Module 2.6

Addressing **overweight and obesity** in **primary health care**
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INTRODUCTION

Overweight and obesity, as well as their related noncommunicable diseases (NCDs), are largely preventable. Supportive environment and communities are fundamental in shaping people’s choices, by making healthier foods and regular physical activity the easiest choice (the choice that is the most accessible, available and affordable), and therefore preventing overweight and obesity. Primary health care workers can play an effective role in providing personalized, clear and practical advice about healthy diet and physical activity. This module covers practical training on providing brief interventions among obese and overweight individuals at the primary health care level using the 5A’s and 5R’s.

LEARNING OUTCOMES

At the end of the session, participants will be able to do the following:

- Describe the environmental and lifestyle drivers of overweight and obesity.
- Classify overweight and obesity in adults and children.
- Provide guidance to individuals to prevent or manage overweight and obesity.

TOPICS COVERED

- Environmental and lifestyle drivers for overweight and obesity.
- Definitions of overweight and obesity in adults and children.
- Prevention of overweight and obesity in adults and children.

COMPETENCY

Deliver brief interventions using the 5A’s and 5R’s to manage overweight and obesity in adults and children.
TEACHING AND LEARNING ACTIVITIES

Total session time: 60 minutes

Activity 1. Environmental and lifestyle drivers of overweight and obesity: 10 minutes

Ask participants the following questions and write the responses on the flipchart or whiteboard.

- What factors are responsible for the rise in overweight and obesity in the population?
- What are the problems related to overweight and obesity?
- What can be done to combat overweight and obesity in the population?

Activity 2. Prevention of obesity: 20 minutes

Step 1. Divide the participants into convenient groups.

Step 2. Ask a few groups to argue for and others against the following statement:

“Preventing obesity is a personal responsibility.”

Step 3. Note the key points for and against the statement on the flipchart whiteboard.

Step 4. Summarize the key points with key messages.

Possible summary message

Obesity is the end result of the intricate interactions of biology, behaviour and environment. Recent hypotheses by the scientific community suggest that the current obesity epidemic is being driven largely by environmental factors (e.g. high-energy/high-fat foods, fast food consumption, watching television (sedentary lifestyle), eating “super-sized” portions, etc.) rather than biological ones. Individuals are bombarded with images and offers of high-fat, high-calorie, highly palatable, convenient and inexpensive foods.

Furthermore, the physical demands of our society have changed, resulting in an imbalance between energy intake and expenditure. Today’s stressful lifestyles compound the effects of environmental factors by impairing weight loss efforts and promoting fat storage. Combating the obesity epidemic demands environmental and social policy changes, particularly in the areas of portion size, reduced accessibility to low-cost foods that are high in fat, salt and sugar, and availability of healthy foods, and promotion of physical activity.
Step 5. Present the powerpoint slides with the following contents:

- burden and definition of overweight and obesity
- causes of overweight/obesity and challenges in management at the individual level
- role of the primary health care worker in managing overweight and obesity.

**Activity 3. 5A’s brief intervention for overweight and obesity:**

20 minutes

Step 1. Divide the participants into convenient groups.

Step 2. Ask participants to calculate the body mass index (BMI).

Step 3. Ask participants to go through the brief interventions algorithm and discuss if there are ambiguities.

<table>
<thead>
<tr>
<th>5A’s</th>
<th>Overweight and obesity</th>
</tr>
</thead>
</table>
| **ASK** | Ask the patient’s permission to speak about overweight and obesity, and reduce the stigma and barrier to talk about obesity.  
(Don’t assume that just because we think weight is an issue that they think weight is an issue. This is important because body weight is a sensitive topic for most owing to embarrassment, fear, blame and stigma, and weight bias exists among physicians, dietitians, nurses and psychologists.)  
Research suggests that patients prefer the term weight.1  
❖ “Would it be alright if we discussed your weight?”  
❖ Are you concerned about the effect your weight may have on your health or your quality of life? |
| **ASSESS** | Assess the health status, BMI, waist circumference, hip circumference, waist–hip ratio.  
Assess the key drivers (root causes) of obesity in the patient (socioeconomic, cultural, mood, depression, anxiety, body image, medication).  
Stage the BMI category.  
Assess readiness-to-change behaviours and barriers to weight loss. |
| **ADVISE** | Advise on the risks of obesity.  
Explain the benefits of modest weight loss and the need for long-term strategies.  
“Now that we have a better understanding of your situation, can I recommend a plan of action to improve things?”  
Discuss lifestyle and treatment options.  
Advise on their individual risk and lifestyle modification and risk factor reduction. |
**Addressing overweight and obesity in primary health care**

**5A’s**

<table>
<thead>
<tr>
<th>AGREE</th>
<th>Overweight and obesity†</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agree on:</td>
<td></td>
</tr>
<tr>
<td>¤ the lifestyle modification programme for weight loss and reduction of risk factors;</td>
<td></td>
</tr>
<tr>
<td>¤ the outcomes of treatment.</td>
<td></td>
</tr>
<tr>
<td>It is better to focus on real health benefits or the quality of life of patients rather than weight loss goals.</td>
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<tr>
<td>Patients may have unrealistic weight loss expectations and are discouraged when these unrealistic goals cannot be achieved. Suggest patients attempt to achieve a “best” weight that is achievable and sustainable while still enjoying life.²</td>
<td></td>
</tr>
<tr>
<td>Setting goals surrounding weight management behaviour – and not the weight itself – might help patients achieve a meaningful weight loss as, ultimately, it will be behaviour changes that will get them there.</td>
<td></td>
</tr>
<tr>
<td>ASSIST</td>
<td>Refer to other services that may be needed and available.</td>
</tr>
<tr>
<td></td>
<td>Assist in arranging follow-up visits.</td>
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<tr>
<td></td>
<td>Address facilitators (e.g. motivation, support) and barriers (e.g. social, medical, emotional and economic barriers) that can make weight management challenging.</td>
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### Activity 4. Prevention of childhood obesity: 10 minutes

**Step 1.** Ask participants to discuss the below questions regarding the prevention of childhood obesity. Write the responses on the flipchart or whiteboard:

- What are the causes of childhood obesity?
- What activities can be conducted to prevent childhood obesity in primary health care settings?

**Possible key message**

Today, obesity causes a broad range of health problems among children that were not previously seen until adulthood. These include high blood pressure, type 2 diabetes and elevated blood cholesterol levels. There are also psychological effects: obese children are more prone to low self-esteem, negative body image and depression. And excess weight at a young age has been linked to higher and earlier death rates in adulthood.

Obese children are more likely to be obese adults. Successfully preventing or treating overweight in childhood may help to reduce the risk of heart disease, adult obesity and other complications.

Physical inactivity is a major risk factor for developing heart disease, stroke, high blood pressure, overweight/obesity and diabetes. **Inactive children are likely to become inactive adults.**
BACKGROUND INFORMATION

Key facts

- Worldwide, obesity has more than doubled since 1980.
- In 2014, more than 1.9 billion adults 18 years and older were overweight. Of these, over 600 million were obese.
- 39% of adults aged 18 years and older were overweight in 2014, and 13% were obese.
- Most of the world’s population lives in countries where overweight and obesity kill more people than underweight.
- An estimated 41 million children under the age of 5 years were overweight in 2016.
- Obesity is preventable.

What are overweight and obesity?

Overweight and obesity are defined as abnormal or excessive fat accumulation that may impair health. Body mass index (BMI) is a simple index of weight-for-height that is commonly used to classify overweight and obesity in adults. It is defined as a person’s weight in kilograms divided by the square of the height in metres (kg/m²). BMI provides the most useful population-level measure of overweight and obesity as it is the same for both sexes and for all ages of adults. However, it should be considered a rough guide because it may not correspond to the same degree of fatness in different individuals.

Although overweight and obesity represent different degrees of health risks, no distinction is made between them. For practical purposes, obesity is defined in terms of a BMI, which is not a direct measure of fatness but a measure of proportional weight. It is calculated for an individual by applying the formula:

\[
\text{BMI} = \frac{\text{weight (kg)}}{\text{height (m)}^2}
\]

Adults

For adults, WHO defines overweight and obesity as follows:

- overweight is a BMI greater than or equal to 25;
- obesity is a BMI greater than or equal to 30.

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BMI International Classification:

<table>
<thead>
<tr>
<th>Classification</th>
<th>BMI Range</th>
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<tbody>
<tr>
<td>Underweight</td>
<td>&lt;18.5 kg/m²</td>
</tr>
<tr>
<td>Normal</td>
<td>18.5–24.9 kg/m²</td>
</tr>
<tr>
<td>Overweight/pre-obese</td>
<td>25.0–29.9 kg/m²</td>
</tr>
<tr>
<td>Obese</td>
<td>≥30.0 kg/m²</td>
</tr>
</tbody>
</table>

For most people, BMI is an indicator of the amount of body fat. It is used as a screening tool to identify whether an adult has a healthy weight.

Children

For children, age needs to be considered when defining overweight and obesity. For children and teenagers, BMI is evaluated using age- and gender-specific charts that take into account the different growth patterns for gender. Weight and the amount of fat in the body differ for boys and girls and those levels change as they grow taller and older. A separate BMI percentile calculator can be used for children and teenagers, which takes a child’s age and gender into consideration.

Children under 5 years of age

For children under 5 years of age:

- overweight is weight-for-height greater than 2 standard deviations above the WHO Child Growth Standards median; and
- obesity is weight-for-height greater than 3 standard deviations above the WHO Child Growth Standards median.

Children aged between 5 and 19 years

Overweight and obesity are defined as follows for children aged between 5 and 19 years:

- overweight is BMI-for-age greater than 1 standard deviation above the WHO Growth Reference median; and
- obesity is greater than 2 standard deviations above the WHO Growth Reference median.
Addressing overweight and obesity in primary health care

http://www.who.int/growthref/cht_bmifa_girls_z_5_19years.pdf?ua=1

http://www.who.int/growthref/cht_bmifa_boys_z_5_19years.pdf?ua=1
What causes obesity and overweight?

The fundamental cause of obesity and overweight is an energy imbalance between calories consumed and calories expended. Globally, there has been:

- an increased intake of energy-dense foods that are high in fat, starch and sugar; and
- an increase in physical inactivity due to the increasingly sedentary nature of many forms of work, changing modes of transportation and increasing urbanization.

Changes in dietary and physical activity patterns are often the result of environmental and societal changes associated with development and lack of supportive policies in sectors such as health, agriculture, transport, urban planning, environment, food processing, distribution, marketing and education.

What are the common health consequences of overweight and obesity?

Raised BMI is a major risk factor for noncommunicable diseases such as:

- cardiovascular diseases (CVDs, mainly heart disease and stroke)
- diabetes
- musculoskeletal disorders (especially osteoarthritis – a highly disabling degenerative disease of the joints)
- some cancers (including endometrial, breast, ovarian, prostate, liver, gallbladder, kidney and colon).

The risk for these NCDs increases with increases in BMI.

Childhood obesity is associated with a higher chance of obesity, premature death and disability in adulthood. But in addition to increased future risks, obese children experience breathing difficulties, increased risk of fractures, hypertension, early markers of CVD, insulin resistance and psychological effects.

Obesity

Abdominal obesity is associated with increased risk of CVDs and diabetes. Abdominal obesity, commonly known as belly fat or clinically as central obesity, is the accumulation of abdominal fat or visceral fat resulting in an increase in waist size. There is a strong correlation between central obesity and CVD.

Visceral fat, also known as organ fat or intra-abdominal fat, is located inside the peritoneal cavity, packed in between the internal organs and torso, as opposed to subcutaneous fat which is found underneath the skin, and intramuscular fat, which is found interspersed in the skeletal muscle.
Visceral fat is composed of several adipose depots, including mesenteric, epididymal white adipose tissue (EWAT) and perirenal fat. An excess of visceral fat is known as central obesity, the “pot belly” or “beer belly” effect, in which the abdomen protrudes excessively. This body type is also known as “apple shaped”, as opposed to “pear shaped”, in which fat is deposited on the hips and buttocks.

**Facing a double burden of disease**

Many low- and middle-income countries are now facing a “double burden” of disease.

- While these countries continue to deal with the problems of infectious diseases and undernutrition, they are also experiencing a rapid upsurge in NCD risk factors such as obesity and overweight, particularly in urban settings.
- It is not uncommon to find undernutrition and obesity coexisting within the same country, the same community and the same household.

Children in low- and middle-income countries are more vulnerable to inadequate prenatal, infant and young child nutrition. At the same time, these children are exposed to high-fat, high-sugar, high-salt, energy-dense and micronutrient-poor foods, which tend to be lower in cost but are also lower in nutrient quality. These dietary patterns, in conjunction with lower levels of physical activity, result in sharp increases in childhood obesity while undernutrition issues remain unsolved.

**How can overweight and obesity be reduced?**

Overweight and obesity, as well as their related NCDs, are largely preventable. Supportive environments and communities are fundamental in shaping people’s choices, by making the choice of healthier foods and regular physical activity the easiest choice (the choice that is the most accessible, available and affordable), and therefore preventing overweight and obesity.

At the individual level, people can:

- limit energy intake from total fats, starches and sugars;
- increase consumption of fruit and vegetables, as well as legumes, whole grains and nuts;
- engage in regular physical activity (60 minutes a day for children and 150 minutes spread through the week for adults).

Individual responsibility can have its full effect only where people have access to a healthy lifestyle. Therefore, at the societal level, it is important to support individuals in following the recommendations above, through sustained implementation of evidence-based and population-based policies that make regular physical activity and healthier dietary choices available, affordable and easily accessible to everyone, particularly to the poorest individuals. An example of such a policy is a tax on sugar-sweetened beverages.

**Population-based approach to overweight and obesity reduction**

- ensuring the availability of healthy food choices and supporting regular physical activity practices in the workplace.
The food industry can play a significant role in promoting healthy diets by:
- reducing the fat, sugar and salt content of processed foods;
- ensuring that healthy and nutritious choices are available and affordable to all consumers;
- restricting marketing of foods high in sugars, salt and fats, especially those foods aimed at children and teenagers.

### Steps to measure waist circumference (WC)

<table>
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<th>Tool</th>
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<tr>
<td>Non-stretchable flexible measuring tape</td>
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**Important point to keep in mind**
- WC should be taken in a standing posture.

**Process steps**
- Remove any layers of clothing over the waist. If the individual is unwilling to remove clothing, the measurement can be taken over the thinnest layer of clothing.
- The individual stands straight looking in front with the abdomen (stomach) relaxed, arms at the side and feet fairly close together (about 12–15 cm) with their weight equally distributed across both feet.
- You will stand in front, facing the subject. Find the midpoint between the lowest rib/bony point in front and top of the hip bone in the back. Waist circumference can also be measured across the umbilical line (at the navel).
- The person should be asked to breathe normally. At the time of reading the measurement they should be asked to breathe out gently.
- Place the tape firmly in a horizontal position making sure the measuring tape is parallel to the floor and not folded or twisted.
- Record the reading at the end of normal expiration/breathing.
- The tape should be loose enough to allow one finger to be placed between the tape and the person’s body but the tape should fit firmly but comfortably around the waist. The tape should not squeeze the skin.
- Look at the place on the tape where the zero end meets the other end of the tape measure. The location of this meeting point is the waist measurement.
- Record the measurement in cm to the nearest 0.0 or 0.5 cm in the individual’s card or your register. Example: if the exact measurement is 85.7 cm, it should be recorded as 85.5 cm and if it is 85.9 cm, then the reading should be recorded as 86 cm.

**Physical activity helps with the following:**
- controlling weight,
- reducing blood pressure,
- raising HDL ("good") cholesterol,
• reducing the risk of diabetes and some kinds of cancer,
• improving psychological well-being, including gaining more self-confidence and higher self-esteem.

_How to promote physical activity in children_

• Physical activity should be increased by reducing sedentary time (e.g. watching television, playing computer video games or talking on the phone).
• Physical activity should be fun for children and adolescents.
• Parents should try to be role models for active lifestyles and provide children with opportunities for increased physical activity.

_Healthy diet for children_

Breastfeeding is the ideal nutrition and sufficient to support optimal growth and development for the first 6 months after birth. Thereafter, babies should be given nutritious complementary foods and breastfeeding should be continued up to the age of 2 years or beyond.

• Energy (calories) should be adequate to support growth and development and to reach or maintain the desirable body weight.
• Eat foods low in saturated fat, transfat, cholesterol, salt (sodium) and added sugars.
• Choose a variety of foods to get enough carbohydrates, protein and other nutrients.
• Eat only enough calories to maintain a healthy weight for your height and build. Kids should be physically active for at least 60 minutes a day.
• Serve whole-grain/high-fibre breads and cereals rather than refined grain products. Look for “whole grain” as the first ingredient on the food label and make at least half your grain servings whole grain.
• Serve a variety of fruits and vegetables daily, while limiting juice intake.
• Serve fat-free and low-fat dairy foods.
• Don’t overfeed. Estimated calories needed by children range from 900/day for a 1-year-old to 1800 for a 14–18-year-old girl and 2200 for a 14–18-year-old boy.

_Additional reading resources_

Addressing overweight and obesity in primary health care

Activity 2: Step 5

Shapes of things to come?
Addressing overweight and obesity in primary health care

Where are we going wrong?
- High carbohydrates & high glycemic diet
- Unhealthy snacking & late dinners
- Sugar sweetened products
- Super sized portions
- High meat content
- Heavy marketing, easy availability and cheap junk food
- Poor quality fats
- Bally and the brain
- Easy access to poor quality junk food
- Hospitality

Causes of overweight/obesity
- Overeating
- Lack of physical activity
- Genetic
- Abnormalities of hypothalamus and endocrine function (pathological obesity).

Health consequences of overweight/obesity
- Raises level of low density lipoprotein (LDL)
- Elevates blood pressure
- Increases risk for cardiovascular diseases, cancers, diabetes.
Many risk factors coexist in the same individual

Assessment of obesity: BMI

- BMI International Classification: (for adults)
  - Underweight: <18.5 Kg/m²
  - Normal: 18.5–24.9 Kg/m²
  - Overweight/pre-obese: 25.0–29.9 Kg/m²
  - Obese: > 30.0 Kg/m²
- For children
  - Obese: Body mass index (BMI) > 2 standard deviations above the WHO growth standard median
  - Overweight: BMI > 1 standard deviation above the WHO growth standard median
  - Underweight: BMI < 2 standard deviations below the WHO growth standard median.

Primary health care worker role

- Assess weight and height for their patients, and calculate BMI
- Educate and reassure patients of recommended BMI level
- Alert about eating disorders and abnormal BMI values
- Educate on health risks of overweight and inter relationship with other health risks (Eg, smoking and eating habits).