



## **TARGET 7**

Halt the rise in  
diabetes and obesity

## A PREAMBLE

Diabetes is an important public health problem, one of four priority non-communicable diseases (NCD) targeted for action. According to the World Health Organization (WHO)'s *Global report on diabetes*<sup>92</sup>, more than 400 million adults (8.5% of the world's population) were living with diabetes in 2014. Diabetes caused 1.5 million deaths in 2012. Higher-than-optimal blood glucose caused an additional 2.2 million deaths, by increasing the risks of cardiovascular and other diseases. Diabetes of all types (type 1, type 2, impaired glucose tolerance, impaired fasting glycaemia, gestational diabetes) can lead to complications in many parts of the body, including heart attack, stroke, kidney failure, leg amputation, vision loss and nerve damage, leading to disability and premature death. Diabetes imposes a large economic burden on the health-care system and the wider economy. Overweight and obesity are the strongest risk factors for type 2 diabetes. Several dietary practices are linked to unhealthy body weight and/or type 2 diabetes risk,

including high intake of saturated fatty acids, high intake of total fat and inadequate consumption of dietary fibre. High intake of sugar-sweetened beverages, which contain considerable amounts of free sugars, increases the likelihood of being overweight or obese, particularly among children. Early childhood nutrition affects the risk of obesity and type 2 diabetes later in life. Obesity also increases the likelihood of developing other NCD such as cancers.

## B LOCAL SITUATION

The ensuing paragraphs provide a snapshot of local situation regarding Indicators (12) to (17), (21) and (23) derived from the WHO's global monitoring framework (GMF); and Indicators (S5) to (S7) of local relevance, on diabetes and obesity, as well as their key underlying risk factors and availability of relevant policies to address them. Detailed definitions, specifications and data sources of these key/supplementary indicators are provided in **Section E**.

### Indicator (12): Raised blood glucose/diabetes

Results of the Population Health Survey (PHS) 2014/15 showed that the age-standardised prevalence of raised blood glucose/diabetes among persons aged 18-84 years was 3.9%, which was lower than that estimated from the Heart Health Survey (HHS) 2004/05 (4.6%), as shown in below Table. The crude prevalence was stable at 5.2% for both surveys.

### Prevalence of raised blood glucose/diabetes<sup>#</sup> among persons aged 18-84 years in 2004/05 and 2014/15

Year	Age-standardised prevalence	Crude prevalence
2004/05	4.6%	5.2% <sup>^</sup>
2014/15	3.9%	5.2% <sup>~</sup>

**Notes:** <sup>#</sup> Raised blood glucose/diabetes is defined as fasting plasma glucose concentration  $\geq 7.0$  mmol/L (126 mg/dl) at the time of conducting measurements or on medication for raised blood glucose **disregarding known history of diabetes or raised blood sugar but not on medication for these conditions**<sup>93</sup>; <sup>^</sup> Estimated number of persons (000') = 234.1; <sup>~</sup> Estimated number of persons (000') = 301.7

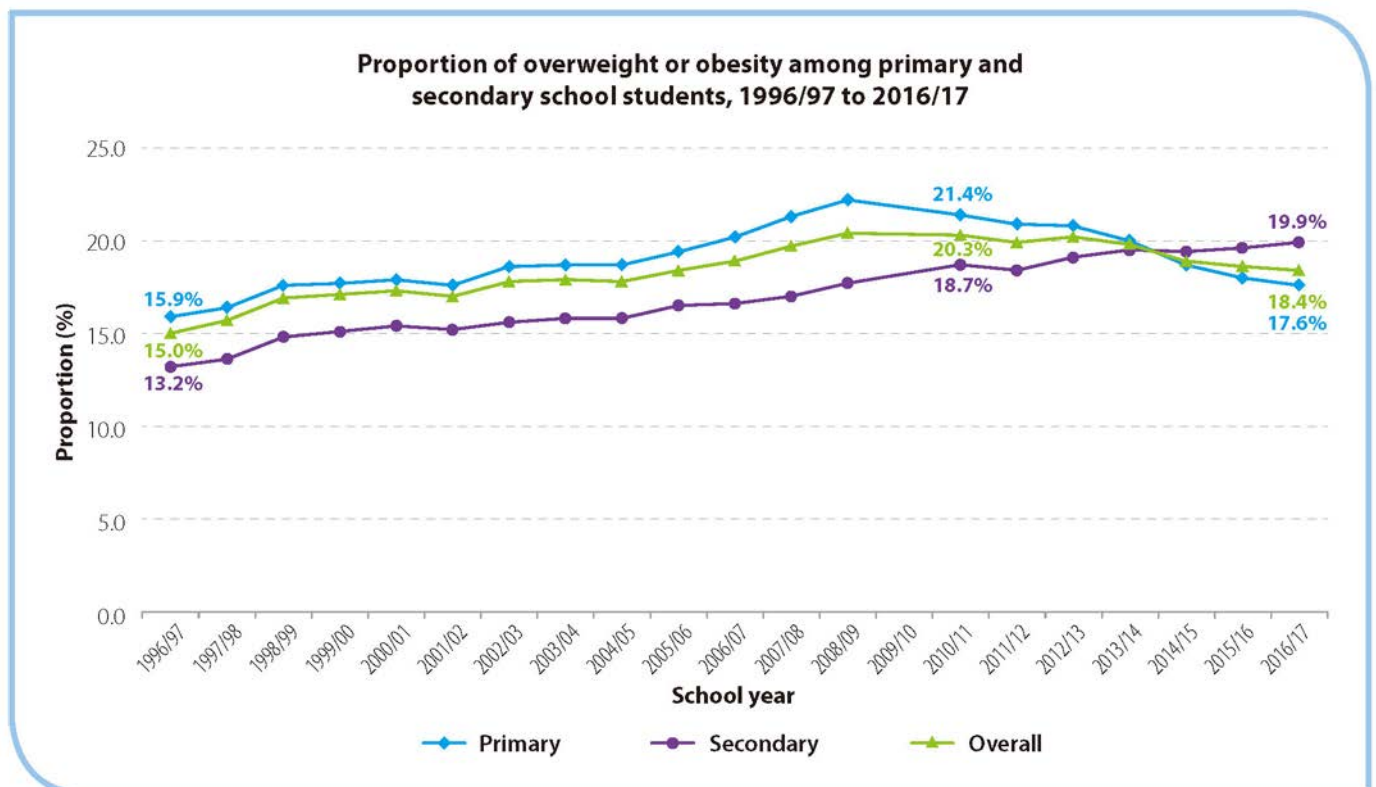
**Sources:** Heart Health Survey 2004/05 and Population Health Survey 2014/15, Department of Health

<sup>92</sup> Global report on diabetes. Geneva: World Health Organization, 2016. Available at: <http://www.who.int/diabetes/global-report/en/>

<sup>93</sup> Persons with previously doctor-diagnosed diabetes or high blood sugar but was not on medication for these conditions would be excluded if the measured fasting plasma glucose concentration  $< 7.0$  mmol/L (i.e. 126 mg/dl) at the time of conducting measurements.

### Indicator (13): Overweight and obesity in adolescents

Using local definition of overweight (including obesity), the proportion of students considered overweight or obese increased from 15.0% in 1996/97 to 20.3% in 2010/11 and then decreased to 18.4% in 2016/17. As shown in the chart below, the corresponding proportion for primary school students decreased from 21.4% in 2010/11 to 17.6% in 2016/17, while the corresponding proportion for secondary school students continued to rise, from 18.7% in 2010/11 to 19.9% in 2016/17.



**Note:** In 2009/10 school year, the Student Health Service of the Department of Health had to take part in the Human Swine Influenza Vaccination Programme, and therefore annual appointments were only provided to Primary 1 to Secondary 1 students. Due to the incomplete coverage, the detection rates for 2009/10 school year were not shown

**Source:** Data based on anthropometric measurement of primary and secondary students attending Student Health Service Centres, Department of Health

Based on WHO's definition<sup>94</sup>, the proportions of overweight and obesity among students (aged 10-19 years) in 2016/17 school year were 16.6% and 7.9% respectively, and the combined proportion of overweight and obesity was 24.5%.

<sup>94</sup> According to WHO growth reference for school-aged children and adolescents, "overweight" is defined as  $\geq 1$  standard deviation (SD) of BMI for age and sex, and "obese" is defined as  $\geq 2$  SD of BMI for age and sex.

### Indicator (14): Overweight and obesity in adults

Using local classification of body mass index (BMI) categories for Chinese adults at BMI  $\geq 23$  kg/m<sup>2</sup>, the age-standardised prevalence of overweight and obesity among persons aged 18-84 years, estimated from the two rounds of PHS, increased from 37.2% in 2003/04 to 47.0% in 2014/15 (see Table below). Using WHO's cut-off levels (i.e. BMI  $\geq 25$  kg/m<sup>2</sup>), the age-standardised prevalence of overweight and obesity among persons aged 18-84 years, estimated from the PHS 2014/15, was 27.9% (Crude prevalence: 30.4%).

#### Prevalence of overweight and obesity among persons aged 18-84 years in 2003/04 and 2014/15

Year	WHO's definition		Local classification	
	Age-standardised prevalence	Crude prevalence	Age-standardised prevalence	Crude prevalence
2003/04	20.0%	21.9% <sup>†</sup>	37.2%	40.3% <sup>^</sup>
2014/15	27.9%	30.4% <sup>‡</sup>	47.0%	50.8% <sup>~</sup>

**Notes:** <sup>†</sup> Estimated number of persons ('000) = 1177.6; <sup>‡</sup> Estimated number of persons ('000) = 1764.0; <sup>^</sup> Estimated number of persons ('000) = 2164.1; <sup>~</sup> Estimated number of persons ('000) = 2947.3

**Sources:** Population Health Survey 2003/04 and Population Health Survey 2014/15, Department of Health

### Indicator (15): Saturated fat intake

Findings on the mean proportion of total energy intake from saturated fatty acids will be available when the Centre for Food Safety (CFS)'s Second Food Consumption Survey will be completed by 2020/21.

### Indicator (16): Low fruit and vegetable consumption

According to the PHS 2014/15, the age-standardised prevalence of low fruit and vegetable consumption among persons aged 18+ years was 94.6% (Crude prevalence: 94.4%).

## Indicator (17): Raised (and mean) total cholesterol

Results of the PHS 2014/15 showed that the age-standardised prevalence of raised total cholesterol among persons aged 18-84 years was 46.5%, higher than that estimated from the HHS 2004/05 (38.4%). The age-standardised mean total cholesterol in 2014/15 was 5.0 mmol/L (Crude mean: 5.1 mmol/L), as shown in the Table below.

### Prevalence of raised total cholesterol<sup>#</sup> and mean total cholesterol among persons aged 18-84 years in 2004/05 and 2014/15

Year	Age-standardised prevalence	Crude prevalence	Age-standardised mean	Crude mean
2004/05	38.4%	41.9% <sup>^</sup>	4.8 mmol/L	4.9 mmol/L
2014/15	46.5%	51.3% <sup>~</sup>	5.0 mmol/L	5.1 mmol/L

**Notes:** <sup>#</sup> Raised total cholesterol is defined as total cholesterol  $\geq$  5.0 mmol/L (190mg/dl) at the time of conducting measurements **disregarding known history of the disease**<sup>95</sup>; <sup>^</sup> Estimated number of persons ('000) = 1880.2; <sup>~</sup> Estimated number of persons ('000) = 2976.2

**Sources:** Heart Health Survey 2004/05 and Population Health Survey 2014/15, Department of Health

## Indicator (21): Elimination of trans fats in food supply

While there is currently no legislation to limit saturated fatty acids or eliminate partially hydrogenated vegetable oils (the main source of industrially produced trans fats) in the food supply, the CFS promotes healthy eating by providing guidelines to the trade on reducing fats (total, saturated and trans fats) in food<sup>96</sup>, and promoting the benefits of reducing dietary intake of fats (total, saturated and trans fats).



<sup>95</sup> Persons with previously doctor-diagnosed hypercholesterolaemia would be excluded if the measured total cholesterol is  $<$ 5.0 mmol/L at the time of conducting measurements.

<sup>96</sup> The guidelines include:

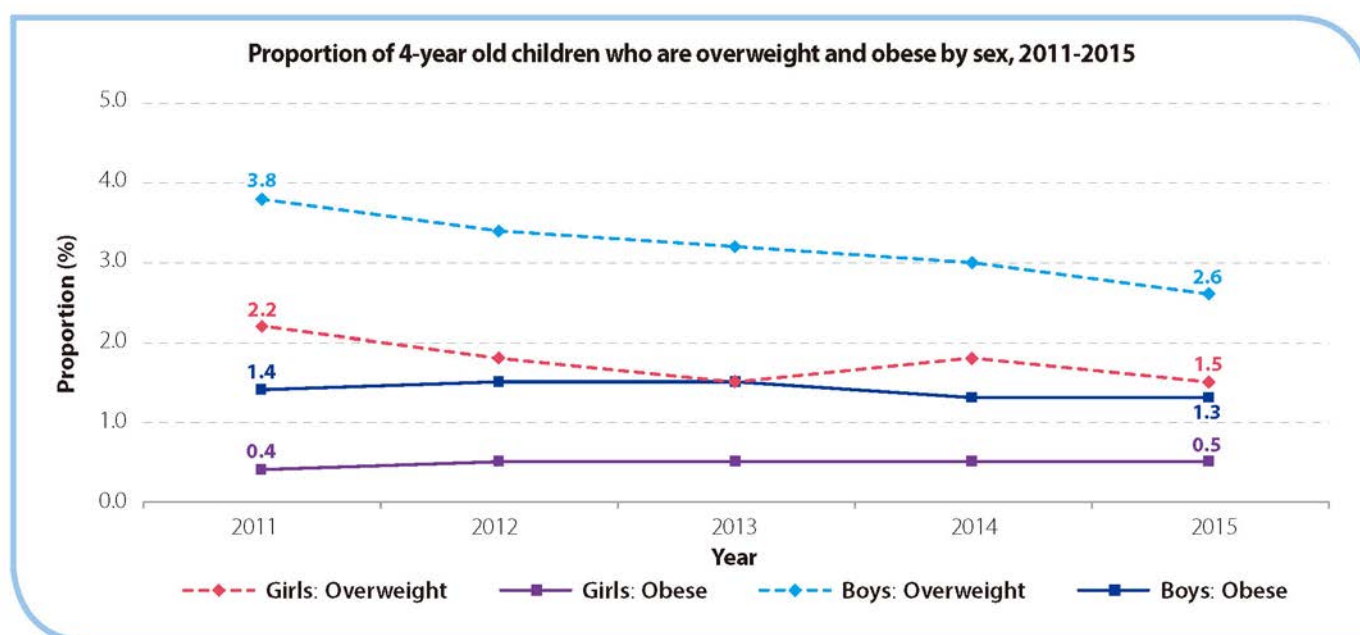
- Trade Guidelines on Reducing Trans Fats in Food
- Trade Guidelines for Reducing Sugars and Fats in Foods

### Indicator (23): Marketing of foods to children

While there is currently no legislation to reduce the impact on children of marketing of foods and non-alcoholic beverages high in saturated fats, trans fatty acids, free sugars, or salt<sup>97</sup>, all schools are advised to formulate a school policy to promote healthy eating among students. Schools have been reminded not to allow promotion of unhealthy food in schools as stated in the “Nutritional Guidelines on Lunch for Students” and “Nutritional Guidelines on Snacks for Students” issued by the Department of Health (DH), which have been incorporated in circulars and guidelines issued by the Education Bureau (EDB). Compliance is monitored under the voluntary “EatSmart School Accreditation Scheme” in which schools achieving the accreditation are required to follow the Nutritional Guidelines. In pre-primary institutions (PPIs), similar recommendations are also stated in the “Nutritional Guidelines for Children aged 2 to 6” issued by the DH.

### Indicator (S5): Overweight and obesity in children below 5

Routine clinical data of weight and height of 4-year-old children attending Maternal and Child Health Centres (MCHCs) for services revealed that the proportions of overweight boys and girls decreased from 3.8% and 2.2% in 2011 to 2.6% and 1.5% in 2015 respectively. The proportions of obese boys (1.3%-1.5%) and girls (0.4%-0.5%) have been stable over the same period.

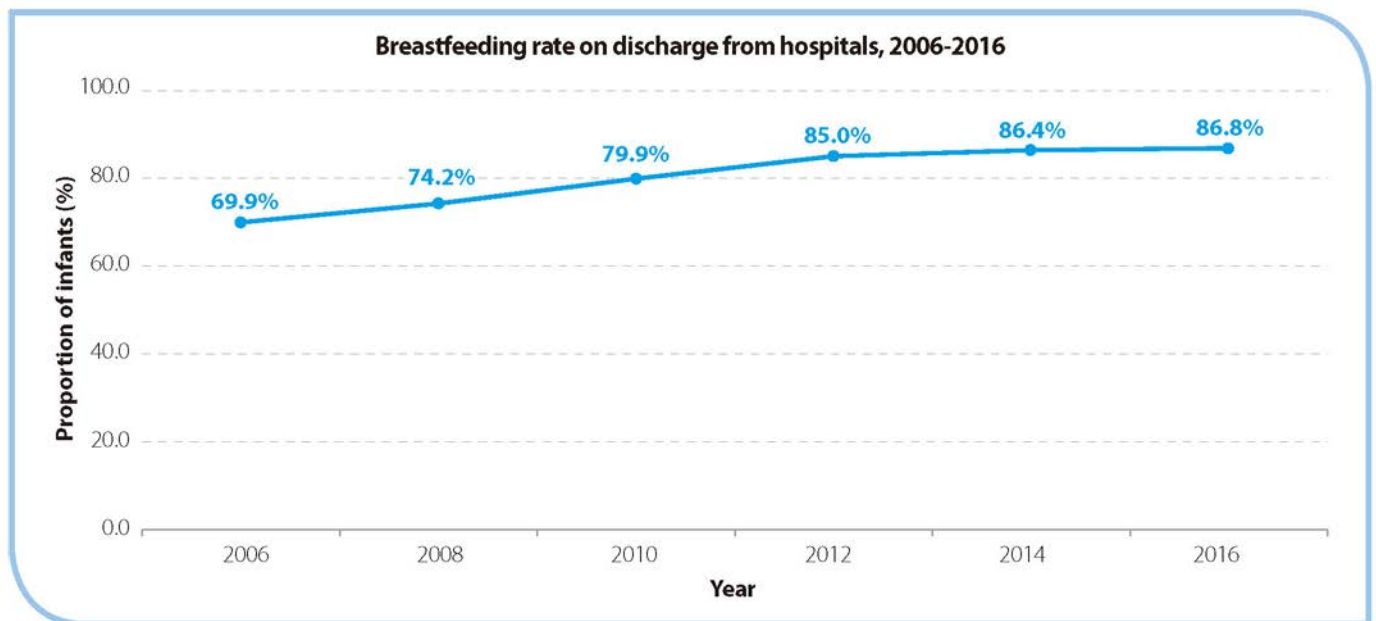


**Source:** Routine clinical data of weight and height of 4-year-old children attending Maternal and Child Health Centres, Department of Health

<sup>97</sup> The Hong Kong Code of Marketing of Formula Milk and Related Products, and Food Products for Infants & Young Children issued on 13 June 2017 does not fall under this classification.

### Indicator (S6): Ever breastfeeding rate on discharge from hospitals

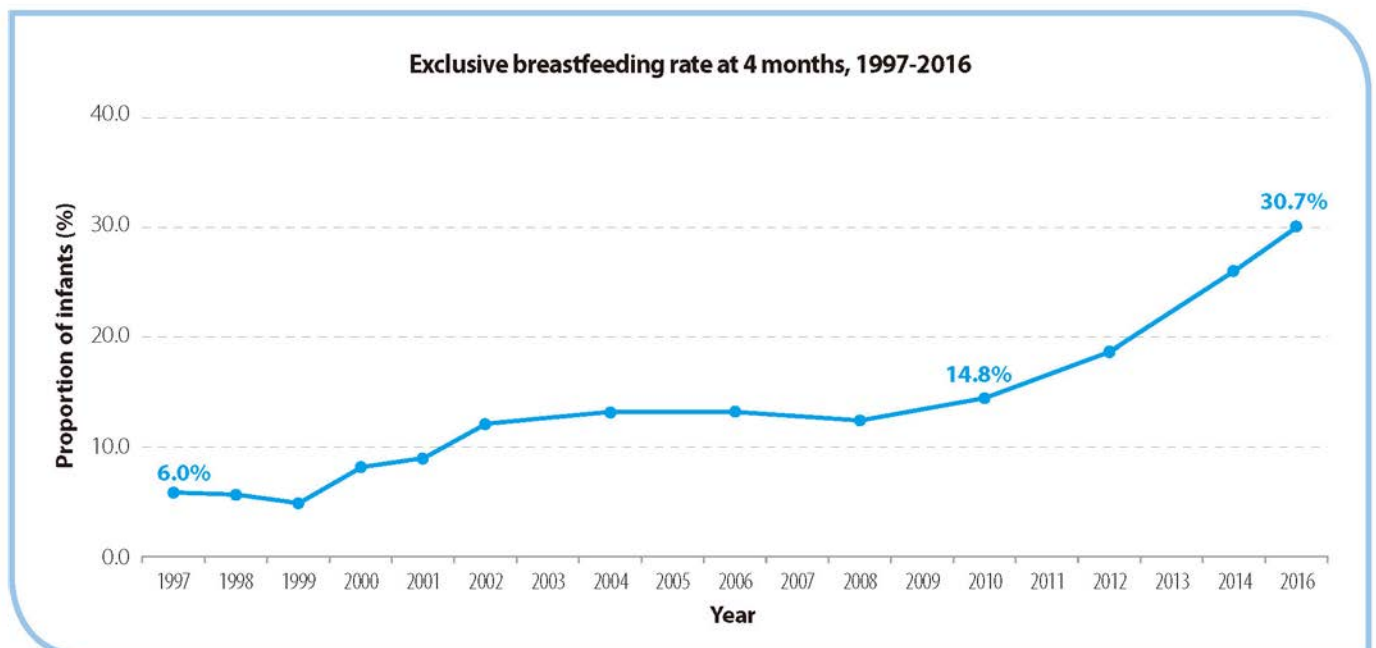
According to the data on breastfeeding collected by local birthing hospitals, ever breastfeeding rate on discharge from hospitals has steadily increased from 69.9% in 2006 to 86.8% in 2016 as shown in below Figure.



Source: Collected from monthly report of ever breastfeeding rate from hospitals with maternity units

### Indicator (S7): Rate of exclusive breastfeeding at 4 months

According to the breastfeeding surveys regularly conducted by the Family Health Service of DH among infants who attended the routine 12-month visit at MCHCs, the rate of exclusive breastfeeding at 4 months has increased from 6.0% among babies born in 1997 to 30.7% among babies born in 2016 (see below Figure).



Source: Breastfeeding Survey, Department of Health

### Indicator (S8): Internet use in adolescents

According to the data collected by Health Assessment Questionnaire (HAQ) of the Student Health Service Centres (SHSCs) in 2015/16 school year, the proportion of students who spent 2 hours or more a day on the internet or electronic screen products for purposes not related to school work was 44%. The corresponding figures for primary and secondary school students were 26% and 65% respectively.

### Indicator (S9): Sleep time in adolescents

From data collected from HAQ of the SHSCs in 2015/16 school year, the proportion of students who had sleep time less than 8 hours a day on a typical night of a school day was 58%. The corresponding figures for primary and secondary school students were 41% and 79% respectively.

## C LOCAL TARGET

Halt the rise in diabetes and obesity by 2025<sup>98</sup>.

## D ACTIONS TO ACHIEVE TARGET

Maintaining a healthy weight is the key to preventing diabetes. Attaining this target of halting the rise in diabetes and obesity will be closely related to achieving targets to reduce harmful use of alcohol and reduce physical inactivity in the wider population.

### 1) Background of the Government initiatives to prevent and control diabetes and obesity

#### Promoting Healthy Diet and Physical Activity

- Obesity has been accorded high priority for action in the prevention and control of NCD in Hong Kong. Under the steer of the Steering

Committee on Prevention and Control of NCD chaired by the Secretary for Food and Health, the Working Group on Diet and Physical Activity (WGDPA) was set up in December 2008. The *“Action Plan to Promote Diet and Physical Activity Participation in Hong Kong”* launched in September 2010 by the WGDPA provided a platform for intersectoral actions, to tackle root causes of and imminent problems caused by obesity through promoting healthy diet and physical activity<sup>99</sup>.

#### Prevention and Control of Childhood Obesity

- Overweight and obese children are likely to remain obese into adulthood, developing life-threatening NCD such as diabetes at a younger age. In 2014, the then Director General of WHO appointed a high level Commission on Ending Childhood Obesity which produced its report in January 2016 leading to the development of an implementation plan with six key areas of action. These are (i) promote intake of healthy foods, (ii) promote physical activity, (iii) preconception

<sup>98</sup> The WHO sets a voluntary global target of ‘halting the rise in diabetes and obesity by 2025’.

<sup>99</sup> More details about the action plan is available at: [https://www.change4health.gov.hk/en/strategic\\_framework/structure/working\\_group\\_dpa/index.html](https://www.change4health.gov.hk/en/strategic_framework/structure/working_group_dpa/index.html)



and pregnancy care, (iv) early childhood diet and physical activity, (v) health, nutrition and physical activity for school-age children, and (vi) weight management. Hong Kong's effort to combat childhood obesity follows closely the directions outlined in the implementation plan.

### **Breastfeeding Promotion Strategy**

- The Government endeavours to protect, promote and support breastfeeding. In April 2014, the Committee on Promotion of Breastfeeding was set up at Food and Health Bureau (FHB) to advise the Government on strategies and actions to promote and support breastfeeding, and to oversee all these activities to ensure that the implementation is co-ordinated, effective and sustainable<sup>100</sup>. Comprehensive strategy had been endorsed by the Committee on Promotion of Breastfeeding. It included strengthening professional support for breastfeeding in healthcare facilities through implementing Baby-Friendly Hospitals initiatives, supporting working mothers to sustain breastfeeding by promoting breastfeeding friendly workplace policy, promulgating breastfeeding friendly public premises and provision of baby care facilities, strengthening public education, enhancing surveillance on local breastfeeding situation, and launching of the voluntary *"Hong Kong Code of Marketing of Formula Milk and Related Products and Food Products for Infants and Young Children"* (HK Code), which promotes good marketing practices of the following designated

products for infants and young children under 36 months old:-

- Infant formula;
- Follow-up formula;
- Formula milk related products: Feeding bottles and teats; and
- Prepackaged food products for infants and young children.

### **Primary Care Development**

- In 2010, FHB issued the *"Primary Care Development in Hong Kong Strategy Document"*, which paved the way for the publication of the *"Hong Kong Reference Framework for Diabetes Care in Adults in Primary Care Settings"* and three other reference frameworks for the care of different chronic diseases and population groups in primary care settings<sup>101</sup>, to support the tackling of NCD through primary care. The reference frameworks aim to:-
  - (a) facilitate the provision of continuing, comprehensive and evidence-based care in the community;
  - (b) empower patients and their carers; and
  - (c) raise public awareness of the importance of proper prevention and management of chronic diseases.

<sup>100</sup> Source: <http://www.info.gov.hk/gia/general/201706/13/P2017061300473.htm>

<sup>101</sup> The four landmark reference frameworks are:

- Hong Kong Reference Framework for Diabetes Care in Adults in Primary Care Settings
- Hong Kong Reference Framework for Hypertension Care in Adults in Primary Care Settings
- Hong Kong Reference Framework for Preventive Care for Children in Primary Care Settings
- Hong Kong Reference Framework for Preventive Care for Older Adults in Primary Care Settings

## 2) Existing actions/interventions/programmes/policies

- With the accomplishment of the *“Action Plan to Promote Diet and Physical Activity Participation in Hong Kong”*, many interventions have become regular features of the Government’s NCD response or have led to development of further initiatives tailored to changing social and environmental circumstances, for examples:-
  - (a) *“StartSmart@school.hk”* Campaign, *“EatSmart@school.hk”* Campaign, voluntary *“EatSmart School Accreditation Scheme”*, *“I’m so Smart”* Community Health Promotion Programme, Report of Advisory Group on Health Effects of Use of Internet and Electronic Screen Products, HK Code, education kits and training workshops on breastfeeding for health professionals, parenting programme on weaning, regular health check-ups, counselling and necessary referrals for students on weight management, Reference Frameworks for preventive care in primary care settings, etc. (DH and health promotion partners within and outside the Government)
  - (b) The DH’s *“EatSmart@restaurant.hk”* Campaign which was launched in 2008 to encourage and assist restaurants to provide dishes with more fruit and vegetables and less oil, salt and sugar through voluntary recognition scheme. A free EatSmart Restaurant mobile application was launched in 2015 to facilitate the public to locate EatSmart Restaurants. (DH)
  - (c) DH’s MCHCs provide dietary advice to expectant mothers and those who have given birth, to maintain an optimal weight gain during pregnancy and prepare the mother for nutritional demands of pregnancy, childbirth and lactation. (DH)
  - (d) The Student Health Service (SHS) of DH offers annual free health assessment to all local day school students whereby body weight and height are measured and tracked over time. To empower students (especially those with body weight for height exceeding optimal range) in weight management with support from family members, SHS provides dietary advice and counselling on healthy weight management to help students make healthy lifestyle choices. (DH)
  - (e) Public education is carried out regarding maintenance of optimal waist circumference and heightening community awareness of the adverse effects of overweight and obesity. (DH)
  - (f) The CFS has been striving to safeguard food safety and promote healthy eating in Hong Kong, including conducting relevant risk assessment studies, implementing nutrition labelling scheme in prepackaged foods, providing guidelines to the trade on reducing dietary sodium, sugar and fats, and promoting the benefits of reducing dietary intake of salt and sugar. There are further details of CFS’ work on these in Target 4. (CFS)
  - (g) *“Sports for All”* promotional programmes, continuous review and enhancement on provision of recreation and sports programmes, leisure facilities, booking arrangements and charges of venues, Workshops on Pre-school Children’s Health and Physical Activities, and Workshops on Pre-school Children’s Gymnastics-For-All

for kindergarten teachers, etc. (Leisure and Cultural Services Department, EDB or other health promotion partners)

### **3) Specific actions/interventions/programmes/policies to be introduced, enhanced or explored to achieve target by 2025**

#### Targeting children and adolescents

- Encourage more PPIs and primary schools to provide healthy lunch and snacks to students, and not to promote unhealthy foods in schools as stated in related guidelines, such as the “Nutritional Guidelines for Children aged 2 to 6”, “Nutritional Guidelines on Lunch for Students” and “Nutritional Guidelines on Snacks for Students” issued by DH. (DH and EDB)
- Encourage students (for children aged 5-17) to engage regularly in physical activities for at least 60 minutes of moderate-to-vigorous-intensity physical activities daily (MVPA60) in accordance with the recommendation of WHO, through the Physical Education (PE) Key Learning Area Curriculum Guide. The EDB will spearhead a pilot project of 20 schools in 2017/18 school year to gather and consolidate field experience of creating an active school through a whole-school approach. Support from community partners will be enlisted. (DH, EDB and other health promoting partners)
- Scale up the WHO Health Promoting School programme to foster a self-sustaining health-enhancing learning environment in a greater number of schools, based on the experience gained from the Healthy Schools Project spearheaded by the Chinese University of Hong Kong. (DH and EDB)
- Provide professional input and support from public health perspective to community and academic partners who are conducting research and promotional projects to develop active students. Examples are the Physical Fitness Association of Hong Kong China, the Hong Kong Elite Athletes Association, the Physical Activities Development Model for Primary Schools Project funded by the Hong Kong Jockey Club Charities Trust, the Department of Paediatrics and Adolescent Medicine of the University of Hong Kong, and the Jump Rope for Heart Programme organised by the Hong Kong College of Cardiology, just to name a few. (DH)
- Increase physical activities of the member of public, including students, parents and teachers and promote sport culture in schools through “Opening up School Facilities for Promotion of Sports Development Scheme”, which encourages more sport activities to be organized using school facilities. (EDB and Home Affairs Bureau)
- Recommend to the Quality Education Fund Steering Committee to continue including “Healthy Lifestyle and Positive Development of Students” as a priority theme. (EDB)
- Promulgate recommendations on healthy use of Internet and electronic screen products for children, adolescents, parents and teachers to protect children from the harmful effect of excessive screen time. (DH)

- Strengthen support and education to families with obese children. (DH/Hospital Authority (HA))
- Continue enhancing measures to promote, protect and support breastfeeding, including stepping up professional support for breastfeeding in healthcare facilities; strengthening public's acceptance and support of breastfeeding; supporting working mothers to sustain breastfeeding by encouraging the community to adopt breastfeeding friendly workplace policy; promoting and supporting breastfeeding in public places through promotion of breastfeeding friendly premises and provision of baby care facilities; promulgating the voluntary HK Code to various stakeholders; strengthening the surveillance on local breastfeeding. (DH)
- Collaborate with stakeholders which may contribute positively to a healthy eating environment in schools, e.g. the On-site Meal Portioning Funding Scheme through the Environment and Conservation Fund administered by the Environmental Protection Department (EPD). (EPD and DH)
- Keep in view global and regional developments and emerging evidence on strategies to address the obesogenic environment based on WHO guidance. (DH)

### Targeting adults

- Continue to strengthen the health system at all levels, in particular emphasising comprehensive primary care for early detection and management of NCD (including diabetes and obesity) based on the family doctor-based primary care team model. The primary care team could be markedly strengthened to provide opportunistic screening for high blood sugar (in line with primary care reference framework) and to support patients to adopt healthier lifestyles for risk factor reduction. (FHB/DH/HA and medical community)
- Continue promulgating the "*Hong Kong Reference Framework for Diabetes Care in Adults in Primary Care Settings*" to health professionals across different sectors and to facilitate the provision of continuing, comprehensive, evidence-based, affordable and holistic care in the community. (FHB/DH/HA and medical community)
- Review and update the reference framework for diabetes care in primary care settings with emphasis on weight management on a regular basis in keeping with latest evidence. (DH)
- Keep in view global and regional developments and emerging evidence on strategies based on WHO guidance. (FHB/DH/Food and Environmental Hygiene Department)

## E DEFINITIONS AND SPECIFICATIONS OF LOCAL INDICATORS

**Key indicators** (derived from the WHO's GMF<sup>102</sup>)

### Indicator (12): Age-standardised (and crude) prevalence of raised blood glucose/diabetes among persons aged 18-84 years

- Monitoring frequency: every 4-6 years
- Source: Population Health Survey, Department of Health
- Definition: fasting plasma glucose concentration  $\geq 7.0$  mmol/L (126 mg/dl) or on medication for raised blood glucose

### Indicator (13): Detection rate of overweight and obesity in primary and secondary students

- Monitoring frequency: annual
- Source: Anthropometric measurement of primary and secondary students attending the Student Health Service Centres of Department of Health
- Definitions:
  - ◆ According to WHO growth reference for school-aged children and adolescents, "overweight" is defined as  $\geq 1$  standard deviation (SD) of body mass index (BMI) for age and sex, and "obese" is defined as  $\geq 2$  SD of BMI for age and sex<sup>103</sup>
  - ◆ According to local definition: "overweight (including obesity)" is defined as weight exceeding 120% of the median weight-for-height for male students with height between 55 and 175cm and for female students with height between 55 and 165cm; and BMI  $\geq 25$  kg/m<sup>2</sup> for male students with height  $>175$ cm and for female students with height  $>165$ cm

<sup>102</sup> The WHO recommends the following indicators for monitoring diabetes and obesity, namely:

- Indicator (12): Age-standardised prevalence of raised blood glucose/diabetes among persons aged 18+ years (defined as fasting plasma glucose concentration  $\geq 7.0$  mmol/L (26 mg/dl) or on medication for raised blood glucose (Expected frequency: every 5 years)
- Indicator (13): Prevalence of overweight and obesity in adolescents (aged 10-19 years) (Expected frequency: every 5 years)
- Indicator (14): Age-standardised prevalence of overweight and obesity in persons aged 18+ years (Expected frequency: every 5 years)

<sup>103</sup> Definition adopted in the WHO's GMF.

### **Indicator (14): Age-standardised (and crude) prevalence of overweight and obesity in persons aged 18-84 years**

- Monitoring frequency: every 4-6 years
- Source: Population Health Survey, Department of Health
- Definitions:
  - ◆ According to WHO's classification (for adult Europeans): BMI  $\geq 25$  kg/m<sup>2</sup> for overweight and  $\geq 30$  kg/m<sup>2</sup> for obesity<sup>104</sup>
  - ◆ According to classification for Chinese adults in Hong Kong: BMI  $\geq 23$  kg/m<sup>2</sup> for overweight and  $\geq 25$  kg/m<sup>2</sup> for obesity
  - ◆ BMI is calculated based on **measured** weight in kilogram and height in metre

### **Indicator (15): Age-standardised mean proportion of total energy intake from saturated fatty acids in persons aged 18+ years**

- Monitoring frequency: About every 10 years
- Source: Hong Kong Population-based Food Consumption Survey, Centre for Food Safety, Food and Environmental Hygiene Department

### **Indicator (16): Age-standardised prevalence of low fruit and vegetable consumption among persons aged 18+ years**

- Monitoring frequency: every 2 years
- Source: Population Health Survey / Health Behaviour Survey, Department of Health
- Definition: "low fruit and vegetable consumption" is defined as consuming less than five total servings (400 grams) of fruit and vegetables on average every day

<sup>104</sup> Definition adopted in the WHO's GMF.

### **Indicator (17): Age-standardised prevalence of raised total cholesterol and mean total cholesterol among persons aged 18-84 years**

- Monitoring frequency: every 4-6 years
- Source: Population Health Survey, Department of Health
- Definition: total cholesterol  $\geq 5.0$  mmol/L (or 190 mg/dl)

### **Indicator (21): Adoption of national policies that limit saturated fatty acids and eliminate partially hydrogenated vegetable oils (the main source of industrially produced trans fats) in the food supply**<sup>105, 106</sup>

### **Indicator (23): Adoption of national policies to reduce the impact on children of marketing of foods and non-alcoholic beverages high in saturated fats, trans fatty acids, free sugars, or salt**<sup>107</sup>

#### ***Supplementary indicators related to childhood obesity***<sup>108</sup> (of local relevance)

### **Indicator (S5): Prevalence of overweight and obesity in children under 5 years of age**

- Monitoring frequency: annual
- Source: Routine clinical data of weight and height of 4-year-old children attending the Maternal & Child Health Centres of Family Health Service, Department of Health

<sup>105</sup> According to the WHO's GMF, indicator (21) is defined as "adoption of a policy to limit saturated fatty acids and virtually eliminate partially hydrogenated vegetable oils in the food supply"; and requires country to respond 'yes' or 'no'. According to the WHO's NCD Country Capacity Survey, both voluntary or industry self-regulation and legislation are considered as policy.

<sup>106</sup> Trans fatty acids in foods originate from three main sources: (i) bacterial transformation of unsaturated fatty acids in the rumen of ruminant animals. They can subsequently be present in the meat and milk of the animal; (ii) hydrogenation and deodorization of unsaturated vegetable oils (or occasionally fish oils) high in polyunsaturated fatty acids; and (iii) during the heating and frying of oils at high temperatures. According to the WHO's 2009 Scientific Update on Trans Fatty Acids, ruminant trans fatty acids cannot be removed entirely from the diet, while their intake is low in most populations and to date there is no conclusive evidence supporting an association with coronary heart disease risks in the amounts usually consumed. In contrast, the removal of partially hydrogenated vegetable oils (the main source of trans fats in processed foods) from the food supply would result in substantial health benefits.

<sup>107</sup> According to the WHO's GMF, indicator (23) is defined as "existence of a policy to reduce the impact on children of marketing of foods and non-alcoholic beverages high in saturated fats, trans fatty acids, free sugars, or salt", and requires country to respond 'yes' or 'no'. According to the WHO's NCD Country Capacity Survey, both voluntary or industry self-regulation and legislation are considered as policy. This indicator does not apply to the following designated products for infants and young children under 36 months old, which have been covered under the scope of the "International Code of Marketing of Breast-milk Substitutes" and the WHO guidance on "Ending the inappropriate promotion of foods for infants and young children" as provided in resolution WHA69.9 on maternal, infant and young child nutrition:

- Infant formula;
- Follow-up formula;
- Formula milk related products: Feeding bottles and teats; and
- Prepackaged food products for infants and young children.

<sup>108</sup> Making reference to the WHO's Global Reference List of 100 Core Health Indicators and the actions recommended by the WHO Commission on Ending Childhood Obesity, these additional indicators are recommended for progress monitoring.

### **Indicator (S6): Ever breastfeeding rate on discharge from hospitals**

- Monitoring frequency: every 2 years
- Source: Data collected from monthly report of ever breastfeeding rate from hospitals with maternity units by Family Health Service, Department of Health

### **Indicator (S7): Rate of exclusive breastfeeding for 4 months**

- Monitoring frequency: every 2 years
- Source: Breastfeeding survey conducted by the Family Health Service, Department of Health

### **Indicator (S8): Proportion of upper primary and secondary school students who spent 2 hours or more a day on the internet or electronic screen products for purposes not related to school work<sup>109</sup>**

- Monitoring frequency: annual
- Source: Health Assessment Questionnaire (HAQ) self-administered by students (Primary 4 and 6, Secondary 2, 4 and 6) attending the Student Health Service Centres, Department of Health

### **Indicator (S9): Proportion of upper primary and secondary school students who had sleep time less than 8 hours a day on a typical night of a school day<sup>110</sup>**

- Monitoring frequency: annual
- Source: Health Assessment Questionnaire (HAQ) self-administered by students (Primary 4 and 6, Secondary 2, 4 and 6) attending the Student Health Service Centres, Department of Health

<sup>109</sup> According to the Report of Advisory Group on Health Effects of Use of Internet and Electronic Screen Products, it is recommended that children age 6-12 years old should limit recreational screen time to no more than 2 hours a day, and prolonged screen time should be avoided for children 12-18 years old.

<sup>110</sup> According to US National Sleep Foundation, recommended sleep time for children 6-13 years old is 9-11 hours (7-12 hours may be appropriate), and that for children 14-17 is 8-10 (7-11 hours may be appropriate).