





# Health service delivery framework for prevention and management of obesity

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## Declaration of interests

All the participants completed a Declaration of Interest form in advance of the obesity management service delivery technical consultation held in Lisbon Portugal. The reported interests were not considered by WHO to present any conflict in light of the objectives of the meeting or peer review of the health service delivery framework for prevention and management of obesity. All the declarations, together with any updates, were made known and available to all participants at the beginning of the consultation. All the experts participated in their individual capacities and not as representatives of their countries, governments or organizations.

# Abbreviations

- BMI** Body mass index
- GDP** Gross domestic product
- HIC** High-income countries
- IMCI** Integrated management of childhood illness
- LMIC** Low-and middle-income countries
- NCD** Noncommunicable disease
- PHC** Primary health care
- SSB** Sugar-sweetened beverage
- SDG** Sustainable Development Goal
- SPDI** Service package delivery and implementation
- UHC** Universal Health Coverage
- WHO** World Health Organization



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*The Health service delivery framework for prevention and management of obesity aims to promote expanded access to obesity prevention and management services for all age groups across the life course*



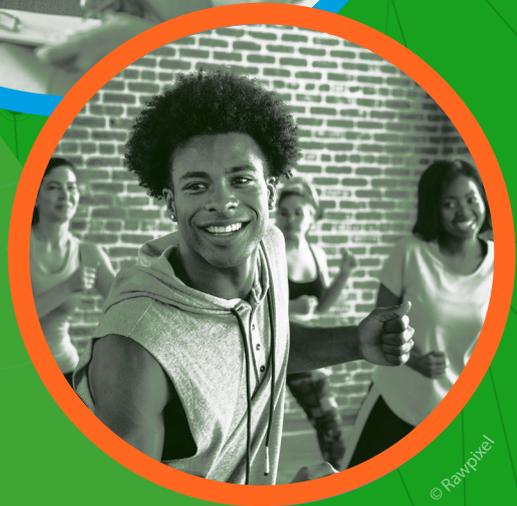
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*The WHO acceleration plan to stop obesity makes a call for scaling up proven policies and strategies for tackling the obesity epidemic and sets out a clear pathway for doing so*

# Executive summary

**T**he global burden and threat of obesity constitutes a major public health challenge that undermines social and economic development throughout the world and has the effect of increasing inequalities between countries and within populations. Overweight and obesity have now reached epidemic proportions globally. Once associated with high-income countries (HICs), obesity is now also prevalent in low- and middle-income countries (LMICs).

Obesity is a cause of mortality and morbidity because it is a major risk factor in many other noncommunicable diseases (NCDs). In 2019, obesity accounted for approximately 5 million deaths from cardiovascular diseases, diabetes, cancers, neurological disorders, chronic respiratory diseases and digestive disorders. Tackling the growth in obesity is critical to achieving the Sustainable Development Goal (SDG) target 3.4: to reduce by one third premature mortality from NCDs by 2030.

The challenge is a complex one. Obesity occurs when there is an energy imbalance associated with diets that are high in unhealthy fats and sugars alongside physical inactivity. Yet there are a multiplicity of factors, including genetic pre-disposition, as well as biological and social determinants, which influence the trajectory of the disease. For these reasons, tackling obesity is recognized first as a societal rather than an individual responsibility. Efforts to slow the obesity epidemic have involved significant investment across nations in programmes and policies that help embed healthy diets and regular physical activity as the most accessible, available and affordable behaviours of daily life. Examples of such policies include taxes on sugar-sweetened beverages (SSBs), promotion of active travel by walking and cycling and education about food choice and preparation. There is good evidence on the effectiveness of a range of such policies in different contexts.

However, it is time to recognize that multisectoral efforts to influence behaviours around healthy diet and exercise, while essential, have so far been insufficient to halt the rising prevalence of obesity. At the Seventy-fifth World Health Assembly in 2022, Member States adopted

new recommendations for the prevention and management of obesity and endorsed the *WHO acceleration plan to stop obesity*.

The *WHO acceleration plan to stop obesity* calls for scaling up proven policies and strategies for tackling the obesity epidemic and sets out a clear pathway for doing so. The plan also recognizes that it is now imperative to deliver a corresponding health system response which ensures that services to prevent, treat and manage the disease are universally available, accessible, affordable and sustainable.

The *Health service delivery framework for prevention and management of obesity* represents the health systems component of the plan and offers a way forward. The framework integrates health and social systems



***Reaching the WHO target of zero growth in the prevalence of obesity between 2010 and 2030 is critical to achieving Sustainable Development Goals (SDG) target 3.4: to reduce by one third premature mortality from NCDs by 2030.***

responses that can be adapted according to country, context, circumstance and need. It outlines opportunities for integrating and activating obesity interventions within already existing care pathways. This avoids the need to design and deliver new and different models for service delivery and maximizes efficiencies for health systems including minimizing additional pressures on the health workforce.

The *Health service delivery framework for prevention and management of obesity* aims to promote expanded access to obesity prevention and management services for all age groups across the life course. It guides the integration and organization of obesity prevention and management services through the health system and community as critical components of universal health coverage (UHC). The framework is based on the principles of primary health care (PHC), follows a chronic care approach, and is supported by the integration of obesity

prevention and management into existing service delivery frameworks across the health care system, including communities and homes. It also supports the planning of required resources for the scaling up and sustainability of services.

**The specific objectives** of the framework are to:

- define integration and organization of services for the effective prevention and management of obesity in children, young people and adults, including women of reproductive age, across the life course, incorporating prevention, early diagnosis and screening for complications and comorbidities, treatment, rehabilitation and long-term management to prevent and revert the progression of the disease and related complications;
- ensure effective integration and support across the three levels of health services, across the lifespan, with a special attention to high-risk and vulnerable groups, through a patient-centred approach;
- provide support for navigation throughout the levels of care and community opportunities;
- harmonize service delivery with societal actions and demands or offers; and
- suggest delivery streams to ensure scale up.

*This framework is part of a more comprehensive package to build capacity in health systems to deliver services to prevent and manage obesity. The package also includes the WHO's UHC compendium and the WHO Academy course and advanced training for health care providers. The framework is also interlinked with additional interventions proposed in the priority package of the WHO acceleration plan to stop obesity.*



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## 1. Background

Obesity has reached epidemic proportions globally and is now linked to more deaths worldwide than underweight. Once associated with high-income countries (HICs), obesity is now also prevalent in low- and middle-income countries (LMICs), many of which are

simultaneously facing the double burden of malnutrition. In every region except parts of sub-Saharan Africa and Asia there are more people who live with obesity than with underweight (1).

### BOX 1: Global health commitments

Despite remarkable improvements in the health outcomes of the global population during the era of the Millennium Development Goals, important gaps persist in people's ability to attain the highest possible level of health. About half of the world's population lack access to the services they need, and poor health disproportionately affects those faced with adverse social and other determinants of health, driving health inequity both within and between countries.

Health is central to the 2030 Agenda for Sustainable Development as it relates to many of the Sustainable Development Goals (SDGs) and is the specific focus of Goal 3 (Ensure healthy lives and promote well-being for all at all ages). Commitment to equity and leaving no one behind is captured in target 3.8 on achieving universal health coverage (UHC) (2). UHC means that all individuals and communities receive the health services they need – including promotive, protective, preventive, curative, rehabilitative and palliative – of sufficient quality, without experiencing financial hardship.

The past decades have seen a growing understanding of the threat posed by the prevalence of obesity. Historically, primary prevention efforts focused on health and nutrition education with the aim of influencing individual behaviour around diet and active lifestyle. However, over the past decades understanding of the complex factors that contribute to obesity has grown and the focus has shifted to addressing some of the social determinants of health. Current responses recognize that the risk of obesity is influenced not only by genetic predispositions, biological factors and behaviours, but by upstream social, economic and commercial determinants such as poverty, employment, urbanization and food production and marketing that impact the environ-

ments in which eating and physical activity behaviours are learned and reinforced. These upstream determinants have the effect of limiting individual agency.

Country efforts to address structural barriers and to create supportive environments have delivered positive results. For example, the implementation of taxes to increase the cost of sugar-sweetened beverages (SSBs) to the consumer, or industry levies to incentivize reformulation that reduces the sugar content of drinks, have been introduced in several countries including Mexico (3), Saudi Arabia (4), the United Kingdom (5) and South Africa (6), and have proved effective.



Yet rates of overweight and obesity have continued to rise fast. The worldwide prevalence of obesity nearly tripled between 1975 and 2016 and it is estimated that by 2030 over 1 billion people globally will be living with obesity (7).

Obesity is a complex, multifactorial chronic disease, defined by excessive adiposity that impairs health, usually due to environments that promote obesity, psychosocial factors and genetic variants (see Box 2 for the definition of obesity).

Beyond health and medical conditions, obesity has wider social and economic impacts and is both a cause

and an effect of inequality. Women and men with lower incomes are more likely to live with obesity. Individuals with at least one chronic disease associated with overweight or obesity are less likely to be employed; when they are at work, they are more likely to be absent or less productive than healthy individuals. Recent evidence shows that the economic impact of overweight and obesity is estimated to rise from 2.19% to 3.3% of GDP in 161 countries by 2060. The majority of this negative economic impact will be in LMICs. If overweight and obesity prevalence remained at, already high, 2019 levels, a predicted global annual savings of US\$ 2.2 trillion could be achieved (8).

## BOX 2: Definition of obesity<sup>1</sup>

Obesity is a chronic complex disease defined by excessive adiposity that can impair health. It is in most cases a multifactorial disease due to obesogenic environments, psycho-social factors and genetic variants. In a subgroup of patients, single major etiological factors can be identified (medications, diseases, immobilization, iatrogenic procedures, monogenic disease/genetic syndrome). Body mass index (BMI) is a surrogate marker of adiposity calculated as weight (kg)/height<sup>2</sup> (m<sup>2</sup>). The BMI categories for defining obesity vary by age and gender in infants, children and adolescents. For adults, obesity is defined by a BMI greater than or equal to 30.00 kg/m<sup>2</sup>. There are three levels of severity in recognition of different management options.

In infants, children and adolescents, BMI categories for defining obesity vary by age and gender based on WHO growth charts. Children 0 to 5 years have obesity if weight-for-length/height or BMI-for-age is above 3 standard deviations of the median of the *WHO child growth standards*. Children aged 5 to 19 years have obesity if BMI-for-age is above 2 standard deviations of the median of *WHO growth reference for school-aged children and adolescents*.

<sup>1</sup> According to the *International classification of diseases for mortality and morbidity statistics (11th Revision)* (9).

## 1. 1 Obesity: a noncommunicable disease

Noncommunicable diseases (NCDs) are among the leading cause of death and disability in the world. The term NCDs refers to a group of conditions that result in long-term health consequences and often create a need for long-term treatment and care. NCDs are not mainly caused by an acute infection and are not passed from person to person but are the result of a combination of genetic, physiological, environmental and behavioural factors.

Obesity is one of the key risk factors for NCDs such as type 2 diabetes, cardiovascular diseases and certain types of cancer, as well as pulmonary, digestive, renal, endocrine, musculoskeletal, neurological and mental health disorders. In 2019, there were an estimated 5 million obesity-related deaths from NCDs, which corresponds to 12% of all NCD deaths (10). This combination of fast rising prevalence and significance as a risk factor for other NCDs means that obesity now represents one of the major public health challenges of our time.

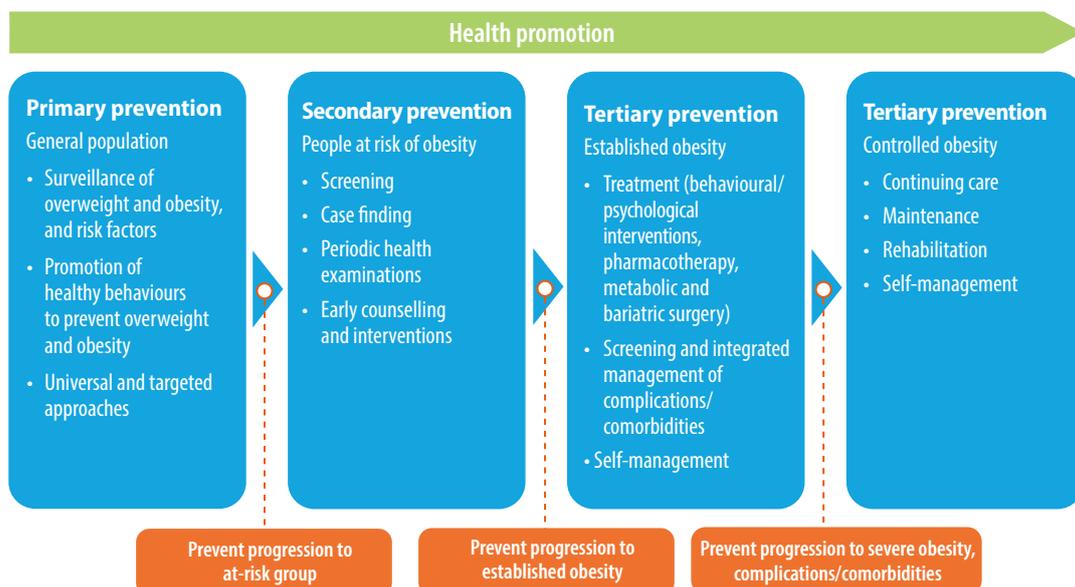
WHO defines chronic disease management as the ongoing management of conditions over a period of years or decades. Management by a multidisciplinary or an interdisciplinary team is usually needed.

The primary aim of the management of adults with obesity is to support long-term changes in health behaviours that contribute to reducing body weight or body fat, and subsequently BMI, and improve health

outcomes and quality of life. In children and adolescents with obesity, the primary aim is to support changes in patient's and family health behaviours that contribute to stabilizing the child's weight, or reducing weight gain during growth, and subsequently reducing the child's BMI standard deviation score (and body fat if measured) and improving health outcomes and quality of life.

A health services response to obesity must form a continuum across three levels of the health system, namely primary, secondary and tertiary delivery platforms (Fig. 1). At primary level, entry points for services must focus on the prevention of overweight and obesity including opportunistic provision of information and counselling from pre-conception and prenatal stage onwards to childhood and adolescence. At secondary level, services must focus on early detection of overweight or obesity to improve the chances of positive health outcomes and quality of life. This includes diagnosis and behavioural interventions to prevent the progression to severe forms of obesity and related complications. At tertiary level, services must deliver treatment, rehabilitation and long-term management of established obesity and related complications and comorbidities to improve the ability to function, quality of life and life expectancy. This would include structured multidisciplinary behavioural change interventions, psychological interventions, pharmacotherapy and metabolic or bariatric surgery if indicated.

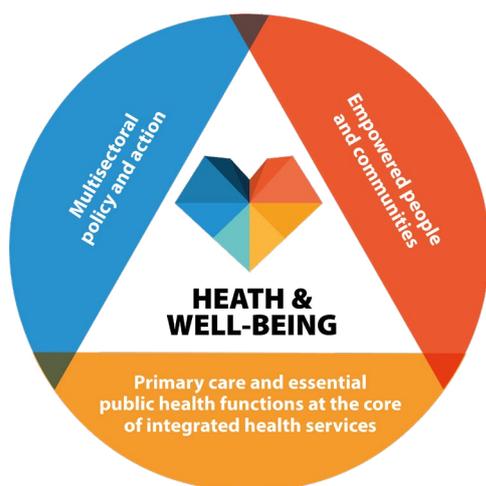
**Figure 1. Obesity prevention and management continuum**



## 1.2 Conditions for success: primary health care-oriented health systems and people-centred integrated services

A health service response to the rising challenge of overweight and obesity will more likely succeed where there are systems that adopt a whole-of-society approach to health that aims to maximize the level and distribution of health and well-being. This is the essence of primary health care (PHC) as envisaged in the *Declaration of Alma Ata* (11) and, later, the *Declaration of Astana* at the Seventy-second World Health Assembly in 2019 (12). The three components of PHC are: firstly, placing primary care and essential public health functions at the core of integrated health services; secondly, focusing on multisectoral policy and action (see Box 3) and; thirdly, empowering people and communities (see Box 4) (Fig. 2).

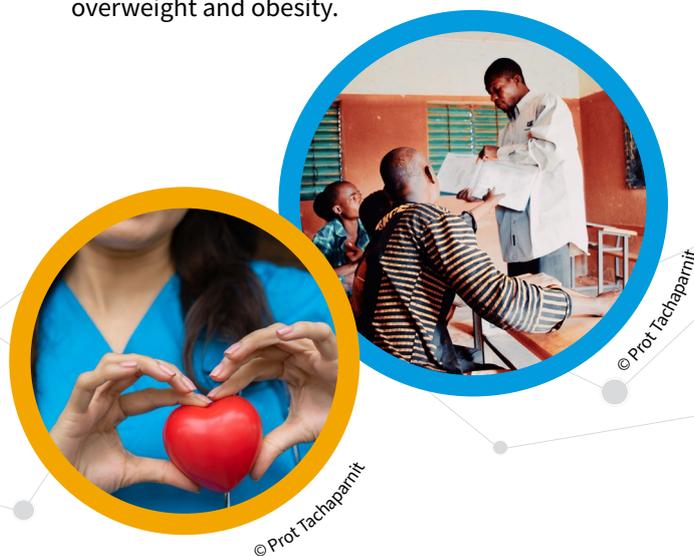
**Fig. 2. PHC components**



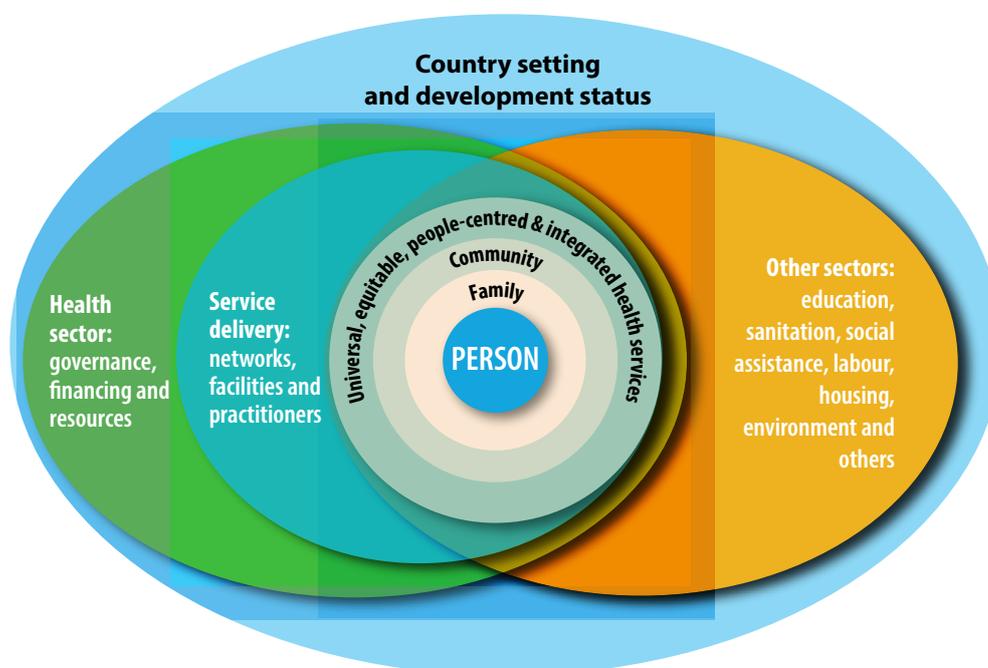
Source: World Health Organization, United Nations Children's Fund (13).

Tackling the obesity pandemic will also require a fundamental shift in the way health services are funded, managed, and delivered. Adopted with overwhelming support by Member States at the Sixty-ninth World Health Assembly in May 2016, the *WHO framework on integrated people-centred health services* supports countries progress towards universal health coverage by shifting away from health systems designed around diseases and health institutions towards health systems designed for people (14).

People-centred health services take an approach to care that consciously adopts the perspectives of individuals, families and communities. They see them as participants as well as beneficiaries of trusted health systems that respond to their needs and preferences in humane and holistic ways. This approach requires that people have the education and support they need to make decisions and participate in their own care. It is organized around the health needs and expectations of people rather than diseases. Integrated health services are health services that are managed and delivered in a way that ensures people receive a continuum of health promotion, disease prevention, diagnosis, treatment, disease management, rehabilitation and palliative care services, at the different levels and sites of care within the health system, and according to their needs throughout their life course (Fig. 3). Only an integrated approach of this kind has the potential to address the multifactorial health challenges that are represented by overweight and obesity.



**Fig. 3. Conceptual framework for people-centred and integrated health services**



Source: World Health Organization (15).

### 1.3 Challenges to be overcome

The need to expand access to obesity prevention and management services is now widely recognized. Nevertheless, there are many challenges that continue to hinder a successful global and national response to obesity.

Firstly, there remains a divergence in perceptions and attitudes towards obesity, with some debate continuing about whether obesity represents a risk factor or a disease in itself. Positive efforts to confront the stigma associated with overweight have also, in some cases, evolved into a narrative that obscures the risks associated with obesity.

Compared to other NCDs, there remains a shortage of knowledge on the biological and genetic factors associated with obesity and there are inconsistencies in the appreciation of the impact of obesity on morbidity and mortality. In relation to prevention and management efforts, there is not yet a full recognition of the need for a holistic approach that includes both prevention and affordable and accessible treatment. The limited evidence on the long-term effectiveness of childhood and adolescent obesity prevention and management inter-

ventions can be an obstacle to much needed investment in these services. There is also a serious shortage of evidence on the effectiveness of interventions among vulnerable populations and in low-income countries. These continuing knowledge deficits are compounded by a shortage of clinical guidelines and protocols and a lack of confidence, knowledge and skills among health care workers in how to address and manage obesity. Added to this are the wider system challenges of fragmentation of care, insufficient collaboration between sectors and settings, health workforce shortages, insufficient funding and a lack of health literacy.

Overall, the now urgent efforts to deliver an effective health system response to the obesity pandemic must overcome years of persistent neglect of obesity as both an individual and public health problem.

Despite the overwhelming evidence of both the human and economic imperative to tackle the obesity pandemic, current trends mean that the global target to halt the rise in obesity by 2030 is unlikely to be achieved.



### BOX 3: PHC component: multisectoral policies and actions

The role of the environments that surround communities has long been recognized as a major contributor to obesity. Obesity prevention and control necessitates multisectoral policies and actions that go beyond the health sector. Such policies and actions are implemented through a coordinated whole-of-society approach with a range of 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 that make healthier food options available, accessible and desirable.

Recommended policies to be implemented in line with national dietary guidance include comprehensive policies to protect people from the harmful impact of food marketing, nutrition labelling policies (including front-of-pack labelling), fiscal policies (including taxes and subsidies to promote healthy diets), public food procurement and reformulation policies, as well as 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, and can include collaboration between organizations working towards a common goal. Examples could include district administration, education and health authorities creating and maintaining public parks that cater for needs of different age groups, or primary care teams in health clinics and school teachers jointly promoting healthy eating practices, giving oral healthcare advice and offering services to ensure timely identification of children at risk of obesity. Within the school setting, school staff together with 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.

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;
- transparent implementation and monitoring of multisectoral and intersectoral actions, in line with local and national strategies; and
- monitoring progress through indicators, and other monitoring tools and practices.

## 2. The health service delivery framework for prevention and management of obesity

### 2.1 Overview

Multisectoral efforts to create enabling food environments and to influence behaviours around healthy diet and physical activity are essential but have not been sufficient to halt the rising prevalence of obesity. At the Seventy-fifth World Health Assembly in 2022, Member States adopted new recommendations for the prevention and management of obesity and endorsed the *WHO acceleration plan to stop obesity* (16).

The *WHO acceleration plan to stop obesity* provides a platform to strengthen these efforts and, through a focus on delivery for impact, will support scaling up of evidence-based policies. As part of the priority actions identified, the plan recognizes that it is now imperative to also deliver a corresponding health system response, which ensures that services to prevent, treat and manage the disease are universally available, accessible, affordable and sustainable.

Current service delivery models that intervene only when obesity-related comorbidities appear must be replaced with models that recognize obesity as a chronic disease and can both take adequate care of those already living with obesity and contribute to the prevention of new or progressing cases. There must be a holistic, integrated approach to early diagnosis, screening for related complications and comorbidities, treatment and long-term management alongside multisectoral health promotion and disease prevention measures. However, a gap has existed for guidance on how health systems could effectively integrate obesity prevention and management. The *Health service delivery framework for prevention and management of obesity* is designed to fill this gap, and represents the health systems-focused component of the comprehensive *WHO acceleration plan to stop obesity*.



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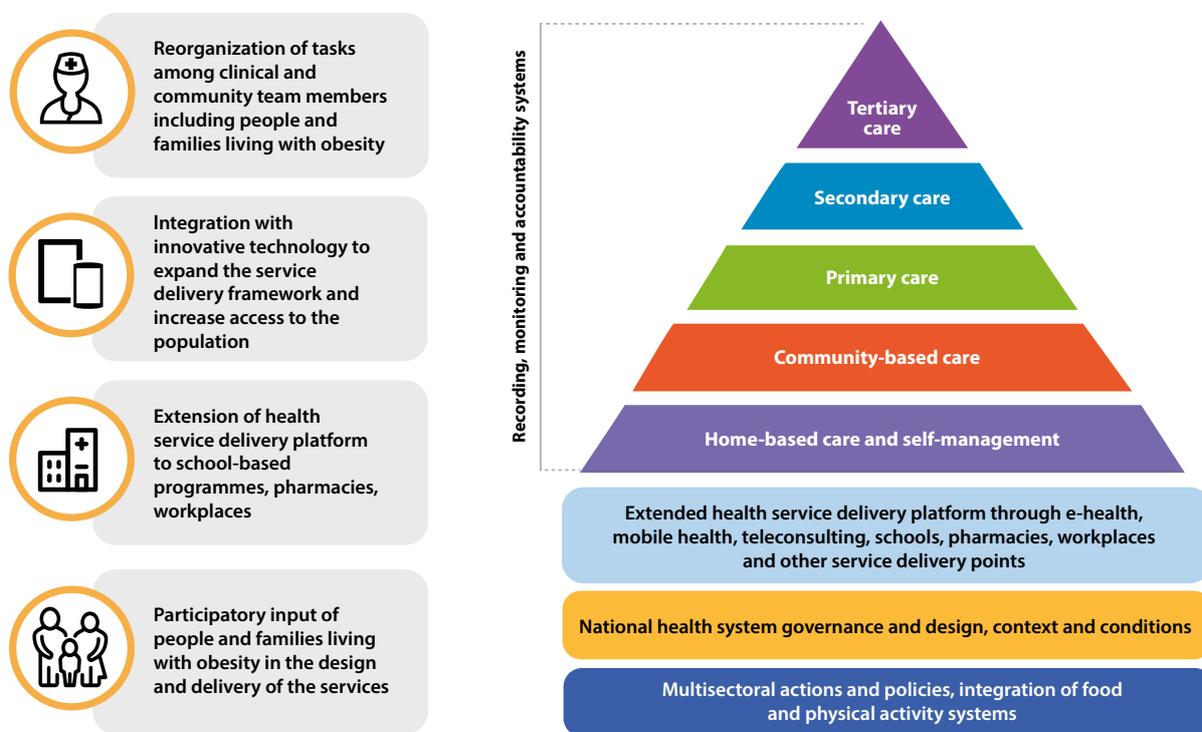
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## 2.2 Aims and objectives of the framework

The health service service delivery framework for prevention and management of obesity aims to promote expanded access to obesity prevention and management services for all age groups across the life course, including people with or at risk of obesity. It outlines the organization of health services across the health care system and community through an analysis of entry and integration points within the existing service delivery model.

This framework presupposes the harmonization of and link to societal and multisectoral activation points and enablers to build the foundation of an integrated approach to obesity prevention and management interventions across the life-course as outlined in the priority package of the *WHO acceleration plan to stop obesity* (Fig. 4).

**Figure 4. Model of care for prevention and management of obesity (harmonization with societal and multisectoral activation points and enablers)**



The specific objectives of the framework are to:

1. define integration and organization of services for the effective prevention and management of obesity in children, young people and adults, including women of reproductive age, across the life course, incorporating prevention, early diagnosis and screening for complications and comorbidities, treatment, rehabilitation and long-term management to prevent and revert the progression of the disease and related complications;
2. ensure effective integration and support across the three levels of health services and community, across the lifespan, with a special attention to high-risk and vulnerable groups, through a patient-centred approach;
3. provide support for navigation throughout the levels of care and community opportunities;
4. harmonize service delivery with societal actions and demands or offers; and
5. suggest delivery streams to ensure scale up.

This framework is based on standardization and simplification of prevention and management services. It is also future-proof as it is designed to accommodate emerging service delivery platforms, such as those supported by technology, outreach services, and vast learning from the COVID-19 pandemic.

The framework takes into consideration integration with multisectoral actions related to the wider determinants of obesity (such as in food systems, built environment, information systems and digital environments, education systems, sport and leisure systems and social

protection systems) that are governed by upstream social, commercial and economic forces.

This framework is generic and needs to be adapted to countries or regions taking into consideration income, education level, ethnicities, culture, specific health and social care settings, high risk and vulnerable groups, and populations requiring additional interventions and support. It must be integrated within national programmes and services and use established clinical and service pathways, policies, strategies and services to improve health outcomes in these settings.

### 2.3 Methodology for development of the framework

The development of the framework followed the process below.

1. Non-systematic search of documented service delivery approaches (on obesity prevention and management interventions) across the six WHO regions from 2010 to 2020. The purpose of the search was to determine the scope or coverage of service delivery frameworks on obesity prevention and management in countries across typologies of health systems, in order to uncover emerging evidence or practice and provide clarity on entry and activation points for health and social actions. The search was narrowed by selecting reports with country-level implementation and a clear description of service delivery mechanisms.
2. Engagement of frontrunner and other countries to assess the health system needs and opportunities for the national obesity epidemic response, guidance gaps and implementation challenges.
3. Establishment of a WHO headquarters and WHO Regional Office for Europe working group to develop the service delivery framework.
4. Online review by a broad group of experts on clinical management of obesity, programme implementation, health system strengthening and multisectoral actions, as well as by people affected by and living with obesity.
5. A *Obesity management service delivery technical consultation* held in Lisbon, Portugal, on 10 January 2023, to finalize the framework.

### 2.4 Who should use this document

The document is primarily intended to assist countries in providing an effective response to prevent and manage obesity by ensuring accessibility, availability and affordability of appropriate health services for all, across the life course and throughout the continuum of care. Governments and policy-makers, both national and subnational, are a key audience. In addition, many components are relevant for other stakeholders at the country level, such as nongovernmental organizations, professional associations, the private sector and development partners. Those in academic institutions may find this document useful for identifying areas requiring further research.



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## 2.5 Scope of the framework

The scope of the framework is based on the following overarching principles:

- A focus on PHC as the entry point for the integration of obesity services and as a link to multisectoral interventions

*Why?* Efforts to tackle the obesity epidemic need to start before conception, during pregnancy, through maternity care and early childhood interventions and then continued throughout the life course in primary care.

- An integrated system approach with referral and back referral pathways for better continuum of care and increased adherence to treatment

*Why?* As with many other chronic diseases, lifelong support is required for obesity management. A full spectrum of services across all levels of the health system is necessary to assess the root causes of obesity and related comorbidities and to ensure continuity of care.

- A focus on reducing vulnerability and supporting vulnerable populations

*Why?* Special focus will need to be given to groups with or at risk of developing obesity requiring additional support due to the sociodemographic setting, presence of comorbidities, mental health conditions, age, gender or ethnic group.



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- A commitment to the principles of human rights, equity and social justice

*Why?* Obesity services delivery needs to be based on an informed, respectful, non-judgmental and non-discriminatory approach by health care providers and communities

- A whole-of-society approach

*Why?* Open and continuous dialogue with political leadership, civil society, clinical providers and community is imperative to achieving a systematic response to improve obesity prevention and management.

- A people-centred approach

*Why?* The participatory input of people living with obesity and other related NCDs in the design and delivery of the services is an essential ingredient for success.

On this basis, the *Health service delivery framework for prevention and management of obesity* endeavours to:

- identify obesity as one of the NCDs that must be prevented and treated appropriately within the health system;
- integrate and organize obesity prevention and management with an emphasis on penetrating the established health care service delivery platforms and communities;
- support allocation of adequate resources and supplies across all levels of the system and community, including training of health care providers at all levels; and
- influence and support the inclusion of obesity prevention and management interventions in UHC and primary care benefit packages, national insurance plans and other financial coverage schemes in countries.

## 2.6 Health service delivery integration strategies: entry and activation

The framework outlines opportunities for integrating and activating obesity interventions within already existing care pathways. This avoids the need to design and deliver new and different models for service delivery and maximizes efficiencies for health systems including minimizing additional pressures on the health workforce.

The framework is aligned to existing health workforce cadres and capabilities, principally within primary care. With some additional training, the skill sets already available across teams, ranging from lay and community health workers, nurse assistants, nurses, clinical officers, primary care counsellors, midwives and primary care physicians to specialized physicians in secondary and tertiary care, are sufficient to provide the basis for prevention and management of obesity. The expertise of less widely available cadres, such as nutritionists, dietitians, physical therapists and psychologists, is also important in the management of obesity, and efforts should be made to expand these cadres as part of multi-disciplinary integrated teams.

## 2.7 Non-health service delivery opportunities

Other non-health service delivery points, such as in childcare settings, schools or workplaces, should also be considered since some age groups or vulnerable groups might be difficult to access through health services alone. For example, adolescents that are not in school might not have contact with health systems and, therefore, services aimed at reaching these groups should be offered in other sites such as leisure sites, youth groups and centres or clubs, community hubs and religious institutions, or through digital platforms. These alternative and community-based delivery points may include health promotion and disease prevention interventions, early detection of overweight or obesity, psychological support or counselling to address health issues associated with overweight and obesity (i.e., physical development issues linked to self-image;

While variation exists in system and service delivery design according to country and context, it is common for programmes in primary care to be organized by age group.

In this framework, the entry and integration points for obesity prevention and management across the life course have been identified by mapping established health programmes targeted to specific age groups, diseases and population groups. While national and sub-national contextualization will be critical in each country, in general terms, the integration points are preconception and antenatal care services, child and adolescent health services and adult and ageing population health services.

The catchment populations are not only those targeted by the programmes themselves but also include the communities around them, resulting in the provision of services to an expanded population that might include, for example, the parents, grandparents or caregivers who accompany a child to an immunization programme or the family or friends of a pregnant woman.

mental health associated with physical changes; eating disorders or disordered eating; psychosocial stress; anxiety; depression; and social isolation linked to stigmatization, among others).

Adults might also not access the health system unless they are experiencing obvious symptoms of poor health. To address this, workplaces and other locally convenient platforms should make available services for: counselling and interventions relating to diet, physical activity, sedentary behaviours and sleep assessment; early detection of overweight and obesity; assessment of other NCD risk factors and mental health issues; referral for screening of complications or comorbidities, treatment, rehabilitation and long-term management of obesity.

## 2.8 Services to prevent and manage obesity

The framework proposes a range of services to prevent and manage obesity organized by level of care (self-management, community care, primary care, secondary care, tertiary care and multisectoral interventions) across the life course. The life course is divided into five stages: pre-conception and antenatal care; children under 5 years old; children 5-9 years old; adolescents 10-19 years old; and adults.

### i. Preconception and antenatal care

Conception and early life are critical phases in the onset of overweight and obesity. Women with a BMI above 30 kg/m<sup>2</sup> before conception are considered at higher risk of complications during pregnancy and delivery. 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 impact the weight at birth and the risk of obesity and related NCDs onward across the life course. For this age group, obesity prevention and management services need to be integrated within established preconception and antenatal programmes. They should be aligned with other maternal care models, following 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 (Fig. 5).

#### Services proposed by level of care:

**Self-management:** monitor weight for weight loss before conception and appropriate weight gain during pregnancy, according to a plan agreed with health care providers and/or support by digital platforms; monitor blood pressure; lead a healthy life (healthy diet, physical activity, sleep duration and quality, avoid tobacco and alcohol, emotional self-regulation); and apply adherence strategies to treatment plans if any (before conception, see “adults”).

**Community:** monitor weight for weight loss before conception and appropriate weight gain during pregnancy; breastfeeding preparation; promote a healthy lifestyle (healthy diet, physical activity, sleep duration and quality, emotional regulation), smoking and alcohol

consumption counselling; nutrition and physical activity campaigns; and family support and counselling to prevent and manage existing overweight or obesity.

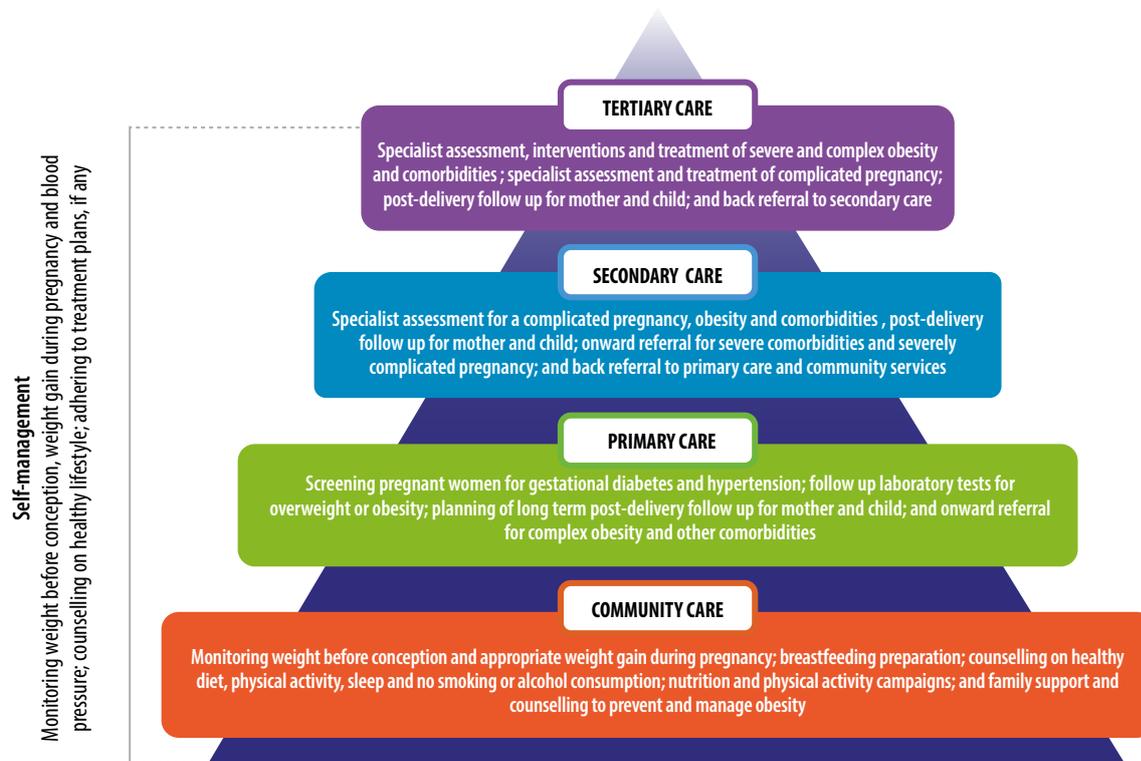
**Primary care:** all of the above; before conception, see “adults”; universally screen pregnant women for obesity before conception (personal history or medical record), gestational diabetes and gestational hypertension; follow-up laboratory tests for women with obesity; plan long-term post-delivery follow-up for mother and child; refer onward complex cases of obesity (e.g., BMI over 40 kg/m<sup>2</sup> or uncontrolled related complications or status post-bariatric surgery); and back referral to community services.

**Secondary care:** all of the above; specialist assessment for complicated pregnancy, obesity and complications/comorbidities; plan a post-delivery follow-up for mother and child; refer to tertiary care for severe complications or comorbidities or severely complicated pregnancy; and back referral to primary care and community services.

**Tertiary care:** all of the above; specialist assessment, interventions and treatment of severe and complex obesity and complications/comorbidities; specialist assessment and treatment of complicated pregnancy; plan a post-delivery follow up for mother and child at this level or in secondary care; and back referral to secondary care.

**Multisectoral:** protection, support and promotion of breastfeeding, through adherence to the International Code of Marketing of Breast-milk Substitutes and through implementation of maternity protection; nutrition labelling policies, including front-of-pack labelling; food environment policies, including taxation of SSBs (including all SSBs, such as sodas, sweetened milk and fruit juice); mandatory limits on sugar content in processed foods; improvements to the out-of-home food environment including menu labelling and portion size control; and regulation to ensure that foods offered in public places – such as schools, health facilities, government offices etc. – are in line with national dietary guidelines to promote healthy diets.

**Fig. 5. Examples of services by level of care during the preconception and antenatal periods**



**ii. Children under 5 years**

For this age group, obesity prevention and management services should be integrated within established child health programmes (including, among others, breastfeeding and complementary feeding support, immunization, growth monitoring, Integrated Management of Childhood Illness (IMCI)<sup>1</sup> and under-5 clinics). Obesity prevention and management services should be aligned with other paediatric chronic care models and offer ongoing comprehensive care in the community, coordinated and co-managed with specialized obesity treatment provided by multidisciplinary or interdisciplinary teams across the system. A cost-benefit approach needs to be taken into consideration with the understanding that treating overweight and obesity in an early phase significantly improves adult prognosis and complications, as well as reducing hospital admissions and length of stay (Fig. 6).

<sup>1</sup> \*Note on Integrated Management of Childhood Illness (IMCI). In children under 5 years, the WHO/UNICEF guidelines for IMCI offer simple and effective methods to prevent and manage the leading causes of serious illness and mortality in young children. The guidelines include methods for checking a child's immunization and nutrition status; teaching parents how to give treatments at home; assessing a child's feeding and provision of counselling to solve feeding problems; and advising parents about when to return to a health facility. Periodic visits could be a good entry point for obesity prevention and management in young children. See *Integrated management of childhood illness: a WHO/UNICEF initiative*. Geneva: World Health Organization; 1997. <https://apps.who.int/iris/handle/10665/42045>.

**Services proposed by level of care:**

**Community:** breastfeeding and complementary feeding support services; nutrition campaigns/supplementation for children; parenting support/advice and peer support groups; measurement of height and weight, calculation of BMI and BMI standard deviation score for age and gender at every well-child visit for children ages 2 and older; for younger children, calculation of weight-for-length percentile; brief opportunistic interventions for primary prevention of overweight and obesity to support behaviours of children and their families around healthy eating, physical activity, sedentary behaviours and sleep, regardless of current weight status; and counselling of all parents and caregivers to limit screen use and consumption of SSBs and energy-dense foods, as well as promotion of other healthy eating behaviours.

**Primary care:** all of the above; growth and development monitoring; immunization; IMCI; assessment of mental health and well-being; clinical assessment; counselling on healthy diet, physical activity, sedentary behaviours

and sleep, including health information and community opportunities to parents and caregivers; screening of pre-conditions and onward referral in case of relevant complications or comorbidities; and back referral to community services.

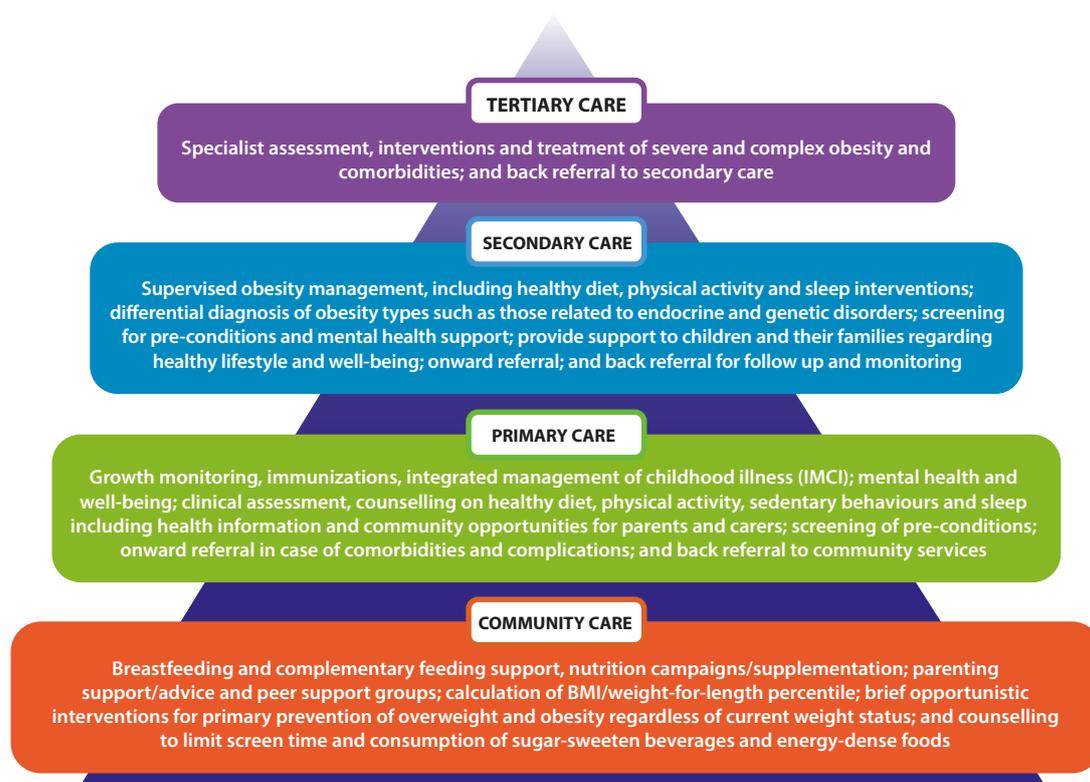
**Secondary care:** all of the above; supervised obesity management programmes including healthy diet, physical activity and sleep interventions; differential diagnosis of obesity types such as those related to endocrine and genetic disorders; screening for pre-conditions related to overweight and obesity (e.g., medications, immobilization), and mental health support; at this level, in certain settings, other providers such as a clinical nutritionist/dietician, physical therapist, psychologist/psychiatrist and counsellor might be present and provide support to children and their families regarding healthy lifestyle and well-being, including referral to community opportunities; and onward referral for children with genetic or

endocrine obesity, neurodevelopmental disorders and/or major complications or comorbidities.

**Tertiary care:** all of the above; specialist assessment and treatment of severe/complex forms obesity in case of relevant complications/comorbidities; and back referral.

**Multisectoral:** regulation of food marketing to which children are exposed, including digital marketing and the promotion of unhealthy foods in and outside of school, in public spaces and places where children gather; implementation of mandatory nutrient declarations in line with Codex guidelines (17); taxation of SSBs (including all SSBs, such as sodas, sweetened milk and fruit juice); protection, promotion and support for breastfeeding including adherence to the International Code of Marketing of Breast-milk Substitutes; reformulation of food for older infants and young children; and promotion of physical activity and sleep.

**Fig. 6. Examples of services by level of care in children under 5 years**





### iii. Children 5-9 years

Schools are often good entry points and provide essential health services for school-aged children. Interventions can be integrated in the learning programme (e.g., nutrition information, food choices, health habits, physical education, sedentary behaviours, sleep, promotion of positive self-concept, mental health and well-being) with possible referral to health systems when needed. Providers range from school health nurses and physicians, teachers or, sometimes, lay clinic associates and counsellors trained on specific skill sets. However, those who do not attend school frequently or out-of-school children remain uncovered as informal outlets might not offer the same set of health services. The interventions for schools designed for this age group need to be reflected and expanded in community settings such as leisure sites, community hubs or religious institutions. This is important, not only to raise awareness among children and their families and caregivers about the need for self-care and the need to avoid overweight and obesity, but also as a contribution to lifelong health promotion messages (Fig. 7).

#### Services proposed by level of care

**Self-management:** self-management, including a combination of appropriate diet, physical activity, sedentary behaviour, sleep and behavioural strategies, could be addressed to children according to age, but will mainly need to address parents and caregivers; specifically, this could include monitoring weight at home for appropriate gain according to age, advice on leading a healthy lifestyle regardless of weight status (i.e., healthy diet, regular physical activity, limited sedentary behaviours, adequate sleep schedule and emotional regulation) and application of a strategy for adherence to treatment plans (if any exist) with children, parents and/or caregivers, including through digital and/or peer support.

**Community:** calculation of BMI and BMI standard deviation score for age (z-score) and gender at every well-child visit; brief opportunistic interventions for primary prevention of overweight and obesity to support behaviours among children and their families on healthy diet, physical activity, sedentary behaviours, sleep and emotional regulation, regardless of current weight status; counselling for all patients and their families to limit sedentary behaviours, ensure adequate sleep schedule, limit consumption of sugary drinks and energy-dense foods and encourage other healthy eating behaviours; supported digital platform for

diet, physical activity and weight management with referral to community opportunities; and community individual or group counselling to enhance self-concept and self-management (integrating mental health for children) and peer support groups.

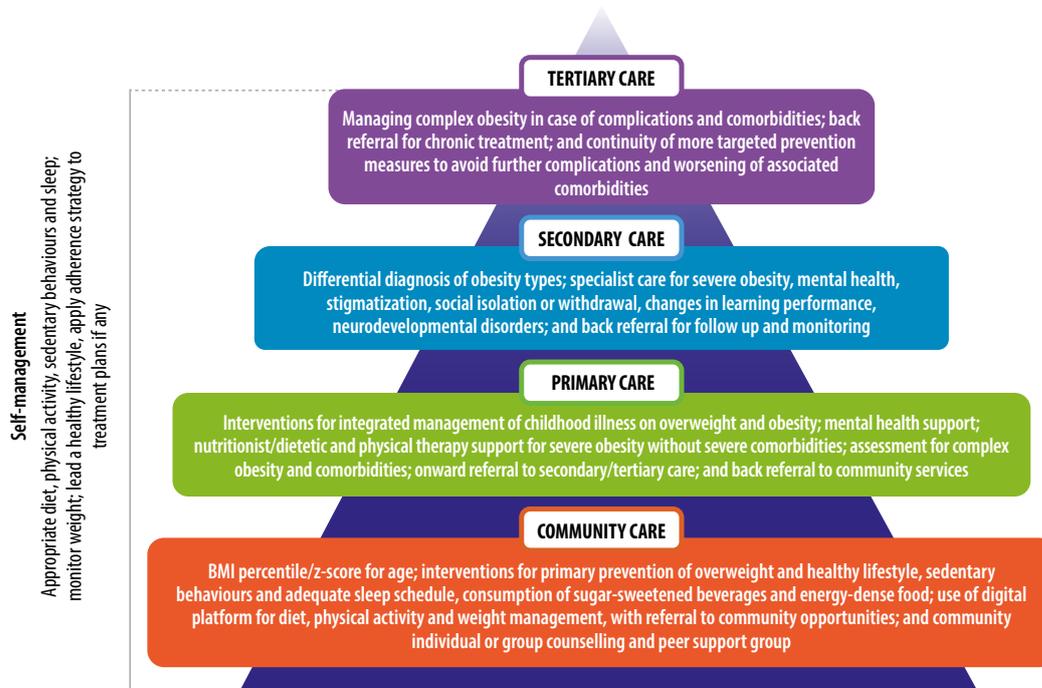
**Primary care:** all of the above; IMCI; interventions for prevention and early diagnosis, treatment and long-term management of overweight and obesity (behavioural and psychological interventions and pharmacotherapy when available for this age range); strengthening the relationship with primary care providers for mental health; nutrition/dietetic and physical therapy support for obesity without complications/comorbidities; and onward referral of children with obesity and relevant complications/comorbidities to secondary/tertiary care, and/or back referral to primary care and community services.

**Secondary care:** all of the above; differential diagnosis of obesity types such as those related to endocrine and genetic disorders; specialist care for obesity (i.e., pharmacological treatment of obesity and other pharmacological interventions for complications/comorbidities) with back referral to primary care for follow up and continuity of more targeted prevention measures to avoid further complications and associated comorbidities; and specialist care for neurodevelopmental or mental health disorders, stigmatization, social isolation, withdrawal or changes in learning performance, with back referral for follow up and monitoring.

**Tertiary care:** management of severe/complex forms of obesity in case of relevant complications/comorbidities; and back referral for chronic treatment and continuity of more targeted prevention measures to avoid further complications and worsening of associated comorbidities.

**Multisectoral:** regulation of food marketing to which children are exposed, including digital marketing and the promotion of unhealthy foods within and outside schools, in public spaces and in places where children gather; other multisectoral interventions focused on regulation of food marketing including digital marketing on social media platforms; regulation of food quality and availability of healthy food choices within and outside school environments, including out-of-home food; and mandate physical activity opportunities in the learning programme, including public education campaigns on active lifestyle and physical education mandated in primary school.

**Fig. 7. Examples of services, by level of care, for children aged 5-9 years**



### vi. Adolescents 10-19 years old

Adolescents can be particularly hard to reach with health promotion programmes as their interaction with the health system progressively diminishes from the age of 10. For this age group, the role of schools as entry points to deliver essential health services and health education is critical. However, those who do not attend school frequently or are out of school remain unreachable. The interventions for schools designed for this age group must be reflected and expanded in community settings, as outlined above for younger children from 5-9 years old (Fig. 8).

#### Services proposed by level of care

**Self-management:** self-management, including a combination of appropriate diet, physical activity, sedentary behaviours, sleep, and behavioural strategies, should be supported by a family member; specifically, monitor weight for appropriate gain according to age, lead a healthy lifestyle regardless of weight status (i.e., healthy diet, physical activity, limiting sedentary behaviours, tobacco or alcohol consumption, following regular sleep schedule and emotional regulation); and, if there are any treatment plans in place apply adherence strategies, including through digital and/or peer support.

**Community:** calculation of BMI and BMI standard deviation score for age and gender at every adolescent visit; brief opportunistic interventions for primary prevention of overweight and obesity, regardless of current weight status, to support behaviours among adolescents and their families on healthy eating, physical activity, sedentary behaviours, sleep and emotional regulation; counselling for all adolescents and their families to limit screen use, consumption of SSBs and energy-dense foods, and encourage other healthy eating behaviours; use of supported digital platforms for nutrition, physical activity and weight management, with referral to community opportunities; and community, individual or group counselling to enhance self-concept and self-management (integrating mental health for adolescents), and peer support groups.

**Primary care:** All of the above; IMCI; interventions for prevention and early diagnosis; treatment of overweight and obesity; behavioural and psychological interventions; pharmacotherapy; referral to metabolic and bariatric surgery service if indicated; strengthening of relationships with primary care providers for mental health support and adolescent health, including sexual education and reproductive health; nutrition/dietetic and physical

therapy support for obesity without complications or comorbidities; assessment of severe/complex forms of obesity with complications/comorbidities; and onward referral to secondary/tertiary care and/or back referral to community services.

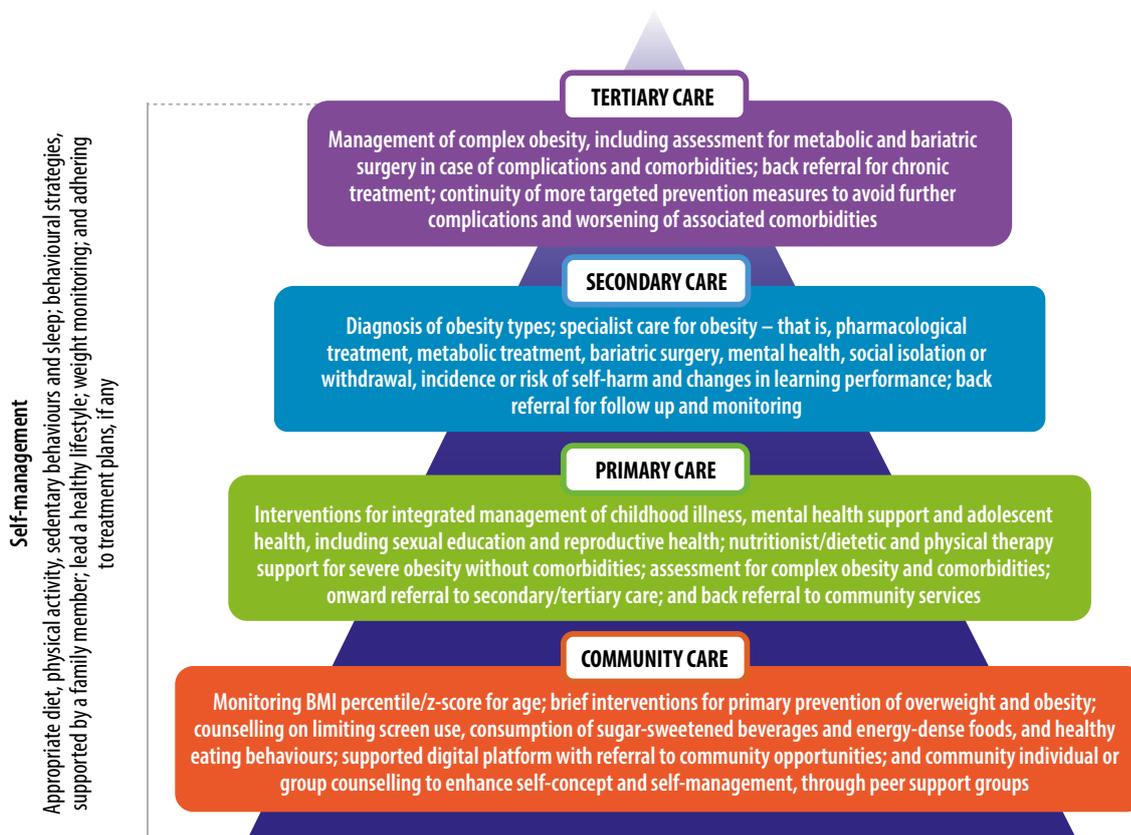
**Secondary care:** all of the above; differential diagnosis of obesity types such as those related to endocrine and genetic disorders; specialist care for obesity (i.e., pharmacological treatment and/or metabolic and bariatric surgery and other pharmacological interventions for comorbidities) with back referral to primary care for follow up and continuity of more targeted prevention measures to avoid further complications and onset of associated comorbidities; and specialist care for mental health disorders, social isolation or withdrawal, incidence or risk of self-harm and changes in learning performance with back referral for follow up and monitoring.

**Tertiary care:** management of severe/complex forms of obesity, including assessment for metabolic and bariatric

surgery, in case of complications and comorbidities; and back referral for chronic treatment and continuity of more targeted prevention measures to avoid further complications and worsening of associated comorbidities.

**Multisectoral:** regulation of food marketing to which adolescents are exposed including digital marketing and the promotion of unhealthy foods within and outside schools, in public spaces and places where adolescents gather; other multisectoral interventions focused on regulation of food marketing, including digital marketing on social media platforms; regulation of food quality and availability of healthy food choices within and outside school environments including out-of-home foods; mandate physical activity opportunities in the learning programme, including public education campaigns on active lifestyle and physical education mandated in lower and upper high school; and mandate national public education communication campaigns on physical activity every two years.

**Fig. 8. Examples of services, by level of care, for adolescents aged 10-19 years**





## v. Adults

Overweight and obesity in the adult population are mostly diagnosed because of the manifestation of complications or comorbidities. This signals that the health system platform is not prepared for early access to obesity prevention and management services throughout the life course. It also increases morbidity and mortality related to complications, as these are likely to be diagnosed only when already in the advanced stage.

At the primary care level, counselling and opportunistic screening to detect early deviations from normal (i.e., changes in BMI and waist circumference, blood glucose and lipid levels and blood pressure) is available in most settings. However, it is not used as a population-based intervention, but is mostly used at the individual level and often only when comorbidities appear. At secondary and intermediate care level, obesity diagnosis, treatment, rehabilitation and long-term management are sometimes available as part of care for acute and chronic comorbidities, yet are not offered broadly. At the tertiary care level, complex treatment of obesity and management of complications or comorbidities is available in some health system settings, but is not broadly accessible to the population in need. Therefore, a collective effort must be put in place to make obesity prevention and management services available, accessible and affordable in order to reduce the epidemiological burden of obesity in this age group, especially in vulnerable populations (Fig. 9).

### Services proposed by level of care

**Self-management:** self-management, which should be within the context of a family management and approach when possible; chronic patient education and self-management support programmes, which must consider the patients' specific educational needs, set learning targets and use adapted methods to deliver therapeutic patient education; a patient-centred, psychosocial and culturally sensitive approach, combined with multidisciplinary or interdisciplinary teamwork and a supportive environment, are key elements of such programmes; specifically, people living with obesity should be educated (using therapeutic patient education techniques) and encouraged to monitor their weight periodically, to lead a healthy lifestyle (i.e., appropriate diet, physical activity, limited sedentary behaviours, avoiding tobacco or alcohol, following a regular sleep

schedule and emotional regulation), regardless of weight status; and application of adherence strategies (including through digital and/or family and peer support) to treatment plans if any.

**Community:** brief opportunistic interventions for primary prevention of overweight and obesity to support behaviours that can impact weight such as diet, physical activity, sleep and emotional regulation; counselling to enhance self-concept and self-management; peer support groups; referral to opportunities for physical activity and access to healthy diet; support for adherence; and referral for diagnosis, screening of complications/comorbidities or other NCD risk factors, treatment and long-term management.

**Primary care:** all of the above; regular measurement of weight, BMI, waist circumference and body fatness; diagnosis and treatment of obesity, including pharmacological treatment in individuals who have been unable to lose weight through behavioural and/or psychological interventions and who have no contraindications; screening and monitoring of other NCD risk factors (e.g., blood glucose, lipids and blood pressure screening) and complications/comorbidities, including mental health disorders; onward referral; design of health settings to avoid stigmatizing people living with overweight or obesity, such as by providing private weighing areas, using scales that can measure weights greater than 150 kg or 300 pounds and adapted cuffs for blood pressure measurement; and use of digital health for nutrition and physical activity advice and weight management support, including opportunistic screening (family care).

**Secondary care:** all of the above; management of severe/complex forms of obesity including pharmacological treatment and metabolic and bariatric surgery for those with severe obesity unable to lose weight through behavioural and/or psychological interventions and who have no contraindications; management of complex complications/comorbidities (diabetes and other NCDs); inpatient obesity and/or diabetes care and rehabilitation services; and onward and/or back referral.

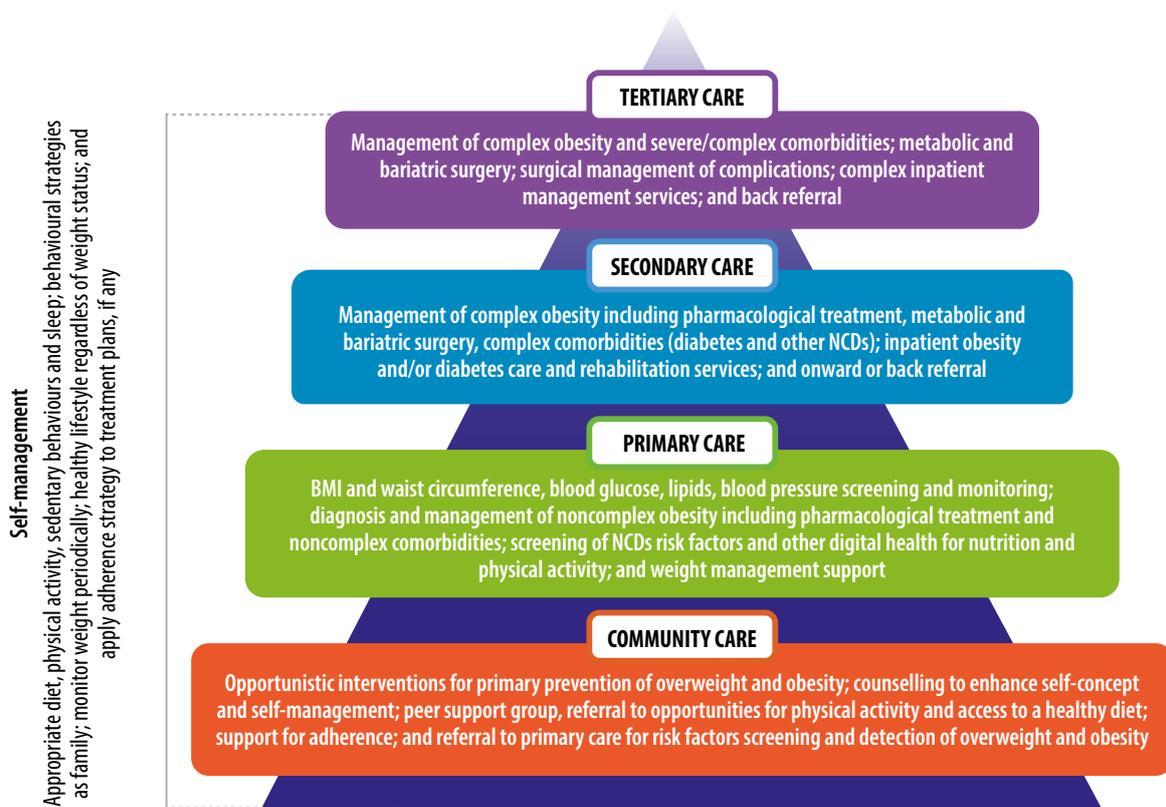
**Tertiary care:** all of the above; management of severe/complex forms of obesity and relevant complications/

comorbidities; metabolic and bariatric surgery and surgical management of complications; complex inpatient management services; and back referral.

**Multisectoral:** nutrition labelling policies, including front-of-pack labelling; food environment policies, including taxation of SSBs (including all SSBs, such as sodas, sweetened milk and fruit juice); mandatory limits on sugar content in processed foods; improvements

to out-of-home food environments including menu labelling and portion size control; regulation to ensure that foods offered in public places (government offices, health facilities etc.) are in line with national dietary guidelines to promote healthy diets; protection, support and promotion of breastfeeding, including through adherence to the *International Code of Marketing of Breast-milk Substitutes*.

**Fig. 9. Examples of services, by level of care, for adults**



**NOTE:** See Annex 1 for table summaries of the entry and integration points for obesity prevention and management interventions across the established continuum of care and using existing routine health programmes which are organized across the three phases of the life course: preconception and antenatal care services (Table A1.1), child and adolescent health services (Table A1.2) and adult and ageing population health services (Table A1.3).

### 3. Operational tools to support the health service delivery framework for prevention and management of obesity

The introduction, adaptation and operationalization of the *Health service delivery framework for prevention and management of obesity* will need to be supported by a detailed implementation plan and effective change management approach to ensure sustainability.

The framework will need to be integrated within national development and health sector plans and priorities, aligned with current health initiatives and spread across all levels of the health system, including communities and other settings such as schools and workplaces. It will be based on chronic disease management and prevention programmes, clinical service development and design, telemedicine and integrated information systems.

It will require strong leadership, stakeholder commitment and system and staff capacity, along with a clearly communicated implementation plan, especially in the context of COVID-19 or other emerging disease. Given the scale of change and service developments needed, prioritization of resources will also be required.

While the integration of obesity prevention and management is based on the established service delivery

platforms, it will require updating of current primary care service packages to purposively include obesity prevention and management interventions.

The training of first-contact providers will be essential to detect and take early action on overweight and obesity and to deliver effective services in primary care. In addition, the training of health care providers in secondary and tertiary care will need to be strengthened to ensure quality care for patients with severe or complex forms of obesity or related complications and comorbidities. Diagnostic tools, treatments and other supplies will also need to be available, and medical record and patient tracking will require harmonization.

Specific guidance will, therefore, be provided to support countries in the adaptation of the *Health service delivery framework for prevention and management of obesity* at both national and regional levels consistent with existing national health plans and systems. This will include guidance around integration with the roll-out of UHC in countries, where appropriate, and practical selection of actions (i.e., service package integration, linking of interventions to existing or new benefit packages) and re-tooling the equipment of facilities and health care providers.



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The principle operational tools currently available are:

- 1. The UHC compendium and related Service package delivery and implementation (SPDI) toolkit.** The *UHC compendium* resources will help ensure that services needed to comprehensively address the prevention, early detection and high-quality management of obesity across the life course will be highlighted for countries to include in packages of essential health services. The SPDI toolkit will help bridge the gap between UHC policy and implementation, and will support countries to deliver a national UHC package of services. Toolkit components will help ensure that the content and structure of packages effectively support integrated service delivery and align with local models of care. Specific tools will facilitate service organization and planning across delivery platforms, effective funding architecture and high-quality clinical care. The *UHC compendium* and associated Selection Interface will guide package development processes, support integrated service delivery by providing a structured approach to service selection and link resource inputs, cost and cost-effectiveness data to services.
- 2. The WHO Academy course: integrated management for primary, acute and chronic care training** will support first-contact providers to ensure prevention, early detection and high-quality management across the life course. In particular, the course will help providers in making accurate diagnosis, developing and implementing evidence-based treatment plans and coordinating care and long-term management. The course will include standardized protocols and guidance that facilitate integration across and within facilities, and between providers. The product will be designed to have real-time applications,

supporting providers during clinical encounters with clinical decision support tools and case-based tutorials. The course will include a module on supporting healthy lifestyles with sections on nutrition and physical activity, as well as a specific section on the management of overweight and obesity in adults and adolescents.

In 2022, the WHO European Office for the Prevention and Control of Noncommunicable Diseases (NCD Office), WHO Regional Office for Europe, developed a train-the-trainer course on childhood obesity management for primary care physicians, including an e-learning platform, on-site workshops and educational tools. An advanced training course on adult obesity management for primary care physicians will also be developed. It aims to support prevention, diagnosis, screening for complications and comorbidities, treatment and long-term management of obesity and its related medical conditions in primary care settings, including in remote areas.

- 3. WHO policy brief on Obesity prevention and management in children and adolescents: a primary health care-based approach**

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 PHC approach, specifically focusing on empowering families and children affected by or living with obesity. It calls on people with obesity and related communities, governments, international organizations and development partners, coalitions and professional associations to demand and take stronger and more affirmative actions to tackle the obesity epidemic.





## BOX 4: PHC Component: empowered people and communities

Placing people 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 people-centred model for coordinated action within and beyond the health sector. In this way, the health services provided can respond to the consumer's 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. While responding to the obesity epidemic is a responsibility of the whole of society, having meaningful involvement of people and families living with obesity is a fundamental principle of people-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 forefront in the obesity epidemic response.

People and community are active influencers and decision-makers in the response to the obesity epidemic through three related functions:

- 1. As 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 they match the needs, values and preferences of the community, as well as the social and culturally specific context. These are elements that, in turn, will increase demand, access, effectiveness and responsiveness, as well as patient satisfaction. People and families living with obesity can be actively involved in their own health and welfare and take an active role in decisions about prevention, treatment, self-management and adherence. They can also play a leadership role in obesity support groups or networks, seek external resources, encourage participation of new members or simply participate by sharing their experiences with others, and participate as spokespersons in campaigns or as speakers at public events and in other arenas.
- 2. As self-carers and caregivers** – people and families living with obesity may be facing higher expenditures, weight bias and stigma, social isolation and loneliness, disabilities, fatigue, pain and discomfort, feelings of distress, anger, hopelessness, frustration, anxiety and depression. Therefore, their involvement as self-carers and home-based community health care workers is critical. For this to happen, individuals and communities with and affected by obesity must have access to the knowledge, skills and resources (both financial and technical) required to meet their specific needs and sociocultural circumstances, as well as to help them to make evidence-informed decisions. This capability is highly shaped by obesity determinants and multisectoral policies and actions.
- 3. As advocates** – people and communities, including individuals with 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 law, regulation and policy reforms, and ensure that the principles of human rights and equity are embedded in the response. They are also 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 allocation.

# Glossary

**Care pathway (or clinical pathway):** a structured multidisciplinary management plan (in addition to clinical guideline) that maps the route of care through the health system for individuals with specific clinical problems.

**Case management:** a targeted, community-based and proactive approach to care that involves case-finding, assessment, care planning and care coordination to integrate services around the needs of people with a high level of risk requiring complex care (often from multiple providers or locations), people who are vulnerable or people who have complex social and health needs. The case manager coordinates patient care throughout the entire continuum of care.

**Catchment area:** a geographical area defined and served by a health programme, facility or institution, which is delineated based on population distribution, national geographical boundaries and transportation accessibility.

**Clinical integration:** the coordination of patient care across the system's different functions, activities and operating units. The degree of coordination of care depends primarily on the patient's condition and the decisions made by his or her health team. Clinical integration includes horizontal and vertical integration.

**Continuum of care:** the spectrum of personal and population health care needed throughout all stages of a condition, injury or event throughout a lifetime, including health promotion, disease prevention, diagnosis, treatment, rehabilitation and palliative care.

**Health benefits package:** the type and scope of health services that a purchaser buys from providers on behalf of its beneficiaries.

**Model of care:** a conceptualization of how services should be delivered, including the processes of care, organization of providers and management of services. The model of care evolves to meet the health aims and priorities of the population and to improve the performance of the health system.

**Multidisciplinary team:** various health care professionals working together to provide a broad range of services in a coordinated approach. The composition of multidisciplinary teams in primary care will vary by setting but may include generalist medical practitioners (including family doctors and general practitioners), physicians assistants, nurses, specialist nurses, community health workers, pharmacists, social workers, dieticians, mental health counsellors, physiotherapists, patient educators, managers, support staff and other primary care specialists.

**Multisectoral action on health:** policy design, policy implementation and other actions related to health and other sectors (for example, social protection, housing, education, agriculture, finance and industry) carried out collaboratively or alone, which address social, economic and environmental determinants of health and associated commercial factors or which improve health and well-being.

**People-centred care:** an approach to care that consciously adopts the perspectives of individuals, carers, families and communities as participants in, and beneficiaries of, trusted health systems that respond to their needs and preferences in humane and holistic ways. People-centred care also requires that people have the education and support they need to make decisions and participate in their own care.

**Population-based approach:** an approach to health services that uses information about the population to make decisions about health planning, management and geographical location. Such an approach seeks to improve the effectiveness and equity of interventions, and to achieve improved health and distribution of health in the population. This is achieved in the context of the culture, health status and health needs of the geographical, demographic or cultural groups represented by a population.

**Primary care:** a key process in the health system that supports first-contact, accessible, continued, comprehensive and coordinated patient-focused care.

**Primary health care:** a whole-of-society approach to health that aims to maximize the level and distribution of health and well-being through three components: (a) primary care and essential public health functions as the core of integrated health services; (b) multisectoral policy and action; and (c) empowered people and communities.

**Service delivery platforms:** modes or channels of health service delivery. Examples include public and private health facilities (for example, health posts, clinics, health centres, mobile clinics, emergency care units, district hospitals and pharmacies), other entities (for example, home-based care, schools, community centres and long-term care facilities) and outreach services, campaigns or digital platforms. These can be classified in a variety of ways. Examples include: family-oriented community-based services; population-oriented schedulable services; and individual oriented clinical services at different levels (primary level, first referral level and second referral level).

**Settings/sites of care:** the varied types of arrangements for service delivery, organized further into different facilities, institutions and organizations that provide care. Settings include ambulatory, community, home, in-patient and residential services. Facilities refer to infrastructure, such as clinics, health centres, district hospitals, dispensaries or other entities, such as mobile clinics and pharmacies.



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# ANNEX:

## Table summaries of entry and integration points for obesity prevention and management

The following three tables summarize the entry and integration points for obesity prevention and management interventions across the established continuum of care and using existing routine health programmes which are

organized across the three phases of the life course: pre-conception and antenatal care services (Table A1.1), child and adolescent health services (Table A1.2) and adult and ageing population health services (Table A1.3).

**Table A1.1. Preconception and antenatal care services**

	Preconception (catchment population includes women of reproductive age and their families)	Antenatal care (catchment population includes pregnant and lactating women and their families)
Continuum of Care	Interventions	Interventions
Disease prevention	<ul style="list-style-type: none"> <li>• Diet</li> <li>• Physical activity, sedentary behaviours and sleep assessment</li> <li>• Mental health assessment</li> <li>• Counselling</li> </ul>	<ul style="list-style-type: none"> <li>• Specific diet</li> <li>• Breastfeeding</li> <li>• Physical activity, sedentary behaviours and sleep assessment</li> <li>• Mental health assessment</li> <li>• Counselling</li> <li>• Gestational weight gain recommendations and monitoring</li> </ul>
Screening	<ul style="list-style-type: none"> <li>• Diagnosis of overweight/obesity</li> <li>• Screening for related complications/comorbidities and risk factors for other NCDs</li> <li>• Opportunistic screening for overweight/obesity, NCDs risk factors and obesity-related complications plus comorbidities in family members</li> </ul>	<ul style="list-style-type: none"> <li>• Diagnosis of overweight/obesity (preconception history or medical record)</li> <li>• Screening for related complications/comorbidities in pregnant women (e.g., gestational diabetes, gestational hypertension, preeclampsia, depression, eating disorders or disordered eating) and in off-spring (e.g., congenital defects, large-for-gestational age, macrosomia, shoulder dystocia)</li> <li>• Opportunistic screening for overweight/obesity, NCD risk factors and obesity-related complications/comorbidities in family members</li> </ul>
Management	<ul style="list-style-type: none"> <li>• Treatment: behavioural or psychological interventions, pharmacotherapy, metabolic and bariatric surgery</li> <li>• Integrated management of complications/comorbidities</li> <li>• Rehabilitation</li> <li>• Long-term management of obesity</li> </ul>	<ul style="list-style-type: none"> <li>• Interventions to support healthy behaviour changes during pregnancy to control gestational weight gain and complications/comorbidities (e.g., brief interventions, motivational interviewing, nutrition and cooking classes, adapted exercise training)</li> </ul>

NCD: noncommunicable disease

**Table A1.2. Child and adolescent health services**

	Child health (<5 years old) with link to periodic visits and IMCI <sup>a</sup> (catchment population includes children, parents, caregivers and their families)	Child health (5-9 years old) with link to school and community programmes (catchment population includes children, parents, caregivers and their families)	Adolescent health (10-19 years old) with link to school, workplace and community programmes (catchment population includes adolescents > 10 years old, parents, caregivers and their families)
Continuum of Care	Intervention	Intervention	Intervention
Disease prevention	<ul style="list-style-type: none"> <li>• Growth and development monitoring across post-natal care</li> <li>• Immunization</li> <li>• Support for breastfeeding and for food preparation</li> <li>• Prevention of malnutrition</li> <li>• Diet, physical activity, sedentary behaviours, sleep assessment</li> <li>• Mental health assessment</li> <li>• Adequate nutrition including food preparation</li> </ul>	<ul style="list-style-type: none"> <li>• Growth and development monitoring</li> <li>• Immunization</li> <li>• Prevention of malnutrition and prompt management of childhood illnesses that are closely linked with nutrition</li> <li>• Diet, physical activity, sedentary behaviours, sleep assessment</li> <li>• Mental health assessment, counselling and interventions</li> </ul>	<ul style="list-style-type: none"> <li>• Growth and development monitoring</li> <li>• Diet, physical activity, sedentary behaviours, sleep assessment</li> <li>• Mental health assessment, counselling and interventions</li> </ul>
Screening	<ul style="list-style-type: none"> <li>• Diagnosis of overweight/obesity</li> <li>• Screening for other NCD risk factors and obesity-related complications/comorbidities</li> <li>• Screening for disordered eating</li> </ul>	<ul style="list-style-type: none"> <li>• Diagnosis of overweight/obesity</li> <li>• Screening for other NCD risk factors and obesity-related complications/comorbidities (including psychological assessment for any adverse childhood events or early psycho-social distress, such as bullying, teasing or parental separation)</li> </ul>	<ul style="list-style-type: none"> <li>• Diagnosis of overweight/obesity</li> <li>• Screening for other NCD risk factors and obesity-related complications/comorbidities (including psychological assessment for any adverse childhood events or early psycho-social distress, such as bullying, teasing or parental separation)</li> </ul>
Management	<ul style="list-style-type: none"> <li>• Treatment including behavioural or psychological interventions mainly with parents and caregivers</li> <li>• Integrated management of complications/comorbidities</li> <li>• Long-term management of obesity</li> </ul>	<ul style="list-style-type: none"> <li>• Treatment including behavioural or psychological interventions with the involvement of parents and caregivers</li> <li>• Pharmacotherapy when available for this age range</li> <li>• Integrated management of complications/comorbidities</li> <li>• Rehabilitation</li> <li>• Long-term management of obesity</li> </ul>	<ul style="list-style-type: none"> <li>• Treatment including self-management, behavioural or psychological interventions with progressively limited involvement of parents and caregivers</li> <li>• Pharmacotherapy or metabolic and bariatric surgery, if indicated</li> <li>• Integrated management of complications/comorbidities</li> <li>• Rehabilitation</li> <li>• Long-term management of obesity</li> </ul>

ICMI: Integrated Management of Childhood Illness; NCD: noncommunicable disease.

<sup>a</sup> In children under 5 years, the WHO/UNICEF guidelines for IMCI offer simple and effective methods to prevent and manage the leading causes of serious illness and mortality in young children. The guidelines include: methods for checking a child's immunization and nutrition status; teaching parents how to give treatments at home; assessing a child's feeding and counselling to solve feeding problems; and advising parents about when to return to a health facility. Periodic visits could be a good entry point for obesity prevention and management in young children. See *Integrated management of childhood illness: a WHO/UNICEF initiative*. Geneva : World Health Organization; 1997 (<https://apps.who.int/iris/handle/10665/42045>, accessed 2 May 2023).

**Table A1.3. Adult and ageing population health services**

	<b>Adult Health (catchment population includes adults, families, caregivers)</b>	<b>Ageing population (catchment population includes ageing individuals and their families)</b>
<b>Continuum of Care</b>	Intervention	Intervention
<b>Disease prevention</b>	<ul style="list-style-type: none"> <li>• Diet, physical activity, sedentary behaviours, sleep assessment</li> <li>• Mental health assessment and counselling</li> </ul>	<ul style="list-style-type: none"> <li>• Diet, physical activity, sedentary behaviours, sleep assessment</li> <li>• Mental health assessment and counselling according to age</li> </ul>
<b>Screening</b>	<ul style="list-style-type: none"> <li>• Diagnosis of overweight/obesity</li> <li>• Screening for related complications/ comorbidities (including mental health disorders, disordered eating or eating disorders) and risk factors for other NCDs</li> <li>• Opportunistic screening for overweight/ obesity, NCD risk factors and obesity-related complications/ comorbidities in family members or caregivers</li> </ul>	<ul style="list-style-type: none"> <li>• Diagnosis of overweight/obesity</li> <li>• Screening for related complications/ comorbidities (including mental health disorders, malnutrition, disordered eating or eating disorders) and risk factors for other NCDs</li> <li>• Opportunistic screening for overweight/ obesity, NCD risk factors and obesity-related complications/ comorbidities in family members or caregivers</li> </ul>
<b>Management</b>	<ul style="list-style-type: none"> <li>• Treatment including self-management, behavioural or psychological interventions</li> <li>• Pharmacotherapy</li> <li>• Metabolic and bariatric surgery if indicated</li> <li>• Integrated management of complications/ comorbidities</li> <li>• Rehabilitation</li> <li>• Long-term management of obesity</li> </ul>	<ul style="list-style-type: none"> <li>• Treatment including self-management, behavioural or psychological interventions</li> <li>• Pharmacotherapy, if indicated</li> <li>• Integrated management of complications/ comorbidities</li> <li>• Rehabilitation</li> <li>• Long-term management of obesity</li> </ul>

NCD: noncommunicable disease





**For further information, please contact:**

Department of Nutrition and Food Safety

<https://www.who.int/teams/nutrition-and-food-safety/overview>

Email: [nfs@who.int](mailto:nfs@who.int)

**World Health Organization**

Avenue Appia 20, CH-1211 Geneva 27, Switzerland

