

**Supplementary A.** The definition of non-communicable diseases based on ICPC-2 and ICD-9-CM codes

<b>Disease</b>	<b>ICPC-2</b>	<b>ICD-9-CM</b>	<b>Clinical parameter</b>
Diabetes mellitus	T89, T90	250.x	Not applicable
Hypertension	K86, K87	401.x-405.x	Not applicable
Cardiovascular diseases	K74-78, K89-91	410.x-414.x, 428.x 429.79, 430.x-438.x,	Not applicable
Cancer	A79, B72-B74, D74-D77, F74, H75, K72, L71, N74, R84-R85, S77, T71, T73, U75-U77, W72, X75-X77, Y78, Y77, Y79, X81, W73, S79, R92, N76, L97, D78, B75	140.x-209.x, 230.x-239.x	Not applicable
Chronic kidney diseases	Not applicable	585.3x, 585.4x, 585.5x, 585.6x	eGFR<60
Chronic respiratory diseases	R79, R95, R96, R03, R04, R05	490.x-496.x	Not applicable

**Supplementary B.** The structure cost questionnaire for public and private health service utilization**Demographic information:**

1. Sex	1.Male		2.Female		
2. What is your date of birth?	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	d		m		year
3. What is your place of birth?	1.Hong Kong	2.Guangdong Province	3.Other provinces of mainland China	4.Macao	5.Other countries / regions
4. What is your highest level of education attainment?	1.No school / pre-primary	2.Primary	3.Secondary	4.Post-secondary or above	
5. What is your marital status?	1.Single	2.Married	3.Separated or divorced	4.Widowed	5.Refuse to answer
6. What is your current employment status?	1.Employed (full-time)	2.Employed (part-time)	3.Employer/self-employed	4.Unemployed	
	5.Retired	6.Refuse to answer			
7. What is your average monthly income, including all sources?	1.Below \$5,000	2. \$5,000 - \$9,999	3.\$10,000-\$19,999	4.\$20,000-\$29,999	
	5.\$30,000-\$39,999	6.\$40,000 or above	7.Refuse to answer	8.Don't know	
8. Are you covered by any health insurance?	1.Individually-purchased private health insurance	2.Employer-provided private health insurance	3.No		
9. Are you receiving any financial subsidies from the government ?	1.Comprehensive Social Security Assistance (CSSA)	2.Disability Allowance (DA)	3.Elderly health care vouchers	4.Old Age Living Allowance (OALA)	
	5.Others (specify)	6.No			

**Doctor-diagnosed chronic conditions:**

10. Have you been diagnosed with any of the following chronic conditions?	1. Cancer	2. Stroke	3. Coronary Heart disease
	4. Asthma	5. Chronic obstructive pulmonary disease	6. High blood cholesterol
	7. Hypertriglyceridemia	8. Hypertension	9. Diabetes mellitus
	10. Kidney diseases	11. Liver disease	12. Musculoskeletal diseases
	13. Skin diseases	14. Thyroid disease	15. Stomach and intestinal diseases
	16. Respiratory disease (other than asthma and COPD)	17. Parkinson's disease	18. Epilepsy
	19. Anemia	20. Congenital blood diseases	21. Mental health illnesses. Specify:
	22. Immune diseases	23. Others (specify):	

**Utilization of private health services:**

11. Did you have any in-person private doctor consultation during 2020 (during COVID-19 outbreak) (western medicine / Chinese medicine)? (If no, go to Q12)	1. Yes 2. No		
a. How many visits?	1. General Practitioner visits	2. Specialist visits	3. Chinese Medicine visits
12. Did you have any in-person private allied health professional consultation during the whole year of 2020 (e.g., physiotherapists / occupational therapists / dietitians)? (If no, go to Q13)	1. Yes 2. No		
a. How many visits?	visits		
13. Did you have any private doctor teleconsultation during the whole year of 2020 (western medicine / Chinese medicine)? *Teleconsultation: the practice of medicine over a distance through telecommunication systems	1. Yes 2. No		
a. How many visits?	1. General Practitioner visits	2. Specialist visits	3. Chinese Medicine visits
14. Did you have teleconsultation with private allied health professionals during the whole year of 2020 (e.g. physiotherapists, occupational therapists, dietitians)? *Teleconsultation: the practice of medicine over a distance through telecommunication systems	1. Yes 2. No		

a. How many visits?	visits		
15. Have you taken any medication that was bought directly from the drug store during the whole year of 2020? (If no, go to Q16)	1. Yes 2. No		
16. Were you ever admitted to a private hospital during the whole year of 2020? (If no, go to 17)	1. Yes 2. No		
a. How many visits?	visits		
b. What was the length of each stay?	1. days	2. days	3. days
	4. days	5. days	6. days
c. In the year 2020, did you attend an accident & emergency department of a private hospital?	1. Yes, times		2. No
17. Did you have any private medical tests during the whole year of 2020? (If no, go to 18)	1. Yes 2. No		
a. If yes, what type of medical tests? (exclude dental and vision examination) (choose all that apply)	1. General Health Screening packages		
	2. Cancer screening (mammogram/ breast ultrasound, Pap test, Prostate cancer screening, colonoscopy, etc)		
	3. Blood tests		
	4. Diagnostic imaging (DXA, X-ray, MRI, CT, etc)		
	5. Others (specify):		
b. How many times did you attend each type of medical tests during the whole year of 2020?	1. General Health Screening packages:		times
	2. Cancer screening:		times
	3. Blood tests:		times
	4. Diagnostic imaging:		times
	5. Others:		times

**Utilization of public health services:**

18. Did you have any in-person public doctor consultation during 2020 (during COVID-19 outbreak) (western medicine / Chinese medicine)? (If no, go to Q19)	1. Yes 2. No		
a. How many visits?	1. General Practitioner	2. Specialist	3. Chinese Medicine
	visits	visits	visits
19. Did you have any in-person public allied health professional consultation during the whole year of 2020 (e.g., physiotherapists / occupational therapists / dietitians)? (If no, go to Q20)	1. Yes 2. No		
a. How many visits?	visits		

20. Did you have any public doctor teleconsultation during the whole year of 2020 (western medicine / Chinese medicine)? <i>(If no, go to Q21)</i> *Teleconsultation: the practice of medicine over a distance through telecommunication systems	1. Yes 2. No		
a. How many visits?	1. General Practitioner visits	2. Specialist visits	3. Chinese Medicine visits
21. Did you have teleconsultation with public allied health professionals during the whole year of 2020 (e.g. physiotherapists, occupational therapists, dietitians)? <i>(If no, go to Q22)</i> *Teleconsultation: the practice of medicine over a distance through telecommunication systems	1. Yes 2. No		
a. How many visits?	visits		
22. Were you ever admitted to a public hospital during the whole year of 2020? <i>(If no, go to 17)</i>	1. Yes 2. No		
a. How many visits?	visits		
b. What was the length of each stay?	1. days	2. days	3. days
	4. days	5. days	6. days
c. In the year 2020, did you attend an accident & emergency department of a public hospital?	1. Yes, times		2. No

**Supplementary C.** Potential disease-specific indicators and complications of different subtype of NCD

<b>Disease</b>	<b>Severity Indicators</b>	<b>Complications</b>
Diabetes mellitus	Hemoglobin A1c	Cardiovascular disease End stage renal disease
Hypertension	Blood pressure	Cardiovascular disease End stage renal disease
Cardiovascular diseases	Troponins; Creatine kinase; Beta natriuretic peptide for heart failure; coronary angiogram for chronic IHD;	Recurrent event
Chronic kidney disease	Estimated glomerular filtration rate	End stage renal disease;
Chronic respiratory disease	FEV1/FEV	Non-COVID-19 related pneumonia (ICD-9-CM:460–466, 480–486); acute exacerbations (ICD-9-CM 491.21, 493.22, 493.92, 494.1)
Cancer	Stage of cancer	Stage progression