

A PRIMARY HEALTH CARE APPROACH TO OBESITY PREVENTION AND MANAGEMENT IN CHILDREN AND ADOLESCENTS: POLICY BRIEF

Policy brief in summary

- Obesity in all age groups, including children and adolescents, is a public health challenge across all settings.
- Obesity is now classified as a complex multifactorial chronic disease and not just a risk factor for other noncommunicable diseases and comorbidities.
- Recognizing the significance of primary health care for an effective and efficient response to the obesity epidemic, the World Health Organization (WHO) has developed guidance on how to build capacity in the health system to deliver health services for prevention and management of obesity across the life course.
- This policy brief discusses the challenges and opportunities for preventing obesity in children and adolescents, and providing health services to treat and manage those already living with obesity. It outlines possible interventions through the primary health care approach.
- WHO recommends the operationalization of three components of primary health care for developing and deploying an effective response to halt and reverse the rising trajectory of obesity worldwide: integrated health services, multisectoral policy and action, and empowered people and communities.

Appropriate and equitable management for overweight and obesity is required in addition to multisectoral and public health prevention measures

Background

Obesity is a complex, multifactorial chronic disease, defined as excessive adiposity that can impair health (1). It is also one of the key risk factors for many other noncommunicable diseases (NCDs), infectious diseases (e.g. COVID-19) and other comorbidities that can be modified and addressed. In addition, children and adults living with obesity often experience mental health issues, different degrees of functional limitation

- that is, obesity-related disability (2) - and social bias, prejudice and discrimination (3).

Globally, the prevalence of overweight and obesity, and the number of affected individuals, have increased in all age groups (including children and adolescents) since 2000 (4, 5) (Table 1). These numbers are expected to rise during the next decade if no concrete actions are taken.

 Table 1. Estimated and projected prevalence of overweight and obesity in children and adolescents, and number of affected individuals

Indicator	2000	2020	2030
Children under 5 years with overweight	5.4%, 33.3 million	5.7%, 38.9 million	5.9%, 40.1 million
	2000	2016	2030
Children 5–19 years with obesity	2.9%, 52.3 million	150 million	254 million

No progress is observed with current projections to 2030, and more efforts are needed to reach the 3% 2030 target prevalence for overweight in children under 5 years of age (3). Almost half of children under 5 years of age affected by overweight live in Asia, and more than one quarter live in Africa (4). The prevalence of obesity among children aged 5–19 years is around 20% or more in several countries in the Pacific, the Eastern Mediterranean, the Caribbean and the Americas (5).

The causes of obesity are commonly regarded as sedentary lifestyle, unhealthy diet, the absence of breastfeeding or mixed feeding during infancy, lack of sleep, stress, mental illnesses (e.g. anxiety, depression), endocrinological diseases, medications, immobilization, iatrogenic procedures and other chronic conditions that can influence weight status. Other elements that are more difficult to modify include genetic variation, early exposure to obesogenic elements during pregnancy and early childhood, family education and income, food systems, physical and urban environments, sociopolitical environments and adverse childhood events.

The challenge of the rapidly rising global obesity epidemic must be halted as soon as possible. To this end, both the food and physical activity environments have to be improved. Systems and settings for primary health care need to better integrate and manage obesity, through a holistic and comprehensive multidisciplinary, multisectoral and whole-of-society approach. Box 1 summarizes effects of obesity on individuals.

BOX 1. EFFECTS OF OBESITY ON INDIVIDUALS

- Overweight and obesity in childhood and adolescence are associated with adverse health consequences and increased morbidity later in life. Preventing and controlling excessive adiposity in children and adolescents is important for many reasons.
 - Overweight and obesity affect children's immediate health and are associated with greater risk and earlier onset of various NCDs, such as type 2 diabetes, cardiovascular diseases and cancers – the higher the body mass index during childhood and adolescence, the higher the risk of these NCDs in adult life (7–11).
 - Childhood obesity has adverse psychosocial consequences, affecting self-esteem, mental health, school performance, social involvement and quality of life, compounded by stigma, discrimination and bullying (11–13).
 - Without intervention, the obesity acquired by children and adolescents is very likely to remain in adulthood (14). Weight loss and maintenance of weight loss are hard to achieve in adults (15).
- Even if treatment options are limited during childhood, management should begin early in life to normalize weight gain, improve health behaviours and outcomes, and improve quality of life (16).

Childhood and adolescent obesity, and the primary health care approach

Why a primary health care focus?

Primary health care (PHC) is a whole-of-society approach to health that aims to maximize the level and distribution of health and well-being through three components (*17*):

- primary care and essential public health functions at the core of integrated health services;
- multisectoral policy and action; and
- empowered people and communities.

PHC-oriented health systems are foundational to achieving healthier populations, universal health coverage (UHC) and protection from health emergencies, enabling the achievement of the health-related Sustainable Development Goals. Evidence shows that PHC-oriented health systems have consistently improved health outcomes, equity and efficiency.

Obesity is a major challenge in all age groups, including children and adolescents. An effective response to prevent and manage the impact of the disease in children and adolescents demands that every action ensures accessibility, availability, coverage and affordability of health services. The PHC approach is the best suited approach for such a response.

In accordance with the World Health Organization (WHO) recommendations for the prevention and management of obesity over the life course (6), this policy brief approaches the prevention and management of obesity in children and adolescents through a PHC lens. It aims to guide the organization and delivery of obesity prevention (primary, secondary and tertiary) and treatment services through an approach involving integrated health services delivery. It also contextualizes and links the prevention and management of obesity in this age group to multisectoral policy actions relating to the social, food and urban environments. Finally, it focuses on the need to empower individuals, families and communities, including those living with and affected by obesity. It provides recommendations on necessary actions and guidance for implementation.

Operational framework for PHC

The Operational Framework for Primary Health Care was adopted by the 73rd session of the World Health Assembly in November 2020 *(18)*. It outlines the three components of PHC (Fig. 1):

- primary care and essential public health functions at the core of integrated health services – meeting people's health needs through comprehensive promotive, protective, preventive, curative, rehabilitative and palliative care throughout the life course; strategically prioritizing key health care services aimed at individuals, families and the population through primary care; essential public health functions as the central elements of integrated health services;
- multisectoral policy and action systematically addressing the broader determinants of health (including social, economic, commercial and environmental factors, as well as individual characteristics and behaviour) through evidence-informed policies and actions across all sectors; and
- empowered people and communities empowering individuals, families and communities to optimize their health, as advocates of policies that promote and protect health and well-being, as co-developers of health and social services, and as self-carers and caregivers.

Fig. 1. Primary health care components



Ensuring accessibility, availability, coverage and affordability of health services for prevention and management of obesity

Additional elements that are critical to ensuring accessibility, availability, coverage and affordability of health services for prevention and management of obesity in children and adolescents are as follows.

- Adopt a health systems approach that ensures continuity of care at all levels. Ongoing efforts are needed to strengthen health systems, involving referral and "back referral" pathways for better continuity of care and increased adherence. The involvement of school health programmes and other community-based preventive health interventions, including youth centres, should be integral to the process. Secondary and tertiary care services need to be linked to primary care, facilitated by clinical coordinators, and supported by community-based programmes and peer self-management support.
- Ensure equity, with special focus on additional support for groups with, or at risk of developing, obesity. Populations of greatest concern include children from low-income settings, racial/ethnic minority groups, rural populations and immigrant families. Predisposing factors for obesity include biological, behavioural, cultural, environmental, political, sociodemographic (education, income, gender, race/ethnicity, age) and life stage factors. There is a need to better understand the multitude of complex and context-specific factors that interact to increase vulnerability.
- Factor in human rights, equity and social justice aspects when designing policies and implementing

programmes to address obesity. Obesity interventions for children and adolescents need to be based on a respectful, non-judgemental and non-stigmatizing approach by health care professionals and communities. A systematic response to identify weight bias and stigmatization must be activated in the health and social settings to counter the effect of inequalities because of obesity-related stigma.

- Follow the principle of "the right care, in the right place, at the right time" to expand access and improve equity in obesity prevention and management services. Children and adolescents with overweight and obesity, and affected families, should be offered a major participatory role in the design and delivery of these services.
- Put into practice the PHC multidisciplinary, multisectoral and whole-of-society approach for obesity prevention and management. The approach must ensure that actions are taken in the best interests of the child or adolescent, and that any perceived or real conflicts of interest are appropriately managed. It should involve support for healthy eating, physical activity, reduced sedentary behaviours, better sleep and reduced psychosocial stress. A multisectoral, multidisciplinary and whole-of-society approach is needed to halt the rise of obesity in children and adolescents, and tackle the broad determinants of health. Open and continuous dialogue between political leaders, civil society, clinical providers and the community - at all scales – is imperative in a systematic response to the obesity epidemic.



PHC approach to respond to the obesity epidemic in children and adolescents

In 2017, the ECHO (Ending Childhood Obesity) report recommended that governments and stakeholders reduce the risk of obesity by acting on obesogenic environments, take a life course approach to promoting obesity prevention and improve the treatment of children who live with obesity (*19*). In 2022, WHO reiterated this area of intervention as a priority for prevention and management of obesity over the life course, including potential targets and the WHO Acceleration Plan to STOP Obesity, endorsed at the 75th World Health Assembly (Box 2).

BOX 2: THE WHO ACCELERATION PLAN TO STOP OBESITY

The WHO Acceleration Plan to STOP Obesity has been designed to stimulate country-level action against the obesity epidemic between now and 2030 through five workstreams.

- Develop and promote **cost-effective actions**, supported by a WHO technical package and impact modelling estimates.
- Provide **technical and delivery support for frontrunner countries** to develop and implement accelerated roadmaps to counteract obesity.
- Increase **advocacy** at global, regional and country levels to raise awareness and generate political engagement, through advocacy campaigns, media and the development of scientific papers.
- Sustain **engagement and partnerships** with partners, including United Nations agencies, civil society, the private sector and academia, focusing on established partnerships and creation of new ones.
- Place a stronger focus on **accountability** and reporting to monitor implementation of the acceleration plan at a global level, and for the 29 frontrunner countries, including:
 - increased number of countries implementing effective policies to address prevention and management of obesity;
 - improved policy efficiency and coverage, and expanded access to obesity prevention and management services; and
 - improved trend in obesity rates across the life course.

Although the Acceleration Plan to STOP Obesity does not initially have a global scope, the actions driven by the 29 frontrunner countries will catalyse actions by other countries and partners.

Integrated health services for obesity prevention and management

As requested by Member States, WHO has developed a comprehensive package to strengthen capacity in the health system to deliver obesity prevention and

> management services across the life course. This section describes the components of the package.

Framework for delivery of health services for obesity prevention and management

This framework has the aim of promoting expanded access to obesity prevention and management services for all age groups across the life course, including people with and at risk of obesity, through a public health approach. The framework facilitates the inclusion of obesity prevention (primary, secondary and tertiary) and treatment as a critical component of UHC. It is based on the principles of primary health care, follows a chronic care approach, and is supported by

> the integration of obesity prevention and management into existing service delivery platforms across the health care system and health care services packages, including in communities and homes. It also supports the planning of required resources for the scale-up and sustainability of services.

As illustrated in Fig. 2, the key steps to integration and scale-up of these health services are as follows:

• Adoption of a systems approach in the organization of health services. This means that the operational specifications of the service delivery unit are constructed around the three levels of the system (primary, secondary and tertiary care), including community, home and self-based care. The possibility of an extended service delivery platform supported by technology and inclusion of community service points such as pharmacies, childcare centres, schools, youth centres, community hubs, work sites and religious institutions - should also be considered. As is the case for many other chronic diseases, lifelong support is required for obesity management. Consequently, a full spectrum of services across all levels of the health system is necessary to assess and manage the root causes of obesity and related comorbidities, and ensure continuity of care. Focus should be mainly on primary care, with linkages to secondary and tertiary care services. To this end, PHC providers should deliver most obesity prevention and management services.

They should also be responsible for helping people living with obesity navigate through the health system for complex issues and management of complications or comorbidities, through an established referral and back referral network, for better continuity of care and increased adherence.

- Integration of delivery of health services for obesity prevention and management into the existing health service delivery platform and health programmes, as organized in national health systems, throughout the life course.
- Adoption of a broader delivery approach to ensure the scale-up and sustainability of health services for obesity prevention and management at national and subnational levels. Innovative approaches should also be explored to expand access to, and the scale of, such services at community-based contact points – such as pharmacies, schools, youth centres, community centres and wellness places.



Fig. 2. Key steps for integration and scale-up of obesity management health services

3 Enable reponsive integrated prevention and treatment

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Model of care for prevention and management of obesity

A multidisciplinary and multi-component model of care (Fig. 3) needs to be adopted based on a people-centred approach, where people and families living with obesity have an essential role in the design and delivery of services, and in shaping the demand at the population level. The model must take into consideration obesity as part of a broad spectrum of NCDs. It should ensure continuity of care and aim to increase access to services according to population needs and epidemiological burden. The model should include primary, secondary and tertiary prevention; healthy behaviour changes;

Fig. 3. Model of care and operational specification

and support for individuals and families for management, treatment, care and rehabilitation, with a specific focus on vulnerable populations.

The proposed model of care takes into consideration integration with local, ongoing, multisectoral actions related to obesity (e.g. in food systems, urban and built environments, information systems and digital environments, education systems, sports systems, social protection systems, health care systems) and governed by upstream social, commercial and economic determinants.



Organization of health services for obesity prevention and management

The organization of health services should be based on the architecture of the national health systems and refer to the following age groups:

- pre-conception and antenatal care (women of reproductive age);
- children under 5 years of age;
- children aged 5–9 years; and
- adolescents aged 10–19 years.

The services proposed span across promotion of a healthy lifestyle; primary, secondary and tertiary prevention and management of obesity; and diagnosis, care, treatment and rehabilitation.

The first goal of obesity management in children and adolescents is to support healthy behaviours that will contribute to stabilizing or reducing body mass index (BMI) during growth, such as a healthy diet, regular physical activity, reduced sedentary behaviours, reduced stress and good sleep. These behaviours will improve health and well-being outcomes. Further assessment for complications of obesity will be needed. Obesity management services are required across primary, secondary and tertiary care, including education programmes for patients, families and carers; structured multi-component behaviour change interventions; psychological interventions; pharmacotherapy; and bariatric surgery. If possible, an interdisciplinary team approach is recommended.

The model of care will need to refer to evidence-based guidelines and recommendations, and clinical service packages in use in the specific country. Reorganization of tasks among health care teams, including delegation and task shifting, may be needed to ensure a multidisciplinary approach and more efficient use of available resources. For this, additional training will be required to adequately equip all care providers across the health and school systems and the community to prevent and manage obesity.

Health services proposed by level of care for prevention and management of obesity in children and adolescents

Pre-conception and antenatal care

Conception and early life are critical phases in the onset of overweight and obesity. Women with a BMI above 30 kg/m² before conception are considered at higher risk of complications during pregnancy and delivery (*36*). In addition, early life exposures during pregnancy, such as maternal obesity, excessive gestational weight gain, high blood glucose levels, maternal smoking, stress and impaired fetal growth, can affect weight at birth, as well as the risk of obesity and related NCDs across the life course. For this age group, obesity prevention and management services need to be integrated into established pre-conception and antenatal programmes. They should be aligned with other maternal care models, follow a comprehensive family approach, and offer ongoing comprehensive care in the community, coordinated and co-managed with a multidisciplinary or interdisciplinary team across the system.



Children under 5 years of age

For this age group, health services for obesity prevention and management should be integrated into established child health programmes (e.g. breastfeeding and complementary feeding support, immunization, growth monitoring, integrated management of childhood illnesses, under-5 clinic). Other paediatric chronic care models should be taken into consideration to offer ongoing comprehensive and coordinated care in the community, which includes obesity prevention and treatment. A cost-benefit approach needs to be used, based on the understanding that treating overweight and obesity at an early stage significantly improves adult prognosis, reduces complications, and reduces hospital admissions and length of stay (3).



Children aged 5-9 years

Schools are often good entry points to ensure essential health services for school-aged children. Health interventions (e.g. nutrition information, food choices, healthy habits, physical education, sedentary behaviours, sleep, promotion of positive self-concept, mental health and well-being) are integrated into learning programmes, with referral of children to health systems when necessary. Providers include school health nurses and physicians, and lay clinic associates and counsellors trained in specific skill sets. However, children who do not attend school frequently or out-of-school children are not covered, because informal outlets might not offer the same set of health services. Interventions for schools designed for this age group need to be reflected and expanded in the health system at large, including in the community (e.g. leisure sites, community hubs, religious institutions). This is critical to raise awareness among children and their families and caregivers about self-care for primary prevention of overweight and obesity, and mental health. Also important is a lifelong health promotion message that overweight and obesity need early detection and interventions, clinical assessment, screening of complications and comorbidities, treatment and long-term management.



Adolescents aged 10–19 years

Adolescents are a critical catchment population because interaction with the health system, in terms of health promotion and prevention, progressively diminishes from this age. As for younger children, schools are often good entry points to ensure promotion and delivery of essential age-specific health services. The comments above (under "Children aged 5–9 years" also apply to adolescents with regard to health interventions in schools, awareness raising and health promotion messages.

Prevention and management of obesity should be integrated with other adolescent chronic care programmes, including diabetes. Stabilization or reduction of BMI, when needed, should be considered a first-line intervention.



Inclusion of obesity prevention and management in the UHC Compendium and related service package delivery and implementation

The WHO UHC Compendium includes health services needed to comprehensively address the prevention, recognition and management of obesity across the life course, to support countries designing and implementing essential health service packages. The toolkit on service package delivery and implementation helps bridge the gap between UHC policy and implementation, and supports countries to deliver a national comprehensive UHC package of services.

Training to deliver quality obesity prevention and management health services for different cadres of health care providers

Training of health care providers to build the skills to prevent, recognize, treat and manage obesity and its related complications, and screen for comorbidities, is an essential element of the response. WHO has developed the following the following training programmes which will be made available by the <u>WHO</u> Academy when it opens in 2024.

 Foundation training for first contact providers. This course supports providers in making more accurate diagnoses, developing and implementing evidence-based treatment plans, and coordinating care. The course includes standardized protocols and guidance that facilitate integration across and within facilities and between providers. It is designed to have "real-time" applications, supporting providers during clinical encounters with clinical decision support tools and case-based tutorials. The course includes a module on healthy lifestyles, with sections on nutrition and physical activity, and a section on the management of overweight and obesity in adults and adolescents.

Advanced training for primary care physicians. This course supports physicians to prevent, diagnose, treat and manage obesity and its related medical conditions, and screen for comorbidities, in primary care settings. The course covers relevant evidence about obesity and the role of primary care services in the diagnosis and management of obesity. It is equipped with a WHO e-learning platform that includes tutorials, clinical decision support tools, fact sheets and reading materials to assist training in countries and regions.

Although the need to expand access to health services for obesity prevention and management is increasingly being recognized, there are challenges in doing so within established health service delivery platforms. These relate to recognition of obesity as a disease and risk factor, health care providers' scope of work and lack of clinical guidelines, and insufficient financial coverage of health services for obesity prevention and management, among others (13, 20-27). In 2021, the WHO Department of Nutrition and Food Safety commissioned a mega-ethnography study to better understand from qualitative data what actually matters to children with obesity, their caregivers and professionals in relation to obesity services. The study concluded that obesity management services must be tailored so that they are appropriate to ages, genders and cultures; varied; and promoted in a sensitive manner (28). Children and adolescents with obesity, their caregivers and relevant professionals all report that family and school environments play a crucial role in initiating, supporting and sustaining health improvements.

Multisectoral policies and actions

The environment surrounding children has long been recognized as a major contributor to childhood obesity. Obesity prevention and control in children and adolescents necessitates multisectoral policies and actions that go beyond the health sector. Such policies and actions are implemented through a coordinated whole-of-society approach involving a range of government ministries and partnerships, while managing conflicts of interest and safeguarding public health. They include structural, fiscal and regulatory actions aimed at creating healthy food environments, which make healthier food options available, accessible and desirable.

Recommended policies to be implemented in line with national dietary guidance include comprehensive policies to protect children from the harmful impact of food marketing (29), nutrition labelling policies (including front-of-pack labelling) (30), fiscal policies (including taxes and subsidies to promote healthy diets) (31), public food procurement (30) and reformulation (33) policies, and school food and nutrition policies (including school food standards, food provision and nutrition education).

A whole-of-society approach also requires actions at subnational and local levels. These can include collaboration between organizations working towards a common goal, such as district administrations, education authorities and health authorities creating and maintaining public parks that cater for the needs of different age groups; and primary care teams in health clinics and schoolteachers jointly promoting healthy eating practices, giving oral health care advice and offering services to ensure timely identification of children at risk of obesity. In the school setting, school staff and food service staff can implement nudges, alongside measures such as setting school food standards, to further influence children's food selection towards foods that contribute to a healthy diet (*34*).

Implementation of multisectoral and intersectoral initiatives can be strengthened by:

- providing policy-makers, civil servants and technical experts with training on how to coordinate and structure multisectoral and intersectoral work;
- developing new engagement and mobilization strategies for different stakeholders, while managing conflicts of interest and safeguarding public health;
- supporting planning with adequate technical tools;
- transparently implementing and monitoring multisectoral and intersectoral actions, in line with local and national strategies; and
- monitoring progress through indicators, and other monitoring tools and practices.



Empowered people and communities

Placing children, adolescents, families, caregivers and communities at the centre of health services means reorienting the health care system by shifting away from fragmented supply-oriented models and moving towards a person-centred model (16). In this way, health care services can respond to consumers' needs, values and preferences across the life course; be coordinated in the continuum of care; and be safe, effective, timely, efficient and of acceptable quality. Although responding to the obesity epidemic is a responsibility of the whole of society, meaningful involvement of people and families living with obesity is a fundamental principle of person-centred care. The rights and responsibilities of the affected group, including self-determination and participation in decision-making processes that affect their lives, should be at the forefront of the response to the obesity epidemic.

People and communities can become active influencers and decision-makers in the response to the obesity epidemic through three basic dimensions: as co-developers of health and social services, as self-carers and caregivers, and as advocates.

- Co-developers of health and social services. The empowered citizen should actively engage in the organization, regulation and delivery of health services in their community, ensuring that services match the needs, values and preferences of the community, as well as the specific social and cultural context. These elements will increase demand, access, effectiveness and responsiveness, as well as patient satisfaction (35). Children, adolescents and families living with obesity can be actively involved in their own health and welfare, and take an active role in decisions about treatment, self-education, therapies, adherence and prevention. They can also become leaders of obesity support groups or networks, through which they can seek external resources, encourage participation of new members, participate by sharing their experiences with others, and participate as spokespersons in campaigns or speakers at public events and in other arenas.
- Self-carers and caregivers. Children, adolescents and families living with obesity face many challenges. Therefore, becoming self-carers and having access to home-based community health care workers is critical. Individuals and communities with, and affected by, obesity must have access to the knowledge, skills and resources (financial and technological) required to meet their specific needs and sociocultural circumstances, as well as to help them to make evidence-informed decisions (18, 35).
- Advocates. Children, adolescents, families and communities, including individuals with obesity and families affected by obesity, must participate in the design, implementation and monitoring of obesity-related policies at all levels. They can also advocate for laws, regulations and policy reforms, and ensure that the principles of human rights and equity are embedded in the response. They are critical in creating and shaping societal demand for services, including treatment, care and support. Their involvement is also critical in the development of the research agenda, resource mobilization and funding allocations.

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Conclusions

The COVID-19 pandemic has highlighted the relevance and importance of stronger health systems built with a strong foundation of PHC to assure provision of essential health services in both normal and emergency situations. Obesity, both as a disease and as a risk factor for other NCDs, needs to be explicitly tackled and addressed at all levels of interventions and for all age groups, including in children and adolescents.

Preventing and managing obesity in children and adolescents through PHC can accelerate steady progress towards reducing the impact of obesity and could pave a path for an effective response to all NCDs.

The WHO focus on tackling obesity complements and amplifies work to create safe and healthy environments and settings for families to make healthy choices to address the global burden of NCDs. These choices include more physical activity, healthier diets, cleaner air and active mobility. Also, as we approach the United Nations High-Level Meeting on Universal Health Care 2023, addressing obesity and overweight through a shared focus on equitable, resilient and inclusive health systems is a chance not to be missed to get UHC back on track.

Governments, citizens (including people and families living with obesity), civil society, professional associations and academia need to come together, through country leadership and clear priorities, as well as increased demand for, and access to, child and adolescent obesity health services. Halting and reversing the obesity epidemic in all age groups, including childhood and adolescence, is possible, and the PHC approach is the most logical, cost-effective and efficient way.

The way forward to empowerment for a comprehensive response to the global obesity epidemic involves the following actors.

People and families living with obesity

- Lobby for the right to prevention, treatment and management of obesity through sustainable food systems, adequate food and urban environments, equitable and affordable access to health services, and respectful consideration of the needs of this community in the absence of stigma and discrimination.
- Participate in political and strategic decision-making processes, leading to a coherent response to address the obesity epidemic, and support efforts in the health and other sectors to regulate food and physical activity environments.

- Become involved in the design of interventions regulating the food and urban environments, as well as in the organization of health services delivery to prevent and manage obesity.
- Participate in decision-making on their own obesity prevention and treatment plans, and support peers in doing so.
- Demand to be equipped with necessary knowledge and skills to self-manage obesity prevention and treatment plans, and to be caregivers.

Governments

- Ensure that prevention and management of childhood and adolescent obesity are integrated in all policies, including intersectoral action.
- Ensure meaningful engagement of people and families living with obesity, as well as wider civil society, in processes and discussions, from start to finish.
- Ensure the availability of national (or nationally adapted) clinical guidelines and training programmes, and that childhood and adolescent policy interventions are implemented through PHC.
- Design obesity prevention and management programmes, and include them in the national monitoring and evaluation system.
- Protect people and families living with obesity from stigma and discrimination. This can involve official campaigns, and advertisements on television and social media.
- Support the creation and strengthening of community organizations, and emphasize their role in addressing infrastructure, governance, management, resource mobilization, accountability and staff capacity-building needs.
- Provide resources to train, engage and employ community members, including people living with obesity, in self-care and obesity prevention.
- Address the many societal barriers to the meaningful involvement of people living with obesity, some of which are rooted in poverty, gender inequality, prejudice, stigma and discrimination, especially in marginalized populations.
- Support documentation of histories of self-empowerment of people living with obesity, and evaluation of successes and failures.
- Provide funding to support research and innovation to prevent and manage childhood and adolescent obesity, as well as to support civil society and organizations for people living with obesity, to ensure their meaningful engagement in the response.

International organizations and development partners

- Prioritize initiatives, supported by enhanced, predictable and continued funding, to build and sustain the capacity of organizations and networks in obesity reduction, as well as continued monitoring, and ensure sustained attention on childhood and adolescent obesity.
- Promote efforts to fulfil the rights and enable inclusion of people and families living with obesity, particularly women, children, adolescents, young people and vulnerable populations.
- Allocate sufficient financial resources to programme budgets to address childhood and adolescent obesity.
- Promote good practice, strategic alliances and information exchanges between organizations and networks of people living with obesity, within and across countries.
- Harmonize, simplify and create more flexibility in donor and partner procedures to facilitate access to technical and financial resources for organizations and networks.
- Ensure that people living with obesity are included in the design of ethical research for new prevention technologies and the development of treatments.

Coalitions

- Participate in the political and strategic decision-making and policy processes of the response to the obesity epidemic.
- Advocate for equitable, resourced and effective actions to address the obesity epidemic, covering prevention, management and treatment.
- Advocate for the rights and needs of people living with obesity, and their families and caregivers.
- Support organizations and networks of people and families living with obesity in management, funding, knowledge and skills.
- Generate awareness about the importance of tackling childhood and adolescent obesity, and the association with obesity later in life.
- Ensure that diversity among people living with obesity across age groups, genders, socioeconomic levels and geographical locations is respected.

Professional associations

- Sensitize and generate awareness about the importance of prevention and management of childhood and adolescent obesity.
- Sensitize members about childhood and adolescent obesity, and prevention and control measures.
- Provide high-quality education and training resources for health care workers and other professionals to prevent and control childhood and adolescent obesity.
- Support research and innovation in the field of childhood and adolescent obesity, and use evidence to support policy development, advocacy and change.
- With governments, develop clinical guidelines and protocols for health care workers and other professionals involved in the prevention and management of childhood and adolescent obesity.
- Coordinate and collaborate with governments, international organizations and development partners, civil society, other professional associations and their members, associations of people living with obesity, and medicine and health products industries, for early response to the challenge of obesity in young people.



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References

- 1. International Classification of Diseases, 11th revision (ICD-11 Code 5B81) (https://icd.who.int/en).
- Sirtori A, Brunani A, Capodaglio P, Berselli ME, Villa V, Corti S, et al. ICF-OB: a multidisciplinary questionnaire based on the International Classification of Functioning, Disability and Health to address disability in obesity. Eur J Physical Rehab Med. 2018;54(1):119–21. doi:10.23736/s1973-9087.17.04836-5.
- 3. WHO Consultation on Obesity (1999: Geneva, Switzerland), World Health Organization. Obesity: preventing and managing the global epidemic report of a WHO consultation. Geneva: World Health Organization; 2000 (https://apps.who.int/iris/handle/10665/42330).
- 4. United Nations Children's Fund (UNICEF), World Health Organization, International Bank for Reconstruction and Development/The World Bank. Levels and trends in child malnutrition: key findings of the 2021 edition of the joint child malnutrition estimates. Geneva: World Health Organization; 2021. Licence: CC BY-NC-SA 3.0 IGO.
- 5. NCD Risk Factor Collaboration. Worldwide trends in body-mass index, underweight, overweight, and obesity from 1975 to 2016: a pooled analysis of 2416 population-based measurement studies in 128.9 million children, adolescents, and adults. Lancet 2017;390(10113):2627–42. doi:10.1016/S0140-6736(17)32129-3.
- 6. Recommendations for the prevention and management of obesity over the life course, including considering the development of targets in this regard (<u>https://apps.who.int/gb/ebwha/pdf_files/WHA75-REC1/A75_REC1_Interactive_en.pdf#page=222</u>).
- Must A, Jacques PF, Dallal GE, Bajema CJ, Dietz WH. Long-term morbidity and mortality of overweight adolescents: a follow-up of the Harvard Growth Study of 1922 to 1935. N Engl J Med. 1992;327:1350–5. doi:10.1056/ nejm199211053271904.
- 8. Abdullah A, Wolfe R, Stoelwinder JU. The number of years lived with obesity and the risk of all-cause and cause-specific mortality. Int J Epidemiol. 2011;40(4):985–96. doi:10.1093/ije/dyr018.
- 9. Park M, Falconer C, Viner R, Kinra S. The impact of childhood obesity on morbidity and mortality in adulthood: a systematic review. Obes Rev. 2012;13(11):985–1000. doi:10.1111/j.1467-789x.2012.01015.x.
- 10. Palma Dos Reis CR, Serrano F, Fonseca MJ, Martins AT, Campos A, McMahon GM, et al. The fetal origins of disease: a prospective cohort study on the association of preeclampsia and childhood obesity. J Dev Orig Health Dis. 2022;13(1):68–74. doi:10.1017/s2040174421000027.
- 11. Caird J, Kavanagh J, O'Mara-Eves A. Does being overweight impede academic attainment? A systematic review. Health Educ J. 2014;73(5):497–521. doi:10.1177/0017896913489289.
- 12. Quek YH, Tam WW, Zhang MW, Ho R. Exploring the association between childhood and adolescent obesity and depression: a meta-analysis. Obes Rev. 2017;18(7):742–54. doi:10.1111/obr.12535.
- 13. Haqq AM, Kebbe M, Tan Q, Manco M, Salas XR. Complexity and stigma of pediatric obesity. Child Obes. 2021;17(4):229–40. doi:10.1089/chi.2021.0003.
- 14. Singh AS, Mulder C, Twisk JW, van Mechelen W, Chinapaw MJ. Tracking of childhood overweight into adulthood: a systematic review of the literature. Obes Rev. 2008;9(5):474–88. doi:10.1111/j.1467-789x.2008.00475.x.
- 15. MacLean P, Higgins J, Giles E, Sherk V, Jackman M. The role for adipose tissue in weight regain after weight loss. Obes Rev. 2015;16(Suppl1):45–54. doi:10.1111/obr.12255.
- 16. Ells LJ, Rees K, Brown T, Mead E, Al-Khudairy L, Azevedo L, et al. Interventions for treating children and adolescents with overweight and obesity: an overview of Cochrane reviews. Int J Obes. 2018;42:1823–33. doi:10.1038/s41366-018-0230-y.
- 17. World Health Organization, United Nations Children's Fund. A vision for primary health care in the 21st century: towards universal health coverage and the Sustainable Development Goals. Geneva: World Health Organization; 2018 (WHO/HIS/SDS/2018.15; https://apps.who.int/iris/handle/10665/328065).
- 18. World Health Organization, United Nations Children's Fund. Operational framework for primary health care: transforming vision into action. Geneva: World Health Organization; 2020 (<u>https://apps.who.int/iris/handle/10665/337641</u>).
- 19. Report of the Commission on Ending Childhood Obesity. Impementation plan: executive summary. Geneva: World Health Organization; 2017 (<u>https://apps.who.int/iris/bitstream/handle/10665/259349/WHO-NMH-PND-ECHO-17.1-eng.pdf</u>?sequence=1).

- 20. Aarestrup J, Bjerregaard LG, Meyle KD, Pedersen DC, Gjærde LK, Jensen BW, et al. Birthweight, childhood overweight, height and growth and adult cancer risks: a review of studies using the Copenhagen School Health Records Register. Int J Obes. 2020;44(7):1546–60. doi:10.1038/s41366-020-0523-9.
- 21. Mapping the health system response to childhood obesity in the WHO European Region: an overview and country perspectives. Copenhagen: World Health Organization Regional Office for Europe; 2019 (<u>https://apps.who.int/iris/handle/10665/346468</u>).
- 22. Meyer JF, Larsen SB, Blond K, Damsgaard CT, Bjerregaard LG, Baker JL. Associations between body mass index and height during childhood and adolescence and the risk of coronary heart disease in adulthood: a systematic review and meta-analysis. Obes Rev. 2021;22(9):e13276. doi:10.1111/obr.13276.
- 23. Lobstein T, Neveux M, Brown T, Kheng Chai L, Collins CE, Ells LJ, et al. Social disparities in obesity treatment for children age 3–10 years: a systematic review. Obes Rev. 2021;22(2):e13153 doi:10.1111/obr.13153.
- 24. Sjunnestrand M, Nordin K, Eli K, Nowicka P, Ek A. Planting a seed child health care nurses' perceptions of speaking to parents about overweight and obesity: a qualitative study within the STOP project. BMC Public Health. 2019;19:1494. doi:10.1186/s12889-019-7852-4.
- 25. Eli K, Neovius C, Nordin K, Brissman M, Ek A. Parents' experiences following conversations about their young child's weight in the primary health care setting: a study within the STOP project. BMC Public Health. 2022;22:1540. doi:10.1186/s12889-022-13803-8.
- 26. Serban CL, Putnoky S, Ek A, Eli K, Nowicka P, Chirita-Emandi A. Making childhood obesity a priority: a qualitative study of health care professional perspectives on facilitating communication and improving treatment. Front Public Health. 2021;9:652491. doi:10.3389/fpubh.2021.652491.
- 27. Argelich E, Alemany ME, Amengual-Miralles B, Argüelles R, Bandiera D, Barceló MA, et al. Paediatric teams in front of childhood obesity: a qualitative study within the STOP project. An Pediatr. 2021;95(3):174–85. doi:10.1016/j. anpedi.2020.11.009.
- 28. Carroll C, Sworn K, Booth A, Pardo-Hernandez H. Stakeholder views of services for children and adolescents with obesity: mega-ethnography of qualitative syntheses. Obesity (Silver Spring). 2022;30(11):2167–84. doi:10.1002/ oby.23558. PMID: 36321275.
- 29. World Health Organization, United Nations Children's Fund. Protecting children from the harmful impact of food marketing: policy brief. Geneva: World Health Organization; 2022 (<u>https://www.who.int/publications/i/item/9789240051348</u>).
- 30. Nutrition labelling: policy brief. Geneva: World Health Organization; 2022 (<u>https://www.who.int/publications/i/</u>item/9789240051324).
- 31. Fiscal policies to promote healthy diets: policy brief. Geneva: World Health Organization; 2022 (https://www.who. int/publications/i/item/9789240049543).
- 32. Action framework for developing and implementing public food procurement and service policies for a healthy diet. Geneva: World Health Organization; 2021(https://www.who.int/publications/i/item/9789240018341).
- 33. Reformulation of food and beverage products for healthier diets: policy brief. Geneva: World Health Organization; 2022 (https://www.who.int/publications/i/item/9789240039919).
- 34. Nudges to promote healthy eating in schools: policy brief. Geneva: World Health Organization; 2022 (https://www.who.int/publications/i/item/9789240051300).
- 35. Lahariya C, Roy B, Shukla A, Chatterjee M, De Graeve H, Jhalani M, et al. Community action for health in India: evolution, lessons learnt and ways forward to achieve universal health coverage. WHO South East Asia J Public Health. 2020;9(1):82–91. doi:10.4103/2224-3151.283002.
- 36. Fitzsimons KJ, Modder J, Greer IA. Obesity in pregnancy: risks and management. Obstet Med. 2009;2(2):52-62. doi:10.1258/om.2009.090009.

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