



TARGET 1

Reduce premature
mortality from NCD

A PREAMBLE

Non-communicable diseases (NCD) are the major causes of ill-health, disability and death, both globally and locally. Unless urgent action is taken, it is anticipated that the burden attributed to NCD will continuously increase in the decades ahead. In light of the World Health Organization (WHO)'s "Global Action Plan for the Prevention and Control of NCD 2013-2020" (Global NCD Action Plan) which provides a road map and a menu of policy options for implementation collectively between 2013 and 2020 to attain 9 voluntary global targets, the Steering Committee on Prevention and Control of NCD (SC), chaired by the Secretary for Food and Health, endorsed at its meeting in January 2018 to align strategies and implement a set of local NCD targets and indicators in line with the WHO's Global NCD Action Plan and global monitoring framework (GMF)⁴⁰. In the coming years, Hong Kong should work collectively on policies, systems, programmes and actions to address NCD. Five key action areas targeted will be **h**ealthy start, **a**lcohol free, **l**ive well

and be active, **t**obacco free and **h**ealthy diet (fitting the acronym **HeALTH**).

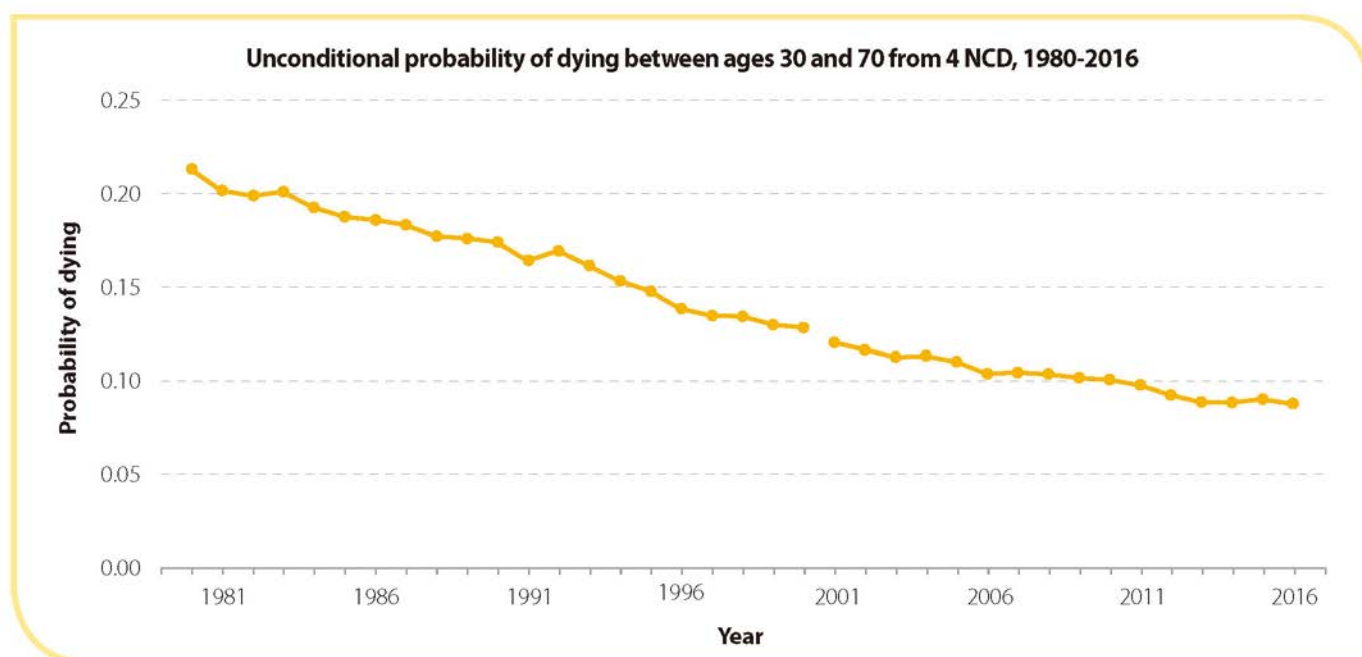
B LOCAL SITUATION

The ensuing paragraphs provide a snapshot of local situation regarding Indicator (1) on risk of premature mortality from four major non-communicable diseases (4 NCD), namely cardiovascular diseases, cancers, diabetes or chronic respiratory diseases; and Indicators (2), (20), (22), (24) and (25) related to the prevention and control of cancers (the top killer disease in Hong Kong), as set out in the WHO's GMF. For local situation of other important NCD indicators, e.g. prevalence of key risk factors for NCD, namely tobacco use, harmful use of alcohol, unhealthy diet, physical inactivity, overweight and obesity, and raised blood pressure/glucose/cholesterol, etc., please refer to **Section B of Targets 2 to 9**. Detailed definitions, specifications and data sources of the indicators set for Hong Kong are provided in **Section E** of each target.

Indicator (1): Premature NCD mortality

In Hong Kong, the unconditional probability of dying between ages of 30 and 70 from 4 NCD, namely cardiovascular diseases, cancers, diabetes or chronic respiratory diseases (denoted by $40q_{30}$) steadily decreased from 0.215 to 0.099 during the period 1980-2010, corresponding to the average annual rate of decline at 2.7% per year compounded continuously. In the ensuing period 2010-2016, $40q_{30}$ continued to decline from 0.099 to 0.086, corresponding to the average annual rate of decline at 2.2% per year compounded continuously. The diagram below shows the estimated $40q_{30}$ for Hong Kong over the period 1980-2016.

⁴⁰ The WHO's GMF sets out 9 voluntary global NCD targets and 25 indicators, which provide Member States a vision for progress by 2025.



Note: Figures for 1980-2000 are compiled based on causes of death data coded according to the International Statistical Classification of Diseases and Related Health Problems (ICD) 9th Revision, while classification of causes of death from 2001 onwards is based on ICD 10th Revision

Sources: Census and Statistics Department and Department of Health

Indicator (2): Cancer incidence and mortality

The 5 most common cancers in 2015 were colorectal cancer, lung cancer, breast cancer, prostate cancer and liver cancer, together accounting for 57.1% of all newly diagnosed cancer cases. Tables below show the statistics of the 5 most common cancers by sex in 2015 and the 5 leading causes of cancer deaths by sex in 2016 respectively.

The 5 most common cancers by sex in 2015

	Site	Number of new cases	Relative Frequency	CIR	ASIR	Trend (AAPC) of ASIR 2006-2015
Both Sexes	Colorectum	5 036	16.6%	69.1	38.4	Stable (0.0%)
	Lung	4 748	15.7%	65.1	35.9	Downward (-1.7%)*
	Breast	3 920	12.9%	53.8	34.6	Upward (+2.8%)*
	Prostate	1 831	6.0%	54.4	28.9	Upward (+3.2%)*
	Liver	1 791	5.9%	24.6	14.1	Downward (-2.1%)*
Male	Lung	2 930	19.1%	87.1	47.1	Downward (-2.3%)*
	Colorectum	2 891	18.8%	85.9	47.3	Upward (+0.6%)*
	Prostate	1 831	11.9%	54.4	28.9	Upward (+3.2%)*
	Liver	1 356	8.8%	40.3	22.7	Downward (-2.0%)*
	Stomach	686	4.5%	20.4	11.0	Downward (-2.8%)*
Female	Breast	3 900	26.1%	99.3	63.8	Upward (+2.4%)*
	Colorectum	2 145	14.4%	54.6	30.1	Downward (-0.5%)*
	Lung	1 818	12.2%	46.3	25.6	Stable (-0.2%)
	Corpus uteri	978	6.5%	24.9	15.9	Upward (+3.6%)*
	Thyroid	641	4.3%	16.3	12.3	Upward (+4.2%)*

Notes: (1) CIR: Crude incidence rates are expressed per 100 000 population for both sexes and gender-specific rates are expressed per 100 000 population in respective gender

(2) ASIR: Age-standardised incidence rate per 100 000 standard population (based on the world standard population specified in GPE Discussion Paper Series: No.31, EIP/GPE/EBD, WHO, 2001)

(3) AAPC: Average annual percentage change (based on the trend analysis over the ten years from 2006 to 2015 by the Department of Health, which is based on the age-standardised rates compiled based on the world standard population of WHO (2001)); * represents the AAPC is statistically significant from zero

Sources: Hong Kong Cancer Registry, Hospital Authority, Census and Statistics Department and Department of Health

The 5 leading causes of cancer deaths by sex in 2016

	Site	Number of deaths	Relative Frequency	CMR	ASMR	Trend (AAPC) of ASMR 2007-2016
Both Sexes	Lung	3 780	26.6%	51.5	26.1	Downward (-2.5%)*
	Colorectum	2 089	14.7%	28.5	14.0	Downward (-1.0%)*
	Liver	1 540	10.8%	21.0	11.0	Downward (-2.7%)*
	Stomach	710	5.0%	9.7	4.9	Downward (-3.5%)*
	Breast	704	5.0%	9.6	5.5	Stable (0.0%)
Male	Lung	2 529	29.9%	74.9	38.2	Downward (-2.9%)*
	Colorectum	1 208	14.3%	35.8	18.0	Downward (-1.2%)*
	Liver	1 135	13.4%	33.6	18.0	Downward (-2.7%)*
	Stomach	427	5.1%	12.7	6.4	Downward (-3.6%)*
	Prostate	410	4.9%	12.1	5.5	Stable (+0.4%)
Female	Lung	1 251	21.7%	31.6	15.2	Downward (-1.9%)*
	Colorectum	881	15.3%	22.2	10.5	Downward (-1.4%)*
	Breast	702	12.2%	17.7	10.2	Stable (-0.1%)
	Liver	405	7.0%	10.2	4.9	Downward (-3.1%)*
	Pancreas	310	5.4%	7.8	4.0	Stable (+0.4%)

Notes: (1) CMR: Crude mortality rates are expressed per 100 000 population for both sexes and gender-specific rates are expressed per 100 000 population in respective gender

(2) ASMR: Age-standardised mortality rate per 100 000 standard population (based on the world standard population specified in GPE Discussion Paper Series: No.31, EIP/GPE/EBD, WHO, 2001)

(3) AAPC: Average annual percentage change (based on the trend analysis over the ten years from 2007 to 2016 by the Department of Health, which is based on the age-standardised rates compiled based on the world standard population of WHO (2001)); * represents the AAPC is statistically significant from zero

Sources: Census and Statistics Department and Department of Health

Indicator (20): Palliative care

Local consumption of morphine-equivalent (Meq) strong opioid analgesics (excluding methadone) for palliative care in 2016 was estimated to be 3 462.5 mg/cancer death per year⁴¹.

Indicator (22): Vaccination for human papillomavirus (HPV)

While three prophylactic vaccines (2-valent, 4-valent and 9-valent) against HPV infection are currently available in Hong Kong, there is no population-based HPV vaccination programme for all teenage girls at the time of writing.

Indicator (24): Vaccination for hepatitis B

A total of six territory-wide surveys were conducted from 2001 to 2015 for immunisation coverage among children aged 2 to 5 years (from birth cohort of year 1995 and after). The percentages of surveyed children who have received three doses of hepatitis B vaccine (HepB3) have consistently been over 95%. The latest survey conducted in 2015 showed that the median time of HepB3 vaccination was around 6 months which was comparable for local (median: 6.3, interquartile range: 6.2-6.6) and non-local children (6.4, 6.2-6.9).

⁴¹ In 2016, the annual local consumption level of the five concerned opioid analgesics, namely morphine, fentanyl, hydromorphone, oxycodone and pethidine were 25 462 g, 131 g, 0 g, 6 969 g and 13 832 g respectively.

Indicator (25): Cervical cancer screening

Results of the Population Health Survey 2014/15 showed that among women between the ages of 30 and 49 in Hong Kong, 62.9% had been screened for cervical cancer at least once by cervical smear test.

C LOCAL TARGET

A 25% relative reduction in risk of premature mortality from cardiovascular diseases, cancers, diabetes, or chronic respiratory diseases by 2025⁴².

D ACTIONS TO ACHIEVE TARGET

Attaining the ultimate target of “reducing premature mortality from NCD” will be closely related to achieving other targets on improving healthcare system for effective management of NCD and reducing underlying risk factors (behavioural or biological) for NCD in the wider population as set out in **Targets 2 to 9**. Details of the actions to be taken/pursued in the coming years, to achieve the committed targets for Hong Kong, are listed in **Section D** of each target.

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

NCD Prevention and Control Strategy

- The Government accords high priority to the work on prevention and control of NCD in order to alleviate its burden on healthcare and society. In the 2007-08 Policy Agenda, the Administration undertook to develop a comprehensive strategy to prevent and control NCD and enhance health

promotion to improve the population’s health.

- In 2008, the Department of Health (DH) published the strategic framework document entitled “*Promoting Health in Hong Kong: A Strategic Framework for Prevention and Control of Non-communicable Diseases*”. As part of the strategy, a high-level inter-sectoral SC chaired by the Secretary for Food and Health was set up to oversee the overall roadmap and strategy.
- The strategic framework focused strategically on reducing a “cluster” of modifiable “behavioural risk factors” and environmental determinants that can induce parallel changes in those biomedical risk factors that mediate and increase the risk of the major NCD. Key to this strategy is a population-based, life course approach that empowers the individual and engages the community in partnership to create environments that support healthy life choices⁴³. This is well illustrated by our tobacco control policy which adopts legislation, enforcement, taxation, publicity and education, as well as support for smokers to quit.
- In 2016, the SC met and agreed, in light of increasing NCD burden globally and locally, to re-define the SC’s terms of reference to align with the WHO’s Global NCD Action Plan and to come up with a set of local NCD targets and indicators applicable for the next couple of years which will be based on WHO guidance and recommendations on systems, programmes

⁴² The voluntary global target for premature mortality from 4 NCD: ‘25% relative reduction in risk of premature mortality from 4 NCD over the 15 year period 2010-2025’ is set by the WHO at a relative reduction of 2% per year.

⁴³ More details about the strategic framework is available at: https://www.change4health.gov.hk/en/strategic_framework/structure/steering_committee/index.html

and actions required to achieve the time-bound commitments, indicators and targets.

Cancer Prevention and Control Strategy

- To address the key NCD, namely cancers, the Government set up the Cancer Coordinating Committee (CCC) in 2001 under the chairmanship of Secretary for Food and Health to give advice on strategies and steer the work on cancer prevention and control. This embraces cancer surveillance, cancer prevention and screening, cancer treatment, and cancer research and development. The CCC's membership is drawn from a broad base comprising public, private, professional and academic sectors. Underpinning the CCC is the Cancer Expert Working Group on Cancer Prevention and Screening (CEWG) which meets regularly to review scientific evidence from abroad and locally, and formulate recommendations for cancer prevention and screening in Hong Kong⁴⁴.

Vaccination Strategy

- The Scientific Committee on Vaccine Preventable Diseases (SCVPD) under the Centre for Health Protection (CHP) of DH provides science-based advice on vaccine use at the population level. It makes recommendations regarding the Hong Kong Childhood Immunisation Programme (HKCIP) from the public health perspective. The Maternal and Child Health Centres of DH strategically located throughout the territory provide free immunisation to local children up

to the age of 5 years in accordance with the HKCIP⁴⁵.

- In 1988, the universal hepatitis B immunisation programme for newborns began; this is an effective preventive strategy for liver cancer. With effect from 2000, the three doses regime (newborn, 1 month, 6 month) of hepatitis B vaccination has been implemented.
- In Hong Kong, HPV vaccine is recommended by the SCVPD and the Scientific Committee on AIDS and Sexually Transmitted Infections (SCASTI) under CHP of DH for individual protection against cervical infection and cancer arising from specific types of HPV viruses. As to whether free/subsidised population-based vaccination should be provided to the local population, the two Scientific Committees conduct ongoing review of emerging scientific evidence and will make recommendations most suited to the local context.

Primary Care Development Strategy

- 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 four landmark reference frameworks⁴⁶ for preventive care in primary care settings, to support the tackling of NCD through primary care. The reference frameworks aim to:-
 - facilitate the provision of continuing, comprehensive and evidence-based care in the community;

⁴⁴ The latest recommendations on screening for seven cancers revised in 2016 can be found at: <http://www.chp.gov.hk/en/content/9/25/31932.html>

⁴⁵ Sources:

- <http://www.chp.gov.hk/en/sas6/101/110/106.html>
- http://www.fhs.gov.hk/english/main_ser/child_health/child_health_recommend.html
- <http://www.dh.gov.hk/english/press/2011/110722-3.html>

⁴⁶ Reference frameworks include:

- 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

- (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

- Under the SC, three action plans targeting diet and physical activity, alcohol harms and injury prevention were published in 2010, 2011 and 2015 respectively, under which multi-sectoral actions have been/will continue to be implemented and stepped up.
- Grounded on CEWG's recommendations on cervical cancer screening, DH launched the territory-wide Cervical Screening Programme (CSP) in March 2004, in collaboration with healthcare professionals across sectors, to facilitate and encourage women aged 25 to 64 who ever had sex to receive regular cervical cancer screening by cytology every three years after two consecutive normal screens. Over 560 000 eligible women have participated in the programme as of 31 December 2017.
- To strengthen cervical cancer screening services especially among low-income groups, a three-year Community Care Fund (CCF) Pilot Scheme on Subsidised Cervical Cancer Screening and Preventive Education for Eligible Low-income Women was launched on 13 December 2017.
- Taking reference from recommendations of the SCVPD and SCASTI, the CCF provided financial support to a 3-year "Free Cervical Cancer Vaccination Pilot Scheme" to teenage girls from eligible low-income families with effect from

October 2016. The scientific committees will keep a close watch on emerging evidence regarding costs and benefits of introducing a population-based HPV vaccination, and make recommendations for Hong Kong accordingly.

- To reduce burden arising from colorectal cancer (CRC), DH launched a 3-year "CRC Screening Pilot Programme" on 28 September 2016 to provide subsidised CRC screening for Hong Kong residents born from 1946 to 1955 by phases.

3) Specific actions to be taken or explored to achieve target by 2025

- Work closely with relevant sectors in society for successful implementation of the multisectoral NCD action plan and monitor action progress against the committed targets using indicators agreed for Hong Kong. (FHB/DH)
- Continue fostering public-private partnerships, engaging civil societies and networking with stakeholders in NCD prevention and control locally and abroad. (FHB/DH)
- Strengthen NCD surveillance by the following means:-
 - (a) Keep track of population NCD status and key behavioural (e.g. smoking, alcohol drinking, physical inactivity, unhealthy diet, salt intake) and biomedical (e.g. diabetes and obesity, raised blood pressure, raised total cholesterol, etc.) risks, based on WHO's STEPwise approach;
 - (b) Conduct the second population-based Food Consumption Survey to keep track of the population intake of foods (e.g. salt,

- fruit and vegetables, oil and fat, etc.) that are associated with diet-related NCD;
- (c) Explore data sharing (e.g. clinical data on diabetes and other NCD) and big data analytics by the Hospital Authority (HA); and
 - (d) Enhance surveillance of risk factors for NCD among children and adolescents. (DH/Food and Environmental Hygiene Department).
- Explore the feasibility of implementation of “best buys”⁴⁷ and timely implementation of other recommended interventions to reduce NCD risk factors and strengthen health systems to address NCD based on WHO guidance. (All government bureaux/departments)
 - Enhance cancer surveillance by strengthening steer and support to the Hong Kong Cancer Registry to produce cancer data of use for policy formulation, policy-driven research, cancer service planning and evaluation of preventive/screening programmes. (FHB/DH/HA)
 - Further promote awareness and uptake of cervical cancer screening by eligible women through stepping up publicity and community actions especially for under-screened groups. (FHB/DH)
 - Provide subsidised CRC screening to average-risk population aged 50 to 75 as recommended by the CEWG. (DH)
- Keep abreast with emerging evidence on prevention and screening of cancers and other NCD of public health importance. (DH)
 - In view of the fact that green living promotion (such as commuting by walking and cycling; eating greener with more seasonal fruits and local vegetable products but less meat; drinking water in own bottle in place of processed beverages) can yield co-benefits for other important issues (e.g. energy saving, cleaner air and addressing climate change) while contributing to NCD prevention and control, FHB/DH will broaden the current partnership base by working with other government bureaux/departments and non-health sectors (such as city development, urban planning, transport and environment) in promotion of healthy living by advocating for and promoting multiple co-benefits that can be gained in promoting healthy eating and physical activities. (Development Bureau/ Planning Department, Environment Bureau/ Environmental Protection Department, FHB/DH and Transport and Housing Bureau/Transport Department)



⁴⁷ 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 ≤ 1 \$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 GMF⁴⁸)

Indicator (1): Unconditional probability of dying between ages of 30 and 70 from four non-communicable diseases (4 NCD), namely cardiovascular diseases, cancers, diabetes or chronic respiratory diseases denoted by $40q30$)

- Monitoring frequency: annual
- Source: Database of registered death records maintained by the Department of Health

Indicator (2): Cancer incidence and mortality, by type of cancer per 100 000 population breakdown by age and sex

- Monitoring frequency: annual
- Sources: Hong Kong Cancer Registry, Hospital Authority (for cancer incidence) and database of registered death records maintained by the Department of Health (for cancer mortality)

Indicator (20): Access to palliative care assessed by morphine-equivalent consumption of strong opioid analgesics (excluding methadone) per death from cancer

- Monitoring frequency: annual
- Source: Drug Office, Department of Health
- Morphine-equivalent (Meq) volumes are estimated by: $(1 * \text{morphine}) + (83.3 * \text{fentanyl}) + (5 * \text{hydromorphone}) + (1.33 * \text{oxycodone}) + (0.25 * \text{pethidine})$

Indicator (22): Availability of vaccines against human papillomavirus (HPV) as part of a national immunisation schedule

- Monitoring frequency: annual
- Source: Department of Health

⁴⁸ Detailed definitions and specifications of all indicators set out under the WHO's GMF are available at: http://www.who.int/nmh/ncd-tools/indicators/GMF_Indicator_Definitions_Version_NOV2014.pdf

Indicator (24): Vaccination coverage of hepatitis B vaccine measured by proportion of children who received three doses of hepatitis B vaccine (HepB3) and the timeliness of vaccination (as reflected by median and interquartile range) for HepB3 among preschool children

- Monitoring frequency: every 2-3 years
- Source: Immunisation Survey, Department of Health

Indicator (25): Proportion of women between the ages of 30 and 49 screened for cervical cancer at least once

- Monitoring frequency: every 2 years
- Source: Population Health Survey / Health Behaviour Survey, Department of Health
- Definition of “cervical cancer screening” is: cervical smear test performed on women with no symptom prior to the test⁴⁹

⁴⁹ According to WHO’s definition under the GMF, apart from pap smear, cervical cancer screening methods can also be visual inspection with acetic acid/vinegar (VIA) and HPV test.