



Food and Agriculture  
Organization of the  
United Nations



## Milan Urban Food Policy Pact Monitoring Framework

July 2018 version

**Indicator 13:** Prevalence of overweight or obesity among adults, youth and children

MUFPP framework of actions' category: Sustainable diets and nutrition

*This indicator measures prevalence of overweight or obesity among adults, youth and children.*

### Overview table

MUFPP Work stream	Sustainable Diets and Nutrition
<b>MUFPP action</b>	<b>Address non-communicable diseases associated with poor diets and obesity,</b> giving specific attention where appropriate to reducing intake of sugar, salt, trans fats, meat and dairy products and increasing consumption of fruits and vegetables and non-processed foods.
<b>What the indicator measures</b>	Prevalence of overweight or obesity among adults, youth and children
<b>Which variables need to be measured / what data are needed</b>	Body weight and height measurements; age and gender
<b>Unit of measurement</b> (i.e. Percentages, averages, number of people, etc.)	Percentage of populations that are overweight or obese
<b>Unit(s) of Analysis</b> (i.e. people under 5 years old, etc.)	-Need for disaggregation by age: Birth to <5 years of age; age 5-18; >18 years of age -Need for disaggregation by gender
<b>Possible sources of information of such data</b>	Primary collection of individual measurements in school setting for children and youth and from primary healthcare professionals for adults. Municipal public health system records; Public school records.
<b>Possible methods/tools for data-collection</b>	Previous or ongoing records and surveys by the health department  Direct measurement
<b>Expertise required</b>	Height and weight measurement
<b>Resources required/ estimated costs</b>	

<b>Specific observations</b>	Note: This indicators covers in fact 3 indicators: overweight in children under 5 years of age (which is SDG indicator 2.2.2); obesity in school-aged children (ages 5-19), and adult obesity. Sources and standards are different for each.
<b>Examples of application</b>	In 2014, the Toronto Public Health department conducted The Student Survey that collected health information, including the direct measurement of students' height and weight. Public Health Nurses and assistants visited 466 classrooms at 165 schools during a 7-week period. The survey sample included 6,053 grade 7 to 12 students. The sample was designed to represent Toronto's diverse public school students, and took into account grade, school board, an average measure of students' socio-economic status within each school, and each school's location within Toronto. The results found that almost one in three students were overweight or obese, putting them at higher risk for heart disease, diabetes and some cancers later in life <sup>1</sup> .

### Rationale/evidence

Obesity is a complex health issue to address. Obesity results from a combination of causes and contributing factors, including individual factors such as behaviour and genetics. Behaviours can include dietary patterns, physical activity, inactivity, medication use, and other exposures. Additional contributing factors in our society include the food and physical activity environment, education and skills, and food marketing and promotion. Obesity is associated with poorer mental health outcomes, reduced quality of life, diabetes, heart disease, stroke, and some types of cancer<sup>2</sup>.

Childhood obesity is reaching alarming proportions in many countries and poses an urgent and serious challenge. The Sustainable Development Goals, set by the United Nations in 2015, identify prevention and control of non-communicable diseases as core priorities, and child overweight is one component of SDG indicator 2.2.2. Among the non-communicable disease risk factors, obesity is particularly concerning and has the potential to negate many of the health benefits that have contributed to increased life expectancy. The prevalence of infant, childhood and adolescent obesity is rising around the world. Although rates may be plateauing in some settings, in absolute numbers there are more children who are overweight and obese in low- and middle-income countries than in high-income countries. Obesity can affect a child's immediate health, educational attainment and quality of life. Children with obesity are very likely to remain obese as adults and are at risk of chronic illness<sup>3</sup>.

### Glossary/concepts/definitions used

**BMI:** Body mass index ( $\text{kg}/\text{m}^2$ ) = weight (kg)/height<sup>2</sup> ( $\text{m}^2$ )

**ADULT OVERWEIGHT AND OBESITY:** Weight that is higher than what is considered as a healthy weight for a given height is described as overweight or obese. BMI is used as a screening tool for overweight or obesity. Overweight is defined as a BMI of 25.0 to <30, and obesity is a BMI of 30.0 or higher.

<sup>1</sup> Toronto Public Health. Healthy Futures: 2014 Toronto Public Health Student Survey. March, 2015.

<https://www.toronto.ca/legdocs/mmis/2015/hl/bgrd/backgroundfile-76820.pdf>

<sup>2</sup> Centers for Disease Control & Prevention (2017). Adult Obesity Causes & Consequences. Available from <https://www.cdc.gov/obesity/adult/causes.html>.

<sup>3</sup> World Health Organization (2016). Report of the Commission on Ending Childhood Obesity. 2016. WHO Press. Geneva. <http://www.who.int/end-childhood-obesity/publications/echo-report/en/>

**CHILDHOOD OBESITY:** From birth to less than 5 years of age: weight-for-height more than 3 Standard Deviation (SD) above the WHO Child Growth Standards median<sup>4</sup>. From age 5 to less than 19 years: BMI-for-age more than 2 SD above the WHO growth reference median<sup>5</sup>.

**CHILDHOOD OVERWEIGHT:** From birth to less than 5 years of age: weight-for-height more than 2 SD above WHO Child Growth Standards median<sup>6</sup>. From age 5 to less than 19 years: BMI-for-age more than 1 SD above WHO growth reference median<sup>7</sup>.

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<sup>4</sup> Ng M, Fleming T, Robinson M, Thomson B, Graetz N, Margono C, et al. Global, regional, and national prevalence of overweight and obesity in children and adults during 1980–2013: a systematic analysis for the Global Burden of Disease Study 2013. *Lancet*. 2014; 384:766–81.

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<sup>5</sup> Roberto CA, Swinburn B, Hawkes C, Huang TTK, Costa SA, Ashe M, et al. Patchy progress on obesity prevention: emerging examples, entrenched barriers, and new thinking. *Lancet*. 2015; 385:2400–9.

[https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(14\)61744-X/abstract?code=lancet-site](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(14)61744-X/abstract?code=lancet-site)

<sup>5</sup> Ng et al. (2014), op. cit.

<sup>6</sup> Ng et al. (2014), op. cit.

<sup>7</sup> Roberto et al. (2015), op. cit.

## Data Collection and Analysis

### **Child Overweight and Obesity Measurement**

Child overweight and obesity measurement is often coordinated through the school system. But the surveillance project requires collaboration among a wide range of local stakeholders whose assistance can help to improve delivery of the programme, data and information that needs to be collected, staff training and equipment required and which schools and children should be included. Engaging with local authority staff, primary care professionals, providers, schools, parents and children themselves can help with delivery and ensure all involved understand the purpose, benefits and outcomes of the programme.

### **Taking the Measurements**

Measurements should take place in a private room where the results are secure and cannot be seen or heard by anyone who is not directly involved in taking the measurements. In the exceptional case that a separate room is not available, a screened-off area of a classroom can be used. Practitioners should ensure that the calibrated weighing scale is placed on a firm, level surface with the read-out display concealed from the participating child and others. Practitioners should also ensure the height measure is correctly assembled and is placed on a firm, level surface with its stabilisers resting against a vertical surface (such as a wall or door) to ensure maximum rigidity. It is good practice to confirm that the height measure is correctly assembled by checking with an item of known length, such as a metre ruler.

For a step by step guide to measuring child and youth overweight and obesity, see the National Child Measurement Programme Operational Guidance (2017)<sup>8</sup>.

### **Adult Overweight and Obesity Measurement**

For a guide to measuring adult overweight and obesity, see TOOL E3 Measurement and assessment of overweight and obesity<sup>9</sup>.

## Data disaggregation

Data need to be disaggregated by age (Birth to <5 years of age; age 5-18; >18 years of age) and gender.

## References and links to reports/tools

Centers for Disease Control & Prevention (2016). Defining Adult Overweight and Obesity. Available from <https://www.cdc.gov/obesity/adult/defining.html>.

De Onis, M., Brown, D., Blossner, M., & Borghi, E. (2012). Levels and trends in child malnutrition. UNICEF-WHO-The World Bank joint child malnutrition estimates.

Levels and Trends in Child Malnutrition: Key findings of the 2017 edition (2017). UNICEF / WHO / World Bank Group. Joint Child Malnutrition Estimates.

Public Health England (2017). National Child Measurement Programme Operational Guidance 2017. Available from

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<sup>8</sup> Public Health England (2017). National Child Measurement Programme Operational Guidance 2017. Available from [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/643226/PHE\\_national\\_child\\_measurement\\_programme\\_operational\\_guidance.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/643226/PHE_national_child_measurement_programme_operational_guidance.pdf).

<sup>9</sup> UK Faculty of Public Health. TOOL E3 Measurement and assessment of overweight and obesity – ADULTS. Available from [http://www.fph.org.uk/uploads/HealthyWeight\\_SectE\\_Toolkit03.pdf](http://www.fph.org.uk/uploads/HealthyWeight_SectE_Toolkit03.pdf).

[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/643226/PHE\\_national\\_child\\_measurement\\_programme\\_operational\\_guidance.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/643226/PHE_national_child_measurement_programme_operational_guidance.pdf).

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