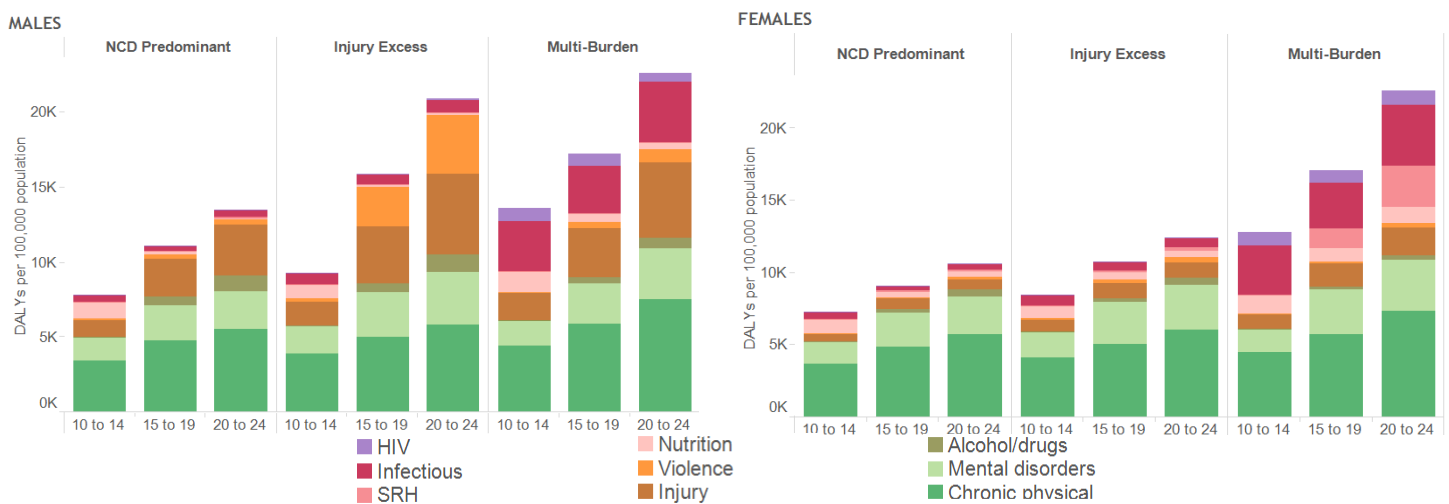


Evidence on Interventions and Platforms to Reach Adolescents

Actions for adolescent health are most effective when embedded in contemporary understandings of adolescent development and prevention science, which underscore the importance of engaging with young people themselves as they become more active agents within their own lives.

Adolescent health has been gaining attention in the past decade. As described by the Lancet Commission on Adolescent Health and Wellbeing, the adolescent years are crucial for the development of health and human capital which influence health and wellbeing during adolescence, throughout the life course and for the next generation. However, patterns of disease burden and health risk vary widely between countries as they progress through the epidemiological transition. As undernutrition, infectious and vaccine-preventable diseases, HIV/AIDS, and sexual and reproductive health needs are brought under control, the burden of road traffic injuries, violence, chronic physical disorders, mental disorders, and substance use becomes more prominent. Marked variation is also seen within countries, reflecting, among other factors, inequities in the social determinants of health and access to preventive interventions, education, and health services. Poverty and homelessness, disability, identity, and indigenous status are important causes of social marginalization, especially in adolescents.

Patterns of disease burden by age and sex (10 to 24 year olds)



Multiburden countries are defined as having 2,500 or more disability-adjusted life years (DALYs) per 100,000 population per year due to diseases of poverty. *Injury-excess* countries are defined as having 2,500 or more DALYs per 100,000 population per year due to injury and less than 2,500 due to diseases of poverty; *NCD-predominant* countries are defined as having less than 2,500 DALYs per 100,000 population due to injury and less than 2,500 due to diseases of poverty.

Platforms for Delivering Effective Interventions for Adolescents

Adolescence presents an opportunity to preserve investments made in childhood and to switch trajectories, while the emergence of new social determinants of health, such as peers, connection with school, neighborhood, and workplace, offer new vehicles and venues for intervention. Across *DCP3* volumes, effective interventions are organized by delivery platform. Health services are just one of the platforms for delivering adolescent health actions; schools, communities, m-health, media and social marketing, and structural interventions are also important. Indeed, the major actions needed to address adolescent health occur outside health services. The task of these platforms, as an integrated system, is to respond to established and emerging health problems, and to prevent other adolescent health issues from developing. These platforms are not mutually exclusive. For example, direct clinical care can be delivered by traditional health services such as primary care clinics and hospitals, in mobile clinics, and school-based clinics.

Health Services

Undernutrition

- Screening and micronutrient supplementation

Vaccine-Preventable and Infectious Disease

- Early identification and treatment of infectious diseases
- Adolescent vaccinations (human papillomavirus, childhood catch-up)

Injury and Violence

- Trauma care, including first responders (ambulances)

Mental Disorders including Suicide

- Management of mental disorders
- Practitioner training in recognizing and treating depression
- Management of chronic physical disorders

Obesity

- Management of comorbidities of obesity

Sexual and Reproductive Health

- Affordable contraception
- Early diagnosis and treatment of HIV/AIDS and sexually transmitted infections
- Male circumcision
- Antenatal, delivery, and postnatal care

Mobile Health

- Several promising interventions but all lack a strong evidence base in adolescents and young adults

Nutrition

Healthy nutrition is a topic of particular importance in the WHO Eastern Mediterranean Region given the double burden of under- and over-nutrition. While additional research is needed in LMICs, interventions addressing undernutrition (summary below), obesity, micronutrient deficiency, and nutrition during pregnancy are as crucial during adolescence as during other stages of the life course.

Summary Estimates of Effectiveness of Interventions Regarding Undernutrition in Adolescence

<i>Intervention</i>	<i>Outcome</i>
Nine-month intervention consisting of participatory training with community kitchen leaders, educational materials, increased access to heme iron (chicken liver and blood) in first five months	Anemia: relative risk (RR), 0.32; 95 percent confidence interval (CI), 0.15–0.69 Iron deficiency: RR, 0.78; 95 percent CI, 0.37–1.63
Iron (60 milligrams per day) as well as energy supplementation for three months	Hemoglobin: Mean Difference (MD), –0.10; 95 percent CI, –0.46–0.26

Schools

Undernutrition

- Micronutrient supplements
- Healthy school meals

Vaccine-Preventable and Infectious Disease

- Human papillomavirus vaccination

Injury and Violence

- Multicomponent interventions targeting violent behavior and substance use

Tobacco, Alcohol, and Illicit Drugs

- Alcohol-free policies
- Smoke-free policies

Sexual and Reproductive Health

- Quality secondary education
- Safe schools with clean toilets and facilities for menstrual care
- Comprehensive sexuality education
- School-based health services with contraceptives

Media and Social Marketing

Injury and Violence

- Promotion of knowledge of the effects of violence and available services
- Promotion of knowledge of risks of injury and violence

Tobacco, Alcohol, and Illicit Drugs

- Advertising restrictions on tobacco, alcohol, and illicit drugs
- Campaigns to build community awareness about tobacco, alcohol, and illicit drugs

Community

Undernutrition

- Micronutrient supplements (particularly in pregnancy)
- Protein-energy supplementation
- Deworming

Sexual and Reproductive Health

- Cash transfer programs, with payments tied to staying in school

Structural Interventions

Undernutrition

- Fortification of foods such as iron and folate

Tobacco, Alcohol, and Illicit Drugs

- Restrictions on alcohol sales to minors
- Taxes on alcohol
- Drunk-driving legislation
- Restrictions on illicit drugs
- Interventions in licensed premises

Mental Disorders including Suicide

- Restricted access to means of suicide (gun control, safe containers)

Obesity

- Tax on foods high in sugar, salt, fat

Injury and Violence

- Gun control legislation
- Legislation legalizing homosexuality and addressing violence against women
- Youth justice reform to promote second chances and diversions from custody
- Legislation making 16 the minimum age for criminal responsibility
- Graduated drivers' licensing
- Mandatory helmet wearing
- Multicomponent traffic injury control