PROGRAMME GUIDANCE FOR EARLY LIFE PREVENTION OF NON-COMMUNICABLE DISEASES

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LIST OF ACRONYMS

ADAP	Adolescent Development and Participation
CSO	Civil Society Organization
DRP	Division of Data, Research and Policy
ECD	Early Childhood Development
EPI	Expanded Programme on Immunization
GAIN	Global Alliance for Improved Nutrition
GAP	The Global Action Plan for the Prevention and Control of NCDs for 2013-2020
GCM	WHO Global Coordination Mechanism on the Prevention and Control of NCD
HIV	Human immunodeficiency virus
HPV	Human papillomavirus
HSS	Health Systems Strengthening
IMCI	Integrated Management of Childhood Illness
MICS	Multiple Indicator Cluster Survey
NCD	Non-communicable disease
PFP	UNICEF Division of Private Fundraising and Partnerships
PMTCT	Prevention of mother-to-child transmission of HIV
SDG	Sustainable Development Goal
UHC	Universal Health Coverage
UNDAF	The United Nations Development Assistance Framework
UNGA	The United Nations General Assembly
UNIATF	The United Nations Interagency Task Force on the Prevention and Control of NCDs
UNICEF	The United Nations Children's Fund
WASH	Water, Sanitation and Hygiene
WHO	The World Health Organization

SUMMARY

This guidance is intended for UNICEF managers and technical staff at country, regional and headquarters levels. It explains how to incorporate non-communicable disease (NCD) prevention into UNICEF programme sectors and divisions, with a focus on NCD risk reduction throughout the maternal, child and adolescent life cycle.

The document relies on evidence-based interventions for the prevention and control of NCDs recommended by WHO and others. It will be complemented by other UNICEF guidance under development, including on overweight and obesity, school nutrition, and NCD prevention among adolescents, as well as existing guidance for policy makers on prevention of marketing unhealthy foods to children.

1. INTRODUCTION & RATIONALE

Described as the "invisible epidemic," non-communicable diseases (NCDs) are the world's leading cause of death, responsible for 71% or 41 million of current annual deaths globally. The majority (85%) of NCD deaths among people <70 years of age occur in low and middle-income countries (LMICs) [1]. NCDs place a major burden on the global economy, and are closely linked to poverty, poor social and economic development and inequities. They most negatively impact poor countries, poor communities and the poorest individuals within all nations [2], including children and adolescents [3, 4]. Despite these adverse consequences, NCD prevention is neglected in global public health policy, expenditure and discourse [5]. The cost of this inaction is staggering; economic losses to NCDs average US$25/capita/year in low-income countries, and $139/capita/year in upper middle-income countries [6].

Evidence suggests that a significant number of the risk factors for NCDs during adulthood can be prevented with appropriate approaches across the maternal, paternal and child health life cycle; throughout the years of reproductive age, especially before conception and during pregnancy; and during infancy, childhood and adolescence [7]. However, the engagement of multiple sectors is required to reduce societal, environmental and behavioural risks for NCDs [8]. A *cross-sectoral, whole-of-government and whole-of-society approach* [5] is required, to build individual skills (by increasing health literacy), change the behaviours and actions of both public agencies and private companies, and implement appropriate programmes. Policy and regulatory actions that prevent and protect individuals from exposure to NCD risks are also required.

> Whilst evidence indicates that significant risk factors for NCDs during adulthood can be mitigated with appropriate approaches early in life, NCD prevention before conception and during pregnancy, infancy, childhood and adolescence is neglected in global public health policy, expenditure and discourse.

Recognising the dramatic changes in disease epidemiology and population demography in recent decades, and in line with UNICEF's Strategic Plan for 2018–2021 and 2016-2030 Strategy for Health, this guidance introduces a framework for mainstreaming NCD prevention across the child, adolescent and reproductive age life cycle, and across UNICEF programme areas. It complements UNICEF guidance on overweight and obesity, school nutrition, adolescent health, wellbeing and nutrition, and on regulatory options on marketing to children and food labelling.

1.1 RATIONALE FOR UNICEF ENGAGEMENT IN NCD PREVENTION

Equitable health and socioeconomic progress and progressive realization of child rights demand that NCD prevention should be given high priority, even in countries still struggling to reduce preventable child and maternal mortality and undernutrition. Contrary to common belief, NCDs also impact the health of children and adolescents. Each year, ~1.2 million people aged under 20 years die from treatable NCDs (such as chronic respiratory illness and cancer), accounting for 13% of all NCD mortality [9]. NCDs cause 24.8% of disability-affected life years (DALYs)[1] and 14.6% of deaths among children and adolescents [10] , and NCD risk factors such as child overweight and obesity have negative impacts on mental and emotional wellbeing, peer relations, learning and other opportunities [11].

Contrary to common belief, NCDs also impact the health of children and adolescents. Childhood and adolescence are also periods when behaviours associated with NCD risk are adopted. They therefore represent periods of opportunity for NCD control.

Overall, NCDs lead to reduced human capital and opportunities: children and adolescents with NCDs or who care for family members with NCDs have lower educational attainment and poorer access to employment [12]. Adult NCDs contribute to gender inequality, as girls more often care for affected family members [13]. Adult alcohol and tobacco use are also linked with child deprivation [14] and violence against children, especially girls [15].

The risk of adult NCDs is often established very early in life, through epigenetic mechanisms operating through both women and men before conception [16,17]. Prenatal maternal under-nutrition and/or low birthweight predispose an individual to obesity, high blood pressure, heart disease and diabetes later in life [18,19]. Similarly, maternal obesity and gestational diabetes are associated with cardiovascular disease and diabetes for both the mother and her child [19, 20].

Childhood and adolescence are also periods when behaviours associated with NCD risk are adopted, including tobacco use, alcohol use, unhealthy diets and sedentary lifestyles [21, 22]. These behaviours contribute to an estimated 70% of premature deaths in adulthood [23]. Children and adolescents are often targeted by marketing of unhealthy products (e.g. tobacco, alcohol and foods high in fat, sugar and salt), especially in LMICs [24] and many grow up in environments not conducive to adoption of healthy lifestyles (e.g. participation in sport) [9, 22]. In addition, inherited but preventable physiological responses increase many modifiable NCD risks [16].

[1] Based on 2016 Global Burden of Disease [43] data for <20 age group. For <5 years old, NCDs account for 13.9% of all DALYs and 12.4% of all deaths.

Childhood, adolescence and the reproductive years for women and men represent an “age of opportunity” for prevention, control, early detection, treatment and care of NCDs [9], including relatively modest, but effective, interventions with major impact on disease risk [25]. UNICEF is already supporting interventions that reduce NCD risk through primary prevention in early life, but rarely with an NCD prevention focus. A major contribution to NCD risk reduction is possible by refocusing many UNICEF interventions across different sectors and across the life cycle.

2. GLOBAL & UNICEF POLICY & ACTION ON NCDs

2.1 GLOBAL INSTITUTIONS & GUIDANCE

In recent years, the global health community has raised numerous calls for action on NCD prevention and control, and countries have committed to the Global Action Plan for the Prevention and Control of NCDs for 2013–2020 (GAP) [26]. Sustainable Development Goal (SDG) target 3.4 focuses specifically on reducing premature NCD mortality by one-third by 2030, and NCD prevention is critical to achieving many other SDGs (Table 1) [2, 5].

Table 1. NCDs intersect with multiple SDGs.

The GAP focuses on four main conditions that account for 80% of global NCDs: cardiovascular diseases, diabetes, preventable cancers and chronic respiratory diseases (including asthma in children and adolescents), and four related modifiable risk factors (tobacco use, unhealthy diets,

physical inactivity contributing to overweight and obesity, and harmful use of alcohol) (Annex 1). To tackle these diseases and risk factors, WHO, as the global coordinating agency on NCDs, has adopted a so-called '4x4 approach' and recently updated the related guidance (Annex 2) [27].

The GAP supports several other instruments that address NCD prevention and control, including the WHO Framework Convention on Tobacco Control [28], the Global Strategy to Reduce Harmful Use of Alcohol [29], the Decade of Action on Nutrition [30], the Global Action Plan for Physical Activity [31], the Accelerated Action for the Health of Adolescents [32] and an implementation plan for the Commission on Ending Childhood Obesity's recommendations [11].

A Global Coordination Mechanism (GCM) [33] and United Nations Interagency Task Force on NCDs (UNIATF) [34] are catalysing action in specific areas, and have supported UN processes and action. UNICEF is a member of these two bodies. In 2018, an Independent High-level Commission on NCDs recommended a *health-in-all-policies, whole-of-government, whole-of-society, cross-sectoral and life-course approach* to NCDs. It also recommended expanding prevention and control efforts beyond the four main NCDs and their risk factors, reflecting growing consensus in the NCD community to also focus on mental health disorders, injuries and their related risk factors. However, whilst UNICEF acknowledges overlap in the prevention of these and the four main NCDs (for example, regarding environmental and occupational issues, especially among adolescents), they are not covered in this Guidance.[1] The Comprehensive Mental Health Action Plan 2013-2020 [35] provides related guidance on mental health, and the most recent edition of Disease Control Priorities also lists relevant evidence-based approaches (Table 5).

2.2 UNICEF ACTION ON NCDs AND THE RELATED POLICY ENVIRONMENT

As part of its commitment to these global efforts and the repeated calls for action, UNICEF has committed to integrate NCDs across programme sectors, with a focus on early prevention of NCDs

[1] Guided by the GAP, this programmatic guidance mainly focuses on the four main diseases and their associated risk factors.

across the lifecycle, before and during pregnancy and during infancy, childhood and adolescence. To this end, UNICEF supports governments and other stakeholders to mainstream NCD risk reduction within national policy, development plans, strategies and initiatives.

UNICEF recently conducted several reviews of the evidence on interventions to prevent NCDs early in life [36, 37, 38], and participated in global commentaries [7, 39]. In 2016, UNICEF's Latin America and the Caribbean Regional Office commissioned studies on marketing of unhealthy food and beverages to children [40] and on the impact of food and beverage labelling [41].

The UNICEF Strategic Plan 2018–2021 acknowledges that the prevention of child overweight and obesity is a critical area for UNICEF action, with a high potential for programming at country level. More generally, several result areas (see Annex 3) of Goal 1 (*Every Child Survives and Thrives*) are linked to NCD prevention and control, including: enhancing maternal, newborn and child health to reduce NCD risks; improving immunisation against human papillomavirus (HPV) and hepatitis B; preventing stunting and other forms of malnutrition; preventing and treating HIV (HIV infection and treatment increase the risks of NCDs and of related risk factors); investing in early childhood development (ECD - e.g. positive and responsive parenting), and addressing adolescent health and nutrition. The Strategic Plan also provides for a learning agenda on other NCD areas, such as adolescent mental health, suicide and road safety. In addition, Goal 2 (*Every child learns*) is linked to NCD prevention, as NCDs are associated with reduced human capital and educational attainment; schools provide a platform to reduce NCD risk. Goal 4 prioritises *a safe and clean environment for children*, including measures on urban planning and safe spaces for recreation, and Goal 5 *addresses inequities* in child poverty and the traditional roles of girls and of boys, both of which can also increase NCD risk in LMICs.

NCDs are also central to the UNICEF Strategy for Health 2016–2030 which, in line with the SDGs and the Global Strategy for Women's, Children's and Adolescents' Health [42], expands UNICEF's focus beyond child survival to the dimensions that equip children to "thrive and transform." As part

of this Strategy, UNICEF commits to addressing the health and development needs of children and adolescents, including promoting social and behaviour change to address harmful behaviours and practices (e.g. unhealthy diets, tobacco consumption and low levels of physical activity) across the lifecycle. The Strategy for Health also recognises the role that UNICEF can play on mental health as well as the prevention of both intentional and unintentional injuries.

In recent years, UNICEF has developed approaches to Health System Strengthening (HSS) and Universal Health Coverage (UHC) that are critical for tackling NCDs, such as enhancing equal access to prevention, screening and care and mitigating the socioeconomic impacts of ill health. However, given that risk factors that drive NCDs are primarily outside of the health system (such as tobacco use, harmful use of alcohol, unhealthy diet, physical inactivity and air pollution), multi-sectoral approaches including regulatory and economic policies (e.g. marketing restrictions and tax measures on unhealthy products) and stimulation of demand / uptake at community level are further needed to comprehensively address NCDs and associated risks.

3. STRATEGIC FRAMEWORK FOR NCD PREVENTION

The UNICEF Strategy for Health 2016–2030 includes four areas for action that provide Country Offices with a strategic framework that can be applied to NCD prevention across different contexts (Table 2). Illustrative actions under each bullet are listed in Annex 4.

Advocate for every child's right to health	Influence government policies	Strengthen service delivery	Empower communities
• Support data capture, evidence generation and use • Engage with partners • Expand available resources	• Support evidence-based policymaking and financing • Promote scale-up effective interventions/innovations • Share knowledge & promote south-south exchange	• Build capacity of management and health providers • Support programmes, including service provision in particular at community level and in emergencies • Strengthen supply chain systems	• Engage for social and behaviour change • Generate demand • Strengthen accountability

Table 2. Four action areas of the UNICEF Strategy for Health 2016-2030

Using this guidance for action and informed by WHO's recently updated minimum package of cost-effective policy options and interventions to tackle NCDs, known as 'best buys' (Annex 2), and by other recommended interventions [27], UNICEF Offices have a menu of options for potential programme activities. These options are outlined in this section and below.

3.1 ADVOCATE FOR EVERY CHILD'S RIGHT TO HEALTH

UNICEF should prioritize advocating for NCD risk reduction among children and adolescents as applicable in all contexts and countries. This advocacy can be guided by the WHO 'best buys' across UNICEF's Health, Nutrition, Child Protection, HIV, ECD, Education, Adolescent Development, Water, Sanitation and Hygiene (WASH) and Social Policy Sections. Advocacy around NCD prevention and control efforts should focus on children and adolescents in global, regional and national policies and programmes. For example, promoting comprehensive laws that reduce children's and adolescent's direct and indirect exposure to tobacco, alcohol, illicit drugs and unhealthy foods and beverages; school- and community-based initiatives that enable healthy lifestyles, including promoting healthy food and physical activity; health systems that, in coordination with education and social services, deliver NCD prevention, screening and care; and environmental initiatives that encourage physical activity and healthier diets (e.g. through health promoting urban planning) (Table 3).

• Laws and regulations that reduce children's and adolescents' direct and indirect exposure to tobacco, alcohol, illicit drugs • Laws and regulations that reduce children's and adolescents' exposure to unhealthy foods and drinks, e.g. through the media and at points of sale • Assurance of funding for universal screening and simple treatment of NCDs across the life cycle; • Initiatives to improve the health literacy of the community at-large • Policies that support and protect health, integration of life skills and healthy living in school curricula • School-based screening for NCD risks and provision/promotion of healthy food and physical activity • Standards for the built environment and public amenity that foster physical activity and individual safety

Table 3: Examples of UNICEF advocacy priorities

Advocacy must be data-driven and evidence-based, but currently neither national health information systems nor UNICEF programme monitoring in most countries capture data on early NCD prevention and control. Whilst the Institute for Health Metrics and Evaluation database [43] presents country estimates of NCD burden by age group and WHO has established a monitoring system for NCD progress, including national policies and legislation [44], there is a dearth of child- and adolescent-specific data synthesized[1] to inform programmes and resource allocation. UNICEF should identify data gaps and strengthen mechanisms for NCD risk and related data collection and monitoring across sectors.

By using existing coordination mechanisms and platforms (e.g. the UNIATF, NCD Child, EAT Forum) at global, regional and country levels, UNICEF should extend its advocacy across sectors, including health, nutrition, education, the social sector, transportation, environment, trade and commerce. In addition to government, effective NCD prevention requires involvement of other stakeholders, such as academia, the private sector, media and civil society organisations (CSOs). At country level, the United Nations Development Assistance Framework (UNDAF) provides a forum for UN-wide engagement to support health promoting policies, programmes and financing.

UNICEF should work with WHO to build cross-sectoral linkages for NCD prevention, facilitate dialogue on accountability, advocate for increased domestic financing for NCD prevention, effective regulation and promoting the inclusion of voices not always at the policy table.

[1] In 2016, UNICEF developed regional child and adolescent NCD profiles based on the Global Burden of Disease/IHME data [39].

3.2 INFLUENCE GOVERNMENT POLICIES & THEIR IMPLEMENTATION

As one of the largest UN agencies and an agency with a large presence in the field, UNICEF can wield substantive influence on the realisation of the rights of children and adolescents, including through national priorities, policies and budget allocation on NCD prevention in early life.

By providing technical support, convening stakeholders, facilitating knowledge exchange and mobilising resources, UNICEF should support governments in all contexts on evidence-based policymaking and financing, adopting laws and implementing programmes to protect children and adolescents from exposure to NCD risk factors. Success in tackling NCDs requires legislation and policy reform across a range of sectors (including education, tobacco, food and beverage production and marketing to children; built environment design); implementation of taxation or other financial regulation mechanisms; public funding for community programmes, health and nutrition literacy and built environment initiatives; and related actions through government, community- and privately-supported efforts that are free of conflict of interest [7]. UNICEF should work with governments, local authorities and, where appropriate, the private sector to support such approaches.

Given that many child survival and development programmes that can impact NCDs are already implemented by countries, UNICEF should their promote scale-up and help governments to make the linkages between those efforts and NCD prevention. To this end, by using multiple platforms, UNICEF should support development of programmes that, together with relevant government policies and legislation, promote protective environments that discourage risk behaviours and support and protect health.

To the extent that NCD prevention is a new area of focus for many governments and development organisations, the financing and policy experiences from other health programmes may be helpful. UNICEF should gather lessons learned, promote knowledge exchange between countries and foster South–South collaboration on effective strategies, policies and interventions, particularly those related to NCD prevention early in life. UNICEF's efforts to implement the International Code of Marketing of Breastmilk Substitutes can provide valuable experience, for example, on how to regulate harmful marketing practices of the tobacco, food and beverage industries.

3.3 STRENGTHEN SERVICE DELIVERY

In addition to promoting vertical interventions and tackling individual behaviours and practices, a system strengthening approach is required to effectively address the NCDs across the lifecycle [7]. In countries where UNICEF is engaged in strengthening service delivery, it is already working to reach children and their families through a range of platforms, including primary health care, community health, schools and child protection systems.

UNICEF-supported maternal, newborn and child programmes are well positioned to further integrate NCD prevention [7]. Whilst UNICEF itself is not positioned to take on treatment of NCDs, it can work with others to ensure that services are in place when NCDs are identified. Conversely, UNICEF is well positioned to support NCD prevention services through the education (e.g. through its preschool, primary and secondary school programmes) and social sectors (e.g. through child protection initiatives).

3.4 EMPOWER COMMUNITIES

Empowerment of communities can support efforts to influence government policy, including through generating demand and creating public accountability. Communication for development (C4D) strategies should be applied to support NCD prevention efforts. UNICEF should work with civil society, governments and other local influencers to create demand for NCD prevention; use information and communication technologies to increase knowledge about healthy lifestyles (e.g. healthy eating choices; the risks of tobacco and alcohol use); and develop contextually-appropriate messaging to promote NCD prevention, delivered through C4D multimedia strategies.

Innovations, such as U-report or other communication initiatives, can potentially engage communities and serve as accountability tools. They can also be used to promote communities',

particularly children's and adolescents', engagement and participation in formulation of policies as well as in planning, implementing and monitoring of interventions.

Further, UNICEF can enhance capacities of community and civil society leaders as well as build mechanisms for child and adolescent inclusion. Adolescents can also contribute in several ways to prevent NCDs, sharing information; leading community-based promotion of healthy behaviours; informing the public about health problems and solutions; and advocating for policies and practices relevant to NCD prevention [45].

4. EVIDENCE-BASED OPTIONS FOR UNICEF ACTION ON NCDs

WHO has developed a list of evidence-based, cost-effective policy options and interventions to tackle NCDs known as 'best buys' [27]. They cover the four major risk factors and disease areas. Many of the best buys can be adapted to NCD risk reduction during childhood and adolescence, and thus provide UNICEF with a menu of options for action.

Table 4 presents the WHO best buy interventions and links them to options for UNICEF action relevant to its capacity, experience and resources. It also lists the relevant life cycle period, the corresponding action area (as described in section 3 above), the scale at which UNICEF could engage ("intervention level"), the programme lead and support entities within UNICEF and other parameters. This table is proposed as a starting point for determining UNICEF's actions to address NCDs as of 2019. It should be reviewed regularly, particularly in relation to UNICEF's ability to act which may change over time.

Many activities that impact child survival and child and adolescent growth and development can directly influence practices, resources and behaviours that influence the risk of NCDs. For example, breastfeeding promotion and support, whilst enhancing child survival, also helps reduce the risks of overweight and type 2 diabetes later in life, and women's risks of breast and ovarian cancer and type 2 diabetes [46]. Programmes to improve antenatal care, maternal nutrition and health literacy; immunisation against HPV and hepatitis B and promoting treatment of streptococcal infections are also examples of existing UNICEF activity that contribute to NCD prevention.

Intervention by risk factor	Life cycle period[1]	Action Area[2]	Intervention level[3]	UNICEF ability to act[4]	UNICEF Progr-amme lead	Supportive Entities
1. TOBACCO USE						
Increase excise taxes and prices on tobacco products	Universal	Advocacy, Policy	Global, Regional, National	Low	Health	Social Policy, PFP, DRP
Enact and enforce comprehensive bans on tobacco advertisement, promotion and sponsorship		Advocacy, Policy	Global, Regional, National	Moderate	DOC	Health, Child Protection, ADAP, PFP
Eliminate exposure to second-hand tobacco smoke in all indoor workplaces, public places and public transport		Advocacy	National, Subnational	Moderate	Health	DOC, C4D
Implement effective mass media campaigns that educate the public about the harms of smoking/tobacco use and second-hand smoke		Advocacy, Empower communities	National, Subnational	Moderate	DOC	Health, C4D
2. HARMFUL USE OF ALCOHOL						
Increase excise taxes on alcoholic beverages	Universal	Advocacy, Policy	Global, Regional, National	Low	Health	Social Policy, PFP, DRP
Enact and enforce bans or comprehensive restrictions on exposure to alcohol advertisements (across multiple types of media)		Advocacy, Policy	Global, Regional, National	Moderate	DOC	Health, Child Protection, ADAP, PFP
Enact and enforce restrictions on the physical availability of retailed alcohol (via reduced hours of sale)		Advocacy, Policy	National	Low	DOC	Health, Child Protection, ADAP
Enact and enforce an appropriate minimum age for purchase or consumption of alcoholic beverages and reduce density of retail outlets		Advocacy	Global, Regional, National	Low	DOC	Health, C4D, Child Protection, PFP
Restrict or ban promotions of alcoholic beverages in connection with sponsorships and activities targeting young people		Advocacy, Policy	Global, Regional, National	Low	DOC	Health, C4D, Child Protection, ADAP, PFP
Provide prevention, treatment and care for alcohol use disorders and comorbid conditions in health and social services		Service delivery	National, Subnational	Low	Health	Child Protection, ADAP
Provide consumer information about and label, alcoholic beverages to indicate the harm related to alcohol	Universal	Advocacy	National, Subnational	Low	Health	Nutrition, C4D, PFP
3. UNHEALTHY DIET						
Reduce salt intake through the reformulation of food products to contain less salt and the setting of target levels for the amount of salt in foods and meals	Universal	Advocacy, Policy	Global, Regional, National	Moderate	Nutrition	Health, PFP

[1] Life cycle period describes the UNICEF focus and includes the following population groups: infants; children; adolescents; families; and pregnant and lactating women. Universal refers to interventions affecting the whole population.
[2] Action area describes key actions UNICEF can take, including : 1) Advocate for every child's right to health (Advocacy); 2) Influence government policies and their implementation (Policy); 3) Strengthen service delivery (Service delivery); and 4) Empower communities. For detailed description, see Part 4.
[3] Intervention level refers to a scale to which UNICEF should engage in implementing the intervention: global (HQ); regional (ROs); and/or national and subnational (COs).
[4] Ability to act describes UNICEF's ability to support implementation given its existing experience and capacities: 'low' indicates that UNICEF has little experience in implementing the intervention and that further development of capacities and approaches is required; 'moderate' that UNICEF has some experience from the national/regional/global level in implementing the intervention; and 'comprehensive' that UNICEF has an established significant role in implementing the interventions throughout the regions and countries.

Intervention by risk factor	Life cycle period	Action Area	Intervention level	UNICEF ability to act	UNICEF Progr-amme lead	Supportive Entities
Reduce salt intake through the establishment of a supportive environment in public institutions, such as hospitals, schools, workplaces and nursing homes, to enable lower sodium options to be provided		Advocacy, Policy, Service delivery	National, Subnational	Moderate	Nutrition	Health, Education, Child Protection, ECD
Reduce salt intake through a behaviour change communication and mass media campaign		Advocacy, Empower communities	National, Subnational	Moderate	Nutrition	C4D, Health
Reduce salt intake through the implementation of front-of-pack labelling	Universal	Advocacy, Policy	National, Subnational	Low	Nutrition	Health, PFP
Eliminate industrial trans-fats through the development of legislation to ban their use in the food chain	Universal	Advocacy, Policy	Global, Regional, National	Low	Nutrition	Health, PFP
Reduce sugar consumption through effective taxation on sugar-sweetened beverages		Advocacy, Policy	Global, Regional, National	Moderate	Nutrition	Health, PFP
Reduce consumption of foods high in fats, salts and sugars and sweetened beverages by children and adolescents through the development of legislation to ban the promotion of these products to children and adolescents.*		Advocacy, Policy	Global, Regional, National	Low	Nutrition	Health, PFP
Reduce sugar intake through strategic product reformulation.*		Advocacy, Policy	Global, Regional, National	Low	Nutrition	Health, PFP
Protect, promote and support exclusive breastfeeding for the first 6 months of life and up to 2 years and beyond with safe and adequate complementary feeding		Advocacy, Policy, Service delivery, Empower communities	Global, Regional, National, Subnational	Comprehensive	Nutrition	Health, C4D, ECD, PFP
Implement subsidies or reduced taxes to increase the intake of fruits and vegetables		Policy	National, Subnational	Low	Nutrition	Health, Education, C4D
Replace trans-fats and saturated fats with unsaturated fats through reformulation, labelling, fiscal policies, or agricultural policies	Universal	Advocacy, Policy	Global, Regional, National	Moderate	Nutrition	Health, PFP
Limit portion and package size to reduce energy intake and the risk of overweight/obesity		Advocacy, Policy	Global, Regional, National	Moderate	Nutrition	Health, PFP
Implement nutrition education and counselling in different settings (for example, in preschools, schools, workplaces, health clinics and hospitals) to increase the intake of fruits and vegetables		Advocacy, Service delivery, Empower communities	National, Subnational	Comprehensive	Nutrition	Health, Education, C4D
Implement nutrition labelling to reduce total energy intake (kcal), sugars, sodium, fats and vegetables		Advocacy, Policy	Global, Regional, National	Moderate	Nutrition	Health, PFP
Implement mass media campaign on healthy diets, including social marketing to reduce the intake of total fat, saturated fats, sugars and salt and to promote the intake of fruits and vegetables		Empower communities	National, Subnational	Moderate	Nutrition	Health, C4D

Intervention by risk factor	Life cycle period	Action Area	Intervention level	UNICEF ability to act	UNICEF Progr-amme lead	Supportive Entities
4. PHYSICAL INACTIVITY						
Implement community-wide public education and awareness campaign for physical activity which includes a mass media campaign combined with other community-based education, motivational and environmental programmes aimed at supporting behavioural change of physical activity levels		Service delivery, Empower communities	National, Subnational	Moderate	Health	Nutrition, C4D, Education, ECD, ADAP
Provide physical activity counselling and referral as part of routine PHC services through the use of a brief intervention		Policy, Service delivery	National, Subnational	Low	Health	Nutrition, C4D
Ensure that macro-level urban design incorporates the core elements of residential density, connected street networks that include sidewalks, easy access to a diversity of destinations and access to public transport		Advocacy	National, Subnational	Moderate (Child-Friendly Cities)	Health	Nutrition, Child Protection, ADAP, DRP
Implement whole-of-school programmes that include quality physical education, availability of adequate facilities and programmes to support physical activity for all children		Advocacy, Service delivery	National, Subnational	Low	Education	Health, Nutrition, C4D, ADAP
Provide convenient and safe access to quality public open space and adequate infrastructure to support walking and cycling		Advocacy	National, Subnational	Moderate (Child-Friendly Cities)	Health	Nutrition, Child Protection, ADAP, Social Policy, DRP
Promote physical activity through organized sport groups, clubs, programmes and events		Service delivery, Empower communities	National, Subnational	Low	ADAP	Education, Health, Nutrition, C4D
5. OTHERS						
Primary prevention of rheumatic fever and rheumatic heart diseases by increasing appropriate treatment of streptococcal pharyngitis at the primary care level	 (part of IMCI)	Service delivery	National, Subnational	Moderate	Health	N/A
Vaccination against human papillomavirus (2 doses) of 9- to 13-year-old girls	 (part of the EPI: Expanded Program on Immunisation)	Advocacy, Service delivery, Empower communities	National, Subnational	Comprehensive	Health	C4D
Prevention of liver cancer through hepatitis B immunisation	 (part of EPI)	Advocacy, Service delivery, Empower communities	National, Subnational	Comprehensive	Health	C4D
Provide access to improved stoves and cleaner fuels to reduce indoor air pollution		Advocacy, Empower communities	National, Subnational	Low	Health	C4D, Child Protection
6. SUPPORTING ACTIONS						
Raise public and political awareness, understanding and practice about prevention and control of NCDs		Advocacy, Policy, Empower communities	Global, Regional, National, Subnational	Low	Health	Nutrition, C4D, DOC
Strengthen international cooperation for resource mobilisation, capacity-building, health workforce training and exchange of information on lessons learned and on best practices	 (Early prevention)	Advocacy	Global, Regional, National	Low	Health	Nutrition, C4D, DOC

Intervention by risk factor	Life cycle period	Action Area	Intervention level	UNICEF ability to act	UNICEF Progr-amme lead	Supportive Entities
Engage and mobilise civil society and the private sector, as appropriate and strengthen international cooperation to support implementation of the action plan at global, regional and national levels	 (Early prevention)	Advocacy, Empower communities	Global, Regional, National	Low	Health	Nutrition, C4D, PFP
Prioritise and increase, as needed, budgetary allocations for prevention and control of NCDs, without prejudice to the sovereign right of nations to determine taxation and other policies	 (Early prevention)	Advocacy, Policy	National	Low	Health	Nutrition, Social Policy
Develop and implement a national, multi-sectoral policy and plan for the prevention and control of NCDs through multi-stakeholder engagement	 (Early prevention)	Advocacy, Policy	National	Low	Health	Nutrition, Education, Child Protection, ADAP, Social Policy
Strengthen research capacity through cooperation with foreign and domestic research institutes	 (Early prevention)	Advocacy, Policy	Regional (South–South collaboration), National	Moderate	Health Nutrition	DRP/M&E
Develop national targets and indicators based on the global monitoring framework and linked with multi-sectoral policy and plans		Advocacy, Policy	Regional, National	Low	DRP/ M&E	Health, Nutrition
Integrate NCD surveillance and monitoring into national health information systems		Advocacy, Service delivery	National	Low	DRP/ M&E	Health, Nutrition

* Not part of the 'best buys'; added as among UNICEF key actions to address overweight and obesity.

Table 4. 'Best buys' and other recommended interventions for UNICEF NCD programming

WHO has not yet augmented the best buys to include evidence-based actions to promote good mental health, but Table 5 lists the actions included in Disease Control Priorities (DCP).

Delivery platform	Interventions
Population platform	• Regulate the availability and demand for alcohol (eg, increases in excise taxes on alcohol products, advertising bans) • Legislative measures to control the sale and distribution of means of suicide (eg, pesticides)
Community platform	• Life-skills training in schools to build social and emotional competencies • Parenting interventions to promote early child development
Health care platform	• Psychological treatment for mood, anxiety, behaviour disorders in children • Diagnosis and management of depression (including maternal) and anxiety disorders in adults • Continuing care of schizophrenia and bipolar disorder • Screening and brief interventions for alcohol use disorders • Opioid substitution therapy for opioid dependence • Interventions to support carers of persons with dementia • Diagnosis and management of epilepsy and headaches • Self-managed treatment of migraine

Table 5: Priority interventions for mental, neurological and substance use disorders by delivery platform. Source: DCP3

4.1 SUMMARY OF ACTIONS BY SECTOR

By leveraging existing activities across UNICEF programme areas in Headquarters, Regional and Country Offices, UNICEF is well-positioned to incorporate a multisectoral approach to NCDs. UNICEF can take these opportunities to reduce risks of NCDs by life cycle period [7].

The following section describes some current and potential actions that can be undertaken as part of a “one UNICEF” approach to NCD risk prevention, based on a situation analysis that includes assessment of NCD morbidity, mortality and risk factors [5]. Interventions should be conducted in close collaboration with governments and other stakeholders across sectors.

Health

The Health programme leads the overall UNICEF response to NCD prevention, develops technical guidance and coordinates activities in-house and with global mechanisms such as the UNIATF on NCDs. Examples of Health programme activities include promoting government policies that protect against NCD risk factors and encourage healthy choices; scaling up existing reproductive, maternal, newborn, child and adolescent health interventions that already contribute to NCD prevention (Table 4); incorporating NCD prevention ’discourse’ into health programmes that enhance service quality and health literacy; strengthening overall national and subnational health systems; knowledge generation and distribution; resource mobilisation, and capacity-building.

Nutrition

The UNICEF Nutrition programme leads work addressing risks related to unhealthy diets globally, with a focus on maternal, infant, child and adolescent nutrition. For example, current programmes on protection, promotion and support of breastfeeding, promoting a healthy diet and addressing multiple micronutrient deficiencies among children aged 6-23 months, school-age children and adolescents can be leveraged to prevent NCDs early in life. Furthermore, UNICEF’s experience with breastmilk substitute regulation will inform its participation in controlling tobacco, alcohol, unhealthy foods and sugar-sweetened beverages. To advance UNICEF Nutrition’s programming on NCDs and nutrition, guidance documents on prevention of overweight and obesity, on school nutrition and on nutrition among adolescents, and an outline of regulatory options on food marketing to children, labelling and fiscal measures are currently under development. These will include activities related to health, education and food systems.

Early Childhood Development (ECD)

ECD incorporates a variety of priorities related to maternal, newborn and young child health and nutrition, as well as a nurturing and safe environment for children that minimises stress and fosters confidence and socialisation. ECD can contribute to NCD prevention, for example, through programmes that support responsive feeding and reduce exposure to adverse events and toxic stressors.

Communication for Development (C4D)

C4D can contribute to advocacy and community engagement efforts by creating an enabling policy and legislative environment for NCD prevention; engaging communities; amplifying the voices of affected children and adolescents; encouraging participation, particularly of adolescents, and keeping governments and other stakeholders accountable for delivering on NCD prevention and control. Existing efforts include C4D's chapter on NCD prevention in Facts for Life and UNICEF's collaboration with Sesame Street in Latin America and the Caribbean on healthy lifestyles.

Education

The Education programme plays a significant role in NCD prevention through its preschool, primary and secondary school programmes targeting children over five years, and adolescents. Existing evidence strongly suggests that schools can influence dietary consumption, participation in physical activity and attitudes to exercise. Schools may also be the focus of annual screening for child well-being, including overweight, hypertension or pre-diabetes. In turn, efforts to raise awareness and establish norms among children can influence entire households. Developing and supporting implementation of whole-of-school policies and programmes that, for example, protect children and adolescents from harmful subsidies, encourage physical activity and address healthy diets are all potential entry points for UNICEF action [7, 47].

Child Protection

The Child Protection programme contributes to enhancing wellbeing of children and adolescents by protecting girls and boys from violence, exploitation and harmful practices. Child Protection is also on the forefront in providing mental health and psychosocial support in humanitarian contexts. In regard to implementing 'best buys,' it can support governments to adapt / implement regulatory policies that protect children and adolescents from harmful substances, including alcohol and tobacco. Furthermore, by further strengthening the linkages between health and social services, it can enhance access to prevention, treatment and care for alcohol use disorders, particularly among adolescents and caregivers.

Adolescent Development and Participation (ADAP)

The Adolescent and Youth programmes are well positioned to contribute to NCD prevention given the fact that many norms, peer acceptance and personal habits relating to consumption, physical activity and exercise are established during adolescence. Moreover, global economic development, changing lifestyles and diets and urbanisation influence NCD risks for adolescents. The Adolescent programme can particularly focus on interventions disseminated through various social and electronic media, as well as community-based programmes that aim to manage substance use or increase physical activity. The programme can also support adolescent engagement and participation to develop meaningful interventions and to empower adolescents.

Social Policy

The Social Policy programme can provide financing and policy expertise to this focus area, which is often new to government. Examples include promotion of the inclusion of financing for NCD screening and prevention in primary health care packages (either provided for free or through various forms of social health insurance); assessment of costs and analysis of the cost–benefit, including assessment of the cost of inaction in the early stages of life; design, costing and piloting of social protection schemes (e.g. cash transfers, subsidies, or vouchers) that include NCD-prevention elements; and promotion of health- or education-sector focused, performance-based NCD prevention and community accountability schemes.

HIV/AIDS

Despite UNICEF's main focus on NCD prevention rather than the treatment of childhood NCDs, the organisation's investment in HIV through PMTCT and Paediatric AIDS programmes expands the potential scope to specific NCD treatment and care activities. Many children and adolescents once at risk of dying from HIV/AIDS now suffer from NCDs related to the infection itself or long-term use of the drugs used to treat it. Aligned with the UNICEF HSS approach, existing HIV care, treatment and support services also need to adequately integrate or link to health care services for cancers; renal, heart, lung and kidney diseases; diabetes; mental illness and gastrointestinal disorders. UNICEF can also support surveillance systems to determine the scope of NCDs among HIV-infected children and adolescents.

WASH

Jointly with Education, WASH can contribute to NCD prevention by supporting access to safe drinking water in schools, reducing the risk of overweight and obesity induced by sugar-sweetened beverages that students may purchase when drinking water is unavailable [48]. WASH may also contribute to girls' activity levels by ensuring their access to changing rooms and hygiene facilities.

4.2 CROSS-CUTTING FUNCTIONS

Several cross-cutting UNICEF functions can contribute to NCD risk reduction.

Communication

Raising public awareness of the risk of NCDs and promoting behaviours that reduce those risks are important approaches. Targeted communication strategies might aim at, for example, raising the visibility of NCDs and the potential to prevent them during childhood and adolescence; reaching more people with evidence-based messages; promoting social and civic engagement; shifting public policy and increasing private and public resources for NCD prevention and control. These strategies can be taken up by UNICEF's communication staff at all levels.

Data and Research

There is a global paucity of data on the prevalence of NCD risk factors among children and adolescents, preventing raising awareness and introduction of programmes specifically designed to reduce development of those risk factors. Monitoring and evaluation (M&E) and Planning units at all levels can support evidence generation on NCD risk factors, trends and prevention. This requires understanding and analysis of robust data and statistics, but before this it requires routine collection of these data by countries on health, education and other sectors. UNICEF's Multiple Indicator Cluster Surveys and other national surveys already collect data on NCD-related indicators on nutrition and substance use (alcohol and tobacco), but these and other data are not yet collected routinely by administrative data systems in most countries. If collected these data can be analysed and reported from an NCD-prevention angle. The Joint Malnutrition Estimates on the number of children under 5 who are overweight [49] and the Measurement of Mental Health among Adolescents at Population Level[1] also contribute data on NCDs. Methodological work for the definition of additional NCD-related indicators can be advanced for inclusion in ongoing data collection programmes, including in regular household and school-based surveys.

Fundraising and Partnership

Funding NCD prevention is imperative to enable UNICEF to raise the profile of NCD risk among its constituency; it is not enough to assume existing health, nutrition and education programmes can be easily adapted to include NCD prevention at no cost. Nor is it safe to assume that governments will take this on, as most are dealing with more immediate issues than the early life origins of NCDs. In addition to UNICEF's traditional sources of funding for programmes and advocacy, the

[1] Currently under development by UNICEF DRP, launch planned for 2019.

private sector may be a source of partnership and funding in this area. Engagement with business is a cross-enabling strategy that acknowledges the organization's recognition of current realities, including the economic and social power of the commercial sector; the movement by many governments to integrate the private sector into service delivery and increasing public expectations that businesses should contribute to human development and social progress. Partnership with or the collaboration of the commercial sector – beyond philanthropy – will be pivotal to a cross section of UNICEF's NCD prevention efforts. In some cases, this partnership may also yield funding, public-private partnerships or in-kind support that can yield reduction of NCD risk.

Supply of essential commodities

While emphasizing NCD prevention over treatment, providing access to essential medicines is an important element of the UNICEF response to tackle NCDs, particularly the supply of orphan drugs in short supply, and in emergencies. The Supply function supports these efforts by improving access to essential medicines and vaccines, strengthening supply chains and procurement systems and encouraging rational use of medicines while assuring, affordability and quality.

5. IMPLEMENTATION PROCESSES

As with all UNICEF programmes, NCD prevention planning, programming and tracking of outcomes should follow a process guided by results-based management principles.

5.1 SITUATION ANALYSIS AND STRATEGIC PLANNING

The first step to design programming on NCD prevention is to understand the current situation and determine the key issues to address. Inclusion of reference to NCDs in UNICEF's Country Strategy Note and Situation Analysis will help understanding of societal, environmental and behavioural factors influencing the prevalence of NCDs, their risk factors and the key bottlenecks to their reduction. The Situation Analysis should include a focus on risk factors (e.g. tobacco and alcohol use among adolescents) disaggregated by age and sex; existing laws, policies, regulations, sectoral and multi-sectoral plans relevant to NCD prevention; existing national and subnational capacities (e.g. multi-sectoral mechanisms; capacities of policymakers, health professionals and education professionals); accessibility and safety of physical spaces where children and adolescents live, learn and play; the built environment and an understanding of social norms, knowledge, attitudes and practices that contribute to high NCD burdens and their risk factors.

Building on the Situation Analysis, a Theory of Change informs prioritization of key issues, realistic goal-setting and the selection of key interventions. Detailed description of how to develop a Theory of Change is provided in UNICEF's 2017 Results-based Management Handbook [50].

Development of a costed multi-sector/multi-stakeholder plan is imperative to address NCDs effectively.[1] Given that NCD prevention requires comprehensive, multi-sectoral action, prioritization should be a consultative process that involves multiple stakeholders from across sectors, including various line ministries, civil society actors, business, academia and development agencies. In the absence of a related guidance document, this document provides a framework for that process.

5.2 IMPLEMENTATION

UNICEF is already engaged in programme activities that contribute to NCD prevention and, thus, already has a solid basis for related programming. The WHO 'best buys' menu of actions provides countries with actionable evidence-based guidance. Based on the country context and informed by

[1] For further guidance on planning including development of theories of change, see Results-Based Management Handbook [50].

the Situation Analysis and Theory of Change, Country Offices can relatively easily expand the scope of relevant and initiate many of these actions.

5.3 MONITORING & REPORTING, EVALUATION

The UNICEF Strategic Plan includes relevant indicators for monitoring of NCD risk reduction, particularly for Nutrition (Annex 3). In addition, Country Offices may wish to use additional indicators to track progress. Annex 6 lists globally developed indicators to guide country-level monitoring of NCD prevention. To the extent that NCD prevention and control is included as a specific element of UNICEF programming and advocacy, appropriate indicators may be developed and included in reporting at all levels.

UNICEF may play a pivotal role in filling data gaps for monitoring and evaluation. There is limited information on the prevalence of NCD risk factors, the effectiveness of preventive interventions, or the cost of inaction during childhood and adolescence in LMICs. This means prioritising preparing evaluation plans and documentation of results and lessons learned when developing programmes, as well as evaluating long-term effects of interventions to prevent NCDs.

6. STRATEGIC PARTNERSHIPS & RESOURCE MOBILIZATION

UNICEF works closely on NCDs with the UNIATF and GCM. As the leading normative agency, WHO is a key strategic partner on NCDs. UNDP, with its focus on governance and sustainable development can help foster whole-of-government NCD responses engaging multiple sectors, such as trade, transportation and built environment that are all critical in tackling NCDs effectively.

Depending on the country context, strategic partnerships can be built with UNFPA, particularly on programmes addressing antenatal care, HPV and risk factors taken up during adolescence; with UN Women on gender policy; and with FAO and WFP on nutrition and agriculture. Other UN and multilateral partners include Gavi on HPV and hepatitis B and C; the World Bank and regional development banks on human capital, financing and taxation; UNESCO on health education and physical activity, and the UN Environment Program on healthy environments [51]. The UN Country Team, as the main mechanism for UN coordination on the country level, should be employed for enhancing multiagency planning, implementation and monitoring; coordinating collaboration with the line ministries; and for ensuring a clear division of labour between UN agencies.

In addition to government, the UN and other development agencies, UNICEF should also collaborate with non-governmental organizations, CSOs, social movements, community-based organisations, advocacy groups, professional associations, media organizations and research institutes for implementation support and the country engagement required for effective policy change [52]. At global and at regional levels, multi-stakeholder networks and platforms such as NCD Child, the NCD Alliance, Global Alliance for Improved Nutrition and EAT Foundation[1] provide an opportunity to collaborate with a range of stakeholders, including academics, policymakers and implementers in relevant fields.

Commercial sector entities may also be a strategic partner for UNICEF in this area. Business data and expertise, for example, can help generate evidence, while business assets, technology, communications and reach can be leveraged to deliver services or promote behaviour change at scale. Shared value partnerships with corporate or smaller private sector partners may influence the effectiveness of UNICEF's NCD prevention programmes. On the other hand, addressing the impacts of business on children's well-being is also a focus of UNICEF´s advocacy strategy, such as the marketing of tobacco, alcohol, and foods and beverages that are high in fat, sugar and salt.

Existing and upcoming tools and guidance can be used to determine when and how to work with businesses to ensure they do no harm, enhance programme effectiveness, promote the rights of children and achieve measurable positive outcomes. Accordingly, appropriate due diligence is required, according to the situation and desired results (7). Since the 2012 release of the

[1] For example, UNICEF and EAT have initiated a collaboration, *Children Eating Well* (CHEW), to research and evaluate interventions related to food environments that children interact with, particularly in the urban context.

Children's Rights and Business Principles, UNICEF has shifted from a 'risk-averse' attitude towards a more 'risk-aware' approach to engagement with business. Blanket exclusions apply to some industries (armaments, alcohol, tobacco, gambling and breast-milk substitutes), but non-formal partnerships with certain companies may be considered in order to reduce the potentially negative impacts of their products or activities on children [53].

6.1 RESOURCE MOBILISATION

Given that many of the interventions addressing NCDs can be integrated into existing UNICEF programmatic work, required funding should be solicited through existing channels and programmes. However, comprehensive analyses of country situations; development and implementation of multi-sector plans and programmes; and extended advocacy and communication efforts will require additional funding at country, regional and global levels.

Given that NCDs constitute 71% of global deaths, but only 1.3% of development assistance for health targets NCDs, UNICEF must increase its advocacy efforts [54]. To raise additional resources for this area of work, UNICEF will need to engage philanthropic foundations, appropriate public–private partnerships that are free of conflict of interest, and bilateral and multilateral donors by better articulating the link between NCDs and the broader context of UHC and HSS.

Based on the recommendation of the WHO Independent Global High-level Commission on NCDs [5], UN agencies are establishing a multi-donor catalytic Trust Fund to support countries with NCD prevention and control. Further investments could be attracted through multi-sector fora that are planned for encouraging investments in healthier portfolios, for example in agriculture, in food production and for innovations to reduce NCD burdens [5].

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Annex 1: Global Action Plan for the prevention and control of NCDs 2013-2020

To strengthen national efforts to address the burden of NCDs, the 66th World Health Assembly endorsed the WHO Global Action Plan for the Prevention and Control of NCDs 2013-2020 (GAP). The GAP provides Member States, international partners and WHO with a road map and menu of policy options which, when implemented collectively, will contribute to progress on nine global NCD targets to be attained in 2025, including a 25% relative reduction in premature mortality from NCDs by 2025.

The overall goal of the GAP is to reduce the preventable and avoidable burden of morbidity, mortality and disability due to NCDs by means of multisectoral collaboration and cooperation at national, regional and global levels, so that populations reach the highest attainable standards of health and productivity at every age and those diseases are no longer a barrier to well-being or socioeconomic development.

OVERARCHING PRINCIPLES

- Life-course approach
- Empowerment of people and communities
- Evidence-based strategies
- Universal health coverage

- Human rights approach
- Equity-based approach
- Multisectoral action
- National action and international cooperation and solidarity
- Management of real, perceived or potential conflicts of interest

OBJECTIVES

1. To raise the priority accorded to the prevention and control of NCDs in global, regional and national agendas and internationally agreed development goals, through strengthened international cooperation and advocacy.
2. To strengthen national capacity, leadership, governance, multisectoral action and partnerships to accelerate country response for the prevention and control of NCDs
3. To reduce modifiable risk factors for NCDs and underlying social determinants through creation of health-promoting environments.
4. To strengthen and orient health systems to address the prevention and control of NCDs and the underlying social determinants through people-centred primary health care and universal health coverage.
5. To promote and support national capacity for high-quality research and development for the prevention and control of NCDs.
6. To monitor the trends and determinants of NCDs and evaluate progress in their prevention and control.

VOLUNTARY GLOBAL TARGETS

1. 25% relative reduction in risk of premature mortality from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases.
2. At least 10% relative reduction in the harmful use of alcohol, as appropriate, within the national context.
3. A 10% relative reduction in prevalence of insufficient physical activity.
4. A 30% relative reduction in mean population intake of salt/sodium.
5. A 30% relative reduction in prevalence of current tobacco use in persons aged 15+ years.
6. A 25% relative reduction in the prevalence of raised blood pressure or contain the prevalence of raised blood pressure, according to national circumstances.
7. Halt the rise in diabetes and obesity.
8. At least 50% of eligible people receive drug therapy and counselling (including glycaemic control) to prevent heart attacks and strokes.
9. An 80% availability of the affordable basic technologies and essential medicines, including generics, required to treat major NCDs in both public and private facilities.

Annex 2: Best-buys and other recommended interventions

1. TOBACCO USE

'Best buys': Effective interventions with cost effectiveness analysis (CEA) ≤ I$100 per DALY averted in LMICs
Increase excise taxes and prices on tobacco products
Implement plain/standardized packaging and/or large graphic health warnings on all tobacco packages
Enact and enforce comprehensive bans on tobacco advertising, promotion and sponsorship
Eliminate exposure to second-hand tobacco smoke in all indoor workplaces, public places, public transport
Implement effective mass media campaigns that educate the public about the harms of smoking/tobacco use and second hand smoke
Effective interventions with CEA >I$100 per DALY averted in LMICs
Provide cost-covered, effective and population-wide support (including brief advice, national toll-free quit line services) for tobacco cessation to all those who want to quit
Other recommended interventions from WHO guidance (CEA not available)
Implement measures to minimize illicit trade in tobacco products
Ban cross-border advertising, including using modern means of communication
Provide cessation for tobacco cessation to all those who want to quit

2. HARMFUL USE OF ALCOHOL

'Best buys': Effective interventions with cost effectiveness analysis (CEA) ≤ I$100 per DALY averted in LMICs
Increase excise taxes on alcoholic beverages
Enact and enforce bans or comprehensive restrictions on exposure to alcohol advertising (across multiple types of media)
Enact and enforce restrictions on the physical availability of retailed alcohol (via reduced hours of sale)
Effective interventions with CEA >I$100 per DALY averted in LMICs
Enact and enforce drink-driving laws and blood alcohol concentration limits via sobriety checkpoints
Provide brief psychosocial intervention for persons with hazardous and harmful alcohol use
Other recommended interventions from WHO guidance (CEA not available)
Carry out regular reviews of prices in relation to level of inflation and income
Establish minimum prices for alcohol where applicable
Enact and enforce an appropriate minimum age for purchase or consumption of alcoholic beverages and reduce density of retail outlets
Restrict or ban promotions of alcoholic beverages in connection with sponsorships and activities targeting young people

Provide prevention, treatment and care for alcohol use disorders and comorbid conditions in health and social services
Provide consumer information about, and label, alcoholic beverages to indicate, the harm related to alcohol

3. UNHEALTHY DIET

'Best buys': Effective interventions with cost effectiveness analysis (CEA) ≤ I$100 per DALY averted in LMICs
Reduce salt intake through the reformulation of food products to contain less salt and the setting of target levels for the amount of salt in foods and meals
Reduce salt intake through the establishment of a supportive environment in public institutions such as hospitals, schools, workplaces and nursing homes, to enable lower sodium options to be provided
Reduce salt intake through a behaviour change communication and mass media campaign
Reduce salt intake through the implementation of front-of-pack labelling
Effective interventions with CEA >I$100 per DALY averted in LMICs
Eliminate industrial trans-fats through the development of legislation to ban their use in the food chain
Reduce sugar consumption through effective taxation on sugar-sweetened beverages
Other recommended interventions from WHO guidance (CEA not available)
Promote and support exclusive breastfeeding for the first 6 months of life, including promotion of breastfeeding
Implement subsidies to increase the intake of fruits and vegetables
Replace trans-fats and saturated fats with unsaturated fats through reformulation, labelling, fiscal policies or agricultural policies
Limiting portion and package size to reduce energy intake and the risk of overweight/obesity
Implement nutrition education and counselling in different settings (for example, in preschools, schools, workplaces and hospitals) to increase the intake of fruits and vegetables
Implement nutrition labelling to reduce total energy intake (kcal), sugars, sodium and fats and vegetables
Implement mass media campaign on healthy diets, including social marketing to reduce the intake of total fat, saturated fats, sugars and salt, and promote the intake of fruits

4. PHYSICAL INACTIVITY

'Best buys': Effective interventions with cost effectiveness analysis (CEA) ≤ I$100 per DALY averted in LMICs
Implement community wide public education and awareness campaign for physical activity which includes a mass media campaign combined with other community-based education, motivational and environmental programs aimed at supporting behavioural change of physical activity levels
Effective interventions with CEA >I$100 per DALY averted in LMICs
Provide physical activity counselling and referral as part of routine primary health care services through the use of a brief intervention
Other recommended interventions from WHO guidance (CEA not available)

Ensure that macro-level urban design incorporates the core elements of residential density, connected street networks that include sidewalks, easy access to a diversity of destinations and access to public transport
Implement whole-of-school programme that includes quality physical education, availability of adequate facilities and programs to support physical activity for all children
Provide convenient and safe access to quality public open space and adequate infrastructure to support walking and cycling
Implement multi-component workplace physical activity programmes
Promotion of physical activity through organized sport groups and clubs, programmes and events

5. CARDIOVASCULAR DISEASE AND DIABETES

'Best buys': Effective interventions with cost effectiveness analysis (CEA) ≤ I$100 per DALY averted in LMICs
Drug therapy (including glycaemic control for diabetes mellitus and control of hypertension using a total risk approach) and counselling to individuals who have had a heart attack or stroke and to persons with high risk (≥ 30%) of a fatal and non-fatal cardiovascular event in the next 10 years. Drug therapy (including glycaemic control for diabetes mellitus and control of hypertension using a total risk approach) and counselling to individuals who have had a heart attack or stroke and to persons with moderate to high risk (≥ 20%) of a fatal and non-fatal cardiovascular event in the next 10 years.
Treatment of new cases of acute myocardial infarction with either: acetylsalicylic acid, or acetylsalicylic acid and clopidogrel, or thrombolysis, or primary percutaneous coronary interventions (PCI) Treatment new cases of acute myocardial infarction with aspirin, initially treated in a hospital setting with follow up carried out through primary health care facilities at a 95% coverage rate Treatment of new cases of acute myocardial infarction with aspirin and thrombolysis, initially treated in a hospital setting with follow up carried out through primary health care facilities at a 95% coverage rate Treatment of new cases of myocardial infarction with primary percutaneous coronary interventions (PCI), aspirin and clopidogrel, initially treated in a hospital setting with follow up carried out through primary health care facilities at a 95% coverage rate
Treatment of acute ischemic stroke with intravenous thrombolytic therapy
Primary prevention of rheumatic fever and rheumatic heart diseases by increasing appropriate treatment of streptococcal pharyngitis at the primary care level
Secondary prevention of rheumatic fever and rheumatic heart disease by developing a register of patients who receive regular prophylactic penicillin
Other recommended interventions from WHO guidance (CEA not available)
Treatment of congestive cardiac failure with angiotensin-converting-enzyme inhibitor, beta-blocker and diuretic
Cardiac rehabilitation post myocardial infarction
Anticoagulation for medium-and high-risk non-valvular atrial fibrillation and for mitral stenosis with atrial fibrillation
Low-dose acetylsalicylic acid for ischemic stroke
Care of acute stroke and rehabilitation in stroke units

6. DIABETES

'Best buys': Effective interventions with cost effectiveness analysis (CEA) ≤ I$100 per DALY averted in LMICs

None

Effective interventions with CEA >I$100 per DALY averted in LMICs

Preventive foot care for people with diabetes (including educational programmes, access to appropriate footwear, multidisciplinary clinics)

Diabetic retinopathy screening for all diabetes patients and laser photocoagulation for prevention of blindness

Effective glycaemic control for people with diabetes, along with standard home glucose monitoring for people treated with insulin to reduce diabetes complications

Other recommended interventions from WHO guidance (CEA not available)

Lifestyle interventions for preventing type diabetes

Influenza vaccination for patients with diabetes

Preconception care among women of reproductive age who have diabetes including patient education and intensive glucose management

Screening of people with diabetes for proteinuria and treatment with angiotensin-converting enzyme inhibitor for the prevention and delay of renal disease

7. CANCER

'Best buys': Effective interventions with cost effectiveness analysis (CEA) ≤ I$100 per DALY averted in LMICs

Vaccination against human papillomavirus (2 doses) of 9–13-year-old girls

Prevention of cervical cancer by screening women aged 30–49 years, either through:
Visual inspection with acetic acid linked with timely treatment of pre-cancerous lesions
Pap smear (cervical cytology) every 3–5 years linked with timely treatment of pre-cancerous lesions
Human papillomavirus test every 5 years linked with timely treatment of pre-cancerous lesions

Effective interventions with CEA >I$100 per DALY averted in LMICs

Screening with mammography (once every 2 years for women aged 50-69 years) linked with timely diagnosis and treatment of breast cancer

Treatment of colorectal cancer stages I and II with surgery +/- chemotherapy and radiotherapy
Basic palliative care for cancer: home-based and hospital care with multi-disciplinary team and access to opiates and essential supportive medicines

Other recommended interventions from WHO guidance (CEA not available)

Prevention of liver cancer through hepatitis B immunization

Oral cancer screening in high-risk groups (for example, tobacco users, betel-nut chewers) linked with timely treatment

Population-based colorectal cancer screening, including through a faecal occult blood test, as appropriate, at age >50 years, linked with timely treatment

8. CHRONIC RESPIRATORY DISEASE

'Best buys': Effective interventions with cost effectiveness analysis (CEA) ≤ I$100 per DALY averted in LMICs

N/A

Effective interventions with CEA >I$100 per DALY averted in LMICs

Symptom relief for patients with asthma with inhaled salbutamol
Symptom relief for patients with chronic obstructive pulmonary disease with inhaled salbutamol
Treatment of asthma using low dose inhaled beclometasone and short acting beta agonist
Other recommended interventions from WHO guidance (CEA not available)
Access to improved stoves and cleaner fuels to reduce indoor air pollution
Cost-effective interventions to prevent occupational lung diseases, for example, from exposure to silica, asbestos
Influenza vaccination for patients with chronic obstructive pulmonary disease

9. SUPPORTING ACTIONS

Raising the priority accorded to the prevention and control of NCDs in global, regional and national agendas and internationally agreed development goals, through strengthened international cooperation and advocacy
Raise public and political awareness, understanding and practice about prevention and control of NCDs
Integrate NCDs into the social and development agenda and poverty alleviation strategies
Strengthen international cooperation for resource mobilization, capacity-building, health workforce training and exchange of information on lessons learned and best practices
Engage and mobilize civil society and the private sector as appropriate and strengthen international cooperation to support implementation of the action plan at global, regional and national levels
Strengthening national capacity, leadership, governance, multisectoral action and partnerships to accelerate country response for the prevention and control of NCDs
Prioritize and increase, as needed, budgetary allocations for prevention and control of NCDs, without prejudice to the sovereign right of nations to determine taxation and other policies
Assess national capacity for prevention and control of NCDs
Develop and implement a national multisectoral policy and plan for the prevention and control of NCDs through multi-stakeholder engagement
Promoting and support national capacity for high-quality research and development for the prevention and control of NCDs
Develop and implement a prioritized national research agenda for NCDs
Prioritize budgetary allocation for research on NCDs prevention and control
Strengthen human resources and institutional capacity for research
Strengthen research capacity through cooperation with foreign and domestic research institutes
Monitoring the trends and determinants of NCDs and evaluate progress in their prevention and control
Develop national targets and indicators based on global monitoring framework and linked with a multisectoral policy and plans
Strengthen human resources and institutional capacity for surveillance and monitoring and evaluation
Establish and/or strengthen a comprehensive NCD surveillance system, including reliable registration of deaths by cause, cancer registration, periodic data collection on risk factors and monitoring national response
Integrate NCD surveillance and monitoring into national health information systems

Annex 3: UNICEF Strategic Plan indicators relevant to NCD prevention

GOAL AREA 1: EVERY CHILD SURVIVES AND THRIVES

Maternal and newborn health
% of pregnant women receiving at least four antenatal visits
% of (a) mothers and (b) newborns receiving postnatal care
of countries implementing plans to strengthen quality of maternal and newborn primary health care
Child Health
of countries that have institutionalized community health workers into the formal health system
Nutrition
% of children who are stunted
% of children who are wasted
% of children who are overweight
% of women with anaemia
% of infants under 6 months exclusively fed with breast milk
% of children fed a minimum number of food groups
of girls and boys received: (a) two annual doses of vitamin A supplementation in priority countries; (b) micronutrient powders through UNICEF-supported programmes
% of pregnant women receiving iron and folic acid supplementation
of countries that have integrated nutrition counselling in their pregnancy care programmes
of countries with: (a) a national strategy to prevent stunting in children, (b) programmes to improve the diversity of diets in children
of countries that are implementing policy actions or programmes for the prevention of overweight and obesity in children
HIV and AIDS
% of girls and boys living with HIV who receive antiretroviral therapy
of pregnant women living with HIV who receive antiretroviral medicine to reduce the risk of mother-to-child transmission of HIV through UNICEF-supported programmes
ECD
of countries that have adopted ECD packages for children at scale
Adolescent health and nutrition
% of girls (age 15-19) with anaemia
% of adolescent girls vaccinated against HPV in selected districts in target counties

of adolescent girls and boys provided with services to prevent anaemia and other forms of malnutrition through UNICEF-supported programmes
of countries that have nationally introduced HPV in their immunization schedule
of countries having an inclusive, multisectoral and gender-responsive national plan to achieve targets for adolescent health and well-being

GOAL AREA 2: EVERY CHILD LEARNS

Learning outcomes
Completion rate (gross intake rate to the last grade) in primary and lower secondary education
% and # of countries with effective education systems for learning outcomes, including early learning
Skills development
% and # of countries with systems that institutionalize gender-equitable skills for learning, personal empowerment, active citizenship and/or employability

GOAL AREA 4: EVERY CHILD LIVES IN A SAFE AND CLEAN ENVIRONMENT

Children in Urban Settings
Proportion of cities with a direct participation structure of civil society in urban planning and management that operate regularly and democratically
of countries where urban/local government development plans and budgets and urban planning standards are child-responsive and involve participation of children
Environmental Sustainability
of countries that implement child-inclusive programmes that foster climate resilience and low carbon development
of countries that take action to reduce air pollution for improved child well-being through UNICEF-supported programmes

GOAL AREA 5: EVERY CHILD HAS AN EQUITABLE CHANCE IN LIFE

Child Poverty
% of children living in extreme poverty
% of countries with an increasing share of public spending on health, education and/or social protection benefiting children living in the poorest regions and/or the poorest quintile
Social Protection
% of children living in the households that received any type of social transfers
of countries with appropriate national policies and legislation supporting development of adolescent girls and boys

Annex 4: Summary of examples for country level actions on NCD prevention

ADVOCATE FOR EVERY CHILD'S RIGHT TO HEALTH (APPLIES TO ALL EVERY CONTEXT)	
Support data capture, evidence generation and use	• Work with government across sectors to synthesize data and evidence on disease burden and risk factors using disaggregated data to inform programmes and resource allocations • Identify data gaps and strengthen mechanisms for data collection and monitoring within and across sectors
Engage with partners	• Use existing country coordination mechanisms and frameworks to build cross-sectoral linkages for NCD prevention (e.g. UNDAF, H6, SUN) • Facilitate dialogue on accountability between stakeholders including private sector, academia and CSOs • Collaborate with existing networks (e.g. NCD Child) and partners that advocate for inclusion of NCDs in national policies and budgets
Expand available resources	• Advocate for increased domestic financing for NCDs prevention, mobilize resources from the private sector, philanthropies, development banks and others.
INFLUENCE GOVERNMENT POLICY (APPLIES TO EVERY CONTEXT)	
Support evidence-based policymaking and financing	• Support laws and policies that protect children and adolescent from exposure to NCD risk factors (e.g. control of availability, sales and marketing of tobacco and alcohol, unhealthy food and beverages, according to 'best buys' guidance)
Promote scale-up of effective interventions / innovations	• Convene multiple stakeholders to review evidence base around existing programmes as basis for recommendation on expansion and scale up • Support development and implementation of action plans to integrate NCD prevention in existing health, education and other sectors' plans
Share knowledge & promote south-south exchange	• Organise study tours to learn about best practices from other settings • Disseminate global and regional best practices and lessons learnt
STRENGTHEN SERVICE DELIVERY (MAY NOT APPLY TO ALL CONTEXTS)	

Build capacity of management and health providers	• In countries where UNICEF is supporting service delivery, support government led efforts to develop guidance and tools maternal, newborn and child care including nutrition and early childhood development and their links with NCD prevention
Support programmes, in particular at community level and in emergencies	• Support development of multi-component interventions that target behaviour risk factors by using multiple platforms (e.g. health care, schools, childcare settings, homes). • In countries where UNICEF is supporting services; support programmes that address poor nutrition, e.g. through IYCF and micronutrient supplementation
Strengthen supply chain systems	N/A
EMPOWER COMMUNITIES	
Engage for social and behaviour change	• Facilitate national and sub-national dialogue to address social and behavioural norms that contribute to NCDs • Use information and communications technologies to improve healthy lifestyles, e.g. eating behaviours, tobacco and alcohol consumption • Support C4D multimedia strategies to prevent NCDs, spur innovations
Generate demand	• Increase knowledge of caregivers, children and adolescents on healthy alternatives (e.g. healthy eating choices)
Strengthen accountability	• Ensure communities', particularly adolescent engagement and participation in planning, implementation and monitoring of interventions

Annex 5: Key indicators for prevention of NCDs in children and adolescents

AREA	INDICATOR	SOURCE
Mortality	Unconditional probability of dying between ages 30 and 70 years from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases	WHO NCDs monitoring framework
	Mortality rate among 0-19 years from road traffic injuries	WHO
Overweight and obesity	Proportion of adolescent girls/boys 15-19 years whose body mass index is above 25	DHS
	Proportion of children under age 5 who are above two standard deviations of the median weight for height of the WHO standard	MICS, DHS
Dietary intake	Age-standardized prevalence of persons (aged 18+ years) consuming less than five total servings (400 grams) of fruit and vegetables per day*	WHO NCDs monitoring framework
	Age-standardized mean population intake of salt (sodium chloride) per day in grams in persons aged 18+ years*	WHO NCDs monitoring framework
	Age-standardized mean proportion of total energy intake from saturated fatty acids in persons aged 18+ years*	WHO NCDs monitoring framework
	Proportion of households with salt testing 15 parts per million or more of iodide/iodate	MICS, DHS
Insufficient activity	Proportion of insufficiently physically active adolescents (defined as less than 60 minutes of moderate to vigorous intensity activity daily).	WHO NCDs monitoring framework
	Age-standardized prevalence of insufficiently active persons aged 5+years (as defined by WHO recommendations)	
Tobacco use	Proportion of adolescents 13-15 years old who have used tobacco in any form in the past 30 days	WHO/CDC Tobacco Surveys, MICS
Use of alcohol	Proportion of students 13–15 years old who had at least one drink containing alcohol on one or more days during the past 30 days	MICS, WHO GSHS
Use of illicit drugs	Proportion of students 13–15 years old who used drugs one or more times during their life	WHO GSHS
IYCF practices	Proportion of infants under 6 months of age who are exclusively breastfed	MICS, DHS
	Proportion of infants age 6-8 months who received solid, semi-solid or soft foods during the previous day	MICS, DHS
	Proportion of children age 6-23 months who received solid, semi-solid and soft foods (plus milk feeds for non-breastfed children) the minimum number of times or more during the previous day	MICS, DHS
	Proportion of children age 6–23 months who received foods from 4 or more food groups during the previous day	MICS, DHS
Low birth weight	Proportion of infants weighing less than 2,500 grams at birth	MICS, DHS
Life satisfaction	Proportion of adolescents aged 15-19 years who are very or somewhat satisfied with their life, overall	MICS
Happiness	Proportion of adolescents aged 15-19 years who are very or somewhat happy	MICS
Enabling environment	Policies to reduce impact on children of marketing of unhealthy food and non-alcoholic beverages high in saturated fats, trans fatty acids, free sugars, salt	WHO NCDs monitoring framework

	Existence of national programmes with budgets for NCD prevention in children and adolescents	National
	Existence of national control policies to reduce tobacco, alcohol and illicit drug use	National
	NCD prevention included in national health and other sectors' policies	National
	Existence of national policies, programmes on mental health and injuries prevention	National
	Key NCD indicators incorporated in national monitoring frameworks	National
Education	Existence of school-based policies to educate children and adolescents about NCD risk-factors and promote action around adoption of healthy lifestyles	National
	Proportion of schools offering programmes to promote action around adoption of healthy lifestyles	National
MCAH services	Proportion of women age 15-49 years with a live birth in the last 2 years who were attended during their last pregnancy that led to a live birth at least once by skilled health personnel/ at least four times by any provider	DHS, MICS
	Proportion of women age 15-49 years with a live birth in the last 2 years who had their blood pressure measured and gave urine and blood samples during the last pregnancy that led to a live birth	DHS, MICS
	Proportion of women age 15-49 years who received a health check while in facility or at home following delivery, or a post-natal care visit within 2 days after delivery of their most recent live birth in the last 2 years	DHS, MICS
	Vaccination coverage against HPV in girls age 9-13 years	WHO
	Vaccination coverage against HBV	WHO
Others**	Percentage of health facilities providing interventions aimed at promotion of healthy practice and prevention of NCDs in children and adolescents	
	Proportion of facilities providing infant and young child feeding counselling services	
	Availability of basic neonatal NCD intervention package: newborn screening (one-off oxygen saturation levels within 24 hours of birth as a minimum); Hepatitis B vaccination within 24 hours of birth; appropriate support and referral where obvious congenital condition evident at birth.	
	Availability of basic technologies for early screening of NCDs in children and adolescents	
	Availability of recreational and sports facilities, public parks	
Poverty	Number of children living in extreme poverty	
	Youth Unemployment (% of total labor force ages 15-24)	
	Child Labour (5-14 yo, %)	
Education, ECD	Literacy Rate, youth total (% of people ages 15-24)	MICS
	Primary education completion rate, total (% of relevant age group)	MICS
	Secondary education completion rate, total (% of relevant age group)	MICS
	Proportion of out-of-school children	
	Proportion of children age 36-59 months who are attending an early childhood education programme	MICS

** WHO NCDs Global Monitoring Framework tracks these dietary indicators only for adults, suggested to be used as a proxy for children/adolescent population.*

*** These are not standard indicators and should be further defined.*

FURTHER GUIDANCE

UNICEF	A Child Rights-based Approach to Food Marketing: A Guide for Policy-makers.	2018
UNICEF	Guidance on the prevention of overweight and obesity in children. *Under development*	
UNICEF	Infant and Young Child Feeding.	2011
UNICEF	Children´s Rights and Business Principles	2012
WHO	Best buys' and other recommended interventions for the prevention and control of noncommunicable diseases. Updated (2017) appendix 3 of the global action plan for the prevention and control of noncommunicable diseases 2013-2020.	2017
WHO	Guidance on ending the inappropriate promotion of foods for infants and young children.	2016
WHO	Guideline: assessing and managing children at primary health-care facilities to prevent overweight and obesity in the context of the double burden of malnutrition. Updates for the Integrated Management of Childhood Illness (IMCI).	2017
WHO	Global accelerated action for the health of adolescents (AA-HA!): Guidance to support country implementation.	2017
WHO	Global Action Plan on Physical Activity	2018
WHO	Recommendations on antenatal care for a positive pregnancy experience.	2016
WHO	Set of recommendations on the marketing of foods and non-alcoholic beverages to children.	2010
WHO and UNAIDS	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.	2015

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