TARGET 6

Contain the prevalence of raised blood pressure

A PREAMBLE

Raised blood pressure (hypertension) is a major cardiovascular risk factor. If left uncontrolled, it can cause heart attacks, stroke, dementia, renal failure and blindness. According to the World Health Organization (WHO)'s *"Global brief on hypertension"*[82], raised blood pressure was estimated to kill 9 million people every year. The harmful use of alcohol, tobacco use, being overweight and obese, physical inactivity, and high salt intake all contribute to the incidence of hypertension. If no action is taken to reduce exposure to these factors, cardiovascular disease incidence, including hypertension, will increase. Hypertension rarely causes symptoms in the early stages and many people go undiagnosed. Those who are diagnosed may not have access to treatment and may not be able to successfully control their illness over the long term. "Early detection, adequate treatment and good control of hypertension" has been identified as one of the WHO's "best buys"[83] to reduce the burden of cardiovascular diseases[84, 85].

B LOCAL SITUATION

Below provides a snapshot of local situation regarding Indicators (11a) and (11b) on high blood pressure, derived from the WHO's global monitoring framework (GMF). Detailed definitions, specifications and data sources of these key indicators are provided in **Section E**.

Indicator (11a): Raised blood pressure

Results of the Population Health Surveys (PHS) conducted in 2003/04 and 2014/15 showed that the age-standardised prevalence of raised blood pressure among persons aged 18-84 years decreased from 21.4% to 17.8%.

[82] A global brief on hypertension: Silent killer, global public health crisis. Geneva: World Health Organizaton, 2013. Available at: http://www.who.int/cardiovascular_diseases/publications/global_brief_hypertension/en/

[83] According to the updated Appendix 3 of the WHO Global NCD Action Plan 2013-2020, "best buys" are interventions that are considered to be the most cost-effective and feasible for implementation, for which the WHO-CHOICE analysis found an average cost-effectiveness ratio of ≤ I$100/DALY averted in low- and lower middle-income countries. (Source: http://apps.who.int/iris/bitstream/10665/259232/1/WHO-NMH-NVI-17.9-eng.pdf)

[84] WHO Report 2011. Scaling up action against NCDs: How much will it cost? Geneva: World Health Organization, 2011. Available at: http://www.who.int/nmh/publications/cost_of_inaction/en/

[85] Frieden TR, Bloomberg MR. Saving an additional 100 million lives. Lancet. 2018 Feb 17;391(10121):709-712. Available at: http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(17)32443-1/fulltext

Indicator (11b): Mean blood pressure

According to the PHS 2014/15, the age-standardised mean systolic blood pressure (SBP) among persons aged 18-84 years was 117.1 mmHg (Crude mean: 120.3 mmHg).

Prevalence of raised blood pressure# and mean SBP among persons aged 18-84 years in 2003/04 and 2014/15

Year	Age-standardised prevalence	Crude prevalence	Age-standardised mean SBP	Crude mean SBP
2003/04	21.4%	24.3%^	124.7 mmHg	126.5 mmHg
2014/15	17.8%	22.1%~	117.1 mmHg	120.3 mmHg

Notes: # Raised blood pressure is defined as systolic blood pressure (SBP) ≥140 mmHg and/or diastolic blood pressure (DBP) ≥90 mmHg at the time of conducting measurements **disregarding known history of the disease**[86]; ^ Estimated number of persons ('000) = 1301.3; ~ Estimated Number of persons ('000) = 1285.7

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

C LOCAL TARGET

Contain the prevalence of raised blood pressure by 2025[87].

D ACTIONS TO ACHIEVE TARGET

Most of the known risk factors for raised blood pressure (e.g. being overweight and obese, high salt intake, physical inactivity, tobacco use and harmful use of alcohol) are common to other biomedical risk factors and major non-communicable diseases (NCD). By modifying the prevalence of risk factors among individuals, their risk of developing NCD can be decreased. Thus, achieving the target to contain the prevalence of raised blood pressure serves concurrently to achieve other targets of halting the rise in overweight and obesity, reducing harmful use of alcohol, and lowering salt intake. Other than prevention, it will also require an affordable total-risk management approach to individual care to maintain blood pressure at optimal levels.

1) Background of the Government initiatives to prevent and control hypertension

Promoting Healthy Diet and Physical Activity

- Under the steer of the Steering Committee on Prevention and Control of NCD chaired by the Secretary for Food and Health, two working groups on diet and physical activity, and alcohol were formed in 2008 and 2009 respectively. The *"Action Plan to Promote Diet and Physical Activity Participation in Hong Kong"* and the *"Action Plan to Reduce Alcohol-related harm in Hong Kong"* launched in 2010 and 2011 respectively, provided platforms for intersectoral actions, to

[86] Persons with previously doctor-diagnosed hypertension or on medication for raised blood pressure would be excluded if the measured SBP is <140 mmHg and/or DBP is <90 mmHg at the time of conducting measurements.

[87] The WHO sets a voluntary global target of '25% relative reduction in prevalence of raised blood pressure or containing the prevalence of raised blood pressure by 2025, according to national circumstances'.

tackle the imminent problems caused by obesity, unhealthy diet, physical inactivity and harmful use of alcohol.[88]

Salt Reduction Strategy

- The Government has been promoting healthy diet all along, which is fundamental to reducing the salt intake of our population. To emphasise the importance of the task of reducing the salt (and sugar) intake of our population, the Government set up an advisory body – the Committee on Reduction of Salt and Sugar in Food – in March 2015 to make recommendations to the Secretary for Food and Health on the policy and work plans to reduce the intake of salt (and sugar) of the population. Also, the Government appointed various renowned public health experts from the Mainland and overseas to advise on international experiences in promoting the reduction of salt (and sugar). Details of the salt reduction strategy are set out in **Target 4** on salt reduction.

Primary Care Development

- In 2010, the Food and Health Bureau (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 Hypertension 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[89], 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.

2) Existing actions/interventions/ programmes/policies

- The Department of Health (DH), Education Bureau (EDB), Centre for Food Safety (CFS), Leisure and Cultural Services Department and Housing Department join forces to promote healthy lifestyle habits (e.g. low salt intake, high fruit and vegetables intake and physical activity) through various public awareness programmes/campaigns. Health promotion programmes such as "EatSmart@restaurant.hk" Campaign, "Startsmart@school.hk" Campaign, "EatSmart@school.hk" Campaign, "Joyful@Healthy Workplace" Programme, "I'm so Smart" Community Health Promotion Programme, Nutrition Labelling Publicity and Education Campaign, "Reduce Salt, Sugar, Oil. We Do!" programme and many others provide opportunities for raising awareness and increasing adoption of healthier eating habits and participation in physical activity.

[88] More details about the action plans are 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_on_ah/index.html

[89] 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

- DH, EDB and CFS have also issued various guidelines for students, parents, and schools, food traders, such as *"Nutritional Guidelines on Snacks for Students" and "Nutritional Guidelines on Lunch for Students"* issued by DH, and *"Trade Guidelines for Reducing Sodium in Foods"* issued by CFS, etc.

- Anti-tobacco and anti-alcohol activities are organised by DH in collaboration with health promotion partners as important means to raise public's health literacy and empower individuals to make informed choices.

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

- Continue to strengthen the health system at all levels, in particular emphasising comprehensive primary care for management of NCD (including raised blood pressure) based on the family doctor model. The primary care doctors' role could be markedly strengthened as member of the primary care team to provide opportunistic screening for high blood pressure (in line with primary care reference framework) and to support patients to adopt healthier lifestyles for risk factor reduction. (FHB/DH/Hospital Authority (HA) and medical community)

- Continue promulgating the *"Hong Kong Reference Framework for Hypertensive 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 hypertensive care in primary care settings on a regular basis in keeping with latest evidence. (DH)

- Implement the "Salt Reduction Scheme for School Lunches" from September 2017 onwards benefiting about 450 primary schools in Hong Kong. The target is to cut down the average sodium level of primary school lunchbox to not more than 500 milligrams in 10 years by gradually lowering the sodium level of school lunches with an average reduction of 5 to 10% per year. (DH and EDB)

- Continue the salt reduction strategy. (FHB/Food and Environmental Hygiene Department)

- Keep in view of "best buys"[90] or other recommended interventions to address the obesogenic environment based on WHO guidance. (All government bureaux/ departments)

[90] According to the updated Appendix 3 of the WHO Global NCD Action Plan 2013-2020, "best buys" are interventions that are considered to be the most cost-effective and feasible for implementation, for which the WHO-CHOICE analysis found an average cost-effectiveness ratio of ≤ I$100/DALY averted in low- and lower middle-income countries. (Source: http://apps.who.int/iris/bitstream/10665/259232/1/WHO-NMH-NVI-17.9-eng.pdf)

E DEFINITIONS AND SPECIFICATIONS OF LOCAL INDICATORS

Key indicators *(derived from the WHO's GMF[91])*

Indicator (11a): Age-standardised (and crude) prevalence of raised blood pressure among persons aged 18-84 years

- Monitoring frequency: every 4-6 years
- Source: Population Health Survey, Department of Health
- Definition: "raised blood pressure" is defined as systolic blood pressure (SBP) ≥140 mmHg and/or diastolic blood pressure (DBP) ≥90 mmHg

Indicator (11b): Age-standardised (and crude) mean SBP among persons aged 18-84 years

- Monitoring frequency: every 4-6 years
- Source: Population Health Survey, Department of Health

[91] The WHO recommends an indicator for monitoring, namely:
- Indicator (11): Age-standardised prevalence of raised blood pressure among persons aged 18+ years (defined as SBP >=140 mmHg and/or DBP >=90 mmHg) and mean SBP (Expected frequency: every 5 years)