

Sample Cohort 2.0 DB User Manual

(Ver 1.0)

2017. 6.

P Prologue

1. User manual update information

version	date	Update details
Ver 1.0	2017. 6.	• User manual released

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1 Sample Cohort 2.0 DB Major Revisions

go. Construction background and purpose

• The sample cohort DB released in July 2014 had a total of 591 cases as of May 2017.

Provided to people, evidence-based policies and academic research using health insurance data

Contributing to development.

• Reflects the requests of researchers that have been raised so far and provides administrative support as a research database.

For the purpose of reinforcing the linkage rate and accuracy of data and claim data, and strengthening personal information protection and de-identification measures in accordance with changes in the remote access environment,

Established a new tram database.

me. Major revisions

<Table 1> Major revisions to Sample Cohort 2.0 DB

division	Major revisions	Reason for revision
sampling	As of 2006*	Strengthening the representation of medical benefit recipients
	Stratification: Gender	
	Additional missing groups for insurance premiums are also provided to strengthen representativeness of the entire population and support analysis convenience.	
Observation period 2002	2015 (14 years) Considering prospective and retrospective observation periods	
Eligibility and Insurance Premiums	Support for analysis convenience provided by year of birth	
	Enhance the accuracy of administrative data by correcting it with city, county and district codes valid at the relevant time	
	Enhancing the accuracy of administrative data by matching eligibility and insurance premium imposition points	
	Provision of eligibility for general primary screening and analysis convenience support	
Births and deaths are separated	into separate tables to support analysis convenience	
diagnosis	Personal ID provided on all treatment tables for convenience of analysis	
	Supports separate analysis for medical/dental/oriental medicine/pharmacy	
	Correct incorrect input of sickness symbol and benefit code, enhance accuracy of claim data	
	Excluding drug item codes; Providing	Strengthening de-identification measures
	drug efficacy classification codes; Strengthening	Support for analysis convenience
	masking of sensitive diseases; Excluding	Strengthening de-identification measures
health checkups during	life transition period;	Separate health checkup cohort DB provided
Nursing institution	Support for analysis convenience by providing city/county/district addresses	
	Enhance the accuracy of administrative data by correcting it with city, county and district codes valid at the relevant time	
	Providing the number of hospitalization and surgical beds and providing analysis convenience	
Access method Online	analysis through remote server Convenient analysis support	

all. Strengthening sample representativeness

1) Change in extraction reference point (2002 ~ 2006)

• Medical treatment history information of medical benefit recipients has been integrated into the Corporation's system since 2006.

As of 2006, a national sample was extracted to determine the overall sample size.

Prospective (2006-2015) medical history information can be provided.

• In addition, for the convenience of research, a retrospective (2002~2005) intra-clinic analysis of the sample as of 2006 was conducted.

Station information is also provided, but the medical treatment details of medical benefit recipients are omitted in this information.

Please note that this is done.

2) Change in stratification criteria

• Reduction of health insurance premiums for subscribers in rural areas based on stratified sampling of the entire population

By adding the 'big city/small city/rural/fishing village' category, which corresponds to the

Strengthening the voice.

• Sampling: Total 2,142 floors (2×17×21×3)

Population: Koreans who maintained their status as health insurance subscribers or medical benefit recipients for one year in 2006
48,222,537 people with Republic of Korea nationality

National sample stratified sampling criteria Age,					sample size
gender	region, subscriber classification, and insurance premium quintile				
Male/Female	1~79 years old (5 years old) /80 years or older	big city /Small and medium-sized cities	Medical benefit recipient		1,000,000 people
			Regional 1st quintile	Workplace 1st quintile	
			Regional 2nd quintile	Workplace 2nd quintile	
			
		Regional 9th quintile	Workplace 9th quintile		
		Regional Decile	Workplace Decile		

1a. Additional specimens available

1) Sample of missing insurance premium quintile (11,638 people)

• Despite the correction of the premium quintile, individual premiums, such as professional soldiers and shipping union members, are

If the premium is not charged or is billed later due to reasons such as long-term leave, the premium decile is entered as missing.

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• Among the national population in 2006, this group falls under the 'normal insurance premium decile missing group'.

Additional samples are extracted so that they can be used for necessary research.

2) Neonatal specimens

• In addition, newborn samples have been sampled since 2006 in the same manner as national sampling.

It is provided so that it can be used selectively according to research needs.

<Table 2> Number of additional newborn samples by year

Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total			
Newborn	9,355	10,236	9,572	8,983	9,758	9,633	9,857	8,960	8,858	8,949	94,161			

mind. Convenient analysis support... Detailed introduction in each table description

• (Qualifications and insurance premiums) Age previously provided in 5-year increments is now provided as birth year, enabling calculation in 1-year increments, strengthening the power of testing demographic factors.

• (Qualifications and insurance premiums) Eligibility and insurance premiums to determine whether you are eligible for the general primary examination in the relevant year
Supports examination effect analysis, etc. by adding it as a table variable

• (Birth and Death) By providing separate birth and death tables,

Promoting convenience of connection between

• (Medicine) The personal identification number (RN_INDI), which was provided only in the statement table (T20), can be used within the clinic.
It is also provided as a variable in the station (T30), illness history (T40), and prescription details (T60) tables.

Promoting convenience of linking between tables

• (Medical treatment) Treatment of drugs according to the 'Regulations on Classification Numbers for Drugs, etc.' (Ministry of Food and Drug Safety regulations)
Supports drug analysis by providing drug efficacy classification codes

• (Health care institution) Provides patient medical care by providing the location of care institutions at the city, county, and district level.
Support for spatial analysis of usage patterns

• (Health care institution) Provides the number of hospitalization, surgery, and emergency beds for each care institution.
Support for mutation analysis according to theory

bar. Enhancing data accuracy

• Reflecting that health insurance premiums are charged on the 1st of every month, an individual's

Qualification and insurance premium information is also extracted as of the 1st of every month and corrected by year.

• In cases where the insurance premium is missing despite being a health insurance subscriber, the cause is that the insurance premium is not

charged to the individual, such as a professional soldier or the shipping union, or suspension of benefits,

Monthly acquisition, post-reporting (retroactive), long-term leave, voluntary continuation, etc. are identified, and missing values are calculated.

Provided after correction with annual average insurance premium

• City/county/gu code corresponding to the residence of the person eligible for health insurance and the location of the medical institution

is provided by converting it into the resident registration address code of the Ministry of Government Administration and Home Affairs, which is valid on January 1st every year.

Invalid city/county records, such as missing or existing only at the city/provincial level.

Provided by replacing it with the closest valid city, county, and district code of the individual.

• Review and utilize changes in administrative districts by year due to reorganization of city, county, and district administrative districts.

• Special cases that are abnormally recorded in the disease symbol and fee code entered on the treatment table

Correction to valid values by removing characters or symbols

buy. Strengthening de-identification measures



- 1) Use of substitution variables
- ÿ Subject to application of substitution variables

<Table 3> Application details of substitute variables for main linked variables

variable name	raw data variables	composition
Personal identification number (RN_INDI)	Resident registration number (13 digits) Personal identification number (7 digits)	
Claim unique number (RN_KEY)	Statement key (23 digits)	Claim unique number (14 digits) : Year/month (6 digits) + serial number (8 digits)
Nursing institution identification number (RN_INST) Nursing institution symbol (8 digits) Nursing institution identification number (6 digits)		

2) Grouping

<Table 4> Grouping variables and contents

variable	detail							
Premium decile Grouping	insurance premiums for regional and employed subscribers from the 20th decile to the 10th decile.							
Moderate disability	<div>Disability levels are grouped into severe (grades 1-2) and mild (grades 3-6)</div> <table><tr><th colspan="2">Before grouping</th><th>After grouping</th></tr><tr><td>00: Not applicable 01: Level 1 02: Level 2 03: Level 3</td><td>04: Level 4 05: Level 5 06: Level 6</td><td>Missing: Not applicable 1: Severe (Grade 1-2) 2: Mild (Grade 3-6)</td></tr></table>		Before grouping		After grouping	00: Not applicable 01: Level 1 02: Level 2 03: Level 3	04: Level 4 05: Level 5 06: Level 6	Missing: Not applicable 1: Severe (Grade 1-2) 2: Mild (Grade 3-6)
Before grouping		After grouping						
00: Not applicable 01: Level 1 02: Level 2 03: Level 3	04: Level 4 05: Level 5 06: Level 6	Missing: Not applicable 1: Severe (Grade 1-2) 2: Mild (Grade 3-6)						
Type of disability	<div>Disabilities other than major disabilities (retardation, brain lesions, vision, hearing impairment) are grouped into other disabilities.</div> <table><tr><th colspan="2">Before grouping</th><th>After grouping</th></tr><tr><td>00: Non-disabled person 01: Physically disabled people 02: Brain lesion disabled person 03: Visually impaired 04: Hearing impaired 05: Speech Impaired 06: Intellectually disabled 07: Autistic People 08: Mentally disabled people</td><td>09: Kidney impaired 10: People with heart problems 11: People with respiratory disorders 12: Hepatic impairment 13: Facially impaired 14: People with ostomy disability 15: People with epilepsy 19: Person of national merit</td><td>Missing: Not applicable 1: Physically disabled people 2: People with brain lesions 3: Visually impaired 4: Hearing impaired 5: Other disabled people</td></tr></table>		Before grouping		After grouping	00: Non-disabled person 01: Physically disabled people 02: Brain lesion disabled person 03: Visually impaired 04: Hearing impaired 05: Speech Impaired 06: Intellectually disabled 07: Autistic People 08: Mentally disabled people	09: Kidney impaired 10: People with heart problems 11: People with respiratory disorders 12: Hepatic impairment 13: Facially impaired 14: People with ostomy disability 15: People with epilepsy 19: Person of national merit	Missing: Not applicable 1: Physically disabled people 2: People with brain lesions 3: Visually impaired 4: Hearing impaired 5: Other disabled people
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3) Masking of sensitive diseases and sensitive price codes

• Standard: 2,980 (some overlap of 2,614 special diseases stipulated by the Corporation and 566 statutory infectious diseases)

• Special injuries stipulated by the Corporation: Special injuries specified in the salary management guidelines

• Target

- Sensitive illness: Injury code in the statement table (T20) and injury history table (T40)

- Sensitive fee code: Code 08 'Treatment and surgery fee' in the treatment history table (T30)

Physical action specified fee code

• Method: Display only the first digit of the code and give a '_' symbol ... (Example) A15 → A_

• Research on sensitive diseases and disease groups corresponding to sensitive price codes is conducted through customized data.

Research can be conducted without restrictions in a designated analysis room.

<Table 5> List and number of sensitive diseases and sensitive cost codes

Classification criteria	detail	Count
A, B	Special Infectious Diseases and Parasitic Diseases (A15-B92)	237
	Statutory Infectious Diseases A00-B99	479
C, D	Specialized neoplasms (C50-C639, D05-D076, D24-D299)	160
E	Special diseases Endocrine, nutritional and metabolic diseases (E280-E309)	16
F	Specialized Mental and Behavioral Disorders (F00-F99)	467
G	Special diseases of the nervous system (G40-G419)	37
	Statutory infectious diseases G000, G001, G020, G051	4
H	Statutory Infectious Diseases H131	One
I	Special diseases: Diseases of the circulatory system (I861, I862, I863, I980)	4
	Statutory infectious diseases I301, I330	2
J	Statutory Infectious Diseases J028 - J2188	38
K	Special diseases Digestive system diseases (K230, K671-K673, K930)	5
	Statutory Infectious Diseases K650	One
M	special corporal Diseases of the musculoskeletal system and connective tissue (M011-M0119, M031-M0319, M490-M4909, M730-M9009)	66
	Statutory Infectious Diseases M001-M0089	22
N	Special diseases: Diseases of the genitourinary system (N290, N330, N43-N999)	280
O	Special illness, pregnancy, childbirth and postpartum period (O0-O998)	572
	Statutory Infectious Diseases O85	One

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P	Legal infectious diseases P236, P350, P358, P371, P373, P374	6
Q	Special diseases congenital anomalies, deformities and chromosomal abnormalities (Q00-Q999)	478
R	Special illness Symptoms, signs and abnormal clinical and laboratory findings not otherwise classified (R40-R488)	44
S, T	Special injuries, poisoning and certain other consequences caused by external causes (S302-T749)	100
U	Special corporal special purpose codes (U220-U327, U843-U8439)	10 things
	Statutory infectious diseases U04, U049, U19, U199, U821, U8280, U830, U837, U8430, U8431	10 things
Z	Factors influencing health status and contact with health services for special illnesses (Z111-Z392)	138
	Statutory infectious diseases Z21, Z220	2

ah. table configuration

Sample Cohort 2.0 DB			file name	Number of cases (millions) Capacity	
Sum			19	2174	299 GB
Eligibility and Insurance Premium Table			NSC2_BNC	14	674.2 MB
Birth and Death Table			NSC2_BND	One	39.5 MB
diagnosis table	Medical and health institutions (M)	General details (T20)	NSC2_M20	153	17.1 GB
		Medical treatment history (T30)	NSC2_M30	740	69.9 GB
		Injury details (T40)	NSC2_M40	404	22.9 GB
		Prescription details (T60)	NSC2_M60	486	42.7 GB
	Dentistry (D)	General details (T20)	NSC2_D20	14	1.6 GB
		Medical treatment history (T30)	NSC2_D30	69	6.7 GB
		Injury details (T40)	NSC2_D40	16	973.5 MB
		Prescription details (T60)	NSC2_D60	9	818.8 MB
	Oriental medicine (K)	General details (T20)	NSC2_K20	20	2.1 GB
		Medical treatment history (T30)	NSC2_K30	94	8.8 GB
		Injury details (T40)	NSC2_K40	26	1.5 GB
	Pharmacy (P)	General details (T20)	NSC2_P20	12	11.8 GB
		Medical treatment history (T30)	NSC2_P30_0208 NSC2_P30_0915	113	107.8 GB
health examination table			NSC2_G1E_0208 NSC2_G1E_0915	2	675.0 MB
Nursing home table			NSC2_INST	One	51.5 MB

ruler. main item

item		Eligibility and Insurance Premiums	death	care	common Health screenings	Nursing institution
Demographic and social characteristic	gender	●				
	age	●				
	residence	●				
	Income (premium quintile)	●				
	Types of Medical Coverage	●				
	obstacle	●				
Disease history and health behavior	Past history/family history				●	
	Smoking/Drinking/Physical Activity				●	
Physical measurements and test results	Height/Weight/BMI				●	
	Chest X-ray				●	
	blood pressure/blood sugar				●	
	Other test results				●	
Medical use	corporal			●		
	Inpatient/outpatient/emergency room			●		
	Treatment and medication			●		
	medical expenses			●		
Dead	Date of death		●			
	Cause of death		●			
Nursing institution	Basic characteristics					●
	Personnel/Facilities					●

2 Birth and Death Table

go. Birth and Death Table Overview

Ÿ Table summarizing the variables of the sample: gender, year of birth, year and month of death, and cause of death¹⁾

Ÿ Death status: 47,830... A total of 47,999 people (2006-2015), including 169 newborns.

Ÿ The sample cohort DB was created based on one year of qualification maintenance in 2006, so among the subjects, those who died in 2006

There are no deaths, but newborns do not meet the one-year qualification requirement (randomly selected between January and December).

Ex) Deaths are possible.

<Table 8> Status of deaths by year

year	dead		Sum
	Subject	newborn baby	
2006	0	7	7
2007	4,961	11	4,972
2008	5,117	17	5,134
2009	5,013	17	5,030
2010	5,302	17	5,319
2011	5,311	20	5,331
2012	5,455	23	5,478
In 2013	5,500	20	5,520
year 2014	5,451	17	5,468
2015	5,720	27	5,747
Sum	47,830	176	48,006

me. Birth and Death Table Variable Entries

variable name	Variable Description	Variable value description
RN_INDI	Personal identification number	Personal identification number (7 digits), link code
BTH_YYYY	Year of birth	Sample birth year
DTH_YYYYMM Date of death		Month of death of the deceased... Link to cause of death by Statistics Korea
COD1	Cause of death 1	Use of Korean Standard Classification of Diseases and Causes of Death (KCD) codes
COD2	Cause of death 2	If the cause of death is S00-T98, enter the detailed cause (V01-Y98)

1) Application for cause of death statistics through Statistics Korea's microdata integration service (<http://mdis.kostat.go.kr>)

all. Births and Deaths Table Variable Description

1) Year of birth (BTH_YYYY)

• When calculating age based on the subject's year of birth, it is necessary to calculate 'base year' - 'year of birth'

• As of 2006, the year of birth for persons aged 85 (born in 1921 or earlier) is indicated as '1921LE'.

2) Cause of death information

• Cause of Death 1 (COD1), Cause of Death 2 (COD2)... Use Korea Standard Classification of Diseases (KCD) codes from Statistics Korea

• If the (estimated) date of death between the Corporation and Statistics Korea differs by more than 91 days, the cause of death may be missing.

3) Criteria for assigning cause of death 1 and 2

• Cause of death 1 (COD1)

- Cause of death code (A00-T98) assigned according to the Korean Standard Classification of Diseases and Causes of Death (KCD)

- It is generally written as a subcategory code (<eg> C34), and in the case of sensitive causes of death,

is presented as a middle classification code (ex. A15-A19)

• Cause of death 2 (COD2)

- If the cause of death listed in Cause of Death 1 (COD1) is S00-T98, please enter the detailed cause.

Heavy classification code (V01-Y98) assigned to cause of death 2

- For general deaths (A00-R99), only cause of death 1 is listed.

• S00-T98: Damage, poisoning, and certain other results caused by external factors (accidents such as traffic accidents, poisoning, assault, etc.)

• V01-Y98: External causes of morbidity and death

< Note. Disease-related variables and disease classification codes >

division	variable name	explanation	note
Dead table	Cause of Death 1 (COD1)	Cause of death code according to KCD code	korea standard Disease/Cause of Death classification (KCD) reference
	Cause of Death 2 (COD2)	If the cause of death is S00-T98, please enter detailed cause. (V01-Y98)	
treatment table (T20)	Sangbyeong Joo (SICK_SYM1)	Illnesses in which the patient's needs for treatment or examination were greatest during the treatment period	
	Wounded Soldier (SICK_SYM2)	Injuries that were present or occurred with the main illness during the treatment period and that affected the patient's treatment	
treatment table (T40)	Corporal symbol (MCEX_SICK_SYM)	All claims in the statement of claim including major injuries and injuries. corporal with	

• Related code: Korean standard disease and cause of death classification

Refer to the Statistics Korea Statistical Classification Portal (http://kssc.kostat.go.kr/ksscNew_web/index.jsp)

3 Eligibility and Premium Table

go. Eligibility and Premium Table Overview

- 1) Year of construction: Qualification and insurance premium details from 2002 to 2015
 - 2) Contents: Qualification information such as gender, age, residence, health insurance type, and socioeconomic information
- 10 items including information and disability information

me. Eligibility and Premium Table Variable Entries

variable name	Variable Description	Variable value description
STD_YYYY	Base year	Base year of construction
RN_INDI	Personal identification number	Personal identification number (7 digits), link code
SEX	castle	1: male, 2: female
SGG	City, county and district	City/City (2) City/County/District (3)
GAIBJA_TYPE	Subscriber classification	1: Local head of household, 2: Local household member, 5: Employee subscriber, 6: Employee dependent, 7: Medical benefit householder, 8: Medical benefit household member
CTRB_Q10	Premium decile 10th decile	1st to 10th deciles
DSB_SVRT_CD	Disability severity classification	0: Not applicable, 1: Severe (Grade 1-2), 2: Mild (Grade 3-6)
DSB_TYPE_CD	Classification of disability types	0: Not applicable, 1: Physical disability, 2: Brain lesion disorder, 3: Visual impairment, 4: Hearing impairment, 9: Other disability
G1E_OBJ_YN	Whether you are eligible for general first screening Y	Subject
SMPL_TYPE_CD	Sample classification	1: All citizens (no insurance premium information missing) 2: All citizens (there is missing insurance premium information) 3: Newborn (no insurance premium information missing) 4: Newborn (insurance premium information missing)

all. Eligibility and Premium Table Variable Descriptions

1) Personal identification number (RN_INDI)

• Individual unique number

• Can be used as a connection variable linking qualification and insurance premium tables, treatment tables, and examination tables.

2) Sample classification (SMPL_TYPE_CD)

• Samples and additional samples can be distinguished by personal identification number.

Specimen type	Individual identification number (RN_INDI)	Sample classification (SMPL_TYPE_CD)
2006 national sample	1 ~ 1,000,000	One
2006 Normal insurance premium missing group additional sample	1,000,001 ~ 2,000,000 Newborn	2
additional sample	2,000,001 ~ 3,000,000	3
Newborn normal insurance premium missing group additional sample	3,000,001 ~ 4,000,000	4

3) City/county code (SGG)

• Composition (five digits): City/City (two digits) + City/County/District (three digits)

Example) City/county code '11110': '11' (Seoul) + '110' (Jongno-gu)

• City, county and district codes are converted to resident registration address codes of the Ministry of Government Administration and Home Affairs, which are effective on January 1st every year.

• Review and utilize changes in administrative districts by year due to reorganization of city, county, and district administrative districts.

• Invalid city, county and district codes, such as missing or existing only at the city/provincial level, are

Replaced with the individual's closest valid city/county/gu code

• Four counties with an annual average number of subjects of less than 500 have integrated codes with neighboring counties.

Before integration			After integration		
City/county code	City/County Life Name	Number of target	city/county/gu code	City/County Life Name	Number of subjects
28720 Ongjin-gun, Incheon Metropolitan City	390.6		28710 Ganghwa-gun, Incheon Metropolitan City	1769.9	
42800 Yanggu-gun, Gangwon-do		472.6	42790 Hwacheon-gun, Gangwon-do		1031.0
47760 Yeongyang-gun, Gyeongsangbuk-do		413.9	47750 Cheongsong-gun, Gyeongsangbuk-do		1024.1
47940 Ulleung-gun, Gyeongsangbuk-do		253.1	47930 Uljin-gun, Gyeongsangbuk-do		1460.1

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4) Subscriber classification (GAIBJA_TYPE)

Ÿ Target: Health insurance subscribers and medical benefit recipients

Ÿ Classification: Local subscribers (1,2), workplace subscribers (5,6), and medical benefit recipients (7,8)

code	division		explanation
1	region	head of local household	Local subscriber and head of household on resident registration
2		Local household member	A member of the household listed on the resident registration as a local subscriber
5	workplace	Work subscriber	Work subscriber
6		Work dependent	A person registered as a dependent of an employed subscriber
7	medical benefits	Head of household receiving medical benefits	Head of household who is eligible to receive medical benefits
8		Medical benefit household member	Household members of medical benefit recipients

<Health insurance coverage>

Ÿ **(Classification)** Divided into employer subscribers and local subscribers.

1. Employee subscribers: Workers and employers at workplaces. Consisting of public officials, faculty and staff, and their dependents
2. Local subscribers: Applicable to people excluding employer subscribers and their dependents.

Ÿ A dependent refers to a person whose livelihood is mainly supported by an employed subscriber and who does not receive any compensation or income.

- Spouse, lineal ascendant (including spouse's lineal ascendant), lineal descendant (including spouse's lineal descendant), and
- Including the spouse, brothers and sisters

<Recipients of medical benefits>

Ÿ Every year, the Minister of Health and Welfare notifies each city/provincial governor of the criteria for selecting medical benefit recipients and determines their jurisdiction over their place of residence.

The head of the security agency selects beneficiaries according to the National Basic Livelihood Security Act based on household or individual benefits, and divides them into Type 1 and Type

2.

- Among those who have requested medical benefits under other laws, the Minister of Health and Welfare has recognized that medical benefits are necessary.

Qualification management and granting of medical benefits to designated persons, etc.

5) Insurance premium decile (CTRB_Q10)

Ÿ It is levied on a household basis as data to determine the income level of health insurance subscribers.

Through insurance premium information, 10th percentile is calculated for each employee subscriber and local subscriber.

classified into groups and apply the same premium tier to holders of the same health insurance card.

Ÿ Insurance premiums are not charged in that month due to reasons such as obtaining health insurance eligibility in the current month.

In this case, it is adjusted to the average annual insurance premium.

Ÿ Group with missing insurance premium: Among health insurance subscribers, no insurance premium is charged to individuals, such as professional military personnel or shipping unions.

Cases where insurance premiums are billed after the fact due to reasons such as long-term leave, etc.

6) Disability-related information

ÿ Disability information registered with the Social Security Information Service

ÿ Disability severity classification (DSB_SVRT_CD): Not applicable, severe (grade 1~2), mild (grade 3~6)

ÿ Classification of disability types (DSB_TYPE_CD)

ÿ Non-disabled (not applicable), physically disabled (1), brain lesion disabled (2), visually impaired (3), hearing impaired

Disabled people (4), other disabled people (9)

ÿ Other disabled people (9): speech impaired, intellectual disabled, mentally disabled, kidney disabled, autistic disabled, heart disabled,

People with respiratory impairment, liver impairment, facial impairment, ostomy impairment, epilepsy impairment

<Complex disability, disability level>

ÿ If two or more disabilities are registered (complex disabilities)... Based on registration information from the Social Security Information Service

- Constructed with disability information with a high disability grade, and if the disability grade is the same, constructed with additionally registered disability information

7) Whether you are eligible for general first checkup (G1E_OBJ_YN)

ÿ Whether you are eligible for screening each year (marked with Y)

4 treatment table

go. Treatment table overview

• Construction period: 2002~2015 (14 years)

• Medical treatment information for medical benefit recipients has been provided since 2006.

• Construction details

- The medical institution requests medical treatment benefits based on the subject's medical history and the decision is made upon review.

Data on which payment has been decided after

• Detailed configuration

- 2 to 4 detailed tables (statement (T20), treatment history (T30), illness and disease) depending on the type of statement format (medical/health institution (M), dental (D), oriental medicine (K), pharmacy (P)) Consists of details (T40), prescription issuance details (T60))

- Each detailed table can be linked by billing unique number (RN_KEY)

<Table 12> Overall composition of treatment table and number of variables

Format classification table type	Medical/Health Institution (M)	Dental (D)	Oriental medicine (K)	Pharmacy (P)
	Format classification (FORM_CD)			
	02: Medical inpatient 03: Medical outpatient 07: Health institution inpatient 08: Health institution outpatient 09: Psychiatric day ward 10: Psychiatric inpatient 11: Psychiatry outpatient 15: Hemodialysis outpatient	04: Dental hospitalization 05: Dental outpatient clinic	12: Oriental medicine hospitalization 13: Oriental medicine outpatient clinic	20: Pharmacy dispensing 21: Prescription dispensing
Specification (T20)	General information of the patient, information on the medical institution, main/injured diseases, number of days of hospital visit, total medical expenses, etc.			
Medical treatment history (T30)	History of activities in the hospital (prescription, surgery, materials, etc.) + amount, etc.			Pharmacy dispensing details + dispensing fees, etc.
Details of injuries (T40)	Details of all injuries received treatment, including major injuries			-
Prescription issuance details (T60)	Out-of-hospital prescription details (prescription drug code, dosage, etc.)			-

me. Detailed configuration status of treatment table

<Table 13> Detailed composition of treatment table

division	detail
Specification (T20)	Billing unit statement details of medical institutions Medical institutions (hospitals, clinics, pharmacies, etc.) provide treatment, medicines, etc. to subjects and prepare billing unit statements according to the billing method Common details Statement form code, treatment department, major/injury disease, date variables (Consisting of date of treatment start), number of days variable (number of days of care, number of inpatient days, total number of prescription days), trial decision cost variable (total amount of care benefit cost, out-of-pocket cost, insurance company contribution), etc.
Medical treatment history (T30)	Detailed information on medical treatment activities, medicines, treatment materials, etc. of medical institutions; detailed data on medical treatment (including dispensing, etc.) and resulting billing amounts;
Injury details (T40)	Detailed data related to the patient's injury history (management of all injuries and illnesses treated) Consists of additional injured soldier data, including main injured and injured soldiers in the statement
Prescription issuance details (T60)	Detailed data on outpatient prescription details for each prescription issued

4.1 Specification details (T20) variable items and explanation 2)

variable name	Variable Description	Variable value description
RN_INDI	Personal identification number	Personal identification number (7 digits), link code
RN_KEY	Unique billing number	Claim identification number (14 digits), link code
RN_INST	Nursing institution identification number	Nursing institution identification number (6 digits), linkage code
MDCARE_STRT_DT Treatment start date		<ul style="list-style-type: none"> · Date the examinee started receiving treatment · Medicine, dentistry, oriental medicine, health institutions: date of treatment start or visit to the hospital in the current month · Pharmacy: Date of dispensing medication
FORM_CD	Format code	<ul style="list-style-type: none"> · Nursing care benefit cost review (medical protection) claims and statements Medical treatment classification statement format classification
MCARE_SUBJ_CD Medical department code		<ul style="list-style-type: none"> · (Hospital level or higher) Department of actual treatment received · (Clinic) Department of treatment corresponding to the name of the disease
SICK_SYM1	Joo Sang-byeong	<ul style="list-style-type: none"> · Patient information regarding treatment or examination during the treatment period Corporal with the greatest demand
SICK_SYM2	wounded soldier	<ul style="list-style-type: none"> · Illnesses that were present or occurred with the main illness during the treatment period and that affected the patient's treatment
FST_HSPTZ_DT	Date of first hospitalization	<ul style="list-style-type: none"> · Enter in case of separate claim for hospitalization care benefit costs
HSPTZ_PATH_TYPE Hospitalization route classification		<ul style="list-style-type: none"> · Enter if you are a hospitalized patient at hospital level or higher. · 1st seat (arrival route) 1: Via another nursing facility, 2: Emergency rescue evacuation, 3: Other · 2nd digit (route of hospitalization) 1 emergency room, 2 outpatient
OIJ_TYPE	Classification of fantasy, etc.	<ul style="list-style-type: none"> · Code for classification of eligible subjects for industrial and veterans, military personnel, patients with rare diseases, etc. y The criteria for selection of subjects and application details for each system are as follows: Please refer to related laws and notices
OPRTN_YN	Surgery	<ul style="list-style-type: none"> · 0: No surgery, 9: Surgery
MDCARE_DD_CNT Number of nursing days		<ul style="list-style-type: none"> · Total number of days the patient was treated (including days of medication administration) y In case of hospitalization, the number of days of in-hospital medication is included. · If 0: Collaboration
VSHSP_DD_CNT	Number of hospital days	<ul style="list-style-type: none"> · Number of days hospitalized or visited the hospital and received treatment
TOT_PRSC_DD_CNT Total number of prescription days		<ul style="list-style-type: none"> · The longest number of prescription days for each prescription drug listed in the prescription · If the prescription details are different depending on the prescription date, add up the number of prescription days and enter it.
MCARE_RSLT_TYPE Treatment result classification		<ul style="list-style-type: none"> · Classification of patient status on the last treatment date 1: Continue, 2: Transfer, 3: Return, 4: Death, 9: Discharge or end of outpatient treatment

2) y Refer to the method of claiming medical care benefit expenses, review request form and statement form, and instructions (hereinafter referred to as 'Notice')

variable name	Variable Description	Variable value description
EDC_ADD_RT	Additional trial decision rate	<ul style="list-style-type: none"> Ratio (%) that is applied additionally, taking into account investment costs such as facilities, manpower, and equipment, depending on the type and size of the medical institution. Additional rate based on the date of commencement of medical treatment, additional rate for sickness, Apply additional medical benefit rate
ED_RC_TOT_AMT	Total amount of nursing care benefit costs determined by trial	Total health insurance benefit costs after review decision
EDC_SBA	Trial decision out-of-pocket expenses	<ul style="list-style-type: none"> Amount to be borne by the examinee after the review decision
EDC_INSUR_BRDN_AMT	Trial decision insurer contribution	Amount to be borne by the insurer after review decision
SPCF_SYM_TYPE	Specific symbol classification	Regarding "Standards for special cases in calculating out-of-pocket expenses" specific symbol code

1) Personal identification and linking variables

• Personal identification number: Qualification and insurance premium table (refer to the explanatory material in 'Chapter 3')

• Claim unique number: Grant a replacement unique number for the claim unique number (year/month + random number)

• Medical institution identification number: Assignment of a replacement identification number for the medical institution symbol

2) Form code (FORM_CD)

• Type of treatment the examinee received at the medical institution

3) Medical department code (MCARE_SUBJ_CD)

• Treatment corresponding to the actual treatment received (hospital level or higher) or disease name

Enter the subject (clinic level) as a medical subject code, but there are two or more medical subjects.

If applicable, please list all injuries and diseases

- In case of 'hospital level or higher': Enter the actual treatment received

- In case of 'clinic': Enter the medical department corresponding to the name of the disease

Medical department code (MCARE_SUBJ_CD)			
code	explanation	code	explanation
00	General	24	Emergency Medicine
01	Medicine	25	Department of Industrial Medicine
02	Neurology	26	Preventive Medicine
03	Psychiatry	49	Dentist
04	Surgery	50	Oral and Maxillofacial Surgery
05	Orthopedics	51	Department of Dental Prosthodontics
06	Neurosurgery	52	Department of Orthodontics
07	Thoracic	53	pediatric dentistry
08	Surgery Plastic	54	Periodontology
09	Surgery Anesthesiology	55	Dentistry Department
10	and Pain	56	Oral Medicine
11	Medicine Obstetrics	57	Oral and Maxillofacial Radiology
12	and	58	Department of Oral Pathology
13	Gynecology	59	preventive dentistry
14	Pediatrics	60	Dental subtotal
15	Ophthalmology	80	Oriental medicine internal medicine
16	Otolaryngology	81	Oriental medicine and gynecology
17	Dermatology Urology	82	Oriental Medicine Pediatrics
18	Radiology	83	Oriental Medicine Otolaryngology Dermatology Clinic
19	Radiation Oncology	84	Oriental medicine neuropsychiatry
20	Pathology	85	Bedding Department
21	Laboratory Medicine	86	Department of Oriental Medicine Rehabilitation Medicine
22	Tuberculosis	87	Sasang constitution and
23	Department Rehabilitation Medicine Nuclear Medicine Family Medicine	88	Oriental medicine emergency
Same as the displayed subject classification (DISP_SUBJ_CD) code value		Not included in displayed subject categories	

<Clinical department code and indicated department classification code>

• The description corresponding to the code value (00~23) is the same for both variables, but the medical department code (MCARE_SUBJ_CD)

In the case of cases, codes are assigned for each disease based on the actual treatment received, but the table in the medical institution table

City subject classification (DISP_SUBJ_CD) is the main medical subject of the relevant medical institution and exists as a single value.

• This cohort's classification of subjects includes only 'clinic' and 'hospital level' information in 'medical department' according to the classification by type of medical institution (numbers 00 to 23), so dentistry and oriental medicine subjects after number 24 in the medical institution table are included.

When analyzing, refer to **the treatment department in the treatment table or the medical institution type code (4: Dental**

Please refer to Hospital, 5: Dental Clinic, 92: Oriental Medicine Hospital, 93: Oriental Medicine Clinic)

4) Variables related to illness³⁾

• Predominant illness (SICK_SYM1): Patient's request for treatment or examination during treatment period

The biggest corporal

• Injured soldier (SICK_SYM2): Injury that occurred or was present with the main sick person during the treatment period.

One of the diseases that affected patient care

• After deleting characters other than English letters or numbers from the injury-related variables, enter the injury code

(ICD-10) Variable values that do not match the format are cleaned and provided.

• Sensitive illnesses are indicated by leaving only the first digit and adding ‘_’ to the end.

5) Hospitalization route classification (HSPTZ_PATH_TYPE) •

1st digit (arrival route): 1 via other nursing facility, 2 emergency rescue evacuation, 3 other

• 2nd position (hospitalization route): 1 emergency room, 2 outpatient department

6) Classification of fantasy, etc. (OFIJ_TYPE)

• Those who fall under the category of industrial or industrial accident (injury in the line of duty), veterans, soldiers, people with rare diseases, etc.

Classification code for those eligible for fee reduction

• Refer to relevant laws and notices for the selection criteria and application details for each system.

	detail
Category 0 None	
1 fantasy	
3 Veterans	Affairs discount patients (30%)
4	Veterans' government-funded patients (recipients of health insurance or medical benefits) at veterans' consignment care facilities
5 Veterans	Affairs discount patients (50%)
6 Veterans	Affairs discount patients (60%)
7 Veterans	government-funded patients (injured persons, unqualified persons) at veterans' consignment care facilities
8	When military families, reserve generals and colonels, founding soldiers, and Korean War veterans use military medical facilities
9	When soldiers or civilian employees use military medical facilities
B Veterans	Hospital's government-funded general (injury, non-qualified) or government-funded insurance (benefit) 1st
C Those with	next-tier rare diseases or those eligible for reduced out-of-pocket expenses
D Veterans	Hospital's government-funded insurance (benefit) 2nd round
E Those with	next-tier chronic diseases and those under the age of 18 who are eligible for self-payment reduction
F Those with	chronic diseases and those under the age of 18 who are in the next tier of disability and eligible for self-payment reduction
G Those eligible	for emergency welfare medical support
H Those eligible	for support for rare and incurable diseases

3) <Reference 2. Disease-related variables and disease classification code>

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7) Variables related to date and number of days

variable name	Variable Description	Variable value description
Treatment start date MDCARE_STRT_DT		<ul style="list-style-type: none"> - Date the patient began receiving treatment - Medicine, dentistry, oriental medicine, health institutions : Current month's treatment start date or hospital visit date - Pharmacy: Date of dispensing medication
Number of nursing days	MDCARE_DD_CNT	<ul style="list-style-type: none"> - Total number of days the patient was treated (including days of medication administration) γ In case of hospitalization, the number of days of in-hospital medication is included. - If 0: Collaboration
Number of hospital days	VSHSP_DD_CNT	<ul style="list-style-type: none"> - Number of days the patient visited the nursing facility to receive treatment (first visit + return visit) or number of days hospitalized
Total number of prescription days TOT_PRES_DD_CNT	- Total number of prescription days	

8) Variables related to medical costs

variable name	Variable Description	Variable value description
Additional trial decision rate	EDC_ADD_RT	<ul style="list-style-type: none"> - Depending on the type and size of the medical institution, an additional fee is applied considering investment costs such as facilities, manpower, and equipment. rate(%) γ Additional rate based on the date of commencement of medical treatment, additional additional rate for sickness, medical expenses Salary and salary addition rate applied
Cost of medical care benefits determined by trial Total amount	ED_RC_TOT_AMT	<ul style="list-style-type: none"> - Total cost of health insurance nursing care benefits after review decision
Trial decision deductible EDC_SBA		<ul style="list-style-type: none"> - Amount to be borne by the person after the review decision
EDC_INSUR_BRDN_AMT - Amount to be borne by the insurer after the review decision.		

9) Whether to have surgery (OPRTN)

γ 0: No surgery, 9: Surgery

10) Classification of treatment results (MCARE_RSLT_TYPE)

γ Patient status on the last treatment date according to the nursing care benefit cost statement

11) Specific symbol classification (SPCF_SYM_TYPE)

Ÿ Specific symbol code related to “Standards for special provisions for calculating out-of-pocket expenses”

Ÿ Refer to relevant laws and notices for the selection criteria and application details for each system.

standard	detail
ŸStandards for special provisions for calculating out-of-pocket expensesŸ	
Article 1 Related specific symbol codes	<p>- A portion of 20/100 of the total cost of nursing care benefits must be borne by the patient:</p> <p>Unregistered cancer patients suffer from the relevant injuries (C00–C97, D00–D09, D32–D33, D37–D48)</p>
Article 2 Related specific symbol codes (Special subject to home nursing calculation)	<p>- 20/100 of the total cost of nursing care benefits (registered cancer patients, severe burns)</p> <p>5/100 for patients and 10/100 for rare incurable diseases)</p> <p>A portion of the burden is borne by the person himself.</p>
Article 4 Related specific symbol codes (Severely ill patients subject to special calculation)	<p>- Outpatient or inpatient treatment (disease group inpatient treatment and expensive medical equipment purchase)</p> <p>5/100 of the total cost of medical care benefits is borne by the person himself/herself (including medical expenses)</p>
Article 5 Related specific symbol codes (Special subject to calculation for patients with rare incurable diseases)	<p>- Outpatient or inpatient treatment (disease group inpatient treatment and expensive medical equipment purchase)</p> <p>10/100 of the total cost of medical care benefits (including medical expenses)</p> <p>Burden</p> <p>Ÿ [Appendix] Patients who register according to the form are 5 days from the date of registration.</p> <p>If you have received treatment for the relevant disease for a year, however, human immunity</p> <p>Deficiency virus diseases (B20–B24) are excluded from registration.</p>
Article 6 Related specific symbol codes	<p>< Subject to special provisions for calculation of out-of-pocket ratio of total pharmacy nursing care benefit costs ></p> <p>- Pharmacy according to prescriptions issued during outpatient treatment at a tertiary general hospital</p> <p>50/100 of the total cost of nursing care benefits at a pharmacy when dispensing from a pharmacy,</p> <p>- Go to the pharmacy according to the prescription issued during outpatient treatment at a general hospital.</p> <p>In case of dispensing from a pharmacy, 40/100 of the total cost of nursing care benefits at a pharmacy</p> <p>Pay a portion yourself</p> <p>Ÿ However, even if you fall into E11.2–E11.9 disease, insulin is prescribed (insulin monotherapy or insulin and oral treatment)</p> <p>If you are receiving or receiving a combination therapy of</p> <p>Excluded from special calculation of out-of-pocket ratio of total salary cost</p>
Specific symbol code for cases of organ transplantation related to Article 4 of the Act on Transplantation of Organs, etc.	

4.2 Medical history (T30) variable items and explanation

variable name	Variable Description	Variable value description
RN_INDI	Personal identification number	Personal identification number (7 digits), link code
RN_KEY	Unique billing number	Claim identification number (14 digits), link code
MDCARE_STRT_DT Treatment start date		<ul style="list-style-type: none"> · Date the examinee started receiving treatment · Medicine, dentistry, oriental medicine, health institutions: date of treatment start or visit to the hospital in the current month · Pharmacy: Date of dispensing medication
FORM_CD	Format code	<ul style="list-style-type: none"> · Nursing care benefit cost review (medical protection) claims and statements <p>Medical treatment classification statement format classification</p>
MCARE_DESC_LN_NO Line number		· Detailed serial number of prescription issued
CLA_CD	anticode	· Refer to the nursing care benefit cost statement (1~10) or C, M, T codes, and code table.
ITEM_CD	neck cord	<ul style="list-style-type: none"> · Numbers assigned to 18 subcategories, <p>Refer to the code table</p>
CLSF_PTTN_CD	Classification type code	· Refer to the classification code type and code table in the specification
MCARE_DIV_CD	Classification code	· Refer to detailed explanation
UPRC	unit price	· Refer to detailed explanation
DD1_MQTY_FREQ Daily dosage or number of times administered		· Enter the daily dosage, and in the case of medicines and prescription details, enter the number of times of daily administration.
TOT_MCNT	Total number of days of administration or number of times administered	
AMT	amount	· Unit price × (daily dosage or number of administrations) × (total number of administration days or number of administrations)
TIME1_MDCT_CPCT 1 dose		
MDCN_UD	Drug upper limit difference	<ul style="list-style-type: none"> · The upper limit price of drugs and the unit price purchased by medical institutions <p>The amount equivalent to 70/100 of the difference.... Added in November 2010</p>
MCEXP_TYPE_CD Medical expense classification code		1: Basic medical treatment fee, 2: Medical treatment fee, 3: Drug fee, 4: Treatment material fee, 5: Flat fee
EFMDC_CLSF_NO Drug efficacy classification number		· Refer to detailed explanation

1) Line number (MDCARE_DESC_LN_NO)

ÿ A serial number is assigned to the medical treatment code as a 4-digit number, sequentially in the order of item and topic.

2) Statement code (CLA_CD)

ÿ Medical care benefit cost statement (1~10) or C, M, T code

ÿ Enter the numbers assigned to the 18 items from the "consultation fee" section to the "non-coverage" section.

3) Specification item code (ITEM_CD)

ÿ Enter numbers assigned to each of the 18 subcategories

4) Classification type code (CLSF_PTTN_CD)

ÿ Classification code type of statement

- (Medicine/Dental) 1: Medical price, 2: Standard price, 3: Insurance registered drugs ("Drug benefit list and benefits Code listed in the "Table of Maximum Amounts"), 4: Raw drug, self-dispensed by medical institution (Preparation) drug, 5: General (ingredient) name of insurance-registered drug, 7: Old agreement material, 8: Chi. Materials... 'Old agreement materials' are dated December 31, 2000. Applicable only to previous treatment
- (Oriental medicine) A: Fee, B: Applicable, C: Insurance registered drug, G: Old agreement material, H: Treatment material, P: fantasy

5) Classification code (MCARE_DIV_CD)

ÿ Classification codes include price, mutatis mutandis, insurance-registered drugs, and generic (ingredient) names, raw materials, and

Classified as preparation (preparation) medicine and therapeutic material

ÿ In the case of pharmaceuticals (P30), the drug product code among classification codes is converted to 'main ingredient code'.

- The medical treatment classification code (MCARE_DIV_CD) in the medical history (30T) table contains the fee (act) Code, drug product code, material code, etc. are included, among which are drug product codes.
The product code is a unique number for each product and is used for private purposes such as market research on specific drugs.
Possibly used for this purpose
- Therefore, when providing sample data, the classification code (MCARE_DIV_CD) is entered in the prescription table (P30).
Provides the main ingredient code instead of the drug product code.
- ÿ Main ingredient code... Ministry of Health and Welfare Notice No. 2010-52
- Enter the drug product code in the 'Drug Reimbursement List' of the Health Insurance Review and Assessment Service.
Matched and converted to registered drug information

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- The main component code shall be 9 digits, and the composition and assignment method of the code is as follows...

Ministry of Health and Welfare Notice No. 2010-52

Number of digits								
code	Main ingredient serial number				Single agent (content serial number for each main ingredient), Combination drug (00)		Administration route (endogenous copy: A, Injectable: B, Topical: C, Others: D)	Formulation
Grant method								

6) Unit price (UPRC)

Multiply the points on the relative value score table by the unit price per point, and for less than 10 won, buy 4 or 5.

Enter the amount. However, in the case of drug prices, treatment materials, raw drugs, etc., 'drugs and treatment materials'

Enter the unit price based on the 'calculation standard for the purchase amount of the fee'

7) Related to dosage and frequency of administration

One dose (TIME1_MDCT_CPCT)

- Amount administered once (starting from the 5th decimal place, add 4 to 5th decimal place)

(applicable to pharmaceutical products only)

Daily dosage or number of times administered (DD1_MQTY_FREQ)

- Number of administrations per day or number of administrations (from the 3rd decimal place to the 2nd decimal place, enter 4th and 5th decimal places)

(In the case of medicines, write the number of doses per day)

Total number of administration days or number of administrations (TOT_MCNT)

- Enter the total number of administration days or number of times administered.

8) Amount (AMT)

Amount = Unit price × 1 dose × daily dosage (number of administrations (administration))

(number of times), however, when claiming additional drug maximum difference, enter '0'

9) Drug upper limit difference (MDCN_UD)

Equivalent to 70/100 of the difference between the upper limit price of the drug and the unit price purchased by the medical institution.

Amount.... Additional number added in November 2010

10) Medical expenses classification code (MCEXP_TYPE_CD)

1: Basic medical treatment fee, 2: Medical treatment fee, 3: Drug fee, 4: Treatment material fee, 5: Flat fee

11) Drug effectiveness classification number (EFMDC_CLSF_NO)

ÿ 'Regulations on Classification Numbers for Medicinal Products, etc.' Food and Drug Administration Regulation No. 237

(2011.12.29., revised) Reference

4.3. Illness History (T40) Variable Composition and Variable Description

variable name	Variable Description	Variable value description
RN_INDI	Personal identification number	Personal identification number (7 digits), link code
RN_KEY	Claim unique number	Claim unique number (14 digits), link code
MDCARE_STRT_DT	Treatment start date	<ul style="list-style-type: none"> · Date the examinee started receiving treatment · Medicine, dentistry, oriental medicine, health institutions: date of treatment start or visit to the hospital in the current month · Pharmacy: Date of dispensing medication
FORM_CD	Format code	<ul style="list-style-type: none"> · Nursing care benefit cost review (medical protection) claims and statements Medical treatment classification statement format classification
MCEX_SICK_SYM	Nursing care benefit disease symbol	· Disease treated by the patient during the treatment period
DETAIL_TMSG_SUBJ_CD	Detailed subject code	· Refer to code table
SICK_CLSF_TYPE	Injury classification code	<ul style="list-style-type: none"> · Major injuries, wounded soldiers, and excluded corporals for each type of illness separator to separate · 1: Main corporal, 2: Wounded soldier, 3: Excluded corporal

1) Nursing care benefit illness symbol (MCEX_SICK_SYM) ÿ Illness classification

symbol of the Korean Standard Classification of Diseases and Causes of Death... Refer to the Korean Standard Classification of Diseases and Causes of Death (KCD-7)

2) Detailed subject code (DETAIL_TMSG_SUBJ_CD)

ÿ If the specialty is internal medicine (01), 'Specialist system certification regulations (Korean Academy of Medical Sciences)'

General hospitals and advanced general hospitals that operate detailed specialties certified in accordance with

In the case of hospitals, please list the subspecialty in which you received treatment, but if there are two or more subspecialties,

please list them all by injury or disease... Added in November 2007

ÿ Internal medicine subspecialties

Department of treatment	code number	Department of treatment	code number
Internal Medicine Integration	00	Department of Nephrology,	05
Department of Gastroenterology,	01	Department of Hematology and Oncology,	06
Department of Cardiology,	02	Department of Infectious Diseases	07
Department of Respiratory Medicine	03	Allergy Department	08
Endocrinology and Metabolism	04	Rheumatology Department	09

ÿ Among internal medicine sub-specialty operating institutions, areas that are operated integrated rather than separated are listed as '00'.

3) Injury classification code (SICK_CLSF_TYPE)

• For each disease classification code, the disease is used as a separator to distinguish between main, wounded and excluded diseases.

The corresponding separator must be entered for each classification symbol.

Category code	applicable item	detail
One	Joo Sang-byeong	Illnesses in which the patient's needs for treatment or examination were greatest during the treatment period • Enter only for corporals in the first digit (first column) of the 'Corporal Classification Code'
2	wounded soldier	Injuries that were present or occurred with the main illness during the treatment period and that affected the patient's treatment
3	Excluded illness	If the final illness is confirmed, the illness was previously considered but excluded.

• Disease classification variable values have been available since 2004.

4.4. Prescription issuance details (T60) variable items and explanations

variable name	Variable Description	Variable value description
RN_INDI	Personal identification number	Personal identification number (7 digits), link code
RN_KEY	Unique billing number	Claim identification number (14 digits), link code
MCARE_STRT_DT	Treatment start date	· Date of first visit, date of dispensing
FORM_CD	Format code	· Classification of medical care classification statement format for nursing care benefit cost review (medical protection) claims and statements
MCARE_DESC_LN_NO	line number	· Prescription issued details and serial number
CLSF_PTTN_CD	Classification type code	· Refer to the classification code type and code table in the specification
MPRSC_TIME1_TUYAK_CPCT 1 dose		· Write down the dosage for one time
MPRSC_DD1_TUYAK_CPCT	Number of administrations per day	· Enter the number of administrations per day
TOT_MCNT	Total number of administration days	
UPRC	unit price	
AMT	amount	
GNL_NM_CD	Common name code	· Generic (ingredient) name code of the drug
EFMDC_CLSF_NO	Drug efficacy classification number	· Refer to the description of medical treatment history (T30)

1) Single dose (MPRSC_TIME1_TUYAK_CPCT)

· One-time dosage (enter 4 to 5 decimal places to the 4th decimal place)

Information [Only applicable to drugs in Section 3 (medication fee), Section 4 (injection fee)]

2) Number of administrations per day (MPRSC_DD1_TUYAK_CPCT)

· Number of administrations per day (enter from 3rd decimal place to 4th or 5th place and write down to 2nd decimal place)

Enter [in the case of medicines, enter the number of doses per day]

3) Common name code (GNL_NM_CD)

· Content: General (ingredient) code of the drug (main ingredient code)

· 'Frequently asked questions on the shared service website (nhiss.nhis.or.kr)' or 'Health Insurance Review and Assessment Service website'

The drug price file can be downloaded from 'hira.or.kr' Law and System > Benefit Standard System > Claims Related Standard Data (changes are not possible).

(Confirmation required)

5 health checkup table

go. Health checkup table overview

Target: Those who have a general health checkup among those eligible for the qualification and insurance premium table

Construction period: 2002~2015 (14 years)

Health checkup information for medical benefit recipients has been provided since 2012.

Construction details

- General health check-up 1st examination and questionnaire items

Detailed composition of examination table

- Can be connected to the personal identification number (RN_INDI) in the qualification and insurance premium table

- Variables: Consists of 51 variables from 2002 to 2008 and 57 variables from 2009 to 2015.

<Subject to general health checkup>

Health check-up target and frequency

Examination target				Checkup cycle
All 1st			Secondary	
region	household heads		1st examination result People suspected of having a disease (high-risk group)	Once every 2 years (Non-office worker Employee subscribers every year)
	Household members aged 40 or older			
rectal	All subscribers			
	Dependents over 40 years of age			
medical benefits	Head of household: 19 to 64 years old			
	Household members aged 40 to 64			

Health checkups for medical benefit recipients have been applied since 2012.

Those aged 40 and 66 are eligible for life transition health examination and are excluded from general health examination.

me. Composition of examination and questionnaire items

1) 1st general health checkup (2002~2015) - Test items

<Table 21> 1st general health checkup (2002~2015) - Test items

Category	Target Disease	Inspection items	Year of examination																	
			'02	'03	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13	'14	'15				
position test	obesity	height	●	●	●	●	●	●	●											
		weight	●	●	●	●	●	●	●	●										
		body mass index	●	●	●	●	●	●	●	●										
		Waist circumference									●	●	●	●	●	●				
	High blood pressure	systolic blood pressure	●	●	●	●	●	●	●	●										
		diastolic blood pressure	●	●	●	●	●	●	●	●										
		Vision	●	●	●	●	●	●	●	●										
		Hearing	●	●	●	●	●	●	●	●										
blood test	diabetes	pre-meal blood sugar (fasting blood sugar)	●	●	●	●	●	●	●	●										
		Total cholesterol	●	●	●	●	●	●	●	●	●									
	High blood pressure, dyslipidemia, arteriosclerosis	triglycerides (neutral fat)											●	●	●	●	●			
		HDL cholesterol											●	●	●	●	●			
		LDL cholesterol											●	●	●	●	●			
	Anemia, etc.		●	●	●	●	●	●	●	●										
Urinalysis	kidney disease	Yodang	●	●	●	●	●													
		Urinary occult blood	●	●	●	●	●													
		PH	●	●	●	●	●													
		urine protein	●	●	●	●	●	●	●	●	●									
blood test	chronic kidney disease	Serum creatinine										●	●	●	●	●				
		New spherical filtration rate											●				●	●	●	
		New spherical filtration rate measurement method															●	●	●	
	liver disease	AST(SGOT)	●	●	●	●	●	●	●	●										
		ALT(SGPT)	●	●	●	●	●	●	●	●										
		Gamma GT	●	●	●	●	●	●	●	●										
			Chest radiography	●	●	●	●	●	●	●										
	electrocardiogram test	●	●	●	●	●														

• Waist circumference test items were added in 2008, and test items were changed by year due to the reorganization of the health checkup system in 2009.

2) 1st general health checkup (2002~2015) - Questionnaire items

<Table 22> 1st general health checkup (2002~2015) - Questionnaire items

division	target disease		Inspection items														
			'02	'03	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13	'14	'15	
disease history	Past history (items changed by year)		●	●	●	●	●	●	●	●	●						
	Family history (items change by year)		●	●	●	●	●	●	●	●	●						
smoking	Smoking status		●	●	●	●	●	●	●	●	●						
	amount of smoking	Amount of smoking per day (multiple choice)	●	●	●	●	●										
		Average amount of smoking per day in the past (Subjective)										●	●	●	●	●	
		Current average daily smoking amount (Subjective)										●	●	●	●	●	
	smoking period	Past and current smoking period (Multiple choice)	●	●	●	●	●										
		Period of past smoking (Subjective)										●	●	●	●	●	
		Current smoking period (Subjective)										●	●	●	●	●	
Drinking	Drinking habit	Drinking habits (frequency) (Multiple choice)	●	●	●	●	●										
		Average number of drinking days per week (Subjective) Amount										●	●	●	●	●	
	amount of alcohol	of alcohol consumed per session (Multiple choice)	●	●	●	●	●										
		Amount of alcohol consumed per day (Subjective)										●	●	●	●	●	
body activity (work out)	(1 week) Number of exercises		●	●	●	●	●										
	(1 week) Number of days of vigorous activity											●	●	●	●	●	
	(1 week) days of moderate activity											●	●	●	●	●	
	(1 week) Number of days of activity such as walking											●	●	●	●	●	
Type B hepatitis	Hepatitis B											●	●	●	●	●	

γ Due to the reorganization of the health checkup system in 2009, the questionnaire items were changed by year.

all. Health checkup table variable items and description

1. General health checkup

1-1. General health examination (2002-2008): 51 variables

serial number	variable name	English name	type	length	note
1	Examination year	EXMD_BZ_YYYY	Character	8	2002~2008
2	Personal identification	RN_INDI	Number	8	Personal identification number (7 digits), link code
3	number	HME_YYYYMM	Text	16	Health checkup date
	Examination year and month 4	Q_PHX1_DZ_V0208	Number	8	* Past medical history code You can enter up to 3 pieces of past medical history. 1: Tuberculosis 2: Hepatitis 3: Liver disease 4: High blood pressure 5: Heart disease 6: Stroke 7: Diabetes 8: Cancer 9: Other diseases * Year of past disease occurrence: YYYY
	(Applicant) Past medical history code 1 5 (Applicant) Year of		number	8	
	occurrence of past disease 1 Q_PHX1_YR 6 (Applicant) Past disease		number	8	
	cured or not 1 Q_PHX1_CR 7	Q_PHX2_DZ_V0208	number	8	
	(Applicant) Past medical history code 2 8 (Applicant) Year of		number	8	
	occurrence of past disease 2 Q_PHX2_YR 9 (Person) Whether or not past disease was cured 1 Q_PHX2_CR		number	8	
	10 (Person) Past medical history code	Q_PHX3_DZ_V0208	Number	8	
	3 11 (Person) Year of occurrence of past disease 3 Q_PHX3_YR		number	8	
	12 (Person) Whether or not a past disease has been	cured 3 Q_PHX3_CR	number	8	
	13 (Family history) Liver disease Q_FHX_LVDZ	14 (Family history)	number	8	1: None 2: Yes
	High blood pressure 15 (Family	Q_FHX_HTN	number	8	
	history) Stroke 16 (Family history)	Q_FHX_STK	number	8	
	Heart disease 17 (Family history)	Q_FHX_HTDZ	number	8	
	Diabetes 18 (Family history) Cancer	Q_FHX_DM	number	8	
	19 Disease 20 Types of	Q_FHX_CC	number	8	
	diseases	Q_AWR_YN	number	8	
		Q_AWR_DZ	character	160	
	21 Nutritional intake behavior	Q_NTR_PRF	number	8	1: I mainly eat vegetarian food. 2: I tend to eat a variety of vegetarian and meat foods. 3: I mainly eat meat.
	22 Drinking habits	Q_DRK_FRQ_V0108	Number	8	1: I don't drink (almost) 2: Drink it about 2-3 times a month. 3: Drink 1-2 times a week 4: Drink 3-4 times a week 5: Drink it almost every day
	23 Amount of alcohol consumed per serving	Q_DRK_AMT_V0108	Number	8	1: Less than half a bottle of soju 2: A bottle of soju 3: 1 and a half bottles of soju 4: 2 or more bottles of soju
	24 Smoking status	Q_SMK_YN	number	8	1: Do not smoke 2: I used to smoke in the past, but I quit now. 3: Still smoking now
	25 (current) amount of smoking per day	Q_SMK_NOW_AMT_V0108	Number	8	1: Less than welcome 2: More than half a pack to less than one pack 3: More than one pack ~ less than two packs

serial number	variable name	English name	type	length	note
					4: Two packs or more
26	(past, present) period of smoking	Q_SMK_DRT	number	8	1: Less than 5 years 2: 5 to 9 years 3: 10-19 years 4: 20-29 years 5: More than 30 years
27	Year of start smoking	Q_SMK_STRT_YR	Number	8 YYYY	* Applicable from 2005
	Year of start of smoking cessation	Q_SMK_STOP_YR	Number	8 YYYY	* Applicable from 2006
29	Number of exercises per week	Q_PA_FRQ	number	8	1: Never 2: 1-2 times 3: 3~4 times 4: 5~6 times 5: Almost every day
30	Height	G1E_HGHT	Number	8 cm	(missing less than 100)
31	Weight	G1E_WGHT	Number	8 kg	(missing less than 20)
32	body mass index	G1E_BMI	number	8	Weight (kg) / (Height * Height)m Rounded and displayed to two decimal places
33	Waist circumference	G1E_WSTC	Number	8 cm	* Applicable from 2008
34	Vision (left)	G1E_VA_LT	Number	8 0.1~2.0	
	Vision (right)	G1E_VA_RT	Number	8 9.9:	Blindness
	Hearing (left)	G1E_HA_LT	number	8	
	Hearing (right)	G1E_HA_RT	number	8	1: Normal 2: Abnormal
	Systolic blood pressure	G1E_BP_SYS	number	8	
	39 Diastolic blood	G1E_BP_DIA	number	8	mmHg
	pressure	G1E_URN_GLU	Number	8 1:	Negative (-) 2: Weak (±)
	Urinary sugar	G1E_URN_PROT	3: Positive (+1) 4: Positive (+2)		
	Urinary protein	G1E_URN_OCC_BLD	number	8	5: Positive (+3) 6: Positive (+4)
43	PH	G1E_URN_PH	number	8	pH * 0 value missing processing
44	Hemoglobin	G1E_HGB	number	8	g/dL * 0 value missing processing
45	Pre-meal blood sugar (fasting blood sugar)	G1E_FBS	number	8 mg/dL	
46	Total cholesterol	G1E_ASTOR Chol	number	8	* 0 value missing processing
		G1E_SGOT			
48	(Serum GPS)ALT	G1E_SGPT			U/L * 0 value missing processing
49	Gamma GT P	G1E_GGT	Number	8	
50	Chest radiography results	G1E_CHST_XRAY_RST	Number	8	
51	Electrocardiogram	G1E_EKG_RST	number	8	1: normal 2: Arrhythmia (pulse irregularity, abnormal heart rhythm) 3: Ischemic heart disease such as angina pectoris and myocardial infarction 4: Cardiomegaly caused by high blood pressure 5: Carditis 6: Abnormalities in electrolyte metabolism (especially potassium and calcium) 7: Other

1-2. General health examination (2009-2015): 57 variables

serial number	variable name	English name	Type	Length	note
1	Interception	EXMD_BZ_YYYY	Character	8	2009-2015
2	(Self) Stroke	RN_INDI	Number	8	Personal identification number (7 digits), link code
	(Self) Troops in	HME_YYYYMM	Text	16	Health checkup date
	the past Q_phx_dx_stk 5 (yourself) Self) hyperlipidemia (Dyslipidemia		number	8	0: Not applicable 1: Yes
			number	8	
			number	8	
			number	8	
8	medical history 9	Q_PHX_DX_DLD) Past	number	8	
	(Person) Past medical history of pulmonary tuberculosis	Q_PHX_DX_PTB	number	8	
10	(Person) Other (including cancer) diseases	Q_PHX_DX_ETC	number	8	
	Previous medical				
11	history (person): Stroke (paralysis) medication treatment	Q_PHX_TX_STK	number	8	
	Whether				
12	(your) heart disease (myocardial infarction/stroke) Symptoms) Medication or not	Q_PHX_TX_HTDZ	number	8	
13	(Person) Whether to take high blood pressure medication	Q_PHX_TX_HTN	number	8	
14	(Person) Whether he/she is receiving diabetes medication	Q_PHX_TX_DM (Person)	number	8	
15	Are he/she is receiving hyperlipidemia medication	Q_PHX_TX_DLD	number	8	
	Whether				
16	(Person) Whether he/she is receiving pulmonary tuberculosis medication	Q_PHX_TX_PTB	number	8	
17	(Person)Other (including cancer) drug treatment	Q_PHX_TX_ETC	number	8	
	Whether				
18	(Family history) Stroke (stroke)	Q_FHX_STK (Family history)	number	8	
19	Heart disease (myocardial infarction/Angina pectoris)	Q_FHX_HTDZ	number	8	
20	(Family history) High blood pressure	Q_FHX_HTN	number	8	
21	(Family history) Diabetes	Q_FHX_DM	number	8	
22	(Family history) Others (including cancer)	Q_FHX_ETC	number	8	
23	Hepatitis B antigen carrier	Q_HBV_AG	Number	8	1: Yes 2: No 3: Don't know
24	Smoking status	Q_SMK_YN	number	8	1: Do not smoke. 2: I smoked in the past, but I quit now. was 3: Still smoking now
25	(past) period of smoking	Q_SMK_PRE_DRT	number	8	_year
	(past) amount of smoking per day	Q_SMK_PRE_AMT_V09N	Number	8	_Open
27	(current) smoking period	Q_SMK_NOW_DRT	number	8	_year
28	(current) amount of smoking per day	Q_SMK_NOW_AMT_V09N	Number	8	_Open
29	drinking days per week	Q_DRK_FRQ_V09N	number	8	0: 0 days 1: 1 day 2: 2 days 3: 3 days 4: 4 days 5: 5 days 6: 6 days 7: 7 days
30	Drinks per serving	Q_DRK_AMT_V09N	Number	8	_cup

serial number	variable name	English name	type length		note
31	1 week_Strong exercise for more than 20 minutes	Q_PA_VD	number	8	0: 0 days 1: 1 day 2: 2 days 3: 3 days 4: 4 days 5: 5 days 6: 6 days 7: 7 days
32	1 week_Moderate exercise for more than 30 minutes	Q_PA_MD	number	8	
33	Week 1_Walking exercise for a total of 30 minutes or more	Q_PA_WALK	number	8	
34	Height 35	G1E_HGHT	Number	8 cm	(missing less than 100)
	Weight 36	G1E_WGHT	Number	8 kg	(missing less than 20)
	Waist Circumference	G1E_WSTC	number	8cm	
37	body mass index	G1E_BMI	number	8	Weight (kg) / (Height * Height)m After rounding, display to two decimal places.
38	Vision (left) 39	G1E_VA_LT	Number	8 0.1~2.0	Blindness
	Vision (right) 40	G1E_VA_RT	Number	8 9.9:	
	Hearing (left) 41	G1E_HA_LT	number	8	1: Normal 2: Abnormal
	Hearing (right) 42	G1E_HA_RT	number	8	
	Systolic blood pressure	G1E_BP_SYS	number	8	mmHg
43	Diastolic blood pressure	G1E_BP_DIA	number	8	
44	Urine protein	G1E_URN_PROT	number	8	1: Negative (-) 2: Weak (±) 3: Positive (+1) 4: Positive (+2) 5: Positive (+3) 6: Positive (+4)
45	hemoglobin	G1E_HGB	number	8	g/dL * 0 value missing processing
46	Pre-meal blood sugar	G1E_FBS	number	8	mg/dL * 0 value missing processing
	(fasting blood sugar)	G1E_TOT_CHOL	number	8	
47	Total cholesterol 48 Triglyceride	G1E_TG	number	8	
49	HDL cholesterol	G1E_HDL	number	8	
50	LDL cholesterol 51	G1E_LDL	number	8	
	Serum creatinine 52	G1E_CRTN	number	8	
	(serum GETP) AST 53	G1E_SGOT	number	8	U/L * 0 value missing processing
	(serum GPS) ALT 54	G1E_SGPT	number	8	
	Gamma GT	G1E_GGT	number	8	
55	Globular filtration rate (GFR) G1E_GFR		number	8	Applicable from 2009 and 2012 * 0 value missing processing
56	Measurement of glomerular filtration rate (GFR) method	G1E_GFR_MTHD	Number	8	Applicable from 2012
57	Chest radiography results G1E_CHST	XRAY_RST	Number	8	Refer to code book

Sample Cohort 2.0 DB User Manual (ver 1.0)

1) Measurement test: height, weight, waist circumference

• Unit, check criteria for missingness, waist circumference is from 2008

• BMI can be calculated based on height and weight

2) Blood pressure: systolic blood pressure, diastolic blood pressure: unit, check missingness processing criteria

3) Blood sugar

• Check the unit and missing processing criteria, change from pre-meal blood sugar to fasting blood sugar from 2010

4) Total cholesterol, triglyceride, HDL cholesterol, LDL cholesterol

• Check unit and missing processing standards

• Integration of calculated and measured values of LDL cholesterol and triglyceride since 2012

If the value is over 400mg/dl, the actual measured value is included.

5) Hemoglobin: Check unit and missing processing criteria

6) Urinalysis: Urine protein: Check unit and missing processing criteria

7) Serum creatinine: Check unit and missing processing criteria

8) Disease history (family history)... Refer to the questionnaire

• The disease changes depending on the year.

• Enter whether or not the disease applies to you from 2007 to 2013.

• 2007~2008 1 None/2 Yes/3 Don't Know • 2009~2013 1 Yes

9) Smoking: Smoking status, smoking amount, smoking period... Refer to the questionnaire

10) Drinking: Number of days drinking, amount of drinking... Refer to the questionnaire

11) Physical activity (exercise): Number of exercise days... Refer to the questionnaire

Ia. Major changes by year

• History variables

2002~2008				2009~2015			
(me) past	Troop Code 1	Q_PHX1_DZ_V0208	1~9	(Myself) Stroke	Past military history	Q_PHX_DX_STK	0, 1
	Occurrence year 1	Q_PHX1_YR	year		Medication status	Q_PHX_TX_STK	0, 1
	Complete cure 1	Q_PHX1_CR	1, 2	(Myself) Heart disease	Previous military history	Q_PHX_DX_HTDZ	0, 1
	Troop Code 2	Q_PHX2_DZ_V0208	1~9		Medication status	Q_PHX_TX_HTDZ	0, 1
	Year of occurrence 2	Q_PHX2_YR	year	(Myself) High blood pressure	Previous military history	Q_PHX_DX_HTN	0, 1
	Complete cure 2	Q_PHX2_CR	1, 2		Medication status	Q_PHX_TX_HTN	0, 1
	Troop Code 3	Q_PHX3_DZ_V0208	1~9	(Myself) Diabetes	Past military history	Q_PHX_DX_DM	0, 1
	Year of occurrence 3	Q_PHX3_YR	year		Medication status	Q_PHX_TX_DM	0, 1
	Complete cure 3	Q_PHX3_CR	1, 2	(Person) Hyperlipidemia	Past military history	Q_PHX_DX_DLD	0, 1
* You can enter up to 3 pieces of past medical history. 1: Tuberculosis 2: Hepatitis 3: Liver disease 4: High blood pressure 5: Heart disease 6: Stroke 7: Diabetes 8: Cancer 9: Other diseases 0: None				(Dyslipidemia)	Medication status	Q_PHX_TX_DLD	0, 1
				(Person) Pulmonary tuberculosis	Past military history	Q_PHX_DX_PTB	0, 1
					(2010~)	Medication status	Q_PHX_TX_PTB
				(me) past	Presence of disease Q_AWR_YN		1, 2
Medication status	Q_PHX_TX_ETC	0, 1					
Disease type Q_AWR_DZ		Type (Person)	Hepatitis B antigen holder		Q_HBV_AG 1: Yes 2: No 3: Don't know	1,2,3	

• (2002-2008) Cured status and disease status 1: Cured 2: Under treatment

• (2009-2015) Past history questions 0: Not applicable, 1: Applicable

• Family history variables

2002~2008			2009~2015		
(family history) Presence of liver disease	Q_FHX_LVDZ	1, 2	-	-	-
(family history) Presence of high blood	Q_FHX_HTN	1, 2	(family history) Presence of patients with high blood	Q_FHX_HTN	0, 1
pressure (family history) Presence of stroke	Q_FHX_STK	1, 2	pressure (family history) Presence of stroke patient	Q_FHX_STK	0, 1
(family history) Presence of heart	Q_FHX_HTDZ	1, 2	(family history) Presence or absence of heart	Q_FHX_HTDZ	0, 1
disease (family history) Diabetes	Q_FHX_DM	1, 2	disease (family history) Diabetes mellitus	Q_FHX_DM	0, 1
(family history) Presence or absence of cancer	Q_FHX_CC	1, 2	(family history) Presence of other (including cancer) patients	Q_FHX_ETC	0, 1

• (2002~2008) Past history question 1: None, 2: Yes, (2009~2015) Past history question 0: Not applicable, 1: Yes.

☺ Smoking variable

2002~2008			2009~2015		
Smoking status	Q_SMK_YN	1~3	Smoking status	Q_SMK_YN	1~3
(past, present) smoking period	Q_SMK_DRT	1~5	(Past) Before quitting smoking smoking period	Q_SMK_PRE_DRT subjective	
-	-	-	(Past) Before quitting smoking Amount of smoking per day	Q_SMK_PRE_AMT subjective	
-	-	-	(Current) Smoking Period	Q_SMK_NOW_DRT subjective	
(today) Amount of smoking per day	Q_SMK_NOW_AMT_V0108 1~4 (Current) amount of smoking per day Q_SMK_NOW_AMT_V09N Subjective				
Year of starting smoking (2005~2008)	Q_SMK_STRT_YR Year		-	-	-
Year of smoking cessation (2006~2008)	Q_SMK_STOP_YR Year		-	-	-

☺ Drinking variables

2002~2008			2009~2015		
Drinking habits	Q_DRK_FRQ_V0108	1~5	-	-	-
Amount of alcohol consumed per serving	Q_DRK_AMT_V0108	1~4	Amount of alcohol consumed per serving	Q_DRK_AMT_V09N Subjective	
-	-	-	Number of weekly drinking days	Q_DRK_FRQ_V09N	0~7

☺ Physical activity variables

2002~2008			2009~2015		
Number of exercises per week	Q_PA_FRQ	1~5	-	-	-
-	-	-	high intensity physical activity (1 week_Strong exercise for more than 20 minutes)	Q_PA_VD	0~7
			Moderate physical activity (1 week_Moderate exercise for more than 30 minutes)	Q_PA_MD	0~7
			physical activity walking (1 week_walking exercise for a total of 30 minutes or more)	Q_PA_WALK	0~7

☺ Nutrient intake variables

2002~2008			2009~2015		
Youngyoung intake behavior	Q_NTR_PRF	1~3	-	-	-

3) Examples of examination and questionnaire items

Example of general health check-up 1st questionnaire (2002~2008)... Refer to the questionnaire according to the 2008 implementation standards.

Please fill out this questionnaire completely as it is important data for the doctor in charge to provide efficient and accurate examination and determine your health status during the examination. You can receive a health checkup conducted by the Corporation once every two years (once a year for non-office workers). If you receive a checkup more than the specified number of times, the cost of the checkup will be recovered as unjust enrichment. 6. If you

1. Have you suffered from the following diseases in the past or are you currently being diagnosed (treated) for them?

Please write down tuberculosis, hepatitis, liver disease, high blood pressure, heart disease, stroke, diabetes, cancer, and other diseases.

Disease name	Year of onset	Current treatment status	
		Complete treatment	in progress
() () () 2.	year	Yes	Yes
Have any of	year	Yes	Yes
your parents,	year	Yes	Yes

brothers, or sisters suffered from the following diseases or died from the diseases? Yes
Liver disease () Yes High blood pressure
() Yes Stroke () Yes Heart disease () Yes
Diabetes () Yes Cancer ()

3. Are there any medical conditions that you are particularly concerned about or suspect about? Yes No Yes (Disease name:)

4. What do you usually enjoy eating? Yes I mainly eat vegetarian food.
Yes I tend to eat a variety of vegetarian and meat foods. Yes Eat mainly meat.

5. How are your drinking habits? Yes I (almost) don't drink. Yes
Drink it about 2-3 times a month. Yes Drink 1-2 times a week. Yes Drink 3 to 4 times a week. Yes I drink it almost every day.

drink alcohol, how much do you drink at a time? (Based on 2

bottles of soju) Yes Less than

half a bottle of soju Yes One bottle of soju Yes

One and a half bottles of soju Yes More than two bottles of soju

7. How much do you smoke?

Yes Do not smoke. Yes I

used to smoke in the past, but I quit now. Yes

I'm still smoking it now. Yes Year of quitting smoking: Year

8. If you smoke, how much do you smoke per day? Yes Less than

half a pack Yes More

than half a pack to less than one pack Yes More than

one pack to less than two packs Yes More than two packs

9. If you have smoked in the past or currently smoke, for how long?

Yes Less than 5

years Yes 5 to 9 years Yes 10 to 19 years Yes 20 to

29 years Yes More than 30 years Yes Year of starting smoking: Year

10. How many times a week do you exercise enough

to make you sweat? Yes I don't do it. Yes

1-2 times Yes 3-4 times Yes 5-6 times Yes

Almost every day

11. During the past month, have you ever felt mentally

or physically overwhelmed? Yes It happens

often. Yes Sometimes Yes Never.

Yes I don't know.

• Example of general health check-up first questionnaire questions (2009~2015)

... Refer to the common health examination questionnaire according to the 2012 implementation standards.

• Questions related to disease history (past history, family

history) • Please read the questions below and mark '•' in the information that corresponds to your current

condition. 1. Have you been diagnosed with any of the following diseases or are you currently receiving medication?

	Name of disease	Stroke (stroke)	Heart disease (myocardial infarction/angina)	high blood pressure	diabetes	Dyslipidemia	Pulmonary tuberculosis and others (including cancer)
Diagnosis							
Status Medication status							

2. Have any of your parents, brothers, or sisters suffered from or died from the following diseases? Diabetes and others

Disease	Name: Stroke (paralysis)	heart disease (myocardial infarction/angina)	high blood pressure	(including cancer)
has exist				

3. Are you a hepatitis B virus carrier? • Yes • Smoking-related • No • Don't know

questions 4. Please read

the questions below and fill in the information that applies to your current condition. 4-1. Have you ever

smoked more than 5 packs (100 cigarettes) in your life? • No (• Go to question 5). • Yes, I have

quit now (• Go to question 4-2) • Yes, I am currently smoking (• Go to question 4-3) 4-2. If you used to smoke

but have now quit, how many years did you smoke before you

quit? Total Years Before quitting, how many cigarettes did you smoke per

day on average? 4-3. If you still smoke, how many years have you been smoking? How	
many cigarettes did you smoke per day on average? • Questions related to	_____ splint

drinking 5. Please read the questions

below and write the information that corresponds to	total years
your current condition. 5-1. On average, how many days	_____ splint

a week do you drink alcohol?

• 0 • 1 • 2 • 3 • 4 • 5 • 6 • 7 5-2. When you drink alcohol, how much do you usually drink per day? (glass)

(• Regardless of the type of alcohol, each drink is counted.

However, 1 can of beer (355cc) is equivalent to 1.6 glasses of beer) • Questions related to physical

activity (exercise) 6. Read the questions below and Please mark '•' in the answer that corresponds to

your activity status. 6-1. During the past week, on how many days did you engage in strenuous activity that made you more

out of breath than usual for more than 20

minutes? (Example: running, aerobics, cycling at high speed, hiking, etc.) • 0 • 1 • 2 • 3 • 4 • 5 • 6 • 7 6-2. During the past

week, on how many days did you engage in moderate activity that made you more out of breath than usual for 30 minutes or more?

(Example: walking quickly, playing doubles tennis, riding a bicycle at normal speed, lying down and mopping, etc.) • Excluding physical activities related to the 6-1 response.

• 0 • 1 • 2 • 3 • 4 • 5 • 6 • 7 6-3. During the past week, on how many days did you walk a total of 30

minutes or more, including at least 10 minutes at a time? (Example: Light exercise, including walking to and from work or leisure time) •

Excluding physical activities related to responses 6-1 and 6-2 • 0 • 1 • 2 • 3 • 4 • 5 • 6 • 7

6 Nursing institution table

go. Nursing institution table overview

- Establishment target: Medical care institutions used by eligible applicants by year
- Construction period: 2002~2015 (14 years)
- Construction method: Establishment of details of medical institutions used by examinees by year based on eligibility criteria
- Construction contents: Information on all medical institutions (including pharmacies), type of medical institution, establishment type, Status, facilities, personnel, and equipment by region (city/province)

me. Status of medical institutions table by year

<Table 38> Construction status of nursing institution DB by year

Category	02	03	04	05	06	07	08	09	10	11	12	13	14	15		
General Hospital	217	239	269	286	299		309	321	319	329		329	327	330	333	340
General hospitals, mental hospitals	362	554	789	928	1,014	1,148	1,316	1,345	1,429	1,496	1,548	1,562	1,560	1,574		
nursing hospital	13	39	101	209	383		659	801	834	979	1,083	1,219	1,331	1,415	1,454	
Representatives	21,733	23,179	24,324	25,315	26,130	26,532	26,779	26,778	27,185	27,501	27,616	27,809	28,146	28,693		
dental hospital	99	111	123	133		152	170	178	195	206		221	223	221	218	228
Dental clinic	11,278	11,738	12,237	12,797	13,263	13,560	13,936	14,347	14,891	15,288	15,668	15,996	16,413	16,843		
Public Health Center	202	223	232	234	237		237	239	239	240		240	243	243	244	244
Public Health Branch	705	1,081	1,250	1,276	1,276	1,279	1,283	1,281	1,285	1,287	1,296	1,298	1,292	1,295		
Health clinic	895	1,252	1,641	1,759	1,805	1,840	1,863	1,890	1,886	1,885	1,881	1,873	1,881	1,880		
health care center	.	3	16	17		17	17	17	17	17	17	17	16	15	15	15
Pharmacy	18,762	19,460	19,962	20,552	20,995	21,091	21,091	21,079	21,252	21,275	21,475	21,419	21,441	21,599		
Oriental medicine hospital	31	53	119	148		156	155	157	175	200		210	230	267	272	296
Oriental medicine clinic	7,608	8,550	9,147	9,852	10,517	11,194	11,646	11,975	12,361	12,710	13,014	13,373	13,662	13,933		

all. Nursing institution table variable items and description

variable name	Variable Description	Variable value description
STD_YYYY	Base year	relevant year
RN_INST	Nursing institution identification number	Nursing institution unique number (6 digits), connection variable
INST_CLSFC_CD	Medical institution type code	See detailed explanation
SGG_INST	Refer to the detailed description of the address (city, county, district) of the medical institution.	
DISP_SUBJ_TYPE	Classification of subjects shown	See detailed explanation
CNT_DR_TOT	number of doctors	See detailed explanation
CNT_NRS_TOT	number of nurses	See detailed explanation
CNT_BED_INP	Number of hospitalized beds	See detailed explanation
CNT_BED_OP	Number of surgical beds	See detailed explanation
CNT_BED_ER	Number of emergency beds	See detailed explanation

1) Medical institution type code (INST_CLSFC_CD)

ÿ Assignment of alternative identification number for medical institution symbol

ÿ Medical institution used by the patient in the base year

code	Main Category	code	Main Category
0	Tertiary general hospital	70	Public Health
One	general Hospital	71	Public health branch
20	General hospital, mental hospital	73	health care center
28	nursing hospital	8	pharmacy
3	lawmaker	92	Oriental medicine hospital
4	dental hospital	93	Oriental medicine clinic
5	dental clinic		
ÿ Same as examination institution type code			

2) Classification of displayed subjects (DISP_SUBJ_TYPE)

ÿ Refer to treatment table (treatment department code) and layout code explanation

3) Nursing institution city/county/district code (SGG_INST)

ÿ Refer to the city/county/district code in the eligibility and insurance premium table.

4) Codes related to personnel and facilities

serial number	variable name	English name
One	number of doctors	CNT_DR_TOT
2	number of nurses	CNT_NRS_TOT
3	Number of hospitalized beds	CNT_BED_INP
4	Number of surgical beds	CNT_BED_OP
5	Number of emergency beds	CNT_BED_ER

7 Other precautions

go. How to connect data

- All tables except the medical institution table: connected by personal serial number (RN_INDI)
- Nursing care institution table • Treatment table (20t): Connected to nursing institution number (RN_INST)
- Detailed DB of treatment table (20t, 30t, 40t, 60t): Connected to claim serial number (RN_KEY)

division		Connection variables for each table		
Eligibility and Premium Table		Personal identification number (RN_INDI)		
treatment table	Specification details (20t)		Unique billing number (RN_KEY)	Nursing institution identification number (RN_INST)
	Medical treatment details (30 tons)			
	Injury and disease details (40 tons)			
	Prescription issuance details (60 tons)			
health examination table				
Nursing home table				Nursing institution identification number (RN_INST)

me. Data limitations

- Data constructed by extracting a sample (1 million people) to derive meaningful results
 - It is recommended to first determine how many research subjects are secured for each project. • It is not recommended to study subjects that are too rare or have a small number of cases. • Due to limitations in claims data, very few disease names match the patient's actual disease name. under
 - May not
- Data on non-covered treatment and plastic surgery were not included, and prescriptions were prescribed at medical institutions.
 - Difficult to determine whether or not over-the-counter medicines are being used
- In cases where daily fee is applied, such as nursing hospitals and public health centers, detailed medical treatment details and medications
 - Difficult to understand product prescription details

all. etc

- Changes in outpatient medical expenses billing method (changed from monthly billing to daily billing, hospital-level billing from 2011)
- There is a change in the number of claims as the application is expanded to both institutions ... Refer to Notice No. 2011-053

<Appendix> Distribution of sample subjects

<Table 42> Distribution of subjects by year according to sample classification

Unit: people

year	Target category (SMPL_TYPE_CD)				Sum
	One	2 3		4	
2002	968,291	11,099	0	0	979,390
2003	978,945	11,290	0	0	990,235
2004	989,176	11,425	0	0	1,000,601
2005	999,925	11,633	0	0	1,011,558
2006	1,000,000	11,638	9,355	215	1,021,208
2007	1,000,000	11,638	10,236	217	1,022,091
2008	993,744	11,575	19,790	425	1,025,534
2009	988,001	11,529	28,731	651	1,028,912
2010	982,317	11,473	38,449	919	1,033,158
2011	976,252	11,418	48,047	1,208	1,036,925
2012	970,474	11,372	57,869	1,489	1,041,204
In 2013	964,579	11,298	66,783	1,763	1,044,423
year 2014	959,031	11,228	75,612	2,057	1,047,928
2015	953,573	11,162	84,524	2,355	1,051,614

<Table 43> Distribution of subjects by year

Unit: people

		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Sum		1,000,000	1,000,000	993,744	988,001	982,317	976,252	970,474	964,579	959,031	953,573
gender	male	500,268	500,268	496,790	493,715	490,637	487,316	484,107	480,888	477,893	474,877
	female	499,732	499,732	496,954	494,286	491,680	488,936	486,367	483,691	481,138	478,696
age	0-4 years old	38,875	28,672	18,461		8,936					
	5-9 years old	64,546	60,769	57,822	54,543	50,218	38,789	28,596	18,421		8,920
	10-14 years old	73,389	72,338	70,474	68,459	67,238	64,352	60,557	57,663	54,419	50,136
	15-19 years old	66,314	68,586	70,411	72,336	73,342	73,135	72,034	70,201	68,240	67,066
	20-24 years old	71,585	67,820	65,512	64,648	64,576	66,019	68,205	70,030	71,976	73,062
	25-29 years old	81,870	82,389	82,747	79,505	75,478	71,229	67,439	65,162	64,302	64,283
	30-34 years old	86,098	83,728	79,916	78,899	80,042	81,359	81,803	82,243	79,048	75,096
	35-39 years old	94,084	94,861	93,776	92,218	89,087	85,322	82,872	79,205	78,310	79,551
	40-44 years old	86,154	85,514	88,026	89,559	90,868	93,086	93,682	92,770	91,342	88,351
	45-49 years old	88,160	90,154	90,003	89,222	87,116	85,053	84,268	86,875	88,532	89,859
	50-54 years old	66,111	69,942	74,490	79,118	83,093	86,792	88,506	88,496	87,832	85,865
	55-59 years old	48,481	50,890	51,804	54,554	59,630	64,759	68,276	72,874	77,535	81,530

		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	60-64 years old	40,513	40,618	42,561	44,349	46,517	47,237	49,335	50,274	52,990	58,075
	65-69 years old	36,384	39,695	39,911	39,688	39,263	38,918	38,775	40,726	42,500	44,649
	70-74 years old	26,642	28,813	30,370	31,855	32,599	34,052	36,763	37,059	36,986	36,667
	75-79 years old	16,278	18,106	19,131	20,388	22,078	23,702	25,204	26,673	28,069	28,920
	Over 80 years old	14,516	17,105	18,329	19,724	21,172	22,448	24,159	25,907	28,030	30,463
premium quantile	Regional 1st decile	23,142	23,186	22,537	18,765	17,403	17,285	17,381	18,552	15,837	15,603
	Regional 2nd decile	19,306	15,814	15,115	18,272	17,867	17,340	16,383	14,371	18,322	17,742
	Regional 3rd quintile	29,746	28,607	26,415	25,373	23,974	22,285	21,642	20,363	16,691	17,682
	Regional quartile	39,751	35,075	34,083	31,620	29,757	28,202	26,353	25,673	24,360	22,733
	Regional quintile	41,860	39,318	37,427	36,573	34,845	33,070	30,728	29,484	28,642	28,348
	Regional 6th quintile	43,930	45,085	42,283	38,910	37,672	35,226	33,823	31,720	30,065	28,377
	Regional 7th quintile	59,125	49,254	45,842	43,729	41,836	39,508	37,614	35,288	33,727	32,673
	Regional 8th quintile	44,222	50,584	47,708	45,872	45,065	42,773	41,294	39,504	37,254	36,029
	Regional 9th decile	59,692	52,785	50,709	49,171	48,115	45,422	43,882	41,849	40,312	38,759
	Regional Decile	53,634	53,553	51,150	49,206	48,511	46,559	44,477	42,247	40,457	39,403
	Region missing	.	110	141	160	158	150	122	99	81	54
	Workplace 1st quintile	58,659	51,966	44,993	47,013	56,379	49,933	51,685	51,068	53,093	53,114
	Workplace 2nd quartile	42,549	44,480	46,589	46,807	39,656	51,127	49,012	57,112	51,146	57,893
	Workplace 3rd quartile	36,200	36,105	43,174	47,708	47,202	46,407	51,387	44,838	55,999	46,236
	Workplace quartile	52,079	43,775	46,624	44,382	50,871	48,908	52,116	51,328	47,535	51,787
	Workplace quintile	47,662	51,733	48,998	50,790	48,357	51,769	48,570	52,931	56,105	53,574
	Workplace 6th quintile	39,762	51,745	54,193	54,723	55,318	55,772	56,755	57,080	55,073	58,028
	Workplace 7th quintile	69,838	59,099	60,199	60,583	62,806	62,513	61,779	62,674	63,778	64,879
	Workplace 8th quintile	60,496	69,222	69,786	70,285	69,091	70,123	71,634	71,960	72,052	71,115
	Workplace 9th quintile	69,279	78,723	81,644	81,444	82,135	83,930	85,285	86,085	86,372	87,130
	Workplace Decile	73,770	81,114	84,435	86,814	88,706	91,631	93,420	95,599	97,081	97,551
	missing work	.	1,341	1,984	2,830	3,440	3,672	4,052	5,985	7,420	8,143
	Medical benefits	35,298	37,326	37,715	36,971	33,153	32,647	31,080	28,769	27,629	26,720
obstacle	Not applicable	966,170	960,336	950,305	941,390	932,457	924,740	918,629	912,749	907,389	901,965
	severe	9,088	10,691	11,326	11,609	11,975	11,709	11,457	11,212	10,970	10,858
	mild	24,742	28,973	32,113	35,002	37,885	39,803	40,388	40,618	40,672	40,750
obstacle category	Not applicable	966,170	960,336	950,305	941,390	932,457	924,740	918,629	912,749	907,389	901,965
	Physical disability	18,534	21,072	22,934	24,706	26,480	27,360	27,449	27,261	27,046	26,858
	Brain lesion disorder	3,077	3,930	4,402	4,736	5,031	5,159	5,150	5,098	5,036	5,052
	visual impairment	3,663	4,175	4,488	4,725	4,970	5,108	5,166	5,205	5,202	5,197
	hearing impairment	3,158	3,815	4,279	4,653	5,067	5,309	5,309	5,257	5,208	5,164
	Other disabilities	5,398	6,672	7,336	7,791	8,312	8,576	8,771	9,009	9,150	9,337