national adolescent health programme, with a broad scope across health priorities. In such a case, the adolescent health focal point in the Ministry of Health will also be the coordinator of the national adolescent health programme.

5. Investing in school health is a fundamental priority for intersectoral programmes. Countries that do not have school health programmes may consider establishing them, and countries that do have school health programmes should continuously improve them to align with existing evidence of effectiveness and emerging priorities.

6. Ensuring healthy lives and promoting wellbeing for all at all ages (SDG no. 3), universal health coverage, and leaving no one behind should be key considerations in programming for adolescent health. An equity lens should inform planning at all stages of programming, from identifying goals, targets, objectives and vulnerable populations, through to defining indicators to monitor achievements and plan interventions, services, and activities.

As noted in Section 1, the Global Strategy for Women’s, Children’s and Adolescents’ Health and its Operational Framework identify nine Action Areas and corresponding Ingredients for Action as critical to achieving the Global Strategy’s survive, thrive, and transform goals (Appendix I in Annex 1) (EWEC 2015; EWEC 2016). This section describes how these actions might be implemented in the context of national adolescent health programming (Figure 5.1).
5.1. A LOGICAL FRAMEWORK FOR TRANSLATING PRIORITIES INTO PLANS AND PROGRAMMES

National programming, as defined here, refers to the stage of a sector’s planning cycle in which identified priorities are translated into plans. Section 4 of this document provides guidance on how to identify priorities for programming, and Section 3 summarizes evidence-based policies and interventions for each of the priorities that might be selected. Programming is about translating evidence-based interventions for priority problems into actions and results. It involves re-organizing existing financial, human, and managerial resources and services to achieve better outcomes for the selected priorities. To successfully translate intervention priorities into results, programming should take a systems approach, meaning that it should influence all the core functions of the relevant sectors.

Service delivery is a core function of all sectors, including the health sector. Most of the other functions are carried out to make service delivery possible, including:

Figure 5.1. Action areas for national adolescent health programming, based on general Action Areas and Ingredients for Action in the Global Strategy and its Operational Framework.
- putting in place a competent workforce (e.g., nurses, teachers);
- generating the products, technologies, and infrastructure necessary to deliver services (e.g., health centres, schools, training materials);
- ensuring information and management systems to monitor results (e.g., the Health Management Information System (HMIS), and Educational Management Information System (EMIS);
- financing services, including ensuring users’ financial access to services (e.g., vouchers for exemption from users fees); and
- governance of the sector, including generating societal support for services and users’ involvement.

Different priorities have specific implications for resources and services, but nonetheless programming for adolescent health has common elements. Figure 5.2 presents a logical framework for adolescent health programming, including four overarching conditions for successful programming (i.e. leadership, adequate financing, adolescent participation, accountability). Interventions should act at more than one level of the ecological framework (i.e. structural, environmental, organizational, community, interpersonal, and individual levels), as explained in Section 1.

Figure 5.2. A logical framework for national adolescent health programming.
One important consideration in national programming is leaving no one behind. An equity lens should inform the planning at all stages of programming, from identifying goals, objectives, and the target population, through defining indicators to verify achievements, to planning interventions, services and activities. The WHO guide “Innov8 Approach for Reviewing National Health Programmes to Leave No One Behind” (2016) provides detailed guidance on how to promote and ensure human rights and equity at all stages of the programming process.

Another critical consideration in national adolescent health programming is maximizing efficiency by integrating services at the delivery level. This means that - after health and intervention priorities have been identified - implementation strategies should consider integrating programme activities and service delivery. For example, if mental health problems and substance use are among the priorities identified based on the national adolescent health needs assessment, and, separately, improving the general content of pre-service training is identified as a priority based on the landscape analysis, then activities for improving the curriculum should simultaneously consider mental health and substance use content. Another example is co-delivery of services at the service delivery point. For instance, if HPV vaccination and deworming for schistosomiasis are identified as priorities during the national prioritization exercise, then co-delivery of HPV vaccination and deworming could be considered (WHO 2014a).

5.2. FIVE PATHWAYS FOR NATIONAL ADOLESCENT HEALTH PROGRAMMING AND INTERSECTORAL ACTION

Programming for adolescent health happens in two contexts. It may be the result of a sector’s routine strategic and operational planning aligned with its budget cycle (e.g. periodic mandated revisions of pre-service education may result in improved adolescent content in the curriculum), or it may take place within an adolescent-specific programme (e.g. programming for substance use prevention) (WHO 2016b). A national adolescent health programme is a comprehensive set of planned and sequential strategies, activities, and services focused on health promotion, protection, prevention, treatment, and care. These should be designed to achieve well-defined objectives and targets. A national programme usually has national, sub-national, and local coordinators, and specified funding to support planned activities. Some national health programmes are time bound, meant to accelerate progress on a specific issue, and are funded from specific additional resources. Within the health sector, however, the term “national health programme” is often used to indicate components of a national health care system that administer specific adolescent services (e.g. a national school health services programme) (WHO 2016b). These programmes are funded from regular budgetary resources.

Within these two contexts, there are five pathways to programming for adolescent health. These pathways are not exclusive, and indeed they often coexist and overlap within a country. Two types of routine programming follow:

1. **Programming for adolescent-responsive health systems within the routine planning cycles of the health sector** ensures an adolescent health focus in the overall process of strategic and operational planning of the health sector for all age groups. Strategic and operational planning is a process whereby the sector continuously adjusts its response to ever-changing demographic, epidemiological,
humanitarian, economic, and social development contexts. This is described in more detail in Section 5.6.

2. **Programming for Adolescent Health in All Policies (AHiAP)** aims to ensure that public policies across sectors systematically consider the health implications for adolescents, avoid harmful impacts, seek synergies, and improve health equity (WHO 2013; World Health Assembly 2014). In order for this to happen, the health sector should proactively seek opportunities to influence the routine strategic and operational planning of other sectors (WHO 2013a). This is described in more detail in Section 5.7.

Influencing the process of routine strategic and operational planning will help to ensure sustainable, long-term results. However, if there is no individual or programme specifically responsible for ensuring an adolescent health focus in routine programming, it might not happen. Therefore, some countries have also found it necessary to establish adolescent-specific programmes. The scope of national adolescent health programmes ranges from those within individual sectors to those that are shared across sectors. In each case, programmes may target a single issue (e.g. HIV) or may broadly address many conditions and concerns (e.g. health-promoting school programmes, adolescent-friendly health services). Three types of adolescent-specific programmes follow:

3. **Adolescent-specific programmes within the health sector** are described in Section 5.8.

4. **Intersectoral programmes** are described in Section 5.9.

5. **Programming for adolescent health in humanitarian and fragile settings** is also necessary to ensure that the needs of adolescents are met, both during the response to an acute crisis and during protracted crises and recovery phases. This is described in Section 5.10.

Whatever the pathway, programming for adolescent health should include intersectoral action. WHO recommends that intersectoral action should be a systematic part of public health and health services (WHO 2013a), especially because many of the most important and powerful influences that shape adolescent health and the distribution of health inequities are outside of the health sector’s remit.

---

*In my school, we do not have toilets. We defecate in the bush and it affects our health in one way or another. Like, sometimes, the breeze just blows the smell to us while in class. One of the classrooms in my school has been turned into a toilet and people defecate there. We do not have water within our school and we have to leave the school compound and go outside to get water.*

- Young adolescent girl in Nigeria

The health sector therefore needs to engage with other sectors of government and society in order to address the determinants of adolescent health and wellbeing (WHO 2008; WHO 2010a). Intersectoral action for health has been defined as “a recognized relationship between part or parts of the health sector and part or parts of another sector, that has been formed to take action on an issue or to achieve health outcomes in a way that is more effective,
efficient, or sustainable than could be achieved by the health sector working alone” (WHO 1997). There are several types or levels of intersectoral action, ranging from information (information exchange), cooperation (incidental, casual, or reactive cooperation led by the health sector), coordination (a joint effort working towards the adjustment of the policies and programmes of each sector for the purpose of greater efficiency and effectiveness), to integration (defining together a new policy or programme) (WHO 2016; WHO 2013a).

The remainder of this section discusses the practical application of the national adolescent health programming framework (Figure 5.2) and its five pathways. Key areas for programming are outlined in boxes.

### 5.3. LEADERSHIP WITHIN THE MINISTRY OF HEALTH AND ACROSS THE GOVERNMENT

Leadership for adolescent health within the Ministry of Health, in each of the key sectors, and across the government, is an essential condition for successful programming. Within the Ministry of Health, strong leadership for adolescent health is needed to mandate collaboration between different departments and to ensure an adolescent health focus in key policies, including those related to financial protection, training and education of providers, quality improvement, health management and information systems, and infrastructure. For programmes that aim to foster intersectoral collaboration for health, strong leadership for adolescents is required at the highest level of the government to mandate collaboration between different arms of government working closely with communities, civil society, young people, and the private sector (Case Study 11; and Case Study A5.1 in Annex 5).

**CASE STUDY 11. England’s teenage pregnancy strategy.**

The ten-year Teenage Pregnancy Strategy for England is an example of a successful nationally-led, locally-implemented programme. It received resources over a long period and resulted in a reduction of 51% in the conception rate among girls under 18 years of age. Based on international evidence of intervention effectiveness, the strategy established a thirty-point action plan within four themes: joint action at national and local levels; better prevention (i.e. improving comprehensive sexual and relationships education, and access to contraception); a national communication campaign to reach young people and parents; and coordinated support for young parents.

A teenage pregnancy unit was established to oversee implementation of the strategy, with support from a cross-departmental board and an independent advisory group of external experts. Teenage pregnancy coordinators were appointed in all government regions, and every local government area also appointed a teenage pregnancy coordinator and a board with representation from health, education, social services, youth services, housing, and relevant NGOs. In addition, a national group of NGOs was also established to provide expert advice. The aims and target of the strategy were embedded in a wide range of government programmes to maintain the priority and strengthen joint working between agencies.

Providing and maintaining leadership throughout the strategy was an important factor of its success. Government leadership was key in putting teenage pregnancy high on the national agenda, reflected by the launch of the strategy by the Prime Minister. It was also critical for sustaining the priority over the ten-year period, even though early progress was slow and
some media commentators claimed the strategy had failed. Evidence that change in complex social phenomena takes time was provided to policy-makers, so that they would not expect quick results. After the mid-course review, visible ministerial presence and direct engagement with local areas contributed to renewed commitment. Local leadership from elected councilors and senior officials also was important to maintain motivation and challenge deeply held views that high rates of adolescent pregnancy were inevitable. In addition, national and local leaders were supported by the independent advisory group, which provided expert challenges to media criticism and offered constructive advice to ministers and local areas.


Leadership can be demonstrated by individuals or through an organization’s structures and governance processes. In practice, both are important as they usually build upon each other (Public Health Agency of Canada 2014). Leaders are instrumental in establishing mechanisms that promote adolescent health, and such mechanisms in turn enable adolescent health leaders to emerge and flourish. For example, many initiatives on establishing adolescent-friendly services in LMICs (e.g. in Colombia, Estonia, Republic of Moldova, Mozambique) that grew to become national programmes owe their success to coalitions of local champions that lobbied decision makers over an extended period to ensure that initial interest did not fade over time (Hadley et al 2016a). Due to their persistent, effective advocacy, institutional mechanisms were created in governance, service delivery, and financing to ensure the sustainability of the initial investments.

Key Areas for Programming:

LEADERSHIP

1. Mandate an adolescent health focal person in the Ministry of Health with the responsibility to:
   a. Work with departments within the Ministry of Health – i.e. financing, workforce, primary care, hospital care – to ensure that all health programmes have an appropriate focus on adolescent health.
   b. Coordinate adolescent-specific programmes within the health sector or across sectors, depending on the mandate.
   c. Work with other sectors during their routine strategic and operational planning cycles to ensure AHiAP (see Section 5.6.2).
   d. Liaise with other sectors through an intersectoral platform and ensure that there is strong leadership for adolescent health at the intragovernmental level to mandate collaboration towards jointly-owned health targets. Anticipate and address behavioural and structural impediments to intersectoral action.

2. Build national and subnational (e.g. district level) political and administrative capacity and leadership for adolescent health, through:
   a. Development of adolescent-centred competencies in using data for decision-making;
   b. Essential skills in negotiation, budgeting, building consensus, planning, and programme management;
   c. Collaborating across sectors;
   d. Coordinating multi-stakeholder action;
Collaboration with other sectors brings specific challenges. Effective intersectoral action will address the behavioural and structural elements that may inhibit such collaboration (WHO 2013a; WHO 2013b; WHO 2010a; Public Health Canada 2014). Possible behavioural impediments 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. (WHO 2013a; WHO 2013b)

Possible structural impediments to intersectoral collaboration include:

- Conflicts between the goal of equity in health and goals in other policy fields, especially economic policies; competing agendas.
- 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.
- Budget allocations within each sector difficult to align with the budget lines needed for intersectoral action. (WHO 2013a; WHO 2013b)

5.4. FINANCING ADOLESCENT HEALTH PRIORITIES IN NATIONAL HEALTH PLANS

To meet the needs of adolescents, resources need to be allocated and purchasing decisions made, within and outside of the health sector (Waddington and Sambo 2015). The Global Financing Facility is an important financing platform for the Global Strategy that is intended to provide smart, scaled, and sustainable financing to support country-led investment plans for women’s, children’s, and adolescents’ health (EWEC 2015). National investment plans should make a strong case for investment in adolescent health based on the “triple dividend” of benefits now, into future adult life, and for the next generation of children (WHO 2014a; Patton et al. 2016), harnessed through investment in the evidence-based, high-impact interventions described in Section 3.
Key Areas for Programming, continued:

RESOURCES FOR ADOLESCENT HEALTH PROGRAMMING

3. Estimate resource needs for the implementation of a priority package of interventions and associated programme costs, using tools such as the “OneHealth Tool”. An adolescent health costing module has been developed for this software tool that allows countries to cost adolescent-specific programmes, as well as the cost of delivering adolescent health interventions within other national programmes or national health plans.

4. Use costing data to advocate for, and secure resources for, adolescent health in national and subnational plans.

5. Build the agency and capacity of district and community managers to address adolescent health priorities when making local adjustments to central budgets.

6. Ensure an adolescent health focus in national and subnational training courses in decentralized planning, budgeting, and results-based financing approaches.


5.5. ADOLESCENT PARTICIPATION IN HEALTH PROGRAMMING

Participation is one of the key principles of a human rights-based approach to health (WHO 2016). It means providing adolescents with meaningful opportunities for engagement in all phases of the programming cycle, and across all Global Strategy Action Areas, including leadership, financing decisions, assessment, analysis, planning, implementation, monitoring and evaluation. Case Study A5.2 in Annex 5 provides an example of how a municipal government in Argentina involved youth in decisions about budget allocation. Other examples of youth engagement at various stages of policy processes are described in Case Study 12 below and Case Study A5.3 in Annex 5.

I think the time of school recess should be lengthened for 5 to 10 minutes. Sometimes the teacher finishes the lessons late, and we may have only five minutes left for recess. It is only enough for us to go to the toilet. In fact, it would allow us to have more time to eat snacks and play ball games in the playground. There would be no rush then.

- Young adolescent girl in Hong Kong

Key Areas for Programming, continued:

ADOLESCENT PARTICIPATION

7. Create forums for meaningful youth participation at the national level (e.g. independent youth commissioners, or a youth coordinator in parliament), with resources for independent oversight of government actions to promote adolescent health and wellbeing.
8. Establish structures and processes to institutionalize adolescent participation in dialogues about relevant areas of public policy, financing, and programme implementation (e.g. youth participation in the Civil Society Coordinating Group for the Global Financing Facility; systematic inclusion of young people through civil society involvement in country platforms for reproductive, maternal, newborn, child, and adolescent health).

9. Adopt minimum standards for improved participation, inclusiveness, transparency, and accountability of such country platforms. Ensure that policies for adolescent representation ensure equitable representation of key vulnerable groups to achieve greater parity.

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

11. Train and mentor youth to build their competencies to: (a) play an effective role in governance and accountability processes around their health and wellbeing; and (b) know their rights and avenues to redress grievances.

12. Support forums for adolescents to share their experiences, good practices, and models of successful adolescent-led interventions.

13. Ensure easy access for young people to present cases before regional and international judicial and human rights bodies.

14. Ensure that vulnerable groups of adolescents have equitable opportunities to participate effectively, through adequate mechanisms for formal and informal youth representation, tailored capacity building, and financial support.

15. Institutionalise the monitoring and evaluation of youth engagement with specific indicators.

Sources: EWEC 2016; WHO 2016.

CASE STUDY 12. Kosovo’s youth councils in refugee camps.

Participation in home, school, and community life is one of the most effective ways to develop the potential of adolescents and increase their protection, especially during times of conflict and crisis. Involving adolescents gives them the opportunity to express themselves and contribute their voices, opinions and ideas to the social dialogue. It also builds self-esteem and helps them find a role for themselves in their communities. The participation of adolescents in community life also has an added advantage: it brings their creativity, energy, and resourcefulness into the social agenda, as shown by youth during the Kosovo crisis.

During the Kosovo crisis in 1999, some 20,000 young Kosovars in six Albanian refugee camps came together and formed youth councils. The youth councils took action to improve the living conditions in the camps, organized sports and music events, improved safety and cleanliness, distributed landmine-awareness information, and provided psychosocial counseling for younger children. On repatriation, when the young activists returned to their home villages, many continued their community development work, maintaining a network that promotes local peace-building efforts, including across ethnic lines.

To support adolescents and youth in becoming effective advocates for their health and wellbeing, the Adolescent and Youth Constituency of the Partnership for Maternal, Newborn and Child Health (PMNCH) has developed a practical guide for young people on how to use global commitment processes to improve adolescent health and wellbeing (EWEC 2017).

## 5.6. PROGRAMMING FOR ADOLESCENT-RESPONSIVE HEALTH SYSTEMS

Demographic, epidemiological, humanitarian, economic, and social development trends and contexts have a critical impact on health systems. In order to respond to the changing environment and societal expectations, health systems need to continuously adjust themselves through the process of strategic and operational planning. These adjustments pertain to:

- the planning of the health workforce (e.g. a projected increase in the proportion of the total population who will be adolescents will require more health providers with a specific training in adolescent health);
- the ways health care is financed (e.g. fiscal austerity increases the pressure to prioritize cost-effective interventions);
- how services are delivered (e.g. wider use of the internet opens new opportunities for health education and user engagement); and
- the ways services are monitored and assessed (e.g. integration of user satisfaction indicators into the HMIS).

When short-, medium- and long-term plans are being developed during the cycles of strategic and operational planning, it is thus important to give adolescent health needs adequate consideration. Programming for adolescent-responsive health systems should inform routine planning cycles within the health sector. These cycles might include long term planning with a 10-20 year time frame, five-year plans, three-year rolling plans, and/or one-year operational plans (WHO 2010). A major advantage of this approach is that financing comes from regular annual sources, and changes are likely to be sustainable even though the results may not be immediate.

Programming for adolescent-responsive health systems entails actions towards:

- Adolescent-protective laws and policies
- Adolescent-mindful financial protection systems
- Building an adolescent-competent workforce at all levels of care
- Prioritizing quality and service delivery platforms that maximize coverage
- Adolescent-vigilant health management and information systems

Country-led investment plans for women’s, children’s and adolescents’ health provide an unprecedented opportunity to strengthen the adolescent responsiveness of health systems. Another opportunity is offered by the Global Fund to Fight AIDS, Tuberculosis and Malaria that encourages countries to focus on adolescents in their applications. An Adolescent Information Note supports strategic Global Fund investments to improve the health and wellbeing of all adolescents (Global Fund 2016). Integrating the programming areas outlined below into these plans will help to secure domestic and international development assistance resources for adolescent health.

### 5.6.1. ADOLESCENT-PROTECTIVE LAWS AND POLICIES
Laws and policies should protect, promote and fulfil adolescents’ right to health. It means, *inter alia*, making the services that adolescents need available and accessible to them, without discrimination.

**Key Areas for Programming, continued:**

**EQUITY**

16. Define the required package of health information, counselling, diagnostic, treatment, and care services for adolescents. Review laws and policies, and modify them as necessary to enable these services to be provided to all adolescents.

17. Enforce policies to redress inequalities and discriminatory practices (both real and perceived) in adolescents’ access to services. Ensure that adolescents with disabilities, LGBTI adolescents, and other vulnerable groups of adolescents do not face barriers in accessing services that they need.

**Sources:** WHO 2014b; WHO 2015.

Adolescents, by virtue of being adolescent, may experience more discrimination than other age groups. During this life stage, they may be perceived as being in need of protection by parents or legal guardians, health and social workers, teachers, and other adults, and also as being incompetent and incapable of making decisions about their lives (Figure A5.1 in Annex 5). Adolescents’ right to protection may come into conflict with their right to autonomy in line with their evolving capacities, and their right to access health care services. Protection and autonomy may seem to be contradictory principles, because protective measures tend to restrict adolescents’ autonomy, but in fact they can be balanced and mutually reinforcing. Fostering autonomy, for example, by empowering adolescents to access health services, is a protective measure, since timely access to services could protect them from the harm. Laws and policies should therefore ensure that all the various rights of every adolescent are afforded equal priority.

In seeking to provide an appropriate balance between respect for the emerging autonomy of adolescents and sufficient levels of protection in national policies, consideration needs to be given to: the level of risk involved; the potential for exploitation; an understanding of adolescent development; how competence and understanding do not develop equally across all fields at the same pace; and individual experience and capacity (CRC GC 2016). The section below presents key areas that need to be considered in designing laws and policies that treat the rights to health, protection, and autonomy as universal, indivisible, and interrelated.
18. Review national laws and policies to clearly and unambiguously indicate situations when confidentiality may be breached, with whom, and for what reasons (e.g. disclosure of sexual abuse of a minor, significant suicidal thoughts or self-harm or homicidal intent).
19. Establish standard operating procedures for situations in which confidentiality might be breached due to legal requirements.
20. Specify in health care guidelines that consultations with an adolescent clients accompanied by parents/guardians should routinely include time alone with the adolescent.
21. Establish procedures to be followed in health facilities to ensure that:
   a. information about clients is not disclosed to third parties;
   b. personal information including client records are held securely; and
   c. there are clear requirements for the organization of the physical space of the facility and actions to ensure visual and auditory privacy during registration and consultations with a service provider.

Consent and Assent to Health Treatment or Services

22. Determine acceptable and appropriate age limits when adolescents may give consent or refuse health treatment or services without parental/guardian involvement. Age limits should be informed by the adolescent’s developmental stages and evolving capacity, as well as careful evaluation of risks, security, and other issues in the local context. Consider lowering existing age limits, if appropriate (see Case Studies A5.4 and A5.5 in Annex 5). As a guide, informed consent should be sought from the child when the child is deemed mature enough to make an informed decision. Usually adolescents aged 15 years and above are able to give oral or written informed consent. For younger adolescents, decisions should be made on a case-by-case basis.
23. Adopt flexible policies to allow specific groups of adolescents to be considered “mature minors”. For example, locally established procedures should not impede unaccompanied adolescents or those who do not have parents or carers from accessing services.
24. Remove the need for parental or guardian consent when an adolescent is seeking counselling and advice services. The right to counselling and advice is distinct from the right to give medical consent and should not be subject to any age limit.
25. Adopt a legal presumption of competence that an adolescent seeking preventive or time-sensitive sexual SRH goods and services (e.g. contraception, safe abortion) has the requisite capacity to access such goods and services. Where evidence suggests that a person lacks the capacity to consent, a determination should be made in the best interest of the adolescent.
26. Enforce a policy that - in all cases, whether or not the consent of the parent/carer is required – an adolescent’s voluntary, adequately informed, non-
forced, and non-rushed assent for services and participation in a data gathering activity is obtained.

27. Enforce a policy that, in all situations, adolescents should be given full, unbiased, and clear information on the nature, risks, and alternatives of a proposed intervention or data gathering activity, to enable adolescents’ participation in their own care and the communication of their choices. Information about an intervention should be provided to adolescents in a manner that is appropriate to their culture, education, and level of understanding. While it is important to clearly explain to adolescents the potential risks, it is also important not to frighten them.

28. Establish standard operating procedures for obtaining informed consent. Consent forms and other informational tools (e.g. posters) should be developed in consultation with trusted community members and designed specifically for the age groups to be included in the activity. If there are mandatory reporting requirements in the setting, this information must be disclosed to the parent/guardian and to the adolescent during the consent/assent process.

29. Adopt policies to protect the right of adolescents with disabilities, including demanding that their views be given due weight in accordance with their capacity, age, and maturity on an equal basis with others. Adolescents with disabilities face particular barriers; they must therefore be provided with opportunities for supported decision-making.

30. Where legal, liberalise legislation to include provision for adolescents to easily access safe abortion care, without parental or spousal consent requirements.

31. Ensure elimination of harmful practices inflicted on young people without consent, including female genital mutilation and early and/or forced marriage.


5.6.2. ADOLESCENT-MINDFUL FINANCIAL PROTECTION SYSTEMS

Financial barriers are one of the main deterrents of adolescents’ use of services, but according to a recent WHO policy survey, adolescents in many countries do not have free access to services (Figure A5.2 in Annex 5) (WHO 2014; Waddington and Sambo 2015). Adolescents may face financial hardship for a number of reasons:

- First, adolescents are less likely than many other age groups to be covered by an effective prepaid pooling arrangement (e.g. a health insurance scheme), particularly if they are not in school, are older than 18 years, are not employed, or live in low-income households.
- Second, adolescents are disproportionally deterred from seeking care by out-of-pocket payments. This is because of their limited access to money, either their own or their family’s (Waddington and Sambo 2015).
- Third, adolescents have limited capacity to access services independent of their parents, although they have a greater need for confidentiality than younger children (Waddington and Sambo 2015; Geissler et al. 2000; Geissler et al. 2001; Hampshire et al. 2011). For example, in the United States of America, even when adolescents are legally allowed to receive some services without parental consent, itemized bills sent to their parents can breach confidentiality (Rainey et al. 2000).
- Fourth, not all services needed by adolescents are adequately covered by prepaid pooled funding arrangements. For instance, an adolescent client may require more
time at an initial consultation than a younger child or an older adult. It is therefore important that mechanisms for paying providers are aligned with the needs of adolescents. Programmes need to ensure that the above key determinants of adolescent service use are adequately addressed.

**Key Areas for Programming, continued:**

**ADOLESCENT-MINDFUL FINANCIAL PROTECTION SYSTEMS**

32. Identify sub-groups of adolescents that are not covered by effective, prepaid pooling arrangements and design mechanisms to maximize their coverage. This can take different forms, e.g. an explicit insurance programme; access to facilities that are financed by prepaid pooled funds; or adequate subsidization for vulnerable adolescents and their families. Consider cash transfer schemes to increase access of adolescents to critical services, and advise welfare and social protection sectors on this issue (Case Study A5.6 in Annex 5).

33. Make the national package of adolescent health interventions an instrument to guide purchasing decisions and benefit packages, giving particular attention to preventive services and to adolescents’ rights to confidentiality.

34. Assess the impact of out-of-pocket payments at the point of use for adolescents accessing key services. Use data to advocate for reduction or elimination of adolescents’ out-of-pocket payments at the point of use.

35. Design and implement measures for adolescent financial protection (e.g. waivers, vouchers, and exemptions from or reduced co-payments) so that health services are free or more affordable to adolescents at the point of use.

36. Monitor facilities to ensure that payment exemption policies are observed.

37. Provide incentives that motivate health workers to implement quality interventions that are essential for adolescent health and development, e.g. through pay for performance mechanisms.

38. Ensure that resources are distributed between geographical areas in proportion to their relative needs.

**Source:** WHO 2011d; WHO 2011f; WHO 2014a; WHO 2016.

**5.6.3. AN ADOLESCENT-COMPETENT WORKFORCE AT ALL LEVELS OF CARE**

Adolescents are not simply “older children” or “younger adults”. Returning to the ecological model described in Section 1, individual, interpersonal, community, organizational, environmental, and structural factors make adolescent clients unique in the ways that they understand information, in what information and which channels of information influence their behaviours, and in how they think about the future and make decisions in the present (Baltag and Sawyer 2017). To respond well to adolescents’ uniqueness, providers need to understand adolescent development and build their competencies (e.g. knowledge, skills and attitudes) so that they can communicate in ways tailored to an adolescent’s age and stage of life. In clinical practice, providers also need to be competent in applying the laws and policies that respect, protect, and fulfil adolescents’ rights (UN CRC 2009; WHO 2015). In order to achieve this, it is critical to address providers’ own attitudes and prejudices regarding adolescents’ normative behaviours and practices.
Health care providers need to be able to assess adolescents’ capacity for autonomous decision-making, and adapt their approach accordingly. For example, they should give direction and guidance to younger adolescents, but increasingly provide reminders and advice as adolescents grow older. In addition, the clinical management of various adolescent conditions requires special competencies to ensure effective care. These competencies must be addressed through education and training of the health workforce. Programmes should thus prioritize improvements in the structure, content, and quality of the adolescent health component of in-service and pre-service curricula. Making competency-based education in adolescent health care mandatory in pre-service curricula and post-graduate education is one of the key actions towards creating a workforce that is competent in the provision of effective adolescent health services (WHO 2014a; WHO 2015; WHO and UNAIDS 2015). In the Republic of Moldova, for example, an adolescent health component has recently been introduced into the pre-service training of family doctors, and two courses in adolescent health were made available in the continuous professional education program: one two-week course in child and adolescent health hygiene, and another eight-day course on adolescent health and health care (Ministry of Health of the Republic of Moldova, 2016).

Key Areas for Programming, continued:

**AN ADOLESCENT-COMPETENT WORKFORCE**

39. Create a common understanding about the importance in investing in an adolescent-competent workforce among key players, such as the ministries of health, education, and youth; the national board of licensing and certification; curriculum development agencies; paediatric societies; associations of nurses and midwives; and other civil society organisations.

40. Define core competencies in adolescent health and development in line with WHO “Core Competencies for Adolescent Health and Development for Primary Care Providers” (WHO 2015). Create and implement competency-based training programmes in pre-service and continuing professional education.

41. Assess the structure, content, and quality of the adolescent health component of existing pre-service curricula of key educational and training institutions. Identify opportunities to strengthen the adolescent health component.

42. Conduct capacity-building activities in adolescent health care at national and district levels, informed by health care providers’ reported training needs. Facilitate providers’ access to online free-of-charge courses.

43. Develop and review information and training materials, practice guidelines, and other tools to support decision-making in adolescent health care.

44. Set up a system for supportive supervision of adolescent health care, and provide collaborative learning opportunities as a key strategy to improve providers’ performance.

45. Where relevant, include competency in adolescent health in job descriptions and policies on the types and levels of abilities within the health workforce.

**Sources:** WHO 2014a; WHO 2015; WHO and UNAIDS 2015.
5.6.4. QUALITY SERVICE DELIVERY AND PLATFORMS FOR UNIVERSAL HEALTH COVERAGE

Global initiatives are urging countries to prioritize quality as a way of reinforcing rights-based approaches to health (iERG 2013). Yet, evidence from high-, middle- and low-income countries shows that adolescents experience many barriers to receiving quality health care, and services for adolescents are often fragmented, poorly coordinated, and uneven in quality (WHO 2014a; WHO and UNAIDS 2015). Recognizing the problems, many countries have moved towards a standards-driven approach to improve the quality of care for adolescents (Figure A5.3 in Annex 5), although few actually measure progress towards achieving these standards. However, Malawi, the Republic of Moldova, South Africa, Tajikistan, the United Republic of Tanzania, and Ukraine have all conducted surveys to measure the quality of the adolescent health services being provided in order to inform action (WHO 2014a).

Programming efforts should be directed to establishing, implementing, and monitoring standards for assessing the quality of adolescent health care as a means to minimize variability, ensure a basic level of quality, and protect adolescents’ rights (Nair et al. 2015). Efforts should also be made to ensure that services are not simply accessed by a privileged minority of adolescents, but that there is universal coverage, with the services reaching marginalized subgroups of adolescents as well.

Key Areas for Programming, continued:

ENSURE ADOLESCENT HEALTH SERVICES ARE OF HIGH QUALITY

46. Develop a shared understanding of adolescent health and the need to improve the quality of health care services for adolescents.
47. Develop and implement national quality standards and monitoring systems in line with the WHO and UNAIDS “Global Standards for Quality Health-Care Services for Adolescents” (WHO and UNAIDS 2015a; WHO and UNAIDS 2015b).
48. Position standards-driven quality improvement within national adolescent health programmes, where such exist, or within overall platforms for quality improvement that are central to health systems strengthening (e.g. country investment cases; applications to the Global Fund to Fight AIDS, TB and Malaria, or to the Global Financing Facility).
49. To facilitate monitoring of adolescent healthcare standards and performance improvements, implement e-standards to automate the processes of data collection and analysis, and to improve adolescent participation in providing feedback to facilities.
50. Establish local, subnational and national learning platforms for quality improvement.
51. Strengthen school health services and community-based platforms for service delivery.
52. Explore the potential for service delivery through use of social and digital media.

Sources: WHO 2014; WHO and UNAIDS 2015.

A lot of people say playing video games is just a home sport. But actually you are improving your motor skills when you play with the controller, learning...
5.6.5. ADOLESCENT-VIGILANT HEALTH MANAGEMENT AND INFORMATION SYSTEMS

National health management and information systems rarely capture data specific to adolescents. Even when this does occur at the facility level, the data are often aggregated with data from other age groups as they move up from facility to district or national level. Age-disaggregated data on adolescents is rare in countries that most need them, i.e. those with large adolescent populations, high adolescent disease burdens, and relatively weak infrastructures. Instead, data are typically compiled in ways that obscures adolescents’ particular experiences, for example, through the use of 5–14 year and 15–49 year age bands. Programmes should review all national systems for health data collection and find ways to incorporate a focus on adolescents. Ideally, all data should be disaggregated by sex and five-year age bands for the first 25 years of life.

**Key Areas for Programming, continued:**

**ADOLESCENT-VIGILANT HEALTH MANAGEMENT AND INFORMATION SYSTEMS**

53. Identify and respond to specific weaknesses in national data collection systems, including a review of data collection of impact, outcome, output, process, and input indicators (see Section 6).
54. Ensure that facility data collection and reporting forms allow for an explicit focus on adolescents, including very young adolescents, cause-specific utilization of services, and quality of care (see Box 5.1).
55. Ensure that district reports address adolescents (10-14, 15-19 years), including cause-specific utilization of services and quality of care.
56. Improve the capacity of national and subnational statistics agencies to report regularly on the health, development, and wellbeing of adolescents, disaggregated by age and sex. At a bare minimum, data should be disaggregated by age and sex, and wherever possible include other relevant stratifiers, e.g. education, rural/urban. Ensure that this information is easily accessible to constituents.
57. Develop national capacity to conduct standardized surveys on key adolescent behaviours and social determinants, and conduct such surveys at regular intervals. Examples include the Global School-Based Student Health Survey (GSHS), the Global Youth Tobacco Survey (GYTS), and the Health Behaviour in School-Aged Children (HSBC) Study.
58. Develop national capacity to conduct standardized surveys to monitor inputs, processes, and outputs within national school health programmes. Examples include the School Health Policies and Practices Study, and surveys using the Focusing Resources on Effective School Health (FRESH) tools. Conduct such surveys at regular intervals.
59. Synthesize and disseminate the evidence base for action.
60. Strengthen the availability of disaggregated data and information to expose inequities. Take remedial actions to address inequities.
Sources: WHO 2014; EWEC 2016.

Box 5.1. Age and sex disaggregation in national-level reporting.

A number of countries have started age and sex disaggregation in their national-level reporting of routine HMIS data. These countries include Argentina, El Salvador, Indonesia, Malawi, the Republic of Moldova, Tajikistan, and the United Republic of Tanzania. The disaggregated HMIS data provide a yearly overview of which adolescents are using services and why. Such data are more timely and less resource-intensive to collect than self-reported household survey data, which are usually only collected every four years, or school-based data, which are also less frequently collected. Health facility statistics can make an important contribution to monitoring and strengthening service provision for adolescents. However, as data from facilities are only representative of the adolescents who access services, so they need to be interpreted with caution.

In Argentina, starting with 2010, the Statistics and Informatics Department of the Ministry of Health publishes a data directory of vital statistics of the adolescent population: Http://www.msal.gob.ar/images/stories/bes/graficos/0000000872cnt-linea-base-adolescencia-2016.pdf. This compendium presents data on key socio-demographic characteristics of adolescent population, main causes of mortality and morbidity, coverage with public health services, health related behaviours, and cause-specific utilization of hospital services.


5.7. PROGRAMMING FOR AHIAP

Despite growing evidence that interventions targeting the determinants of adolescent health and wellbeing are effective, including some interventions with parents, in schools, or carried out through social protection programmes, there are relatively few examples of the health sector proactively mobilizing and supporting action in other sectors (WHO 2013a). Opportunities to influence other sectors arise during their routine strategic and operational planning cycles, when they make adjustments in the direction of the sector’s focus and priorities to reflect changes in the environment. For example, the education sector may use strategic planning to adjust investments in response to changing labour markets and social demands for education (UNESCO 2010). In another example, the “2015–20 Strategic Plan for the National Department of Transport” in South Africa prioritizes employment-intensive programmes and youth initiatives in response to high unemployment and income inequity (National Department of Transport 2015).

Traditionally, strategic planning within a sector has only involved stakeholders from within that sector. However, to achieve the interlinked and mutually dependent Sustainable Development Goals, it will be important for strategic planning within sectors to be carried out with the participation of experts representing other key sectors. For example, health experts need to be involved in the development of the plans of the education sector, and vice versa. Mechanisms need to be put in place to ensure such participation.
When it comes to adolescent health, the aims of the health sector’s participation in the strategic and operational planning of other sectors are to ensure that each sector’s policy development takes its impact on adolescent health into account, and that the “Adolescent Health in All Policies (AHiAP)” approach is observed in policy formulation, implementation, monitoring, and evaluation (Box 5.2).

**Box 5.2. Adolescent Health in All Policies (AHiAP).**

Adolescent Health in All Policies (AHiAP) is an approach to public policies across sectors that systematically takes into account the implications of decisions on adolescent health, avoids harmful effects, and seeks synergies, in order to improve adolescent health and health equity (WHO 2013; World Health Assembly 2014). It is a strategy that facilitates the formulation of adolescent-responsive public policies in sectors other than health (WHO 2013b). Strategic and operational planning within key sectors such as education, family and social affairs, recreation and sports, transport, food and agriculture should be carried out with the participation of health sector experts, and should aim to ensure that policies for each sector are formulated and implemented with due attention to the inclusion of evidence-based policies and interventions that will improve adolescent health.

Key evidence-based policies and interventions by sectors other than the health sector are summarised in Section 3. The following sections consider where the interests of different sectors overlap and how they can work together in programming for AHiAP.

**Key Areas for Programming, continued:**

**ADOLESCENT HEALTH IN ALL POLICIES**

**The Health Sector**

61. Create platforms for the Ministry of Health to engage in the planning cycles of other sectors for the development of the other sectors’ long-, medium- and short-term plans that affect adolescent health. This arrangement should be reciprocal, so that other relevant sectors also participate in developing the health plan.

62. Health ministries can support effective AHiAP by implementing joint activities at all stages of the strategic planning of other sectors, including during situation/needs assessment, policy formulation, preparation of plans, and evaluation of key policies. In particular, the health sector can:
   a. Monitor trends and outcomes for adolescents using disaggregated data to identify the impact of a sector’s policies on adolescent health, and use this information to support the sector’s efforts to achieve its goals.
   b. Assist the sector to carry out needs-based assessments for adolescents, including those related to lifestyle changes, food use, and other health determinants.
   c. Scrutinize potential unintended consequences of any policies that may affect adolescents, or subgroups of adolescents; communicate these to all concerned and the public; and develop interventions to address them.
d. Work with the relevant ministry to develop evidence-based guidelines, standards, and recommendations on areas of the sector’s mandate that have a direct impact on adolescent health.

e. Amplify the adolescent health focus and adolescent voices in other sectors’ policy debates, including transportation, local planning, food and agriculture, housing, and aid policy. Highlight the potential consequences of inaction on adolescent health.

f. Strengthen coalitions of professionals, such as those working in public health, environment, nutrition, chronic disease epidemiology, and social and behavioural sciences to collaborate on adolescent health policy development and advocacy.

g. Examine adolescent health equity within a sector’s core business and share findings with key stakeholders from the sector concerned.

h. Ensure a competent adolescent public health workforce in key sectors (e.g. education), including the provision of training and support to address new developments.

i. Mobilize regional and local partnerships to identify and address public health concerns that have implications for action in other sectors.

The Education Sector (WHO 2011c)

64. Improve education system facilities and reduce exposure to environmental hazards through ensuring minimum standards are met for the design of facilities (e.g. shelter, warmth, water, food, light, ventilation, sanitary facilities, and emergency medical care), and the availability of sanitation and potable water.

65. Ensure adequate conditions for menstrual hygiene management, such as lockable, single-sex, private toilets with water and soap for washing, as well as a private open air space to dry wet menstrual cloths and/or a closed bin or incinerator for used menstrual pads.

66. Support teachers’ adolescent health literacy through a combination of pre- and in-service training opportunities.

67. Become involved in programmes to improve access to health and education, such as through provision of conditional and unconditional cash transfers.

68. Support policies to improve girls’ access to schools, for example by: adopting an integrated strategy that addresses cultural and gender barriers impacting on girls’ education; redeploying teachers to remote areas where inequalities in access between boys and girls are highest; and increasing the number of female teachers.

69. Provide education to hard-to-reach children and collaborate with health professionals in the design and delivery of the educational activities.

70. Address the needs of children with chronic conditions and disabilities, by adapting buildings and classrooms to the special needs of people living with disabilities, and strengthening linkages with health services for early diagnosis and interventions.

71. Monitor quality in the implementation of health-promoting schools programmes using available tools and resources (e.g. FRESH).

72. Develop curricula to promote health literacy, address stigma related to HIV and gender-based violence, and incorporate comprehensive sexuality and life-skills based education. Promote positive development approaches to improve self-
esteem through learning interventions, participatory governance approaches, and broader community involvement.

73. Implement “extended schools” to improve social and family conditions for schooling success by offering different social and support services for students, families, and communities. Actions may include:
   a. working with health authorities and other social agencies to provide health services, family counselling, and training for parents;
   b. family visits or school-based training to discuss health issues, such as sleeping, eating and behavioural problems; and
   c. outreach activities jointly with the health sector to increase health literacy and parenting skills.

74. Implement policies to ensure a life-course approach to education by acknowledging the importance of early child development interventions for improving health and health equity in the long-term.

We sometimes do homework until late at night. Some classmates live far away and have to get up very early, at about 6:00 am, to go to school every day. Their sleeping time is less than the classmates who live closer to school, so they fall asleep during lessons. They are unable to concentrate on the lessons.

- Adolescent girl in Hong Kong

The Social Protection Sector (WHO 2012c)

75. Implement conditional and unconditional cash transfer programmes that create incentives to increase specific health-promoting behaviours (e.g. nutrition, school attendance, medical check-ups, vaccinations). Design demand-side interventions to increase adolescents’ access to health services, which may include reimbursing user fees and the costs adolescents incur in transportation. Interpret non-compliance with conditionalities as a sign that a family is facing additional vulnerabilities that prevent them from complying, and ensure that such families get extra help to overcome the reasons for non-compliance.

76. Increase the portability of social protection benefits so that health coverage is more responsive to the needs of increasingly mobile populations of older adolescents and young adults who may also be subject to more frequent changes of employer.

77. Tailor health and nutrition interventions to the developmental needs of adolescents at various ages, e.g. ensure that in-kind transfers to improve nutrition take into consideration recommended caloric intake for adolescent boys and girls.

78. Contribute to the design, implementation, and evaluation of active youth labour policies so that policies provide unemployed youth with opportunities for re-training and job-seeking support, as well as schemes for income security to protect young adults from being disproportionately affected by unemployment.

79. Engage in public-private partnerships to combat child labour in countries where a large number of children are involved in farming, through supporting the development and extension of community-based monitoring systems, and enhancing coordination with national child labour committees.
<table>
<thead>
<tr>
<th>The Roads and Transportation Sector (WHO 2011b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>80. Promote active transport (e.g. walking and cycling spaces) between residential communities and schools.</td>
</tr>
<tr>
<td>81. Ensure that transport costs for adolescents do not adversely affect their access to schools, social services, and health services.</td>
</tr>
<tr>
<td>82. Reduce the negative health impacts of road infrastructure expansion, such as decreasing safe playgrounds and sports areas for adolescents. Collaborate with the health sector to undertake assessment of potential health impacts of infrastructure projects, and anticipate, prevent, or mitigate their negative impact on adolescents. Support and facilitate community consultations to assess adolescents’ needs, particularly for vulnerable or excluded groups (e.g. adolescents with limited mobility).</td>
</tr>
<tr>
<td>83. Ensure law enforcement on the use of motorcycle helmets and seatbelts.</td>
</tr>
<tr>
<td>84. Promote special road safety measures around schools and playgrounds. Identify opportunities for traffic calming and increase the number of speed bumps in crash-prone areas and around schools and playgrounds, to lower speeds and improve the environment for pedestrians and cyclists.</td>
</tr>
<tr>
<td>85. Implement graduated drivers’ licensing.</td>
</tr>
<tr>
<td>86. Implement age-adjusted alcohol control measures.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The Housing and Urban Planning Sector (WHO 2011e)</th>
</tr>
</thead>
<tbody>
<tr>
<td>87. Ensure that the development of master plans for urban planning take into consideration the needs of adolescents (e.g. for safe playgrounds, cycle paths to schools) in the planned configuration of buildings, housing units, traffic, public services, public infrastructure, and land use. Facilitate adolescents’ voices in informing such master plans.</td>
</tr>
<tr>
<td>88. Increase green spaces around schools to provide shade and improve air quality.</td>
</tr>
<tr>
<td>89. Integrate health considerations when setting housing standards, and develop housing designs adequate for most-at-risk groups of adolescents who spend the greatest time at home.</td>
</tr>
<tr>
<td>90. Prevent crime through environmental design by planning physical environments in a way that enhances openness and promotes social interaction.</td>
</tr>
<tr>
<td>91. Implement initiatives to prevent urban physical degradation that can encourage minor delinquency and further abandonment of public spaces.</td>
</tr>
<tr>
<td>92. In the event of forced evictions, assess the negative impacts on adolescents and ensure that relocation plans take into consideration the rights of adolescents to education and safe recreational activities.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The Energy Sector (WHO 2013c)</th>
</tr>
</thead>
<tbody>
<tr>
<td>93. Ensure that schools and health facilities are among the community institutions that have access to adequate, reliable, and sustainable energy.</td>
</tr>
<tr>
<td>94. Assess the impact of the cost of energy on the cost of health services and schooling.</td>
</tr>
<tr>
<td>95. Support initiatives to implement energy efficient public transport and cycle/pedestrian routes.</td>
</tr>
</tbody>
</table>
96. Promote eco-labelling programmes in which a label indicates that the product’s manufacture conforms to recognised environmental standards, and promote adolescents’ literacy in eco-labelling.

97. Collaborate with health and education ministries to integrate sustainable living (e.g. lifestyle changes to reduce greenhouse gas emissions incorporated into the education curricula)

98. Support the identification of pollution sources and locate residences, schools, and hospitals away from roads highly polluted due to vehicle traffic.

99. Support or advocate measures to address energy poverty for women and girls, including the supply of clean, safe fuels to low-income households for cooking or heating. Disseminate information on how to install, manage and maintain improved cooking stoves.

100. Carry out campaigns that address the need for lifestyle changes to improve energy safety.


### 5.8. ADOLESCENT-SPECIFIC PROGRAMMES WITHIN THE HEALTH SECTOR

Influencing routine health sector planning to ensure adequate attention to adolescent needs is essential in the long term, but it is unlikely to produce immediate results, especially if there is no mandated coordination of these efforts within the Ministry of Health. To make more rapid progress, adolescent-specific programmes also are often necessary. Broadly, these programmes are of three types:

- Programs that focus on a single issue (e.g. HPV immunization programmes, Case Study A5.7 in Annex 5)
- Programs that have a single issue as their primary consideration, but that use a broad-based approach to respond to the problem, for example improving the availability of adolescent-friendly services for sexual and reproductive health (e.g. the National Adolescent Sexual and Reproductive Health Programme in Nepal, Case Study A5.8 in Annex 5).
- Programs with a broad focus, that address multiple issues in an integrated way (Case Study 13 below). Examples of this type of programme are the national adolescent health programmes that exist in many countries, for example Chile (Case Study A5.9 in Annex 5), Costa Rica, Hungary, Mexico, Philippines, Portugal, Uruguay, and Uzbekistan.

**CASE STUDY 13. Argentina’s national programme for integrated adolescent health.**

In Argentina, the National Programme for Integrated Adolescent Health (Programa Nacional de Salud Integral en la Adolescencia, PNSIA) was created in 2007. The programme is managed by an interdisciplinary team of 15 people (13 technical officers, including the National Coordinator, and two administrative staff). In 2016, an Advisory Council of the Programme was established, including technical teams from relevant scientific societies and development partners (PAHO, UNICEF, and UNFPA). Plans are being made to include youth organizations in the governance of the programme. All 24 jurisdictions have a provincial coordinator.
The PNSIA budget comes from the budget of the National Directorate of Maternity, Childhood and Adolescence. In 2016, the PNSIA budget constitutes the equivalent of 440,000 USD. This is a budget for activities and does not include remuneration of human resource.

PNSIA aims to achieve the following objectives:

- Achieve universal health coverage through access to quality essential care services, medicines, and vaccines.
- Promote holistic adolescent health by promoting healthy lifestyles, supporting planning of life projects, and incorporating gender perspectives into the health system.
- Improve health in adolescence by (a) reducing maternal morbidity and mortality in adolescence, (b) decreasing early pregnancy, (c) reducing morbidity and mortality from external causes (unintentional injuries-accidents, suicides, homicides), and (a) reducing problematic consumption of alcohol and other substances.

PNSIA implementation strategies include facilitating the establishment of provincial programmes; strengthening the HMIS; improving human resource capacity and quality health care services for adolescents; establishing financial protection mechanisms for adolescents; and ensuring adolescent participation in programme design and activities.

In 2007, at the time of programme’s establishment, only five jurisdictions had a provincial adolescent health programme. Given the federal structure of the health system in Argentina, one of the key priorities of PNSIA was to encourage provinces to establish local programmes to contribute to the achievement of aforementioned objectives. Currently, 23 out of 24 jurisdictions have a provincial programme and a coordinator in charge, and these make up the National Network of Adolescent Health. To strengthen this network, and build the capacity of staff, three annual meetings are held with the provincial coordinators. In these meetings, trainings are carried out on selected topics of adolescent health, and management and technical guidelines are agreed. These meetings constitute a platform for experience sharing and dissemination of good practice. Due to the constant investment in the capacity of provincial coordinators, they have managed to firmly install the adolescent health agenda in their provincial ministries. In spite of political changes in the provinces, the network remained relatively stable, and even when provincial coordinators have changed, there was a continuity with the previous provincial efforts.

One of the key achievement of PNSIA was the improvement of the HMIS to reflect the adolescent population. Prior to PNSIA, the available health information was fragmented or non-existent. Information systems did not consider adolescence as a stage in the course of life. Adolescent health data were recorded in the child or adult group, whether they were younger or older than 14 years, respectively. Since 2010, the Statistics and Informatics Department of the Ministry of Health publishes a data directory of vital statistics of the adolescent population.

In 2012, PNSIA launched an Adolescent Health Services Plan linked to the Basic Benefit Package Program, which specifies the populations that have health coverage for a basic benefit package of services. Due to the inclusion of adolescents in the Health Services Plan, at present 2,944,076 adolescents have health coverage provided entirely by the public system. 958,648 adolescents received at least one health check compliant with quality requirements during 2014, and 840,828 during 2015.
Across Argentina, more than 250 adolescent-friendly spaces have been established at primary and referral care levels, with different degrees of complexity in their functioning. Importantly, they are distributed in different locations throughout the country. With PNSIA efforts, education and training opportunities in adolescent health care were expanded at national and provincial levels, including through distance learning modalities. Finally, adolescent health training has been integrated into the residency training courses of paediatricians and general practitioners.


Successful health sector programmes are rarely implemented in isolation from other sectors. Intersectoral relationships in the context of an adolescent-specific programme within the health sector usually include information exchange, cooperation (e.g. co-provision of services), and coordination (e.g. having a school-based component supporting health interventions). For example, in Argentina, PNSIA is led by the Ministry of Health (Case Study 13 above). However, activities are implemented in collaboration with the education, justice, and social welfare sector. In another example of adolescent-specific programming addressing many health concerns, the US Adolescent and Young Adult Health Program aims to increase adolescents’ and young adults’ access to safety education and quality health care, including comprehensive general health, oral health, mental health, and substance abuse prevention and treatment services.

Programming in the context of adolescent-specific programmes within the health sector will focus on Key Areas for Programming, 17-61 above.

5.9. INTERSECTORAL PROGRAMMES

The most impressive results for adolescent health and wellbeing are achieved when actions are intersectoral, multilevel, and multi-component (Patton et al. 2016). Unlike single-sector programmes, intersectoral actions require public policies that involve more than one ministry, performing different roles for a commonly agreed purpose. Such collaborations are much more complicated than merely involving other sectors in programme implementation through information exchange, coordination, or cooperation, as in the single sector programmes described in Section 5.7.1. Intersectoral programmes require integrated intersectoral action. Integrated intersectoral action involves defining a new policy or programme together with other sectors and sharing resources, responsibilities, and actions related to it, which requires solidarity and power-sharing to achieve a common social goal (rather than particular sectoral objectives) (WHO 2016).

Intersectoral programmes can be focused on a single issue or area of concern, such as adolescent pregnancy (Case Study 11) or ASRH (Case Study A5.10 in Annex 5), or be broad-based, for example a school health service programme (Case Study A5.11 in Annex 5) or a health-promoting school programme (Case Study 14 below, and Case Study A5.12 in Annex 5). School health programmes are the most common form of nationally-owned intersectoral programmes. These are in place in almost all countries in the European and Eastern Mediterranean regions, in many countries in Latin America, Southeast Asia, and the Western Pacific, and in at least 21 countries in the African region. Various initiatives exist to promote education and health in schools. These include “FRESH”, led by UNESCO; Child Friendly Schools, led by UNICEF; School Health and Nutrition, led by the World Bank; and the World Health Organization’s Health Promoting Schools Framework. The evidence-base for positive
effects of school-based interventions and school health programmes is compelling. They have shown positive impact across health outcomes including SRH, substance use, nutrition, mental health, and immunization (Das 2016; Das et al. 2016a; Das et al. 2016b; Langford et al. 2014; Salam et al. 2016a; Salam et al. 2016b). Investing in school health is a fundamental priority for intersectoral programmes (WHO 2011c). Countries that do not have school health programmes should consider establishing them, and countries that do have school health programmes in place should consider critically reviewing them to align them with the evidence base and emerging priorities.

A priority for intersectoral programmes is to tackle the structural and intermediate determinants of health, none of which could be adequately achieved by any single sector (WHO 2010a).

**Key Areas for Programming, continued:**

**INTERSECTORAL PROGRAMMES**

101. Establish school health programmes to address priorities in an integrated way, or critically review existing programmes to align them with the evidence base. Plan interventions across the six areas recommended by the WHO Health Promoting Schools Framework:
   a. *School health policies and plans*: This includes those related to healthy food, smoking, bullying, gender equity, and safety.
   b. *Physical environment*: Safety and physical condition of facilities, water and sanitation services, and healthy environments.
   c. *Social environment*: School ethos to reinforce tolerance, caring, support to those with disadvantages, and provide support to parents.
   d. *Community relations*: Family and community involvement.
   e. *Personal health skills*: Curriculum interventions, and teachers as health promoters.
   f. *School health services*

102. Implement programmes that foster positive development and gender transformative approaches (see Case Study 14, and Case Studies A5.10 and A5.11 in Annex 5).

103. Implement intersectoral initiatives with a specific focus on disadvantaged and marginalized adolescents (including those who are not in school, live in poverty or otherwise experience social exclusion).

**Sources:** WHO 2014a; EWEC 2016.

*My friend is important to me, because she helps me settle down with everything stressful that I go through. We made a pact that, even with what we are going through in school - like me and her get bullied - we have to try to bring home only “A’s” and “B’s” on our report cards, because we both want to get into a good high school.*

- Young adolescent girl from the USA
CASE STUDY 14. Rwanda’s comprehensive school health policy.

School-aged children in Rwanda face many challenges related to poor health, poverty, and environmental hazards, such as inadequate water and sanitation facilities, limited school infrastructure, communicable and non-communicable diseases, and gender-based violence. Other important health issues relate to sexuality, SRH, HIV prevention, trauma, violence, substance abuse, and mental health problems. These factors impact on attendance at schools and on learners’ abilities to concentrate on school lessons, leading to poor retention rates.

In order to overcome such barriers, the Government of Rwanda has developed a comprehensive national school health policy as an integrated set of planned and sequential efforts designed to promote the students’ physical, social, psychological, and educational development. The school health policy recommends policy actions in eight key areas:

- Health promotion and disease prevention and control
- HIV, AIDS and other STIs
- Sexual and reproductive health and rights
- Environmental health
- School nutrition
- Physical education
- Mental health and related needs
- Gender and GBV issues

The policy takes a whole-school approach, with interventions directed at improving the school curriculum, physical infrastructure, access to school-based health services, school ethos, school policies, and linkages with the community. It recommends a school health “minimum package”, including health promotion and education, referral and follow-up of minor health issues, safe water and sanitation provision, deworming, and school nutrition. Nine ministries implement the policy, each with its specific areas of responsibility.

The policy is governed by both political and operational structures, as shown in Figure 5.3.
The policy is financed by budget lines in all sectors. The monitoring and evaluation strategy focuses on strengthening the data collection of school health indicators, building on the current data collection of the Ministry of Education. These data will allow the Ministry of Education to monitor the implementation of school health services and education, and measure their impact on the progress of learners. A set of indicators has been identified and suggested to measure and monitor the implementation of activities.


5.10. PROGRAMMING IN HUMANITARIAN AND FRAGILE SETTINGS

Section 3 identifies evidence-based approaches and interventions in humanitarian and fragile settings relevant to adolescents’ health. This section looks at the adolescent-specific aspects of programming for the delivery of these interventions. Programming for adolescents in humanitarian and fragile settings must be conducted in accordance with general humanitarian guidance that requires all interventions and support to:

- be well coordinated between the relevant and responsible authorities, humanitarian agencies, civil society organizations and representatives of affected populations;
- be based on participatory principles and implemented together with communities;
- be based on an assessment of capacities and needs;
- build and strengthen existing resources and helpful practices;
- promote human rights and protect affected populations from violations of human rights; and
• Ensure that all data-collection efforts must follow existing safety and ethical standards for researching, documenting and monitoring health risks, programmes, and interventions. (WHO 2007; WHO 2012a; WHO 2012b; CPWG 2012)

From the earliest stages of a recovery programme in a humanitarian and fragile setting, programming should be guided by development principles that seek to generate self-sustaining, nationally-owned, resilient processes for post-crisis recovery (CPWG 2012). The recovery programme should aim, therefore, to re-establish disrupted systems’ core functions as outlined in the programming logical framework (Figure 5.2). The adolescent-specific considerations for programming along those functions should be embedded in, and understood in the context of, general principles of health systems strengthening in humanitarian and fragile settings, including during the transition from acute crisis response to protracted crisis and/or recovery (WHO 2011). The general principles for programming in humanitarian and fragile settings are outside of the scope of this guidance document and can be found elsewhere (WHO 2011; WHO 2011a).

**Key Areas for Programming, continued:**

**ADOLESCENT HEALTH PROGRAMMING IN HUMANITARIAN AND FRAGILE SETTINGS**

**Adolescent-Protective Laws and Policies**

104. Ensure that policies and practices in emergencies and humanitarian crises promote, protect, and support essential services and interventions for adolescents’ health, education, and social protection, based on context and need.

105. Ensure that policies are in place to protect girls and boys from child labour, in particular those related to or made worse by the emergency.

106. 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.

107. 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, such as mandatory HIV testing before being placed in residential care.

108. For adolescents who have lost their parents or carers, establish that policies as needed to ensure the adolescents have consistent, supportive caregiving.

109. Ensure that policies and practices in humanitarian and fragile settings respect adolescent rights to dignity, their best interest, 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.

110. Establish standard operating procedures which 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.

111. 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 adolescent rights to autonomy and self-determination.

112. If adolescents are to be subject of information gathering, ensure that additional safeguards are in place, in line with WHO recommendations (WHO 2007).

113. Ensure that human resource policies include measures to protect girls and boys from exploitation and abuse by humanitarian workers.

**Build an Adolescent-Competent Workforce**

114. 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).


116. 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.

117. Ensure that teachers and other education personnel receive periodic, relevant, and structured training according to need and circumstances.

**Adolescent-Responsive Service Delivery**

118. 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 and HIV**
- **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 (CPWG 2012).
- **h. education:** in consultation with the community, determine emergency education options for boys and girls and establish, as appropriate, temporary learning centers 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 in line with minimum standards for education in emergencies, chronic crises, and early reconstruction (INEE 2004).

119. 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 (CPWG 2012).
120. Ensure that the deployment of goods and services, including the minimum initial service package, is fairly distributed and reaches all adolescents in need of such goods and services. Identify and address the causes and means of exclusion or inequitable distribution.

121. 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 gender, weight, physical activity levels, pregnancy, and lactation).

122. 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.

123. Establish, as appropriate, adolescents-friendly spaces as a first response to adolescent needs for protection, psychosocial wellbeing, and non-formal education, and as an entry point for working with affected communities. Make sure that these spaces adhere to guidelines to ensure that recreational and learning environments are safe, secure, inclusive, and promote the protection and mental and emotional wellbeing of adolescents (INEE 2011).

124. 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 they further include clear guidance on how adolescents will access them.

125. 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.

| Many of the camp’s residents are responsible for the situation here. Why? Because when they dump their waste, they feel it is not their responsibility anymore. For example, when the UN staff go on strike from time to time, the garbage workers stop working and people start to dump their waste at the doors of their houses. They do not bother to take it to the end of the street, where the container is. |
| - Adolescent refugee in the occupied Palestinian territories |

Ensure Supply, Technology, and Infrastructure for Service Delivery

126. 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.

Build Adolescent-Vigilant Management and Information Systems

127. 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).
128. 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.

129. 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 adolescent subgroup analysis.

130. 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, aggressive questioning, being “over-researched” by multiple partners, undermining of existing supports, or the use of overly stigmatizing labelling.

131. 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**

132. Implement community awareness actions to reduce stigma and promote adolescents’ access to services.

133. 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.

134. Implement community-mobilization activities to provide adolescent-friendly spaces, to determine emergency education options for boys and girls, and to establish temporary learning centers.

135. Implement self-help and resilience initiatives, such as adolescent support groups, dialogue groups, and community education and advocacy.

136. Ensure that affected communities actively participate in assessing adolescents’ educational needs, and that community resources are identified, mobilised, and used to implement education programmes and other learning activities in schools or other settings.

137. 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**

138. 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.

139. Ensure that adolescents are involved in establishing monitoring and evaluation systems, and mechanisms of accountability (see Case Studies A5.8 and A5.9 in Annex 5).
140. Establish a transparent coordination mechanism for emergency education activities, including effective information sharing between stakeholders.

Mobilize Financing and Build Adolescent-Mindful Financial Protection Systems

141. 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.


5.11. POSITIVE DEVELOPMENT APPROACHES IN PROGRAMMING

I like helping others because it broadens my horizons. It offers me a chance to understand people with visual impairments and physical disabilities, to realize why the elderly feel lonely at home, and to know people with different backgrounds.

- New immigrant adolescent girl in Hong Kong

Programming for adolescent and youth positive development (AYPD) emphasizes that programmes should try to boost young people’s resilience and protective factors rather than solely trying to reduce risk factors. This approach represents an important shift away from focussing primarily on adolescence as a problematic period of enhanced risk due to unhealthy or maladaptive behaviour. Programmes should not regard adolescents as “problems to be managed” that require deterrence of problematic behaviour and reduction of risk exposure (e.g. not using drugs or alcohol, not engaging in unsafe sex, and not participating in crime or violence) (NREPP 2015). The shift to a positive development approach is important for several reasons, including that programmes which solely seek to prevent and reduce adolescent risk factors have limited effectiveness. For example, programmes that focus solely on substance-specific risk reduction have been found to have little to no effect on adolescent alcohol use, even when they are effective at increasing adolescent knowledge of the risks of alcohol use (WHO 2004; WHO WPRO 2015). Programmes that focused on boosting protective factors, such as the six ‘C’s of positive youth development (Table 2.1), may be more effective, and/or may be a valuable complement to those focused on risk reduction. For instance, one US review found AYPD interventions to have a robust and sustained impact on the health of diverse groups of young people (Catalano et al. 2004).

Another useful example is sexuality education. A holistic approach to sexuality education requires looking beyond mortality, morbidity, and risks (e.g. reducing the risk of pregnancy or STIs) to developing a focus on health and wellbeing and a positive approach to sexuality for all programmes and services (IPPF 2016). CSE requires a broader approach that
addresses key issues such as young people’s self-confidence, self-expression, citizenship, their sexuality and aspirations, and their ability to think critically and make informed decisions (IPPF 2016). Case Study A5.13 in Annex 5 illustrates an example of a rights-based, gender-focused, and citizenship approach to sexuality education. While such approaches acknowledge and tackle the various risks associated with sexuality and the barriers related to sexual and reproductive health and rights, they do this in ways that does not reinforce fear and shame (IPPF 2016).

In programming, AYPD is both a means and an end in its own right. In order to achieve health outcomes, approaches that promote AYPD should be considered, and AYPD outcomes should be part of what any the programme is trying to achieve. Hence evidence-based AYPD programmes seek to achieve one or more of the following objectives:

- promote bonding, social competence, emotional competence, cognitive competence, behavioural competence, and moral competence;
- foster resilience, self-determination, spirituality, self-efficacy, clear and positive identity, belief in the future, and prosocial norms; and
- recognize the importance of positive behaviours and opportunities for prosocial involvement. (Catalano et al. 2004)

Gender transformative programmes also are based on such positive development approaches (see Case Study 15 below, and Case Studies A5.13 and A5.14 in Annex 5).

As shown in Table 3.1, interventions that promote AYPD work at various levels of the ecological framework. Programming for AYPD should therefore consider actions at these various levels (Catalano et al. 2012; NREPP 2015). The success of programmes based on AYPD approaches have encouraged some governments and development partners to expand funding for such programmes (see Case Study 15 below, and Case Studies A5.14 and A5.15 in Annex 5).

CASE STUDY 15. The Sahel Region’s initiatives to empower girls.

The Sahel Women’s Empowerment and Demographic Dividend Project covers Burkina Faso, Chad, Cote d’Ivoire, Mauritania, Mali, and Niger. The World Bank has provided 205 million USD in funding to the project with an aim to accelerate the demographic transition and position the region to benefit from a demographic dividend. Investing in the social and economic empowerment of adolescent girls is essential to achieve these aims.

Adolescent girls are marginalized throughout the world, and their vulnerabilities and constraints are particularly acute in the Sahel region. Across that region, most girls are married during their adolescence, with the median age at marriage ranging from 15.7 years in Niger to 19.7 in Cote d’Ivoire. Once married, girls typically drop out of school. The primary school completion rates for girls in SWEDD countries are alarmingly low, particularly in rural areas. Early marriage also means early sexual activity and, in most cases, early childbearing. In all of the project countries except for Mauritania, the adolescent fertility rate exceeds the average for sub-Saharan Africa.

A key component of the Sahel project is positive development. It aims to expand the range of choice and opportunities available to poor girls and their families in order to make decisions to delay marriage and childbearing more viable and desirable. The project targets girls aged 10 to 19 years who are at high risk of early marriage and early childbearing.
Nineteen age-appropriate and evidence-based interventions were developed by multiple ministries across the six countries and will be conducted over the coming years to:

- **Empower girls.** These interventions build girls’ capacity to lead healthy and productive lives and support an enabling community environment. Examples include: community- or school-based clubs that provide safe spaces and deliver life skills training to girls; and community-level sensitization activities that target husbands, parents, and/or other community members.

- **Improve economic opportunities.** These programmes seek to expand the range of economic opportunities available to girls (especially out-of-school girls) and/or their families. Examples include: business or vocational skills training; productive cash and/or in-kind grants (some of which will be made conditional on delayed marriage); and access to financial assets or services.

- **Keep girls in school.** These interventions seek to promote school retention, reduce dropout, or allow re-entry to formal school. Examples include (a) conditional or unconditional cash transfers; (b) in-kind transfers (e.g., food, transportation, accommodation) to girls and/or their families; and (c) creation of girl-friendly learning environments.

**Source:** World Bank, unpublished (2015).

**References [Section 5]:**


CRC GC 2016


Every Woman Every Child. 2017. Adolescent Health & Wellbeing Toolkit: a practical guide for young people to advocate for improved adolescent health and wellbeing
Global Fund. 2016. Maximizing impact by addressing adolescents’ needs in Global Fund concept notes: Strategic Investments for Adolescents In HIV, Tuberculosis and Malaria Programs.
http://www.theglobalfund.org/documents/core/infonotes/Core_Adolescents_InfoNote_en/
IASC TF. Year ?. Guidelines for HIV/AIDS interventions in emergency settings.
Inter-Agency Standing Committee (IASC) Task Force on HIV/AIDS in Emergency Settings Inter-Agency Task Team (?). Overview of HIV Interventions for Young People.
Ministry of Education of Republic of Rwanda. 2014. National school health policy


Public Health Agency of Canada. 2014. Toward health equity: canadian approaches to the health sector role.


WHO. 2012b. Do’s and don’ts in community-based psychosocial support for sexual violence survivors in conflict-affected settings.


WHO. 2013a. Practising a health in all policies approach: lessons for universal health coverage and health equity: a policy briefing for ministries of health based on experiences from Africa, South-East Asia and the Western Pacific.

WHO. 2013b. Demonstrating a health in all policies analytic framework for learning from experiences: based on literature reviews from Africa, South-East Asia and the Western Pacific.


http://www.who.int/maternal_child_adolescent/topics/adolescence/second-decade/en/


WHO. 2016b.


World Health Assembly. 2014.
6. MONITORING, EVALUATION, AND RESEARCH

**KEY MESSAGES [Section 6]:**

1. **Through a consultative process, the Global Strategy for Women’s, Children’s and Adolescents’ Health has arrived at a list of 16 core indicators. These include several that are either adolescent-specific or include adolescents, such as the adolescent mortality and birth rates, proficiency in reading and mathematics, and experience of sexual violence.**

2. **Beyond the Global Strategy indicators, which largely focus on outcomes and health impact, adolescent health programmes will also need to monitor inputs, processes and outputs.**

3. **Two recent global adolescent health-related research prioritization exercises which have been coordinated by WHO form a useful basis for the focus of research in adolescent health over the next few years.**

Monitoring is an essential component of programmes to guide efforts and investments, act as the basis to celebrate and reinforce progress, and is a critical tool for advocacy to redouble efforts. The new Global Strategy for Women’s, Children’s and Adolescents’ Health (2016-2030) has put considerable emphasis on monitoring and accountability (EWEC 2015).

6.1. MONITORING ADOLESCENT HEALTH PROGRAMMES

The International Health Partnership (IHP+), with its secretariat in WHO and the World Bank, is a broad partnership of UN and other development partners and country governments that are “committed to improving the health of citizens in developing countries by putting the principles of effective development cooperation into practice” (IHP+ 2014 Brochure). The IHP+ Common Monitoring and Evaluation Framework (WHO 1981; WHO 2011a) classifies indicators for monitoring health programmes into five main categories: inputs (e.g. financing, human resources), processes (e.g. supply chain, mechanisms for sharing information), outputs (e.g. availability of services and interventions and their quality), outcomes (e.g. intervention coverage, prevalence of risk behaviours) and impact (e.g. health outcomes, system efficiency). This is a useful framework for thinking about both the indicators themselves and the processes that will need to be in place for a monitoring and evaluation system to be effective and useful (Figure 6.1).
Figure 6.1. The International Health Partnership (IHP+) Common M&E Framework. Source: IHP+ 2014.

6.1.1. INDICATORS FROM THE GLOBAL STRATEGY FOR WOMEN’S, CHILDREN’S AND ADOLESCENTS’ HEALTH INDICATOR AND MONITORING FRAMEWORK

The Global Strategy for Women’s, Children’s and Adolescents’ Indicator and Monitoring Framework (EWEC 2016a) provides explicit guidance on impact and outcome indicators that should be monitored by national adolescent programmes to monitor progress to meet the 17 Global Strategy targets. These targets align with the Sustainable Development Goals (SDGs). There are 60 indicators in the main Global Strategy Indicator and Monitoring Framework. These 60 indicators, which are classified under the three key objectives of the Global Strategy (Survive, Thrive and Transform), were selected to provide sufficient depth for tracking progress on the Global Strategy (EWEC 2016a). The indicators related to adolescent health are shown in Table A6.1 in Annex 6. In order to minimize the reporting burden for countries, 16 of these indicators have been selected as key indicators that all countries will be expected to monitor in the near term.

**Key and Main Indicators:** Twelve of the 16 key Global Strategy indicators have been classified as being relevant to adolescent health (Table A6.1 in Annex 6). Six of these cover adolescents and include a specified age range, and at least one of these falls under each of the three objectives:
- Strive (Adolescent Mortality Rate)
- Thrive (Adolescent Birth Rate; and Number of countries with laws and regulations that guarantee women aged 15-49 access to sexual and reproductive health care, information and education)
- Transform (Proportion of children and young people (in schools) (a) in grades 2/3; (b) at the end of primary; and (c) at the end of lower secondary achieving at least minimum proficiency level (i) reading and (ii) mathematics, by sex; 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 and Proportion of young women and men aged 18-29 who experienced sexual violence by age 18).

Out of the full list of 60 main indicators, 43 are related to adolescent health (see Table 6.1 below, and Table A6.1 in Annex 6).
Table 6.1. Number of Global Strategy for Women’s, Children’s and Adolescents’ Health indicators relevant to adolescents, by Global Strategy and IHP+ classification.

<table>
<thead>
<tr>
<th>Types</th>
<th>Covers adolescents, including specified age range</th>
<th>Covers adolescents if age disaggregated (no specified age range)</th>
<th>Applicable to all (including adolescents)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Inputs/Processses</td>
<td>Outputs</td>
<td>Outcomes</td>
<td>Impact</td>
</tr>
<tr>
<td>Key</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>5</td>
</tr>
<tr>
<td>Other</td>
<td>-</td>
<td>1</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>For Further Development</td>
<td>-</td>
<td>-</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>0</td>
<td>2</td>
<td>9</td>
<td>12</td>
</tr>
</tbody>
</table>
**Indicators for Further Development and Context:** An additional 25 indicators have been identified as requiring further development (EWEC 2016a). The indicators requiring further development that are related to adolescent health are shown in italics in Table A6.1 and the numbers of such indicators are also shown in Table 6.1. Seventeen will allow them to be used as indicators of adolescent health if calls for age disaggregation are heeded (Table 6.1).

An additional 18 contextual indicators have been suggested (EWEC 2016a). These include indicators that are of relevance to adolescent health, such as the number of health workers per 100,000 population, and the proportion of 15-24 year olds not in education, employment, or training.

**Monitoring Strategy:** While indicators will be very important to monitor progress towards the targets of the Global Strategy at the global and regional levels, the major focus of monitoring of the Global Strategy will be at national and sub-national levels, as this is where most of the specific actions to improve the health of women, children and adolescents will need to take place. In addition, these are the data that must feed into the regional and global reports.

**Data Sources:** As shown in the 2016 report on country data for the Global Strategy (EWEC 2016b), many countries will have empirical data on some, but, not all the adolescent health-related indicators in Table A6.1 in Annex 6, but the aim will be to improve this over the course of the 15 years of Global Strategy implementation, especially within the first five years (2016-2020), and especially for the key indicators. An example of this is the adolescent mortality rate (Box 6.1).

**Box 6.1. Measuring the adolescent mortality rate.**

The main source for the adolescent mortality rate should be reasonably complete civil registration and vital statistics systems (CRVSs), yet these do not exist or are far from perfect in many low and middle-income countries. Initiatives to improve the completeness and accuracy of CRVSs include the Health Data Collaborative (www.healthdatacollaborative.org), which has recently been set up to assist countries to strengthen their health information systems and enhance their capacity to monitor progress towards the Sustainable Development Goals. In the meantime, the UN Department of Economic and Social Affairs (UN DESA) plans to use a mix of data from CRVSs and population censuses to generate model life tables from which the adolescent mortality rate can be estimated.

Countries with sample or sentinel vital registration systems and/or with local health and demographic surveillance systems should make full use of these to obtain estimates of the adolescent mortality rate by sex and triangulate these with estimates produced by the UN DESA, the Global Health Observatory and other sources, such as the Global Burden of Disease Project of the Institute of Health Metrics and Evaluation.

The main data source for many of the adolescent health-related indicators will be nationally representative household survey, such as DHS or MICS, or school-based health surveys, such as GSHS, HSBC, GYTS.

Data for other indicators will need to come from routine facility data. These will be the main source for indicators of the availability of various services, such as the proportion of rape survivors who sought care within 72 hours who received HIV post-exposure prophylaxis, and for coverage indicators such as the percentage of people living with HIV who are currently...
receiving ART, by sex and age.

Some indicators will come from facility surveys, which can provide data on service provision (e.g. Proportion of health facilities providing adolescent health services), service readiness (e.g. Proportion of health workers with specific training in provision of health services to adolescents), and health worker knowledge (e.g. Proportion of health workers with knowledge of the specific needs of adolescents related to contraception).

Other sources of data will include key informant interviews on policies, legislation and regulation, which could provide information such as whether there is a national policy and/or plan for mental health that is in line with international human rights instruments and has a focus on adolescents. Focus group discussions with adolescents will be important to ensure that their perspectives are incorporated and given adequate attention.

Finally, some data might come from special studies, such as one-off nationally or locally representative surveys, or cohort studies.

Other collations of existing data related to adolescents are planned, such as the “Adolescent Country Tracker” led by UNICEF, and the Global Youth Index led by UNFPA and the Office of the UN Secretary General’s Envoy on Youth.

The usefulness of routine monitoring of adolescent health service was shown by their ability to detect the impact of a national “Year of Sobriety” on clinic attendances for alcohol toxicity among 7-14 year-olds in Lithuania (Zaborskis et al 2010), summarized in Case Study A6.1 in Annex 6. Similarly, the value of institutionalized monitoring and periodic evaluations of adolescent health programmes is illustrated by England’s Teenage Pregnancy Strategy which is summarized in Case Study A6.2 in Annex 6.

6.1.2. INDICATORS OF INPUTS, PROCESSES AND OUTPUTS FOR MONITORING ADOLESCENT HEALTH PROGRAMMES.

The Global Strategy indicators are also mapped against the IHP+ Framework in Table 6.1 above, and Table A6.1 in Annex 6.

Sixteen of the 43 Global Strategy indicators that are related to adolescents measure impact, 13 measure outcomes, 5 measure outputs, and 6 measure inputs/processes. Similarly, 6 of the 17 indicators requiring further development that relate to adolescents would measure impacts, 5 would measure outcomes, 1 would measure an output, and the other 5 would measure inputs/processes.

Most of the Global Strategy indicators measure health outcomes or impact, and the great majority of the adolescent health-related indicators that measure inputs/processes or outputs are from the group of indicators that are applicable to all three population groups (women, children and adolescents) and do not specify an analysis for adolescents in the indicator (Table 6.1).

However, it will be essential for adolescent-specific programmes to monitor inputs such as financing, drugs and supplies, and health workforce requirements; processes such as staff training, systems for purchasing and delivering materials; and outputs such as the quality of the interventions and their availability. Some of these will be generic and needed for all adolescent health programmes. Examples of these are listed in Table 6.2. Others will be
specific to a particular programme. Examples of the indicators that might be needed to monitor a programme to reduce adolescent birth rates, a school health programme, and an adolescent mental health programme are suggested in Table 6.2. The indicators suggested are not intended to be either prescriptive or exhaustive, but are used as examples to demonstrate the importance of all types of M&E indicators for day-to-day programme monitoring and evaluation.
### Table 6.2 Examples of indicators for monitoring and evaluation of adolescent health programmes.

<table>
<thead>
<tr>
<th>Generic indicators for programmes focusing on adolescent-responsive health systems</th>
<th>Inputs</th>
<th>Processes</th>
<th>Outputs</th>
<th>Outcomes</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Resources available for adolescent health by source</td>
<td>• Mechanisms in place to ensure that health systems are adolescent-responsive</td>
<td>• Proportion of target education and training institutions that have their faculty trained in recommended approaches to adolescent health education and training</td>
<td>• Proportion of adolescents reporting satisfaction with care</td>
<td>• Proportion of adolescents reporting financial access to contraceptives</td>
<td>• Adolescent mortality rate (by sex)</td>
</tr>
<tr>
<td>• Number of health workers per 10,000 population by categories, geographical distribution, place of employment, etc.</td>
<td></td>
<td>• Number and percentage of health care providers trained in the provision of health services to adolescents</td>
<td>• Met need for adolescent-responsive health services</td>
<td></td>
<td>• Adolescent birth rate (by age group)</td>
</tr>
<tr>
<td>• Governance structures for the adolescent health programme are defined at national, subnational and local levels</td>
<td></td>
<td>• Number and proportion of health facilities with “adolescent-friendly” accreditation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Number and proportion of health workers with “adolescent-friendly” accreditation by category</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Proportion of target education and training institutions that have an adolescent health component in their curriculum in line with WHO Core competencies in adolescent health for primary care providers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Adolescent mortality rate (by sex)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Adolescent birth rate (by age group)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Programme to reduce adolescent pregnancies (WHO 2016a, EWEC 2015, EWEC 2016a)</td>
<td>• Programme funding for adolescent pregnancy reduction, by source</td>
<td>• Strategies and mechanisms in place to ensure that health systems are adolescent-responsive (including provision of contraceptive services to adolescents) Strategies and mechanisms in place for information, education and communication about reducing adolescent pregnancies</td>
<td>• Number of countries with laws and regulations that guarantee adolescent girls and young women (15-19) access to sexual and reproductive health care, information and education (including contraceptive services) • Number and percentage of health care providers trained in the provision of health services to adolescents (including provision of contraceptive services to adolescents) • Proportion of target education and training institutions that have their faculty trained in recommended approaches to adolescent health education and training (including provision of contraceptive services to adolescents) • Proportion of target audiences for adolescent pregnancy reduction messages reached</td>
<td>• Percentage of adolescent girls and young women (15-19) who have their need for family planning satisfied with modern methods • Proportion of adolescent girls and young women (15-19) who make their own informed decisions regarding sexual relations, contraceptive use and reproductive health care • Proportion of secondary schools that provide comprehensive sexuality education • Proportion of men and women aged 15-24 with basic knowledge about sexual and reproductive health and rights (SRHR) • Proportion of women aged 20-24 who were married or in union before age 15 and before age 18 • Proportion of women aged 20-24 who report sexual debut before age 15 and before age 18 • Adolescent birth rate (10-14, 15-19) per 1,000 women in that age group • Proportion of adolescent girls and young women (15-19) with obstetric complications due to abortion</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
<td></td>
</tr>
<tr>
<td>School health programme (UNESCO)</td>
<td>• Funding for school health programme by source</td>
<td>• Number of staff trained in the principles and</td>
<td>• Existence of a school health-related strategy or policy exist, either as part</td>
<td>• Prevalence of insufficient physical</td>
<td>• Proportion of children and young people: (a) in grades 2/3; (b) at the</td>
</tr>
<tr>
<td>Inputs</td>
<td>Processes</td>
<td>Outputs</td>
<td>Outcomes</td>
<td>Impact</td>
<td></td>
</tr>
<tr>
<td>-----------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>et al 2014a; UNESCO et al 2014b)</td>
<td>practice of health the health promoting schools initiative</td>
<td>of a broader health, education or poverty reduction policy or strategy or as a stand-alone document</td>
<td>activity among adolescents</td>
<td>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</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Existence of national school safety standards addressing both the physical and socio-emotional school environment</td>
<td>• Prevalence of current tobacco use among school-going persons 15 years and older [age disaggregated]</td>
<td>• Harmful use of alcohol among adolescents</td>
<td>• Proportion of ever-partnered women and girls aged 15 years and older subjected to physical, sexual or psychological violence by a current or former intimate partner in the previous 12 months, by form of violence and by age</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Percentage of schools with a functional water point at or near the school that provides a sufficient quantity of water for the needs of the school and is safe for drinking and accessible to children with disabilities.</td>
<td>• HPV vaccine coverage among adolescents</td>
<td>• Proportion of men and women aged 15-24 with basic knowledge about sexual and reproductive health services and rights</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Priority health content and skills-based pedagogy are present in national guidance for school curricula, teacher training and learning assessments.</td>
<td>• Number and percentage of teachers who have received pre-service training in skills-based health education, including participative teaching approaches</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Number and percentage of teachers who have received pre-service training in skills-based health education, including participative teaching approaches</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Global Accelerated Action for the Health of Adolescents (AA-HA!) Implementation Guidance, 15Dec2016 DRAFT 131
### Mental health programme for adolescents (Source: Baltag & Servili 2016, adapted)

<table>
<thead>
<tr>
<th>Inputs</th>
<th>Processes</th>
<th>Outputs</th>
<th>Outcomes</th>
<th>Impact</th>
</tr>
</thead>
</table>
| • Mental health workers per 100,000 population (psychiatrists, nurses, psychosocial care providers, paediatricians)  
• Existence of a national policy and/or plan for mental health that is in line with international human rights | • Mechanisms in place for training, support and supervision of health care workers in adolescent mental health | • Percentage of schools that provide regular skills-based health education sessions, as recommended in the national guidance.  
• Proportion of men and women aged 15-24 with basic knowledge about sexual and reproductive health services and rights  
• Proportion of secondary schools that provide comprehensive sexuality education (CSE)  
• Percentage of schools where the minimum package of school-based health and nutrition services (as defined at local- and national-level) is provided. | • The proportion of adolescents aged 10-14 and 15-19 years with severe mental disorders who utilized a specified package of (mental) health services in the last 12 months | • Number of suicide deaths per year per 100,000 adolescents  
• Proportion of adolescents who report experiencing symptoms of depression in a specified period |
<table>
<thead>
<tr>
<th>Inputs</th>
<th>Processes</th>
<th>Outputs</th>
<th>Outcomes</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>instruments and has a focus on adolescents (e.g. provisions for child and adolescent friendly mental health services, provisions to address transition from paediatric to adult mental health services)</td>
<td>institutions that have an adolescent mental health in their training curriculum for primary care providers</td>
<td>Functioning programmes of multisectoral mental health promotion and prevention in existence that address the specific needs of adolescents (e.g. mention school-based promotion and prevention, antibullying programmes)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sources:
6.2 EVALUATION OF ADOLESCENT HEALTH PROGRAMMES

While monitoring is the systematic collection of data to check on the progress of a programme, evaluation is the critical assessment of the degree to which the programme fulfils its stated goals and objectives. Programme evaluation tries to answer such questions as: “Have the programme strategies been implemented as planned, and how has this contributed to reaching the programme goals?” Evaluations can be used to redirect implementation and for subsequent programme planning. Monitoring data will usually form a major resource for any programme evaluation.

Countries should conduct periodic evaluations of the degree to which their adolescent health programme is meeting its goals and targets related to the Global Strategy. An example of an evaluation of the National Adolescent-Friendly Clinic Initiative in South Africa is given in Case Study 16 below (Dickson et al. 2007). An evaluation of a reproductive and sexual health programme in Jharkhand State, India is provided in Case Study A6.3 in Annex 6 (Barua et al. 2016).

CASE STUDY 16. South Africa’s evaluation of standards to improve the quality of adolescent services in clinics.

The South African National Adolescent Friendly Clinic Initiative (NAFCI) was initiated in 1999 as an integral component of loveLife, a national multi-dimensional HIV/AIDS programme for youth. NAFCI clinics agreed to a set of ten standards related to the provision of adolescent-friendly services. An independent evaluation was carried out between June 2002 and March 2003. A one-day assessment was conducted in 11 NAFCI clinics by a team that included a youth representative, and also in eleven control clinics that were randomly selected from within the same community. The ten standards were assessed using 41 specific criteria.

The evaluation showed that the NAFCI clinics had substantial and significantly better scores for 8 of the 10 standards. These results were used to support calls for the further expansion of the NAFCI clinic initiative. The evaluation also revealed areas where further improvements were needed to ensure that all NAFCI clinics would meet all 10 of the desired adolescent-friendly standards, and showed that a single orientation to the standards was not sufficient. Significant improvements were only seen if clinics were supported over a period of time by a facilitator trained in quality improvement approaches.


Ideally, provisional plans for these evaluations should be made from the start and should not be an afterthought. This is to allow the necessary budget to be allocated for the evaluation, and making an evaluation plan helps to clarify the specific goals and targets of the programme, as it is against these that the programme will be evaluated.

This document will not cover the basics of programme evaluation in general. Good guidance on that can be found elsewhere (WHO 1981; WHO 2011a). The aim here is to highlight issues that are particularly important considerations for evaluations of adolescent health programmes. These relate to permissions and ethics, adolescent involvement and participation in the evaluation, gaining effective and representative access to adolescents, including marginalized and particularly vulnerable adolescents, and adolescents’ evolving capacity.
6.2.1. PERMISSIONS AND ETHICS

Extra consultation with both adolescents and their communities is often required. An example of this would be if the evaluation will include a questionnaire survey that will require asking sensitive questions to adolescents who are under the legal age of majority (usually under 18 years), such as questions to unmarried adolescents about their sexual behaviour, or use of illegal drugs. Also, appropriate consent from parents or legal guardians, and assent from underage adolescents may be required, and issues related to legal and ethical provision of protection and enabling access to services need to be considered. Balancing the benefits that might accrue to all adolescents from an evaluation or research study with the rights of specific adolescent participants in the research requires very careful review by an ethics review committee (WHO 2011b).

6.2.2. ADOLESCENT INVOLVEMENT AND PARTICIPATION IN THE EVALUATION

Ideally, evaluations of programmes designed to improve the health of adolescents should always include obtaining the opinions of adolescents themselves. However, compared to younger children, there is much more potential for adolescents or young people to be engaged as active evaluators rather than only as “subjects” of the evaluation. This engagement can include adolescents actively and meaningfully participating in the design, implementation, analysis and interpretation of results, and in formulating the recommendations resulting from the programme evaluation. Ideas for how to involve adolescents can be found in the Youth Participation Guide developed by Family Health International and Advocates for Youth (FHI and Advocates for Youth 2008).

I do not think that health is all about diseases. It is also about psychology and spirituality, for example. Someone who does not have any physical problems might have psychological problems. Every one of us unfortunately has many problems.

- Working, rural adolescent in Turkey

6.2.3. GAINING EFFECTIVE AND REPRESENTATIVE ACCESS TO ADOLESCENTS

Few surveys collect data on a representative sample of all adolescents. Most, such as GSHS and GYTS, aim to include a representative sample of school-going adolescents within specified age ranges. The biases introduced by excluding out-of-school adolescents will vary by country, as the proportion of adolescents who are in school varies considerably. However, accessing out-of-school adolescents is more problematic than accessing young children as they are much more mobile.

6.2.4. ADOLESCENTS’ EVOLVING CAPACITY

In addition to issues with consent and assent, data collection instruments and the role that adolescents can have in actively being involved in the design, implementation, analysis and interpretation of programme evaluations should be appropriate to their evolving capacity. This will be very different for a 19 year-old relative to a 10 year-old. Furthermore, all adolescents of the same age will not have the same capacity. As a result, evaluation methods and study instruments may need to vary across adolescence, and special data collection approaches may be required to overcome shyness or increase understanding.

Monitoring and evaluation of equity and adolescents’ rights are critically important, and the Innov8 technical handbook provides a useful tool for this (WHO 2016b).
6.3. PRIORITY AREAS FOR FUTURE RESEARCH

The earlier sections of this document have demonstrated that much is known about the burden of disease and injuries in adolescence and the risk factors for future adult burden, what adolescent health interventions are effective, and how best these interventions might be prioritized and then implemented within adolescent health programmes. However, research will be essential to push progress forward within the Global Strategy for Women’s, Children’s and Adolescents’ Health in order to achieve the bold health-related Sustainable Development Goals. Reflecting this, research and innovation is one of the nine action areas highlighted by the Global Strategy (EWEC 2015). Key research areas will include research to develop the evidence on which interventions should be implemented (research on the “what” of adolescent health programming), and research on how best to deliver evidence-based interventions (research on the “how” of adolescent health programming).

The number of important research questions is very large and priorities will need to be selected for investment. To assist with this, two global adolescent health research prioritization exercises have been conducted recently, led by WHO (Hindin et al 2013; Nagata et al 2016). Both used versions of the Child Health and Nutrition Research Institute (CHNRI) methodology (Rudan et al 2008), in which experts propose potential research questions and then score them based on explicit criteria related to clarity, answerability, importance, potential for implementation, and relevance for equity.

The first prioritization exercise (Hindin et al) focused on seven areas related to adolescent sexual and reproductive health (SRH):

- Maternal health
- Contraception
- Gender-based violence
- Treatment and care of patients with HIV infection
- Abortion
- Integration of family planning and HIV-related services
- Sexually transmitted infections

The five top-ranked SRH research questions in each of these seven areas are summarised in Table A6.2 in Annex 6, along with the type of question as classified by the authors of the report on the prioritization exercise. The majority of the questions were either descriptive: epidemiological research/evaluation of existing interventions (n=16) or related to development of interventions: operations research/scaling up of existing interventions (n=18), with only two relating to discovery of new interventions.

The second exercise (Nagata et al 2016) covered eight other adolescent health areas:

- Communicable diseases prevention and management
- Injuries and violence
- Mental health
- Non-communicable diseases (NCD) management
- Nutrition
- Physical activity
- Substance use
- Policy, health and social systems

The five top-ranked research questions in each of these eight areas are summarised in Table A6.3 in Annex 6, along with the type of question as classified by the authors of the report on the prioritization exercise. The majority of the 40 questions that were ranked in the top five across the eight health areas related to descriptive epidemiology (n=13), Intervention development and
testing (n=8), or intervention delivery/implementation (n=14), with few related to intervention discovery (n=3) or adolescent health policy or health and social systems research (n=2).

Both exercises showed that priorities have shifted away from basic questions on the prevalence of specific health conditions towards questions about how best to scale-up existing interventions and testing the effectiveness of new ones.

References [Section 6]:


