



中華民國醫師公會全國聯合會

Path to Universal Health Coverage: Taiwan's experience in NHI and its reform

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Demographics of Taiwan's Population (I)

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- Area
 - ▣ 36,193 km² (136th)
- Population
 - ▣ 23,539,816 as of Dec. 2016 (56th)
 - ▣ ≥65 y/o, 3,106,105 (13.20%) as of Dec. 2016
 - ▣ Density 660/km² (16th)
- Ethnicity
 - ▣ 98% Han Chinese
 - 70% Hokkien
 - 14% Hakka
 - 14% Waishengren
 - ▣ 2% Aborigines



Demographics of Taiwan's Population

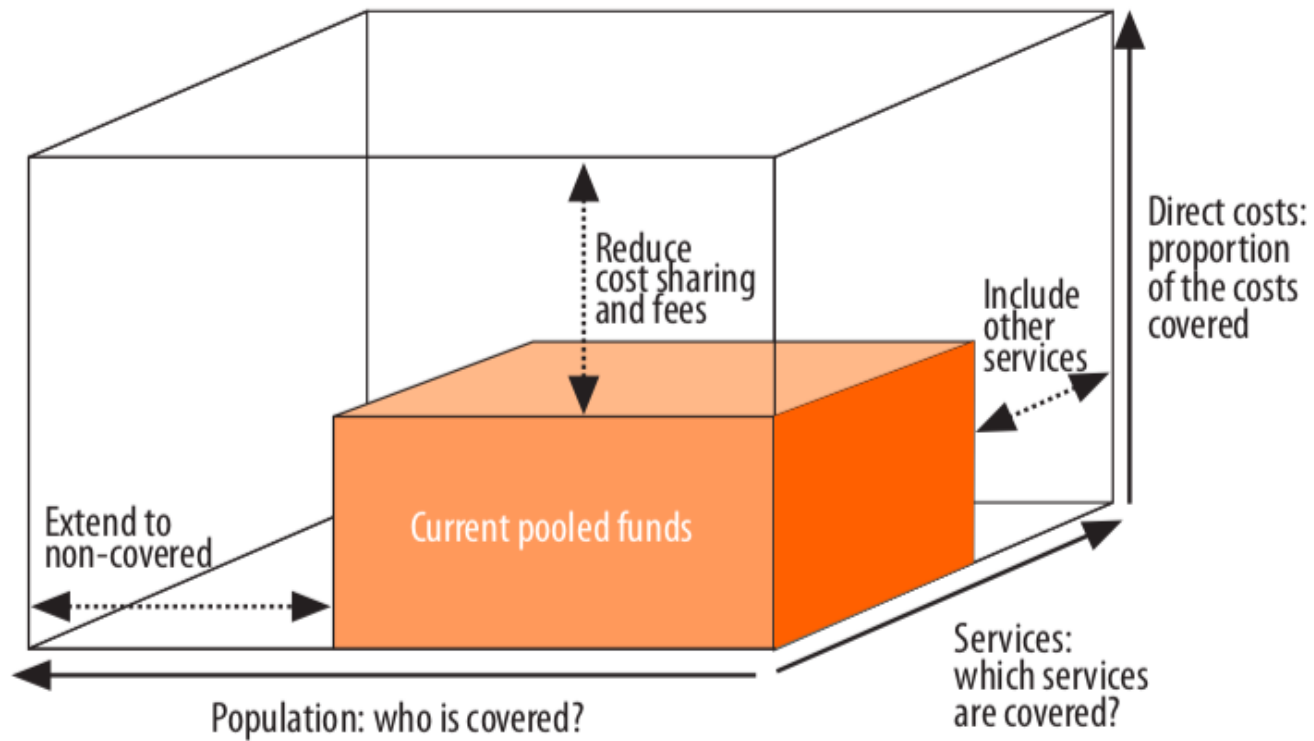
(II)

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- Distribution
 - ▣ Urban population 78% (2011)
- GDP (nominal) 2016 estimate
 - Total \$523.01 billion (22nd)
 - Per capita \$22,592 (36th)
- Religion
 - ▣ Buddhism 35.1%, Taoism 33%, Christianity 3.9%, Yiguandao 3.5% (2009 census)
- Unemployment rate
 - ▣ 3.79% (May, 2017)

What is in UHC?

The Three Dimensions of UHC



Health care System in Taiwan (I)

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- National Healthcare Expenses as 6.34% of GDP (2017)
- 22,330 medical institutions, including 485 hospitals and 21,845 primary care clinics (93% contracted with NHI) in June 2016
- 44,006 physicians, 6,928 doctors of Chinese medicine and 13,502 dentists in 2015
- 27.14 physicians, 119.41 medical personnel and 69 hospital beds per 10,000 populations in 2015

Health care System in Taiwan (II)

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- Ten leading causes of death in 2016
 - Malignant neoplasms
 - Heart disease
 - Pneumonia
 - Cerebrovascular disease
 - Diabetes
 - Accidents and adverse effects
 - Chronic lower respiratory disease
 - Hypertensive disease
 - Nephritis, nephrotic syndrome and nephrosis.
 - Chronic liver disease and cirrhosis

Health care System in Taiwan (III)

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- National Health Insurance
 - Social insurance plan
 - Compulsory program
 - Single payer
 - Started since 1995
 - Coverage rate 99.6% population in 2016
 - 20,759 contracted providers, including 483 hospitals and 20,276 primary care clinics in June 2016
 - Funding
 - Premium from insured & group insurance applicants
 - Government subsidies
 - Low co-payment

NHI– from 1st generation to 2nd generation

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NHI was implemented since 1995.3. Under the basis of social insurance, the NHI provides health care for all and prevents the deprivation of right to health due to poverty.

2000–2005 To increase financial responsibility of the government, to link the income and expenditure of premium, and to collect premium from a variety basis, revolution of NHI to 2nd generation was proposed

2006–2011 The legislative procedures were complete.

2013.1 The 2nd generation NHI was implemented.

Key points of upgrading NHI to 2nd generation (I)

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Reduce waste of medical resources

Increase financial responsibility of the government

The income and expenditure should be linked under the supervision of NHI committee

Key points of upgrading NHI to 2nd generation (II)

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Supplementary premium is claimed from a variety basis to strengthen the financial structure and lowering the burden of the employed population

Diversified payment system

Increase transparency and citizen engagement

Key points of upgrading NHI to 2nd generation (III)

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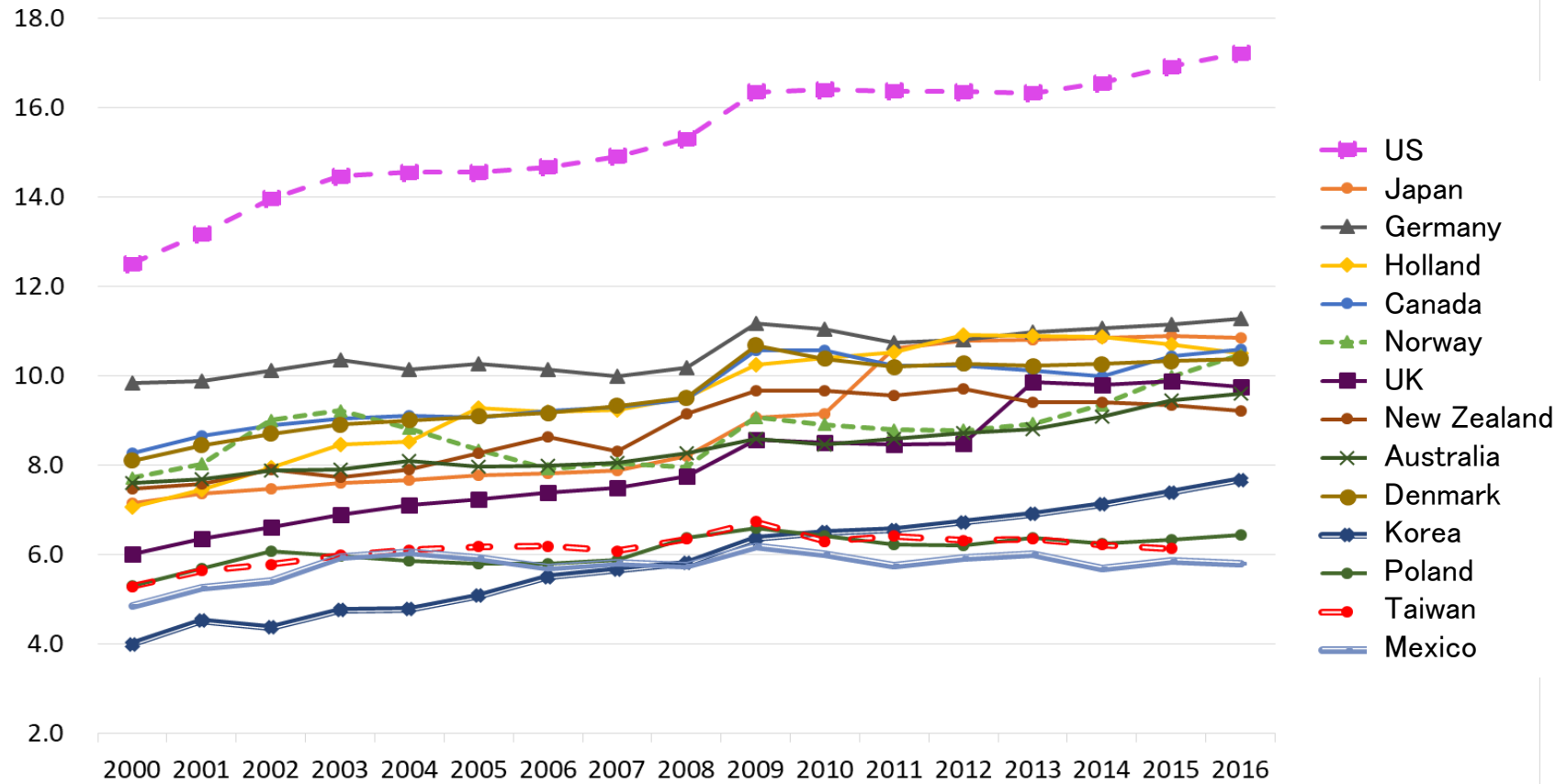
Protect the right of health care of the vulnerable with subsidy

Returned overseas to join NHI with stricter requirements

Prisoners in jail are enrolled in NHI

Ratio of NHE(national health expenditure) to GDP (Gross Domestic Product)

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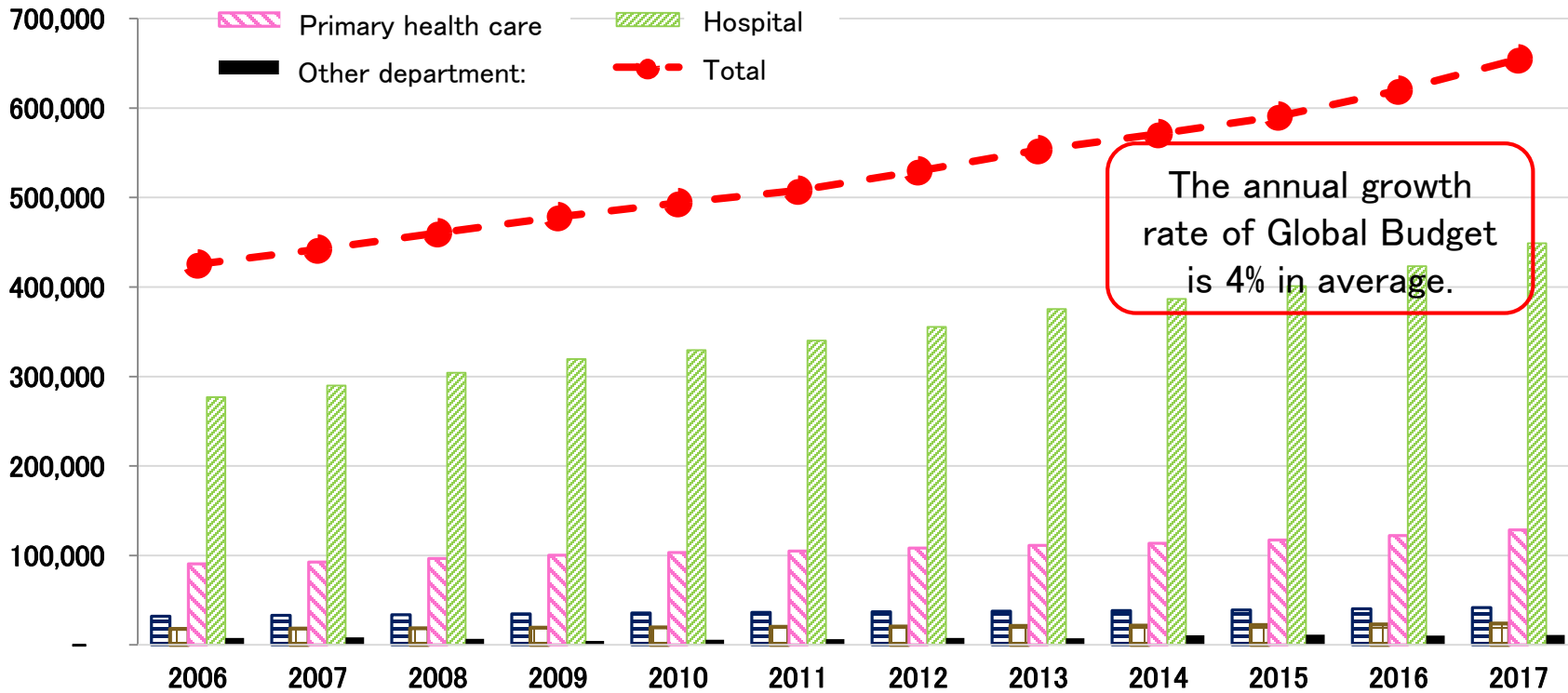


Global budgets of the years

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Million

- Dental medicine
- Traditional Chinese Medicine
- Primary health care
- Hospital
- Other department:
- Total

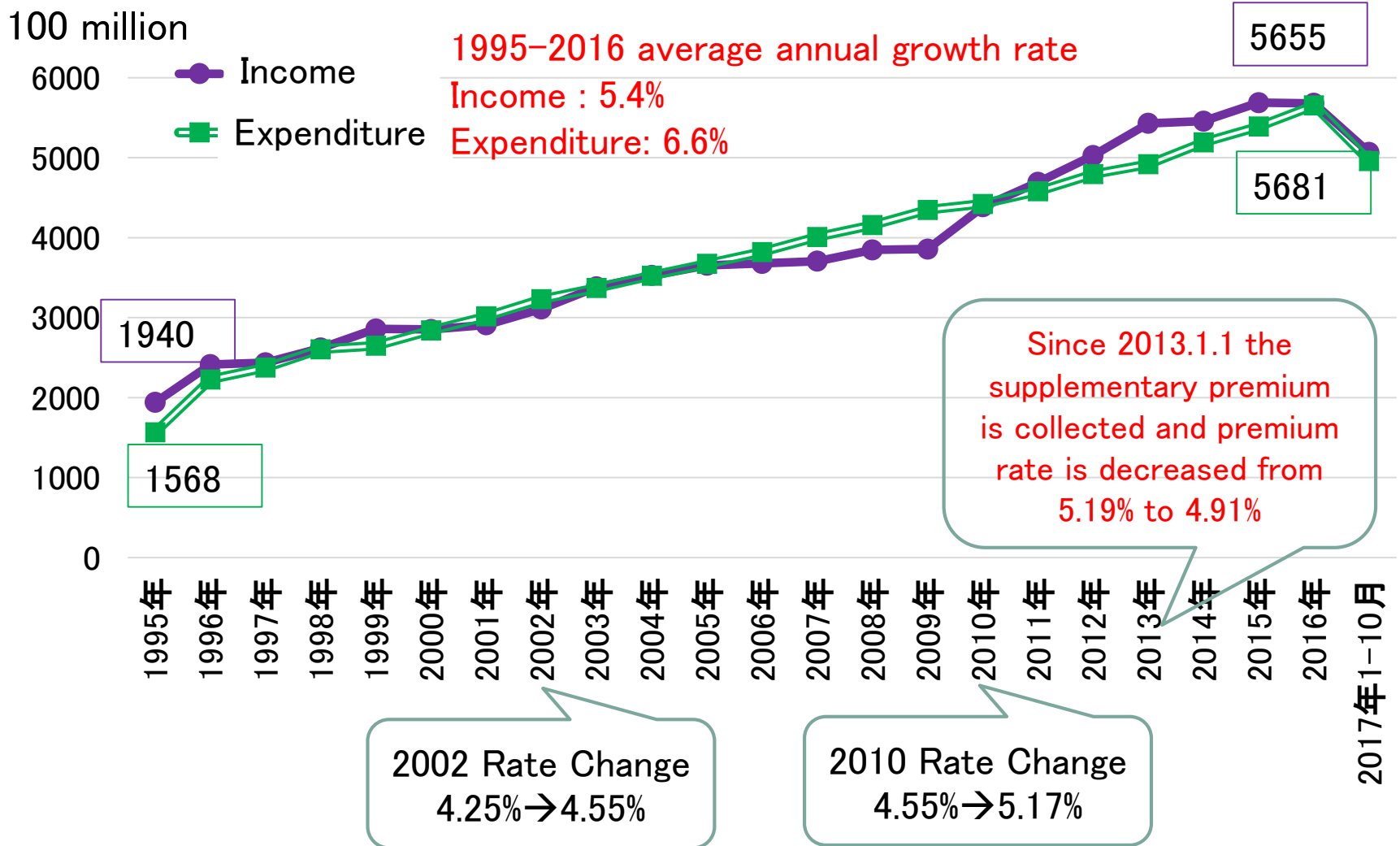


The annual growth rate of Global Budget is 4% in average.

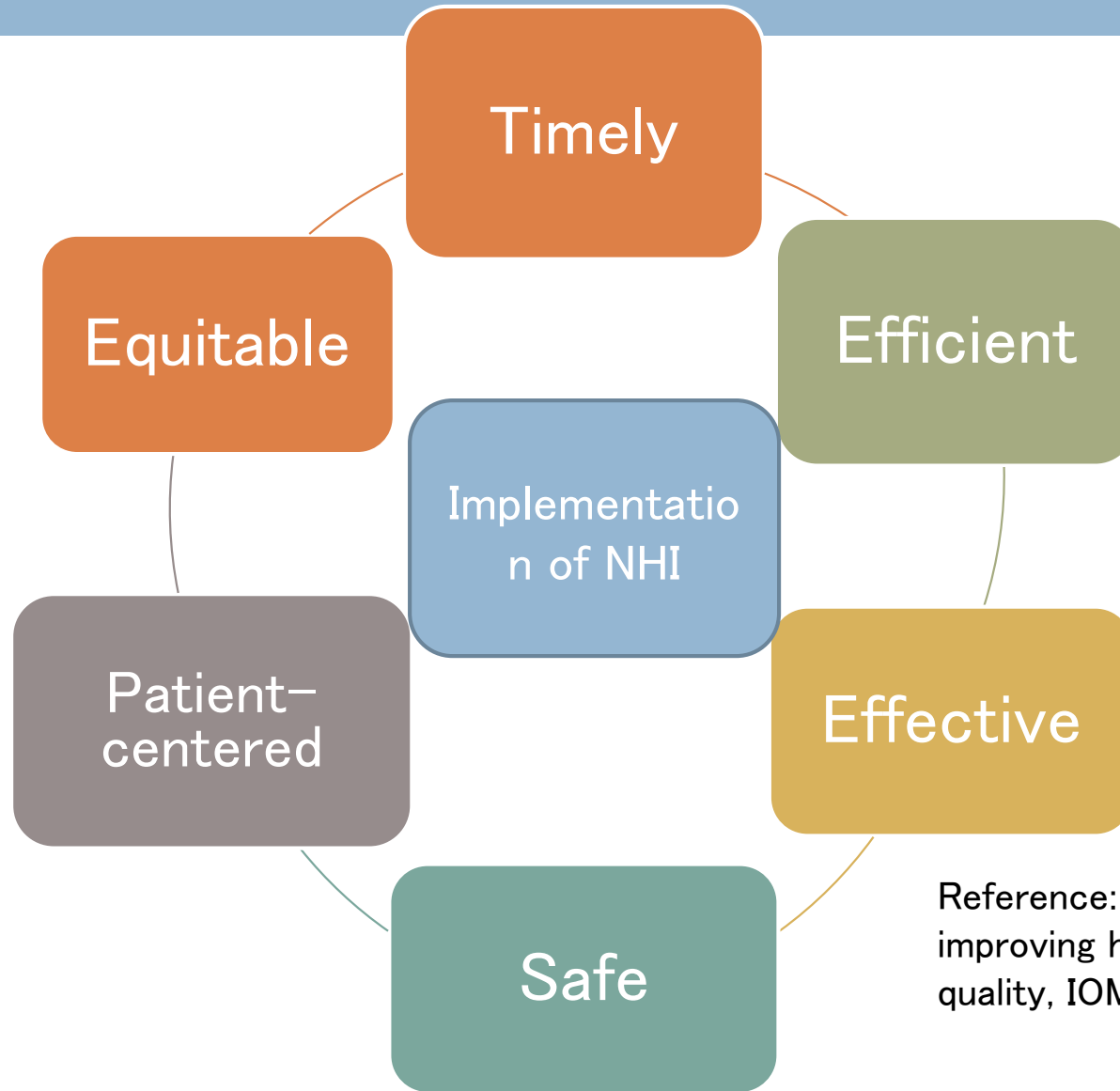
Dental medicine : 32.18 Billion
 Traditional Chinese Medicine :17.79 Billion
 Primary health care : 90.69 Billion
 Hospital :276.9.Billion
 Other department : 7,94 Billion
 Total:425.5 Billion

Dental medicine:41.88 Billion
 Traditional Chinese Medicine:23.93 Billion
 Primary health care:128.57 Billion
 Hospital:448.89 Billion
 Other department:11.26 Billion
 Total:654.51 Billion

The income and expenditure of NHI



Six aims to the implementation of NHI



Reference: six aims for improving health care quality, IOM

Public satisfaction of NHI

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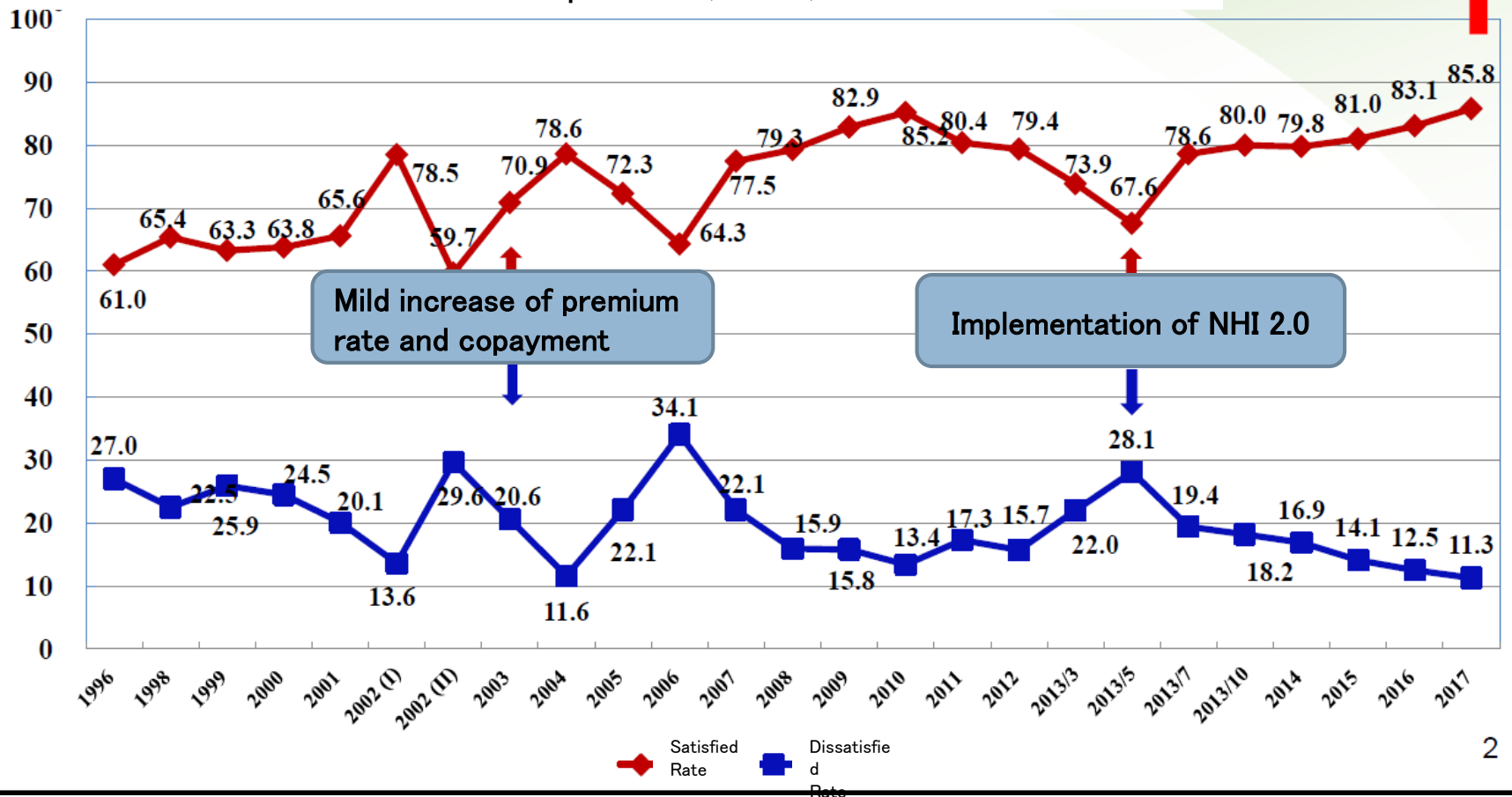
Reasons for high satisfaction

Easy Access (48.2%)

Reasonable charge (28.4%)

Low financial burden as a patient (22.7%)

Highest Satisfied Rate



Electronic information system

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- Upgrading NHI card
- The Pharmacloud system
- Electronic referral system
- My health bank

NHI card

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- ✓ The NHI card is what the patient need when seeking medical attention



NHI card has been upgraded to include the following data:

1. Personal ID
2. Health insurance profiles: disease category, catastrophic illness registration, preventive healthcare records
3. Health care information: prescription, diagnosis, lab tests, allergy record
4. Administrative profile: organ donation, palliative care, vaccine injection

The PharmaCloud System (I)

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Since 2013, based on cloud technology, the NHI established the PharmaCloud System to include individual patients' personal pharmacy records. In 2016, it is upgraded to integrate most medical records of the patients, wherever he or she visited the doctors. The information could be shared under certain safety procedure and be reviewed instantly during treatment so to avoid duplication of



It saves time and transportation costs, avoid waste due to duplication, and improved healthcare quality and results.

The PharmaCloud System (II)

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To check the PharmaCloud System, both patient's NHI card and the physician's profession card are need for security reasons. To logon the system through VPN, another set of ID and password is needed.



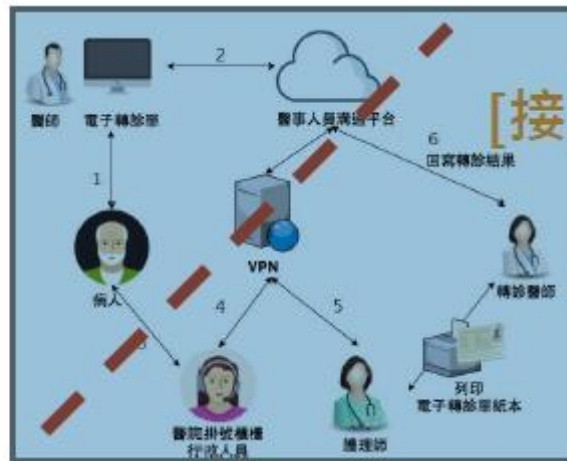
Within 15 seconds, 11 medical information are provided for instant enquiry, such as prescription, lab results, operation records, drug allergy, discharge note, dental tx, etc. The images of CT and MRI could be download as well for reviewing.

Electronic referral system

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- When a patient needs to be referred to specialist, the primary care doctor could write referral notes on the web, so staffs in hospital could instantly receive the message and prepare for the follow-up session. After counselling and management in the hospital, the specialist should write the note to respond to the primary care doctor on the platform so for the continuous care of the patient.
- Rewards would be given to the physicians who use the electronic referral system

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My health bank

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- My health bank is a cloud database for the storage of personal medical records
- With the use of NHI card and card reader, everyone could have access to his healthcare information such as date of visit, prescription, lab results. The information could be downloaded to cell phone or any mobile storage devices to improve self-management of acute or chronic illness
- The asymmetry in health care might be reduced with the use of My Health Bank



Measures to improve access

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- Hierarchically integrated healthcare system
- family physician integrated care plan
- medical service plans for regions lacking medical resources

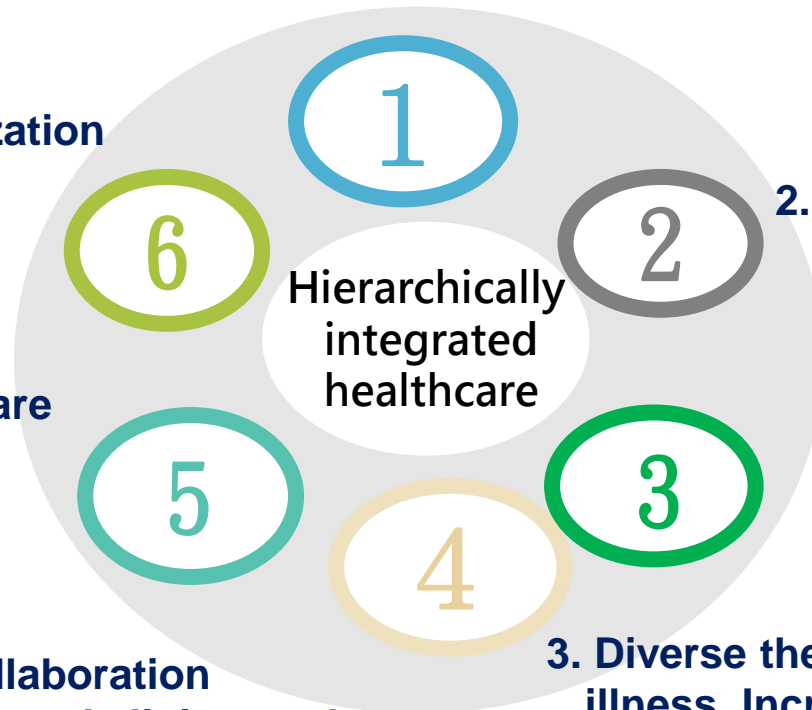
Hierarchically integrated healthcare system (I)

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1. Increase capacity of PHC services

6. Regulation on the management of healthcare organization

2. Advice patients to visit PHC doctors first with the adjustment of copayment under the referral system



Hierarchically integrated healthcare

6

1

2

3

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5. Improve health literacy and self-care ability of patients

3. Diversify the patient flow by the severity of illness. Increase payment for the hospital to treat emergent or catastrophic condition.

4. Strengthen the collaboration between hospitals and clinics so the patient will have continuous care.

Hierarchically integrated healthcare system

(II)

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- 1. Increase capacity of PHC services
 - Increase payment items in PCH
 - Approval of US\$53M budget for family physician integrated care plan

- 2. Advise patients to visit PHC doctors first with the adjustment of copayment under the referral system
 - Increase copayment in hospital visits if no referral from PHC
 - encourage the use of electronic referral system
 - Information for the patients to know which clinics remain open on holidays.
 - PHC doctors take turns to open their clinics on holidays to avoid unnecessary ER visit.

- 3. Diverse the patient flow by the severity of illness.
 - Increase \$US 200M budget for the payment for the hospital to treat emergent or catastrophic condition.
 - Stable or minor ill patients should be referred to PHC for continuous care

Hierarchically integrated healthcare system (III)

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- 4. Strengthen the collaboration between hospitals and clinics so the patient will have continuous care.
 - Electronic referral system
 - Budget for Family physician integrated care plan and other regional integrated care
 - shared care clinic supported by doctors from both hospitals and community

- 5. Improve health literacy and self-care ability of patients
 - Join family physician integrated care plan
 - 24-hour consultation hotline
 - Promote the idea of primary care physician as gatekeeper

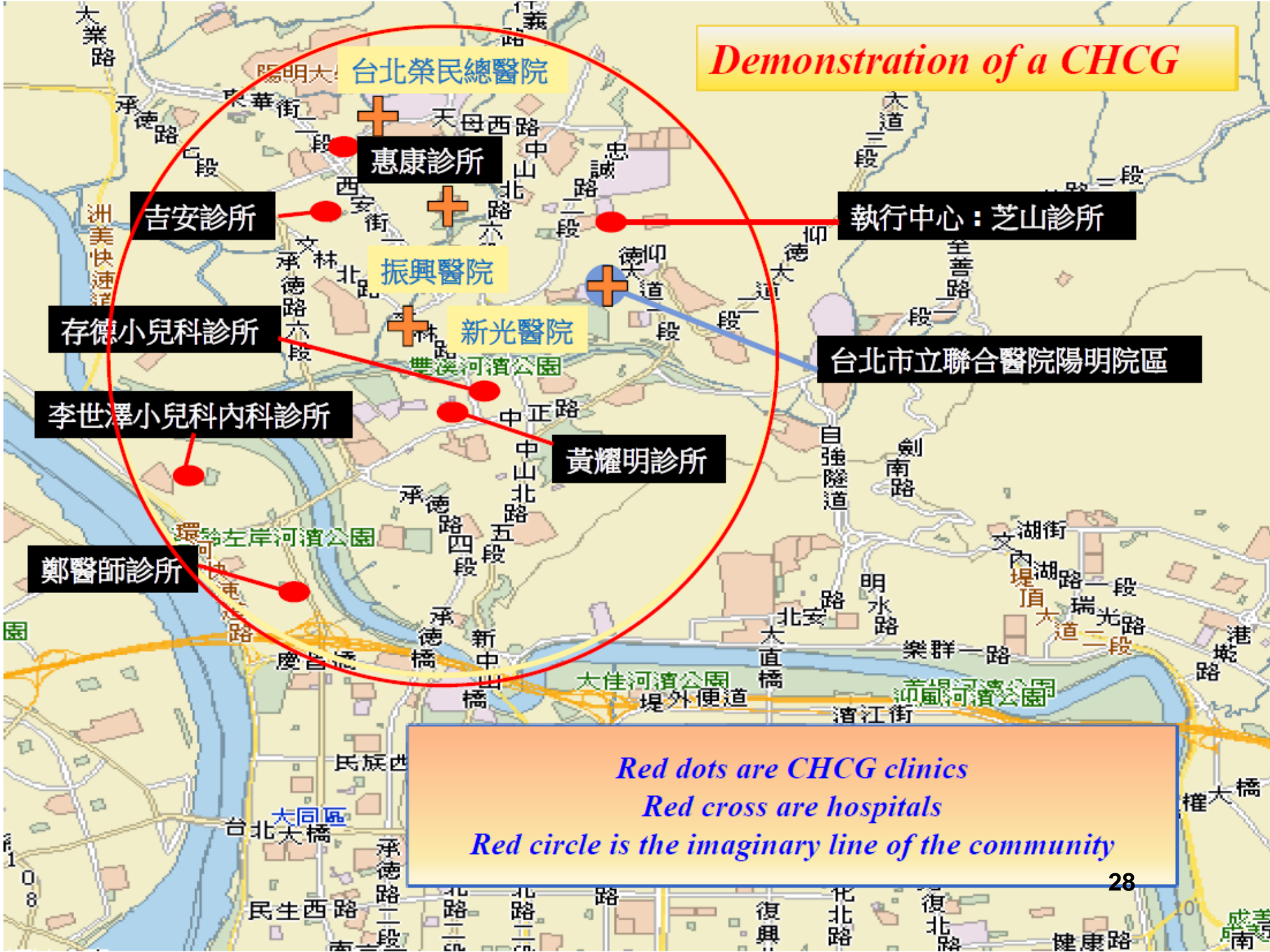
- 6. Regulation on the management of healthcare organization
 - Prohibit transportation of minor ill patient to hospitals' outpatient clinic
 - Restriction for hospitals to extend their outpatient clinic to the community

Family Physician Integrated care plan through community health care groups (CHCG)

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- 5~10 *GPs*, one fifth of which specialized in FM
- Recruit members from patients encountered
- Continuous and comprehensive care
 - *24-hr consultation*
 - *Health promotion*
 - *Disease prevention*
 - *Disease management*
 - *Patient referral*
- Regular meeting and sharing experiences

Demonstration of a CHCG



吉安診所

台北榮民總醫院

惠康診所

振興醫院

新光醫院

執行中心：芝山診所

存德小兒科診所

台北市立聯合醫院陽明院區

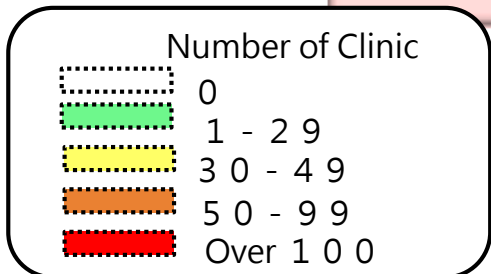
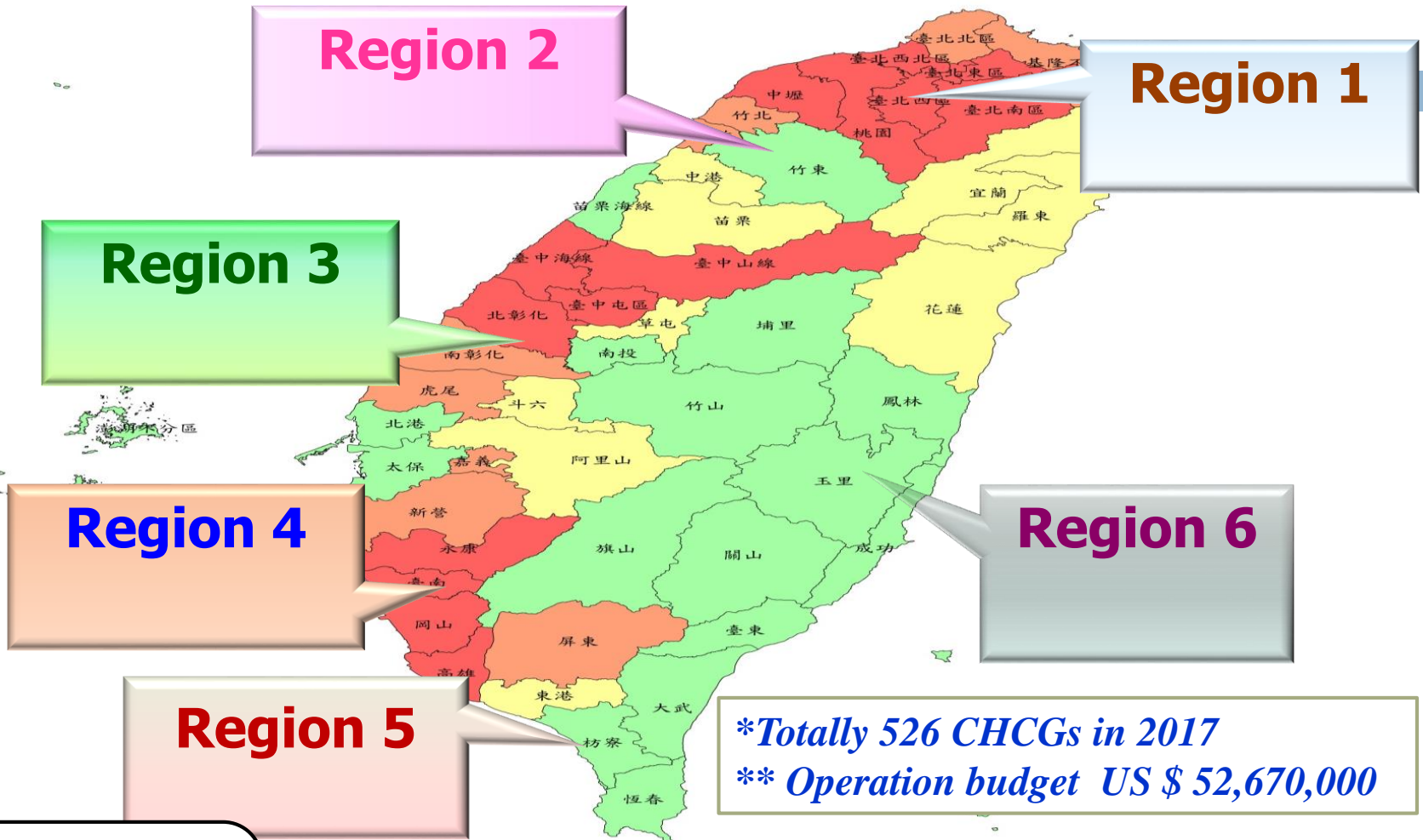
李世澤小兒科內科診所

黃耀明診所

鄭醫師診所

Red dots are CHCG clinics
Red cross are hospitals
Red circle is the imaginary line of the community

Community Health Care Groups (CHCG) in Taiwan



Physicians and enrollees in the project

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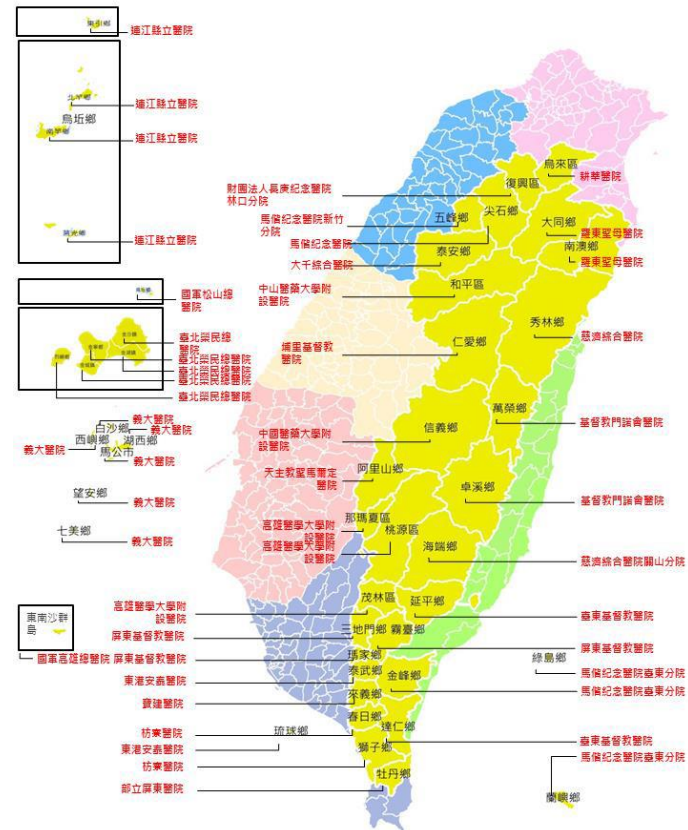
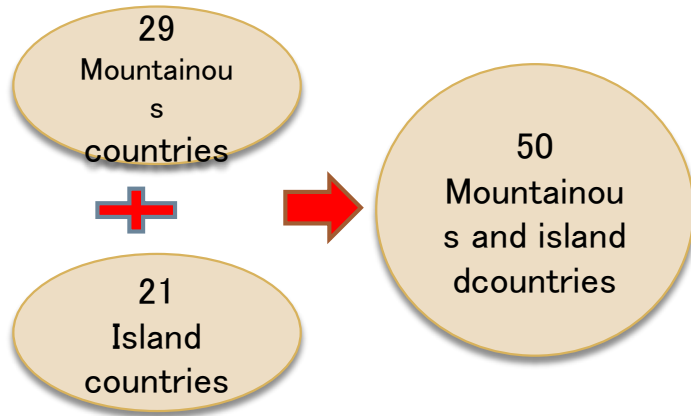
- **Clinics participated in CHCGs**
 - Around 4,063 (*36.6% of total clinics*)
- **Physicians participated in CHCGs**
 - Around 5,182 (33.7% of total physicians)
- **Enrollees**
 - Around 4,130,000 (17.95 % of total population)

Statistics from NHI, Taiwan, 2017

Medical service plans for regions lacking medical resources(I)

- 26 hospitals are in charge of 30 integrated care plans for 29 mountainous countries and 21 island countries.

in-charge hospital	number
Medical center	4
Regional hospital	14
District hospital	5



Medical service plans for regions lacking medical resources(II)

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- Budgeting for hospital doctors, PHC doctors, dentists, traditional Chinese medical doctors to practice in regions lacking medical resources
- Subsidies are provided for doctors to practice in those areas
- 84 Primacy care clinics and 32 hospitals practice in those areas in 2017.
- In areas without healthcare organization, we encourage physicians to have site visits at remote areas, so local residents have continuous access to quality medical care.

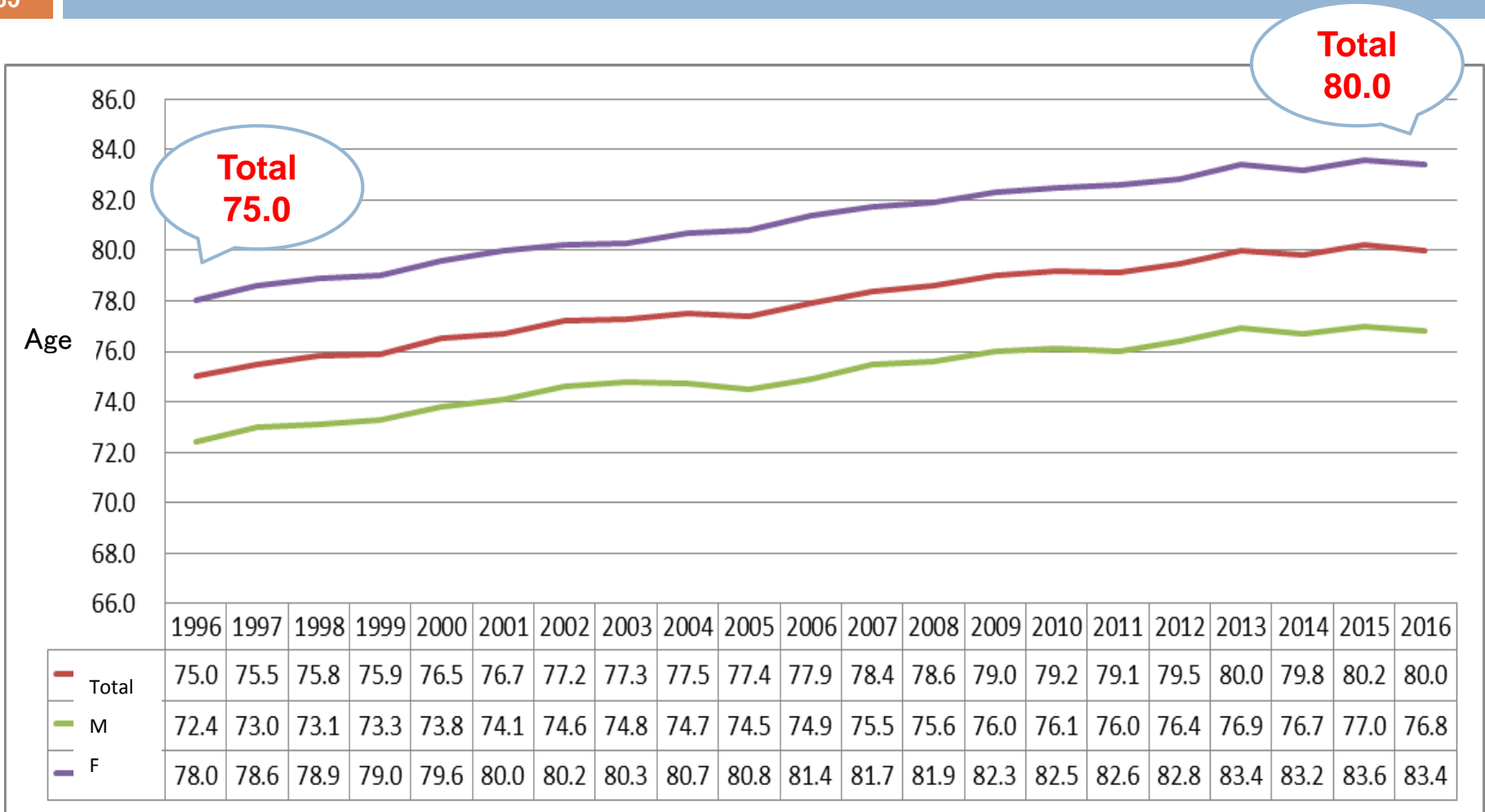
Medical service plans for regions lacking medical resources(IX)

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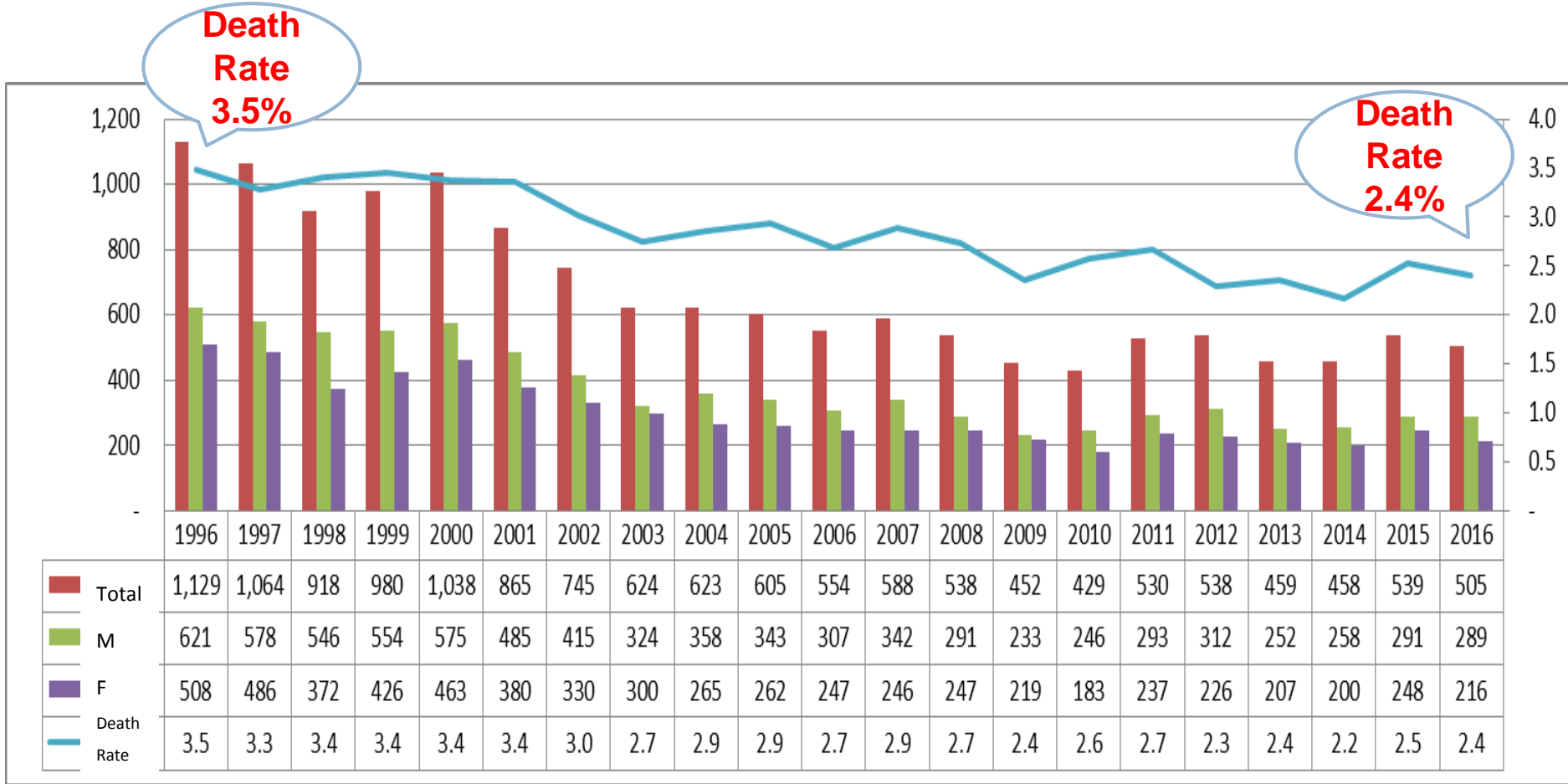
- Satisfaction survey was performed for patients in these areas (2017)
- The average satisfaction rate was above 90%

Item÷Division	Taipei	Northern	Central	Southern	Kaoping	Eastern	Total
Number	378	19	545	1,549	60	150	2,701
Waiting time	100.0%	85.6%	98.8%	94.6%	97.8%	83.0%	93.3%
Care result	99.7%	84.4%	98.4%	93.2%	94.2%	81.0%	91.8%
Clinic Setting	98.3%	71.7%	97.0%	86.7%	92.0%	65.0%	85.1%
Attitude of care	100.0%	96.7%	99.4%	96.3%	100.0%	90.0%	97.1%
Communication	100.0%	100.0%	99.3%	96.5%	99.5%	88.0%	97.2%
Time of visit	99.4%	92.2%	98.7%	93.7%	98.3%	85.0%	94.6%
Convenience	99.4%	96.6%	99.0%	95.4%	100.0%	91.0%	96.9%

Life expectancy

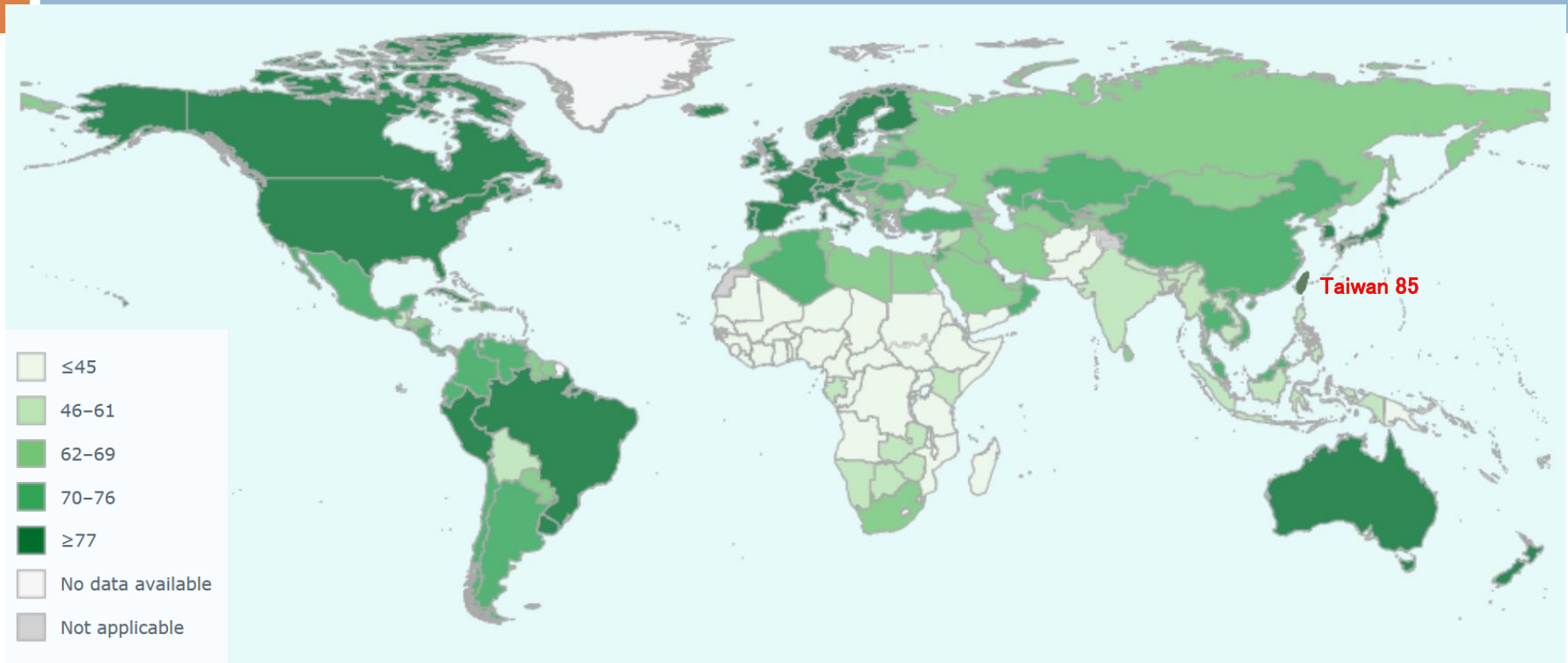


Perinatal Death Rate



Universal Health Coverage (UHC)

UHC service coverage index 2015



NO.	Tracer Indicator	Taiwan	Japan	South Korea	Singapore	China	Thailand	Malaysia	Philippines	U.S.A.	Canada	Germany
	UHC service coverage index	85	≥ 80	≥ 80	≥ 80	76.6	75.2	69.7	58.3	≥ 80	≥ 80	78.5

Summary

- Universal health coverage (UHC) is now a global health priority with three dimensions: reducing cost sharing and fees, including more services, and expanding medical care coverage.
- By 2016, 99.6% of the population was covered by NHI in Taiwan
- With the upgrade to 2nd generation, the NHI has improved access and continuous care through various use in electronic system
- NHI also introduced pay for performance over Non-communicable diseases including DM, CKD, Asthma, COPD and other preventive care, such as periodic health exam, vaccinations, cancer screenings.

感謝聆聽，敬請指教
Thank you for your attention.

