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Investing in Sustainable Health and Well-Being: National Health Insurance and Dental Care in Taiwan

Mei-ling Sheu, PhD.

School of Health Care Administration

College of Management
Taipei Medical University



Outline

- ◆ Profile of Taiwan
- ◆ Healthcare Delivery System
- ◆ National Health Insurance (NHI) and Dental Care
- ◆ Oral Health Indicators
- ◆ Conclusion



Profile of Taiwan, 2020



Table 1.1 Profile of Taiwan

Population	23.56 million
Land area	36,197 km ²
Ageing (over 65)	16.07%
GDP per capita	US\$ 28,180 (nominal)
Crude birth rate	7.01‰
Crude death rate	7.34‰
Infant mortality	3.6‰
Maternal mortality	13.0 0/0000
NHE as % of GDP (2019)	6.54%
Life expectancy	84.7 (F)/78.1(M)

Source: Lee et al. 2022



Taiwan's Healthcare Delivery System

- Dominated by the private sector
- A closed-staff medical structure for hospitals
- No gate-keeper system
- High volume of hospital OPD services
- No waiting list as defined in western countries



Social Insurance in Taiwan



Taiwan's Major Social Insurance Programs

1950

Labor Insurance

1958

Government Employee Insurance

1985

Farmers Insurance

1995

National Health Insurance

2013

2nd Generation NHI

Only 59% of the population was covered by these insurance plans in 1994, most of the uninsured were the children and the elderly.

Framework of the NHI

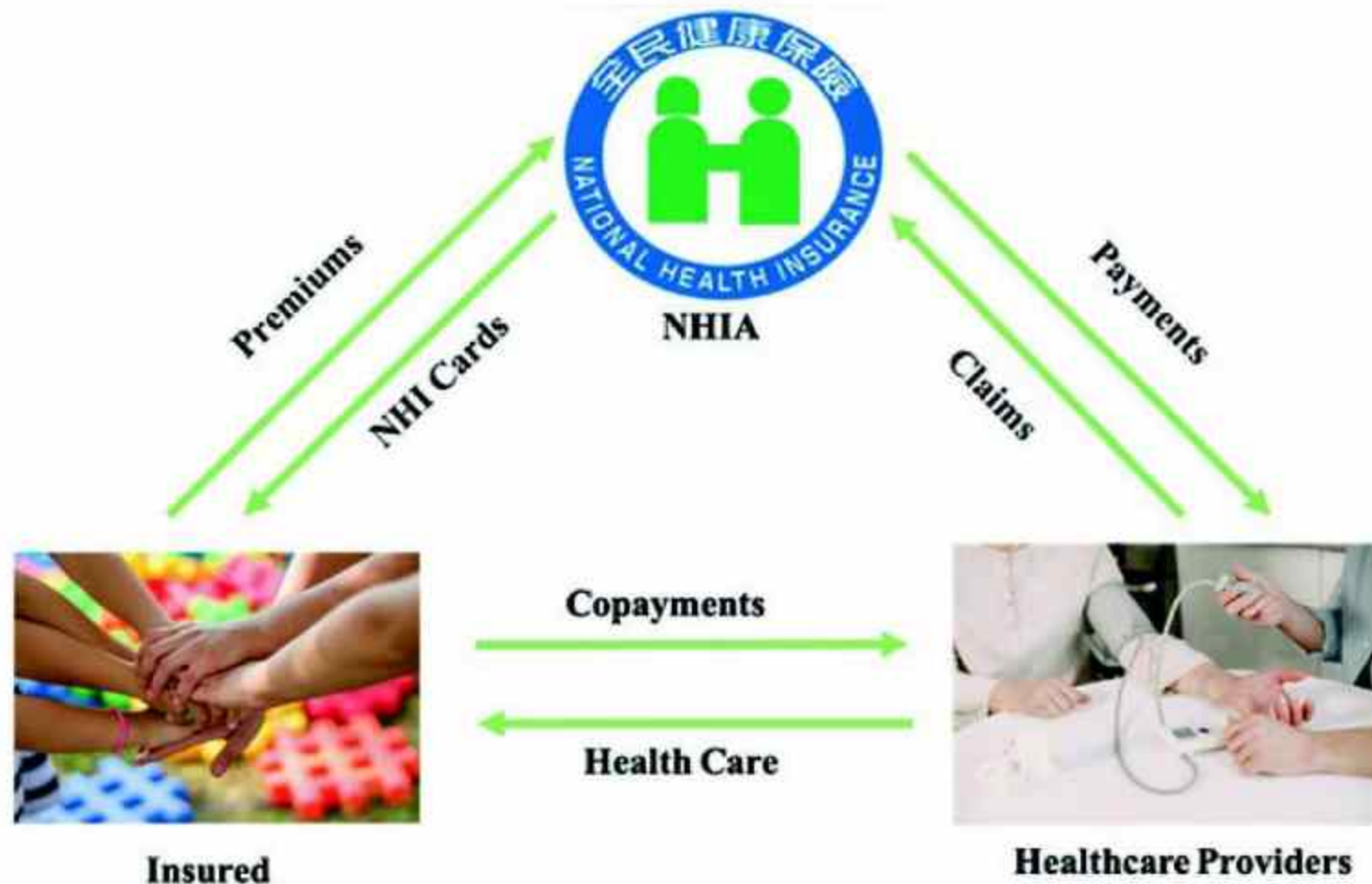


Fig. 1.4 The framework of the National Health Insurance



NHI Characteristics

Coverage	Compulsory enrollment for all citizens and legal residents
Administration	Single-payer system run by the government
Financing	Premiums
Benefits	Uniform package, copayment required
Providers	<ul style="list-style-type: none">• Contract-based• About 93% of healthcare providers contracted with NHI
Payment	Plural payment programs under the global budget payment systems
Privileges	Premium subsidies and copayment waivers for the disadvantaged

Number of Hospitals and Clinics

表3-1 全民健保特約醫療院所數

Table 3-1 Number of NHI-Contracted Hospitals and Clinics

單位：機構數 Unit: No. of Institutions

	總計 Total	西醫醫院 Hospitals	西醫診所 Clinics	中醫醫院 Chinese Medicine Hospitals	中醫診所 Chinese Medicine Clinics	牙醫診所 Dental Clinics
全國醫療院所數 Total Medical Institutions	23,164	470	11,776	4	4,020	6,894
特約醫療院所數 Contracted Medical Institutions	21,463	470	10,487	4	3,755	6,747
特約率 Percentage of Contracted Institutions	92.66%	100%	89.05%	100%	93.41%	97.87%

資料時間：2020年6月30日。 Data as of June 30, 2020

Source: 2020-2021 National Health Insurance in Taiwan Annual Report



Number of Western Medicine Physicians per 1000 Population

	2013	2014	2015	2016	2017	2018	2019	2020	2021
Australia	3.4	3.5	3.5	3.6	3.7	3.8	3.8	3.9	...
Canada	2.5	2.5	2.6	2.6	2.7	2.7	2.7	2.7	2.8
France	3.1	3.1	3.1	3.1	3.1	3.1	3.2	3.2	...
Germany	4.0	4.1	4.1	4.2	4.3	4.3	4.4	4.5	4.5
Netherlands	...	3.4	3.5	3.5	3.6	3.7	3.8	3.8	...
Norway	4.3	4.4	4.5	4.6	4.7	4.9	5.0	5.1	5.2
Sweden	4.0	4.1	4.2	4.2	4.3	4.3	4.3	...	...
United States	2.6	2.6	2.6	2.6	2.6	2.6	2.6	...	...
Japan	...	2.4	...	2.4	...	2.5	...	2.6	...
South Korea	2.2	2.2	2.2	2.3	2.4	2.4	2.5	2.5	...
Taiwan	1.8	1.8	1.9	1.9	2.0	2.0	2.1	2.2	2.2

Source: National Health Insurance Committee, 2022

Number of Dentists per 1000 Population

	2013	2014	2015	2016	2017	2018	2019	2020	2021
Australia	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	...
Canada	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	...
France	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	...
Germany	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	...
Netherlands	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	...
Norway	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Sweden	0.8	0.8	0.8	0.8	0.8	0.8	0.8	...	...
Japan	...	0.8	...	0.8	...	0.8	...	0.8	...
South Korea	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	...
Taiwan	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7

Source: National Health Insurance Committee, 2022

A stylized map of East Asia, including Taiwan, China, and Korea, is positioned in the upper left corner of the slide. The word "Benefits" is written in a large, bold, blue font to the right of the map.

Benefits

Disease

Injury

Maternity care

- Inpatient care
- Outpatient care
- Prescription drugs
- Dental services (orthodontics & prosthodontics excluded)
- Traditional Chinese medicine
- Day care for the mentally ill
- Home health care



Benefits

Disease

Injury

Maternity care

- Inpatient care
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- Prescription drugs
- Dental services (orthodontics & prosthodontics excluded)
- Traditional Chinese medicine
- Day care for the mentally ill
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The amounts and proportions of various sources of insurance income in 2020

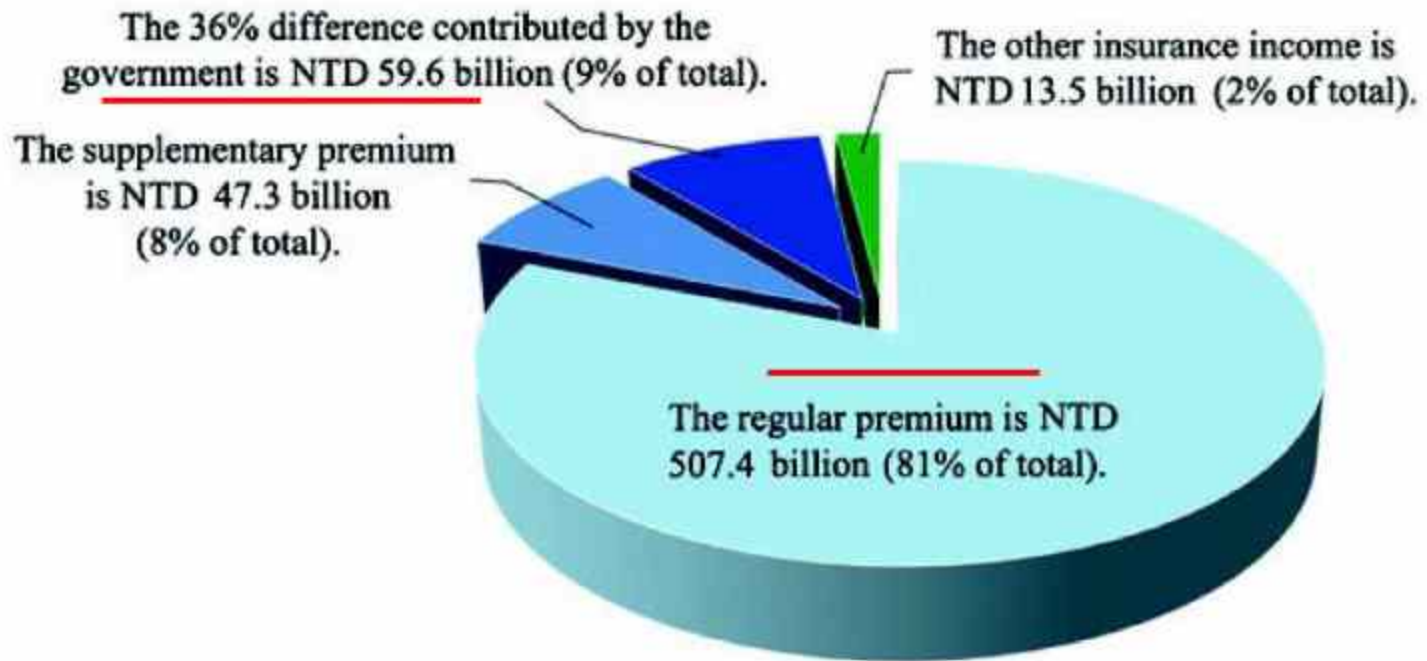


Fig. 2.1 The amounts and proportions of various sources of insurance income in 2020

The amount and proportion of the tripartite burden of premium income in 2020

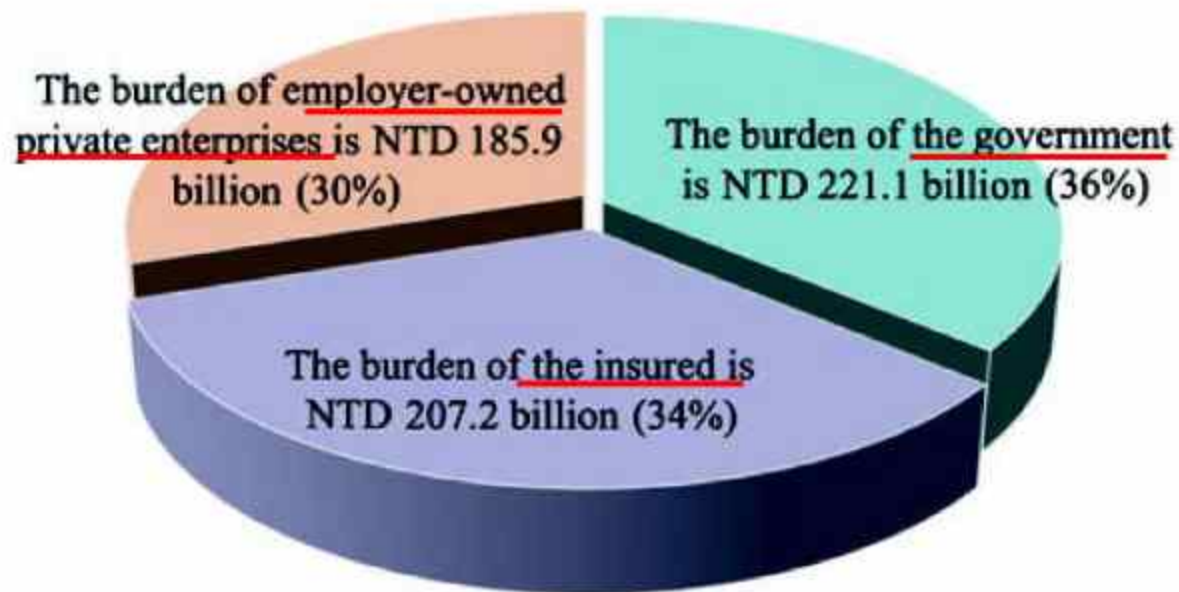


Fig. 2.2 The amount and proportion of the tripartite burden of premium income in 2020

The records on the National Health Insurance card

- Last Six Medical Visits
- Drug Prescriptions and Allergies
- Catastrophic Diseases
- Organ Donation Consent
- Palliative Care
- DNR



Fig. 1.8 The records on the National Health Insurance card

NHI co-payments for outpatient visits



Table 2.3 National Health Insurance co-payments for outpatient visits

Type of institution	Western medicine outpatient care		Dental care (NTD)	Chinese medicine (NTD)
	With referral (NTD)	Without referral (NTD)		
Medical centres	170	420	50	50
Regional hospitals	100	240	50	50
District hospitals	50	80	50	50
Clinics	50	50	50	50

Source: Lee et al. 2022

Evolution of the NHI payment system

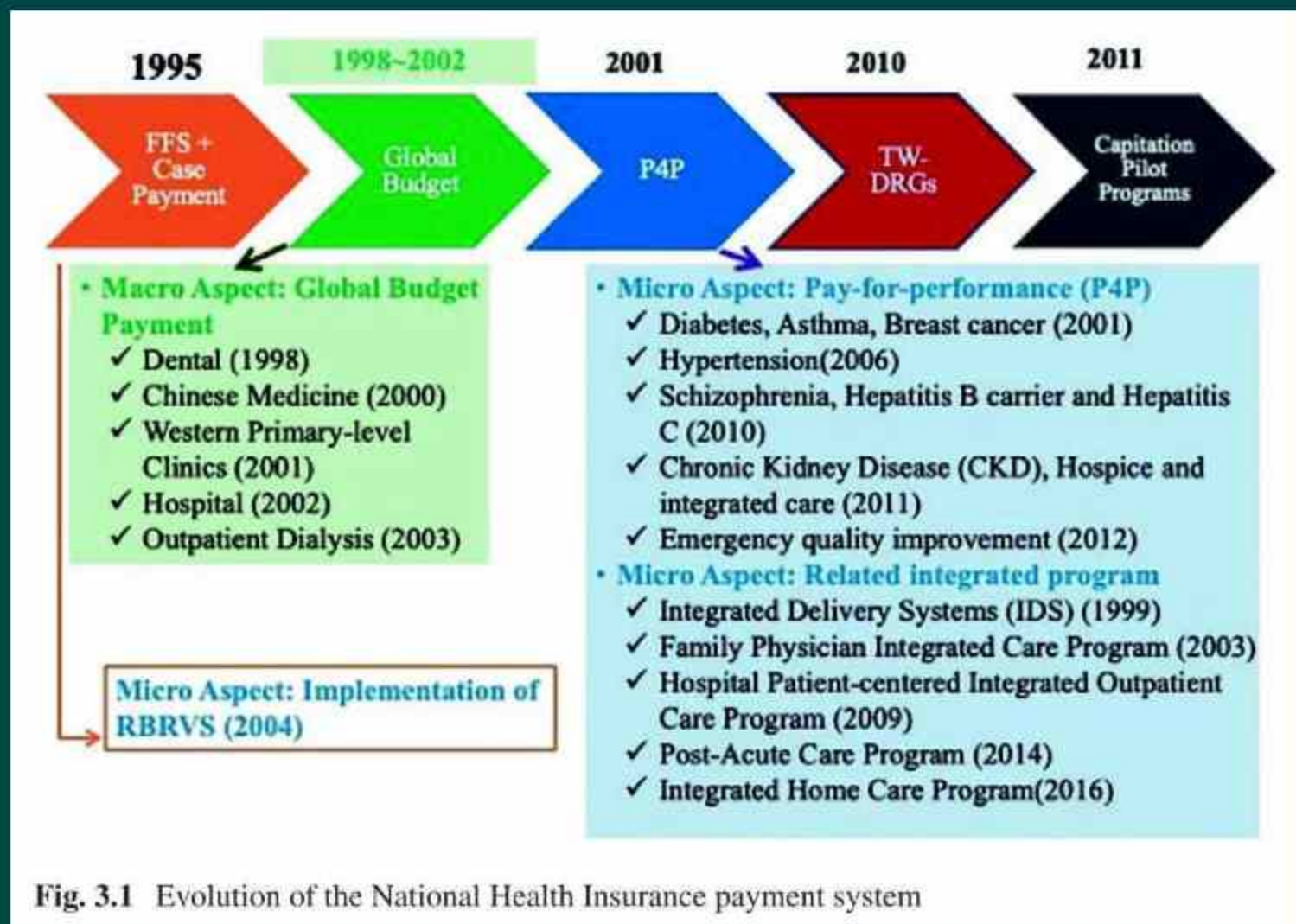
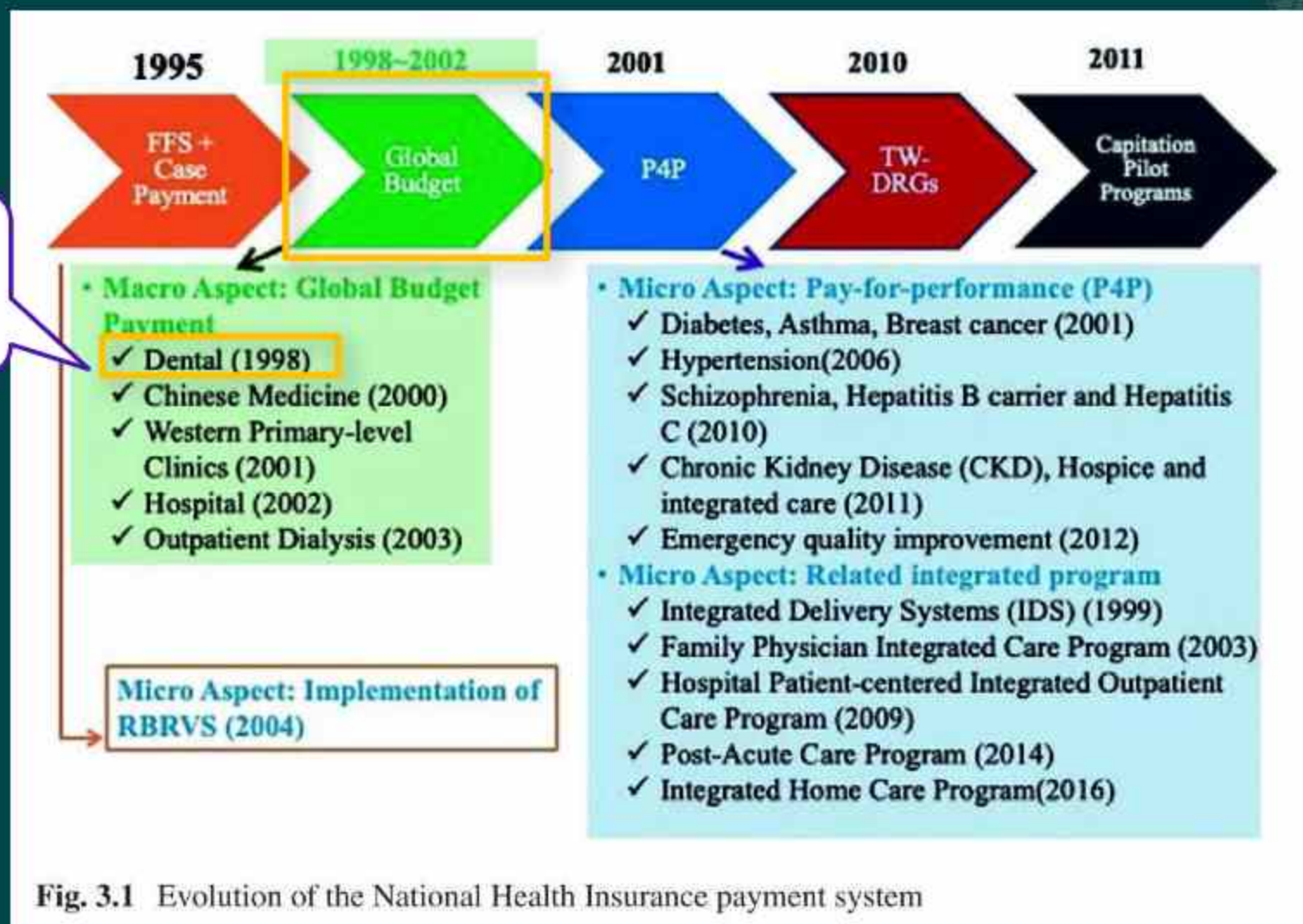


Fig. 3.1 Evolution of the National Health Insurance payment system

Evolution of the NHI payment system



Annual Negotiated Growth Rate of Global Budget

表3-4 全民健保歷年各總額部門醫療費用協定成長率

Table 3-4 Annual Negotiated Growth Rate of Global Budget

單位：% Unit: %

總額部門 Sector	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
整體 Total	3.874	3.317	2.855	4.314	4.436	3.275	3.430	4.912	5.642	4.711	4.417	5.237
牙醫門診 Dental	3.033	2.515	1.783	2.264	1.421	1.888	2.140	3.463	3.246	4.001	3.433	3.876
中醫門診 Traditional Chinese Medicine	2.950	2.063	2.551	2.856	2.187	2.421	2.124	3.927	4.066	3.699	4.429	5.393
西醫基層 Clinics	3.756	2.742	1.874	2.986	2.818	2.391	3.191	4.274	5.157	4.053	4.067	4.401
醫院 Hospitals	4.887	3.256	3.173	4.683	5.587	3.281	3.659	5.672	6.021	4.800	4.428	5.438

Source: 2020-2021 National Health Insurance in Taiwan Annual Report

Global Budget Composition (%)

	2016	2018	2019	2020	2021
Hospital Sector*	68.58%	68.63%	68.63%	68.76%	68.95%
Western Medicine Clinics*	19.64%	19.53%	19.47%	19.31%	19.21%
<i>(Outpatient Hemodialysis)</i>	<i>5.64%</i>	<i>5.58%</i>	<i>5.51%</i>	<i>5.40%</i>	<i>5.36%</i>
Dental Services	6.39%	6.35%	6.29%	6.21%	6.15%
Chinese Medicine	3.66%	3.62%	3.62%	3.63%	3.64%
Other	1.72%	1.87%	1.98%	2.08%	2.06%

* Including outpatient Hemodialysis

Outpatient Visits per person

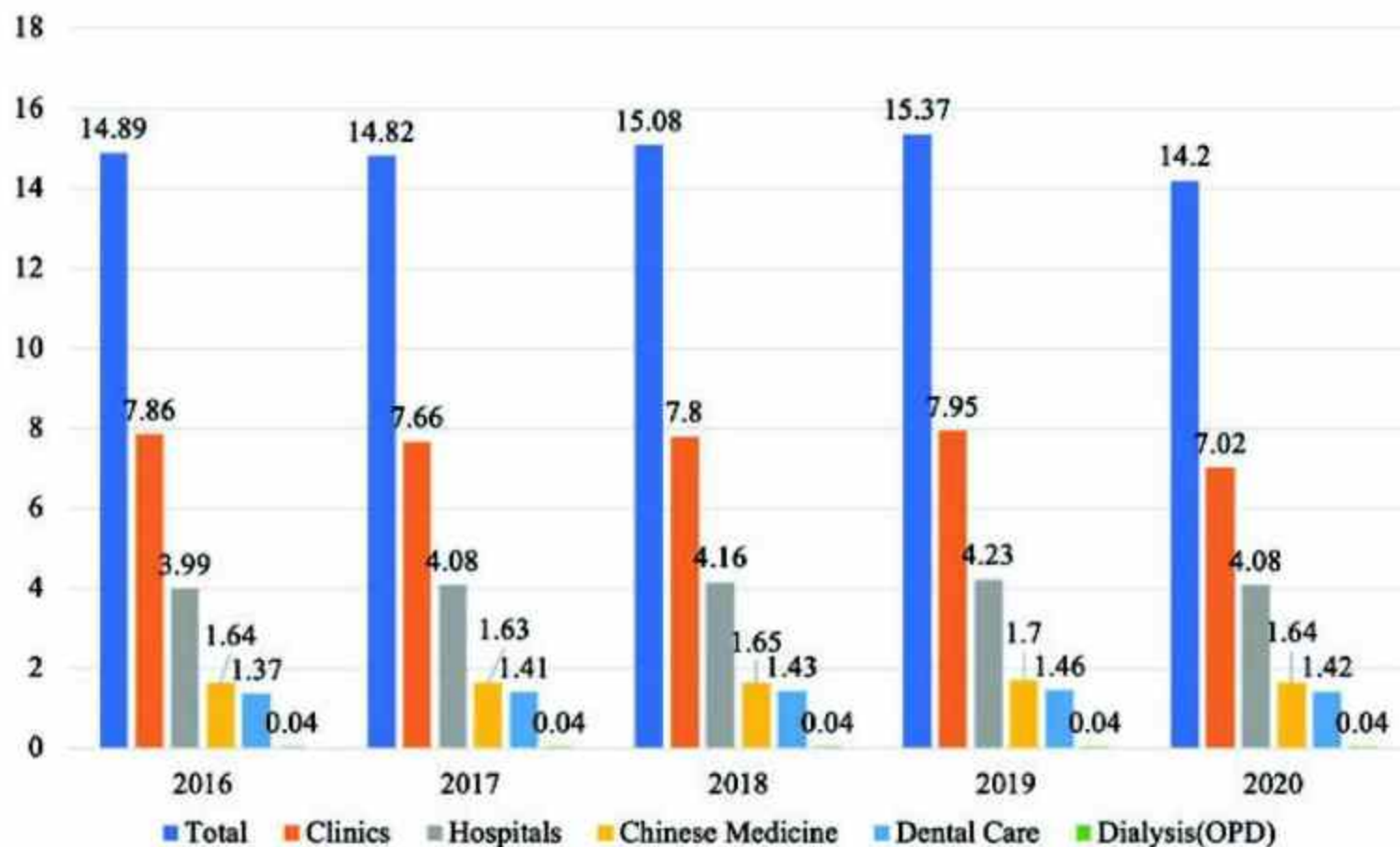


Fig. 1.5 Outpatient visits per person

Source: Lee et al. 2022

Outpatient Visits per person

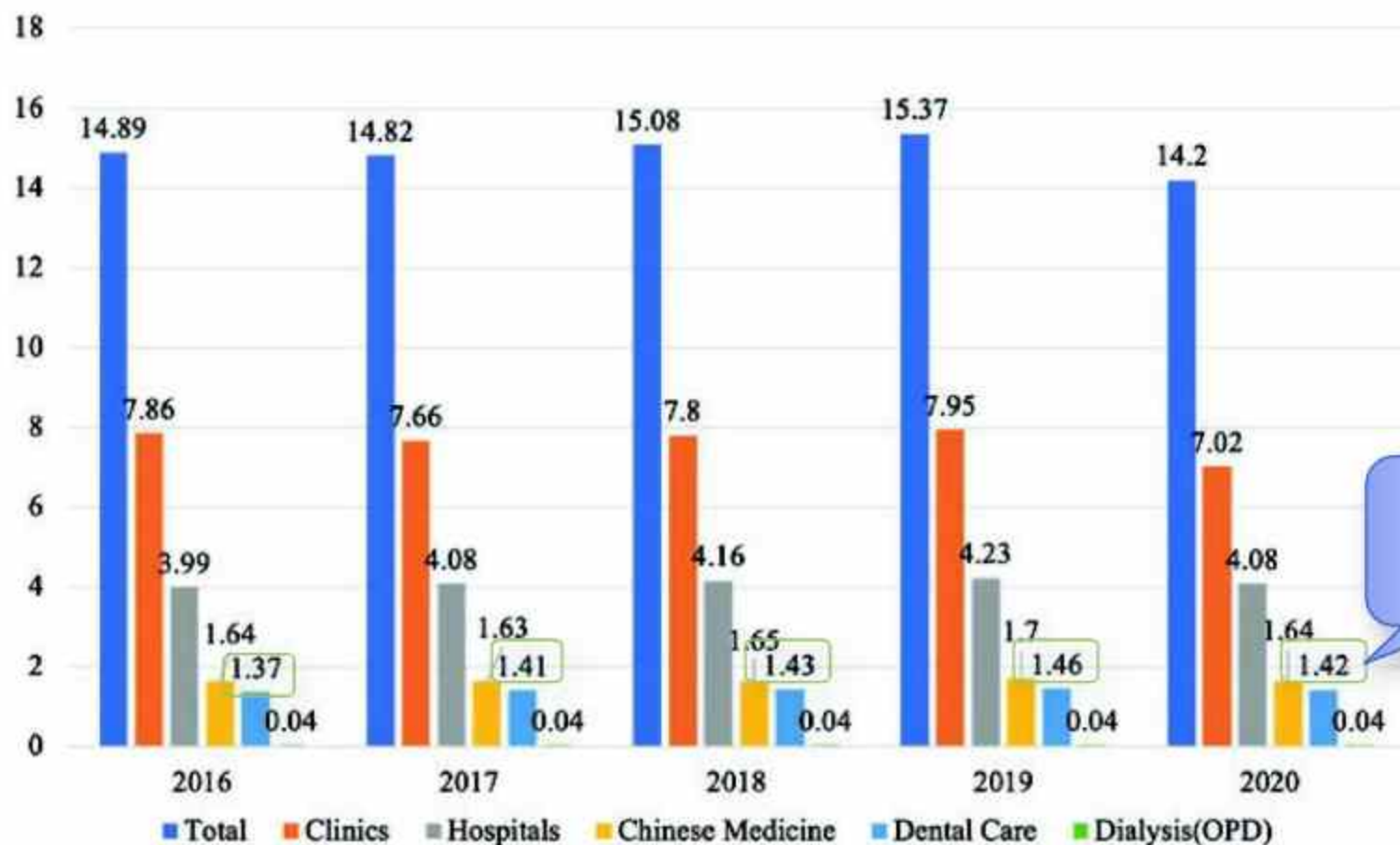


Fig. 1.5 Outpatient visits per person

Source: Lee et al. 2022

Utilization of Health Services

Number of the Insured People (unit: 1,000)	2017	2018	2019	2020	2021
Hospital (Outpatient)	13,229	13,336	13,491	12,950	12,618
Hospital (Inpatient)	1,948	1,975	2,023	1,895	1,769
Western Med. Clinics (Outpatient)	20,126	20,239	20,342	19,442	18,727
Dental Services (Outpatient)	11,167	11,311	11,508	11,200	10,794
Chinese Medicine (Outpatient)	6,473	6,461	6,501	6,119	5,541
Hemodialysis (Outpatient)	87	90	93	94	96
% of the Insured People	2017	2018	2019	2020	2021
Hospital (Outpatient)	55.95%	56.24%	56.88%	54.52%	53.26%
Hospital (Inpatient)	8.24%	8.33%	8.53%	7.98%	7.47%
Western Med. Clinics (Outpatient)	85.11%	85.35%	85.76%	81.86%	79.05%
Dental Services (Outpatient)	47.23%	47.70%	48.52%	47.15%	45.56%
Chinese Medicine (Outpatient)	27.37%	27.24%	27.41%	25.76%	23.39%

Source: National Health Insurance Committee, 2022

Utilization of Health Services

Influence of COVID-19 Pandemic

Number of the Insured People (1,000)		2018	2019	2020	2021	
Hospital (Outpatient)	13,336	13,491	12,950	12,618		
Hospital (Inpatient)	1,975	2,023	1,895	1,769		
Western Med. Clinics (Outpatient)	20,239	20,342	19,442	18,727		
Dental Services (Outpatient)	11,167	11,511	11,508	11,200	10,794	
Chinese Medicine (Outpatient)	6,473	6,461	6,501	6,119	5,541	
Hemodialysis (Outpatient)	87	90	93	94	96	
% of the Insured People		2017	2018	2019	2020	2021
Hospital (Outpatient)	55.95%	56.24%	56.88%	54.52%	53.26%	
Hospital (Inpatient)	8.24%	8.33%	8.53%	7.98%	7.47%	
Western Medicine Clinics	85.11%	85.35%	85.76%	81.86%	79.05%	
Dental Services (Outpatient)	47.23%	47.70%	48.52%	47.15%	45.56%	
Chinese Medicine (Outpatient)	27.37%	27.24%	27.41%	25.76%	23.39%	

Outpatient Visits per Person

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Australia	6.5	6.5	6.5	6.5	6.7	6.8	7.0	7.1	7.3	7.3	6.8
Canada	7.0	7.0	6.9	6.7	6.6	6.6	6.6	6.6	6.5	6.6	...
France	6.7	6.8	6.7	6.4	6.3	6.2	6.1	5.9	5.9	5.8	5.0
Germany	9.9	9.7	9.7	9.9	9.9	10.0	10.0	9.9	9.9	9.8	9.5
Netherlands	6.6	6.6	6.2	6.2	8.0	8.2	8.8	8.3	9.0	8.8	8.4
Norway	4.1	4.4	4.4	4.2	4.3	4.3	4.4	4.5	4.5	4.4	3.7
Sweden	2.9	3.0	2.9	2.9	2.9	2.9	2.8	2.8	2.7	2.6	2.2
United States	4.0	4.0	...	...	...	...	...	...	...	...	...
Japan	13.1	13.0	12.9	12.8	12.7	12.8	12.6	12.6	12.5	12.4	...
South Korea	13.5	12.5	14.3	14.6	16.9	16.6	17.1	16.7	16.9	17.2	14.7
Taiwan (NHI)	12.4	12.2	12.2	12.2	12.4	12.2	12.7	12.6	12.9	13.2	12.2

Source: National Health Insurance Committee, 2022

Dental Visits per Person

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Australia	1.5...	...	...	...	1.0...	...	...	...	1.0	1.1...	...
Canada	1.3...	...	1.3	1.3	1.3	1.3	1.4	1.4	1.4	1.5...	...
France	1.7	1.7	1.7	1.3	1.2	1.2	1.3	1.3	1.3	1.4	1.2
Germany	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.4
Netherlands	2.3	2.3	2.1	2.2	2.6	2.5	2.6	2.8	2.8	3.0	2.5
Sweden	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.2	1.2	1.0
United States	0.9	0.9	0.9	1.0	1.0	1.0	0.9	1.0	1.1	1.0...	...
Japan	3.1	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3...	...
South Korea	1.7	1.6	1.7	1.9	1.3	1.4	1.4	1.5	1.5	1.6	1.5
Taiwan (NHI)	1.3	1.3	1.3	1.4	1.4	1.4	1.4	1.4	1.5	1.5	1.4

Source: National Health Insurance Committee, 2022

Equity issues

- ◆ Financial barriers
- ◆ Access to health services



Assistance for the disadvantaged

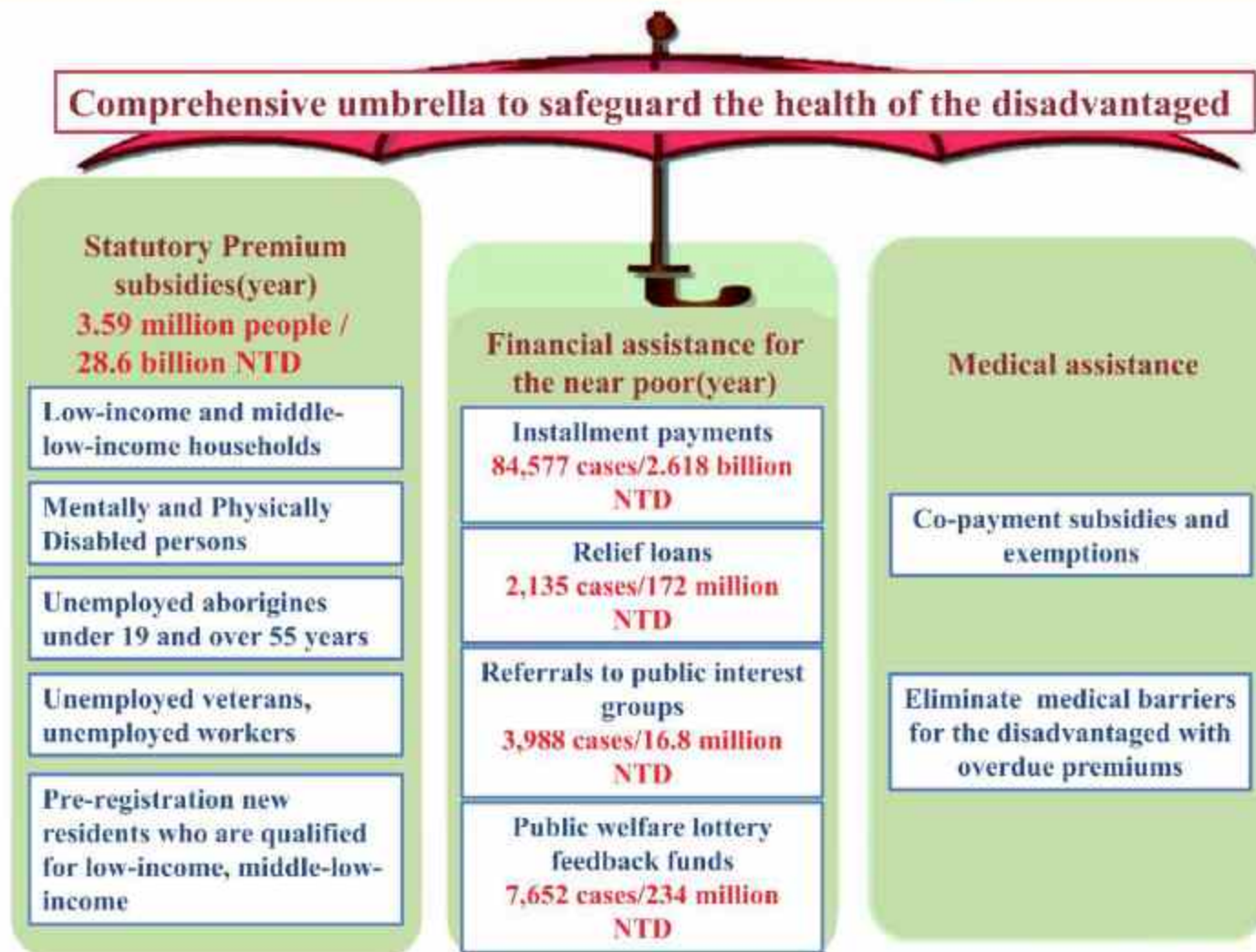


Fig. 5.2 Assistance for the disadvantaged

History of the NHI medical services promotion on remote and offshore islands

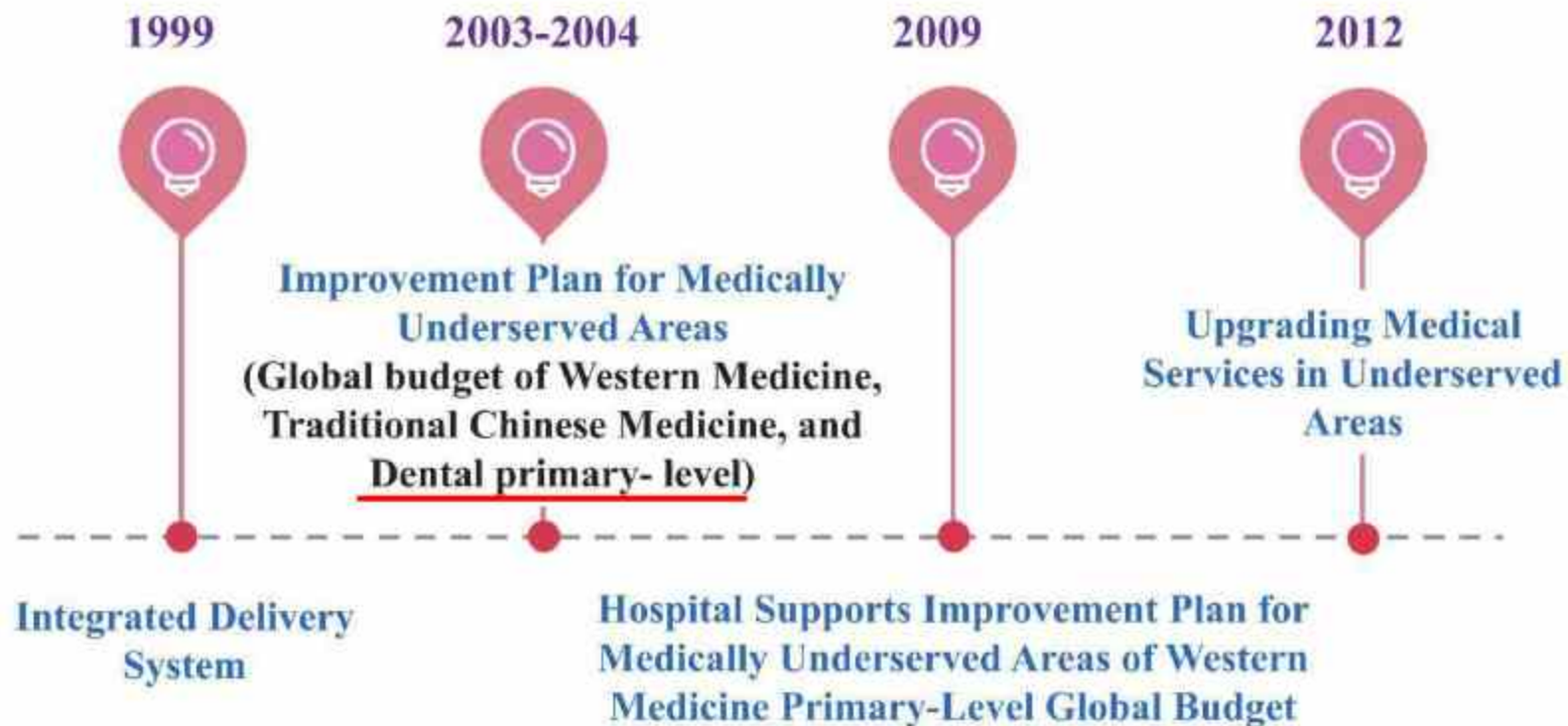


Fig. 5.3 The history of the National Health Insurance medical services promotion on remote and offshore islands

The average number of Western medicine outpatient visits per person per year



Table 5.1 The average number of Western medicine outpatient visits per person per year

	2015	2016	2017	2018	2019
Mountain areas	16.1	16.3	16.3	16.1	16.4
Offshore islands	14.5	14.8	14.7	14.5	14.9
Entire population of the NHI insured	12.7	13.0	13.0	12.9	13.1

Unit: Times

Source: Lee et al. 2022

Number of Dentists per 10,000 Population

Regions	2017	2018	2019	2020	2021
All	6.06	6.22	6.38	6.55	6.74
Taipei	7.80	8.01	8.28	8.51	8.73
North	5.08	5.26	5.40	5.62	5.87
Central	5.69	5.81	5.89	6.02	6.20
South	4.74	4.85	4.93	5.04	5.12
Gao-Ping	5.43	5.53	5.70	5.84	6.06
East	3.83	3.97	4.00	3.98	4.06

Source: National Health Insurance Committee, 2022





Services provided by the Improvement Plan for Medically Underserved Areas for Western medicine, Traditional Chinese medicine, and dental

Table 5.3 Outcome of the Improvement Plan for Medically Underserved Areas for Western medicine, Traditional Chinese medicine, and dental in 2019

Sector of the global budget	Mobile health care			Rewarded practice
	Number of villages and towns	Total number of clinic (days)	Total person-times	Number of clinics
Hospitals	31	5023	67,884	–
Western medicine	83	12,598	236,030	13
Traditional Chinese medicine	111	11,174	278,599	2
Dental	149	11,562	127,631	28
Total	374	40,357	710,144	43

The Improvement Plan for Medically Underserved Areas was implemented in a total of 374 villages and towns in 2019 (Table 5.3), enabling an impressive 40,357 specialized consultations serving 710,144 patients.

Oral Health Indicators



DMFT: 12-year-olds

	1981	1990	1996	2000	2006	2012	2020
Taiwan	3.76	4.95	3.67	3.31	2.58	2.5	2.01
Global	2.43		2.78	1.74	1.61	1.67	1.86
	(1980)		(1985)	(2001)	(2004)	(2011)	(2015)

- DMFT index = Decayed, missing and filled teeth
- WHO Goals :
2000 DMFT index ≤ 3 ; 2010 DMFT index ≤ 2 ; 2020 DMFT index ≤ 1

Source: National Health Insurance Committee, 2022

DMFT: 13 to 18 year-olds

Age	2000	2006	2012
13	3.94	3.78	3.34
14	4.38	4.23	4.41
15	5.03	4.52	4.92
16	5.32	4.72	5.29
17	5.68	5.14	5.34
18	6.01	4.86	5.38

Source: National Health Insurance Committee, 2022

Over 18 year-olds

Age	Number of remaining teeth		% Edentulous	
	2003-2005	2015-2016	2003-2005	2015-2016
18-34	25.70±6.06	28.52±2.18	0	0
35-44	24.58±4.73	27.50±2.71	0.2	0
45-49	23.65±6.05	26.67±3.93	1	0.4
50-64	21.00±6.09	24.93±5.50	1.5	0.7
65-74	14.31±5.69	20.82±8.38	11.5	4.44
75+	14.43±5.60	16.72±9.27	17.4	9.99

Source: National Health Insurance Committee, 2022

Conclusion



Public Satisfaction with NHI

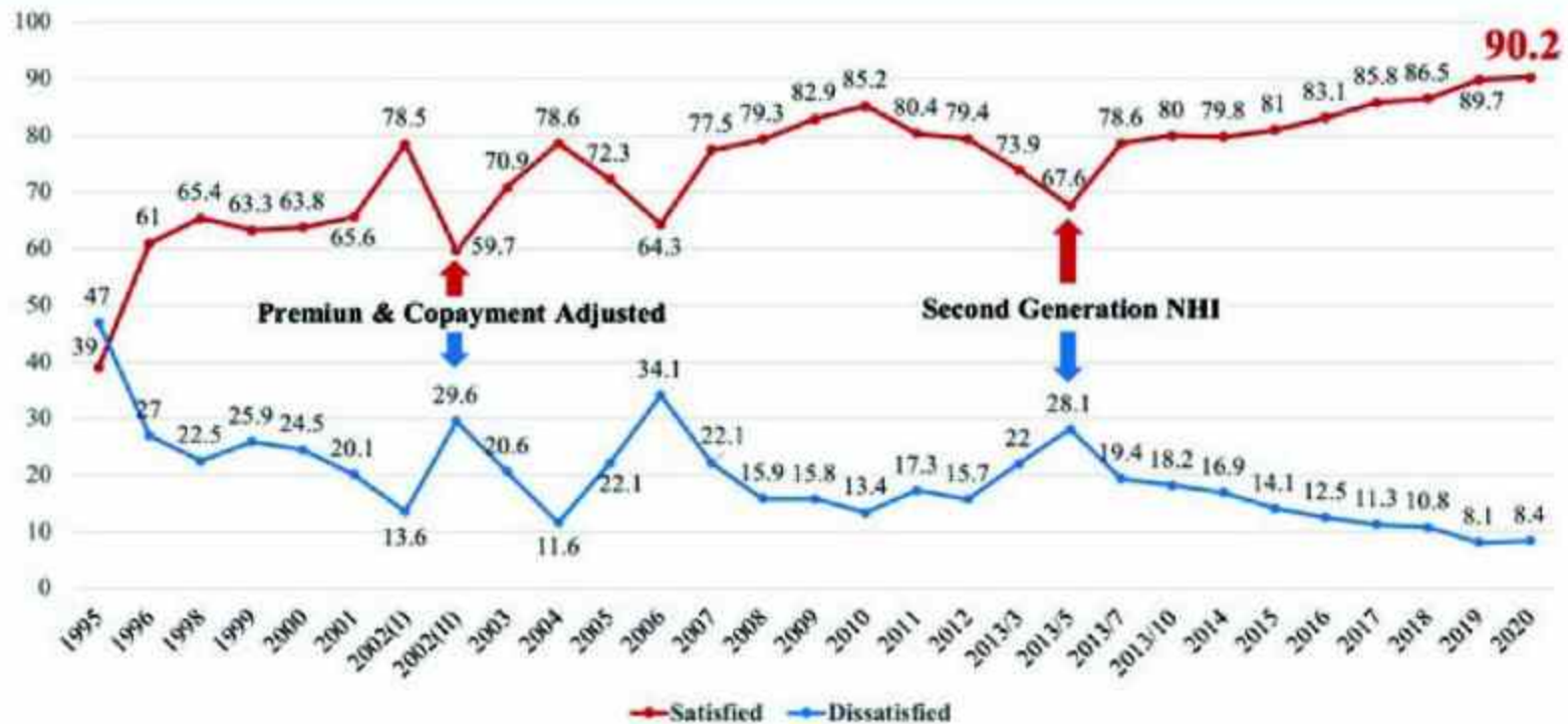


Fig. 1.11 The high public satisfaction with the National Health Insurance programme

Source: Lee et al. 2022

Health System Performance

- ✓ Affordable
- ✓ Comprehensive
- ✓ Accessible
- ✓ Quality care
- ✓ Innovative
- ✓ Sustainable?
 - Aging population and low birth rate
- ✓ Health and Well-being
 - Primary prevention vs. Medical Care
 - Oral health literacy



Po-Chang Lee
Joyce Tsung-Hsi Wang
Tzu-Yu Chen
Chia-Hui Peng
Editors

Digital Health Care in Taiwan

Innovations of National Health Insurance



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全民健康保險年報

National Health Insurance Annual Report



NHI Medical Benefits Global Budget Negotiation Reference Indicators

111 年全民健康保險醫療給付費用 總額協商參考指標要覽

(本要覽僅供年度總額協商參考)

衛生福利部全民健康保險會

中華民國 111 年 10 月

NHI Profile

Vision of the National Health Insurance

Learning about the Logo of the National Health Insurance

NHI in Taiwan

Taiwan's National Health Insurance 2021-2022(video)

National Health Insurance Annual Report 2021- 2022 (bilingual)

Development of the Healthcare system in Taiwan

Home Page > About NHI > NHI Profile >

Taiwan's National Health Insurance 2021-2022(video)

Taiwan's National Health Insurance 2021-2022(video)



Reference

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Thank you for listening!

