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# Optimizing and Innovating in Capital Health Assets Management: Maximizing Digital Technology in National Health Insurance



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# Agenda

01

National Health Insurance: 30 Years of Progress

02

Advancing Universal Health Coverage with Digital Management

03

Perspectives



# Major Social Insurance Programs



1950

**Labor Insurance**



1958

**Government Employees Insurance**



1985

**Farmers Insurance**



1995

**National Health Insurance**



2013

**2<sup>nd</sup> Generation NHI**

2025

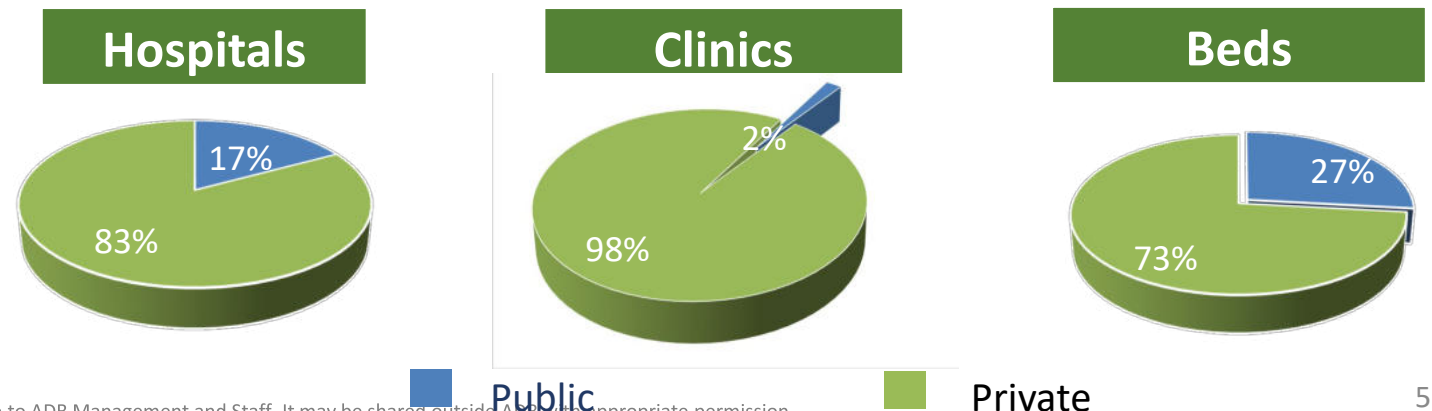
**Cancer Drug Fund—Rare Disease Drug Fund**

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



# Healthcare Delivery System

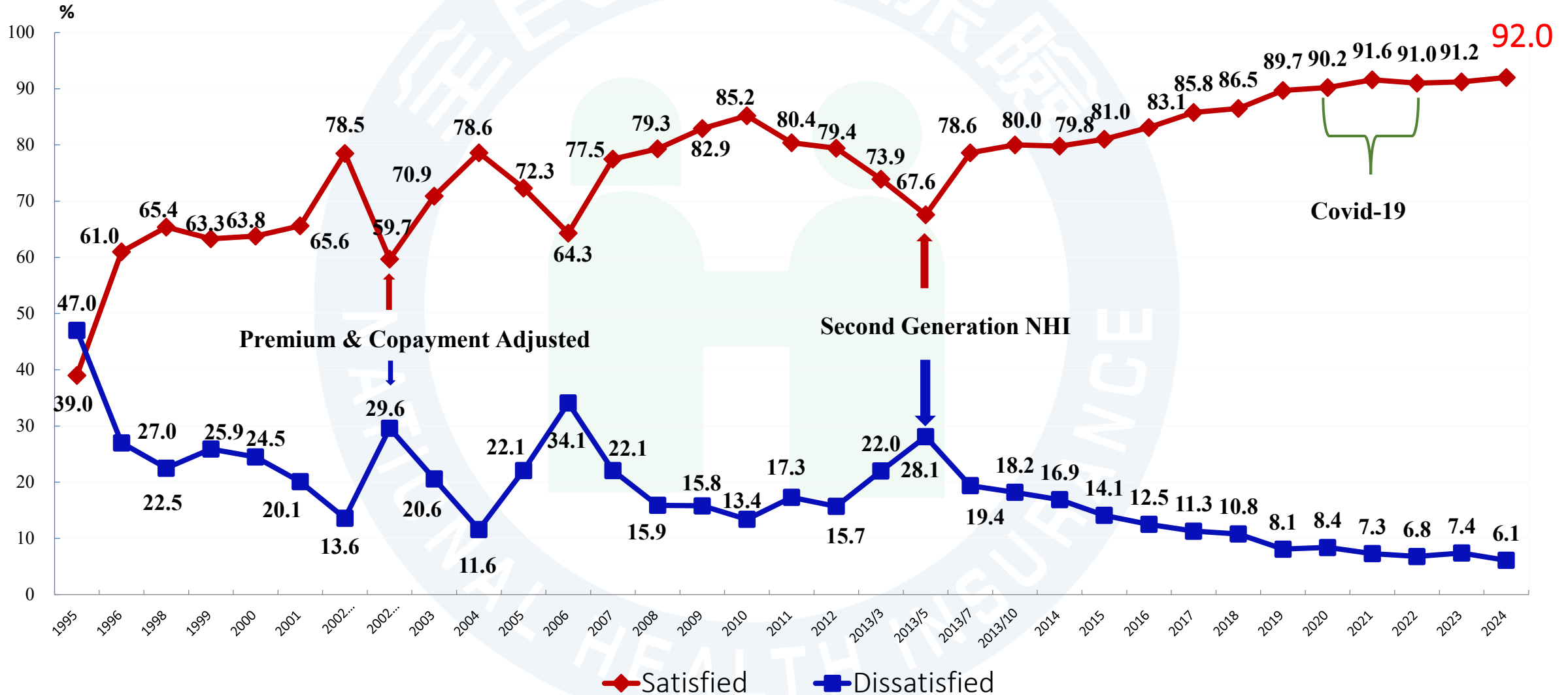
- Predominantly private sector-led healthcare system
- No mandatory gatekeeper system
- Dental services covered by National Health Insurance since 1995
- Healthcare Workforce (per 1,000 population)
  - Physicians: 2.3
  - Dentists: 0.7
  - Registered Nurses: 8.0





# High Public Satisfaction

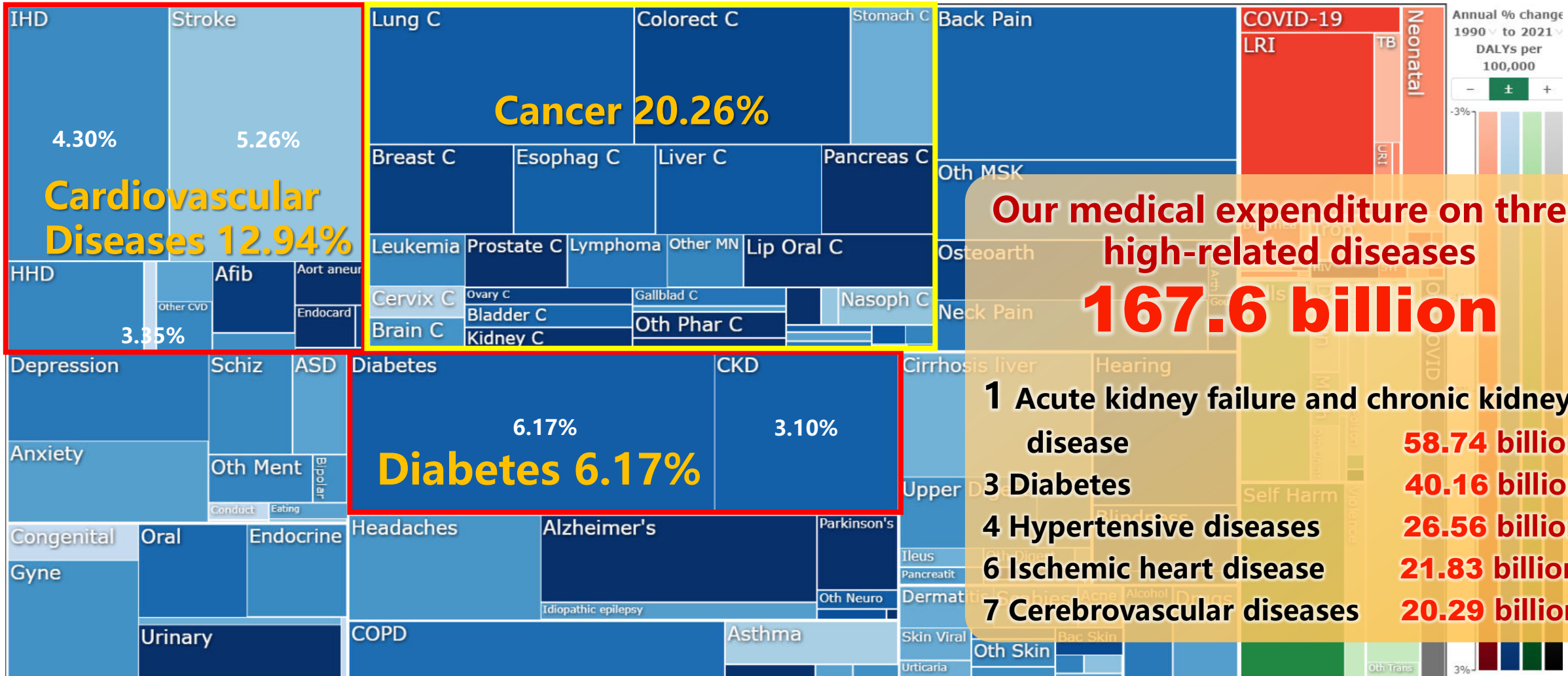
1995-2024





# The DALYs by Cause

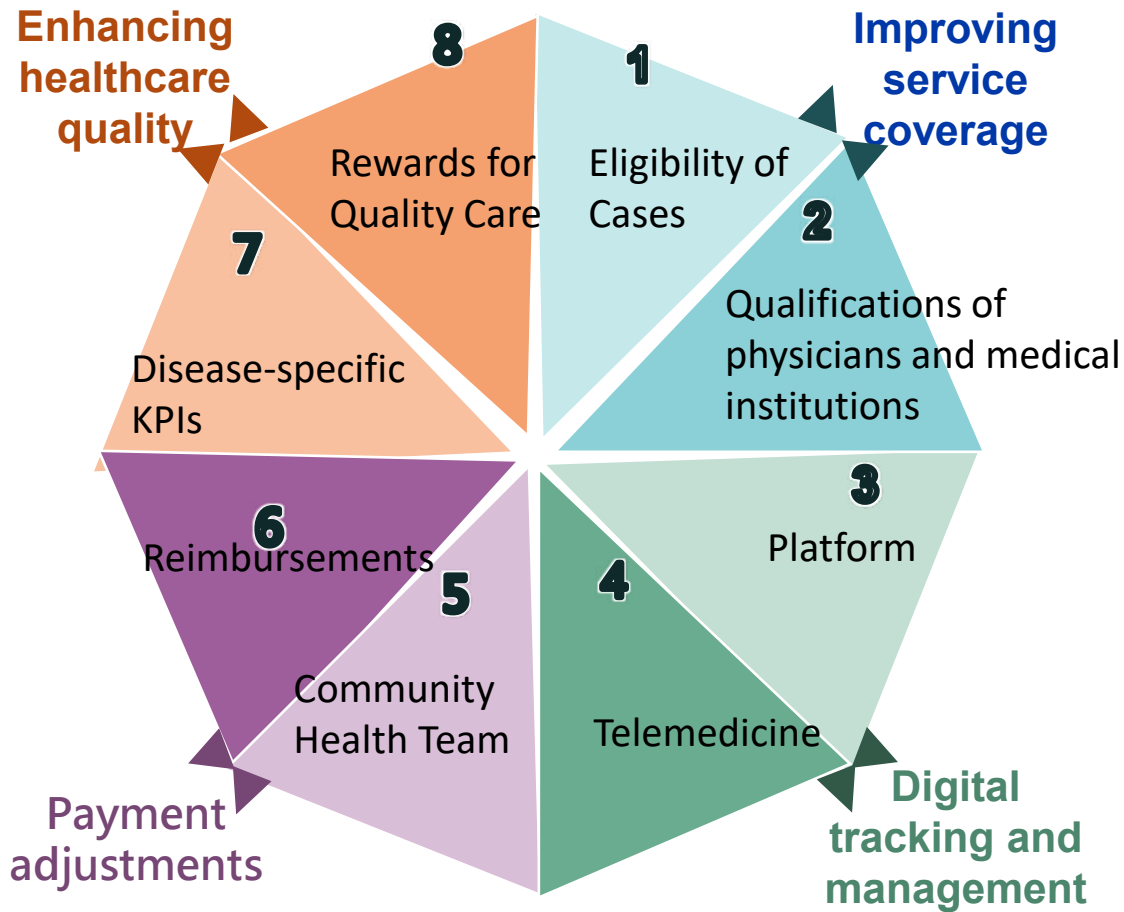
Cancer ranks first at 20.26%, cardiovascular diseases second at 12.94%, and diabetes third.





# 888 Program for Chronic Disease Management: Expanding Coverage

Promoting the Comprehensive Family Physician Program to implement holistic healthcare



80%

## Broaden Service Scope

Expand integrated care via Family Physician Programs

80%

## Lifestyle Intervention

Enhance lifestyle counseling with localized tools, support Family Physician Program implementation and **pilot bundled payments** for holistic chronic care

80%

## Fair three highs control

Build **digital platforms** and **AI tools** to enhance personal health management and implement value-based care via public-private partnerships

Current Status: In 2023, around 5.34 million people were diagnosed with one or more of the 'Three Highs'—hypertension, hyperglycemia, or hyperlipidemia. By 2024, 3.16 million of them (60%) were already enrolled in chronic disease management programs under the National Health Insurance (NHI).



# NHI Card



- Last Six Medical Visits
- Drug Prescriptions, Drug Allergies
- Catastrophic Diseases
- Organ Donation Consent
- Palliative Care
- Do Not Resuscitate (DNR)



## NHIA

- Data management
- Infectious disease tracing and monitoring



## Insured

- Identification
- Paper cards were consolidated into one smart card in 2004



## Healthcare Providers

- Authentication

## Digital NHI Card

- One-time only QR CODE
- Home Health Care, Telemedicine, and Video Consultations widely applied



# Improve Patient Safety by NHI MediCloud System

HIS of NHI-Contracted Healthcare Providers

Authentication using three cards together



## Proactive Prompting Mechanism:

- ▶ Allergy medications
- ▶ Chinese and Western medicine drug interactions
- ▶ Western medicine drug interactions
- ▶ COVID-19 drug interactions
- ▶ Duplicate medications, tests, and exams

History of Drugs Allergies

Chinese Medicine Services

Discharge Summaries

Rehabilitation Services

Medical device Records (Medical Implants, Biomaterials)

Control Drugs

Medications of Coagulation Factor

Medications

Healthcare/Dispensing

Examinations & Tests Records

Reports/Lab Data/Images

Surgery Records

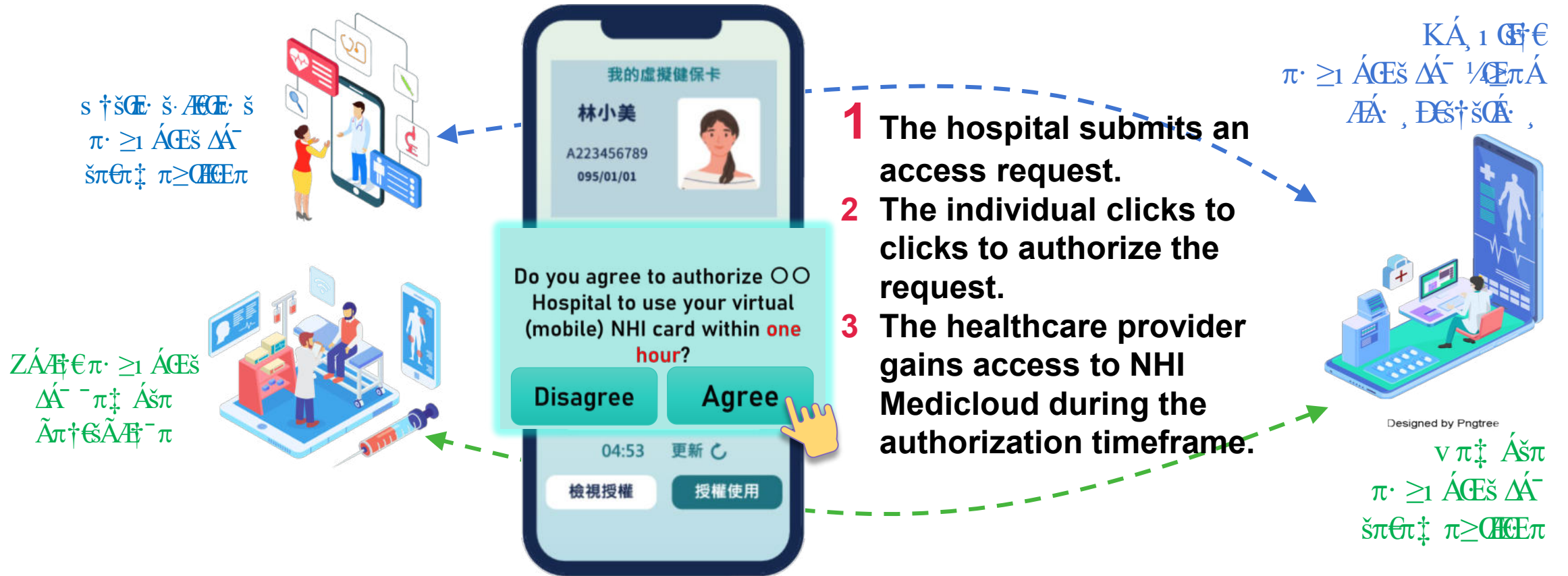
Dental Services

Immunizations



# Digital NHI Card: Enabling Telemedicine and Video Consultations

NHI App: Integrating the Digital NHI Card with Video Consultation through an Interface Program for Identity Verification and Cloud-Based Queries (launched on May 27, 2022)

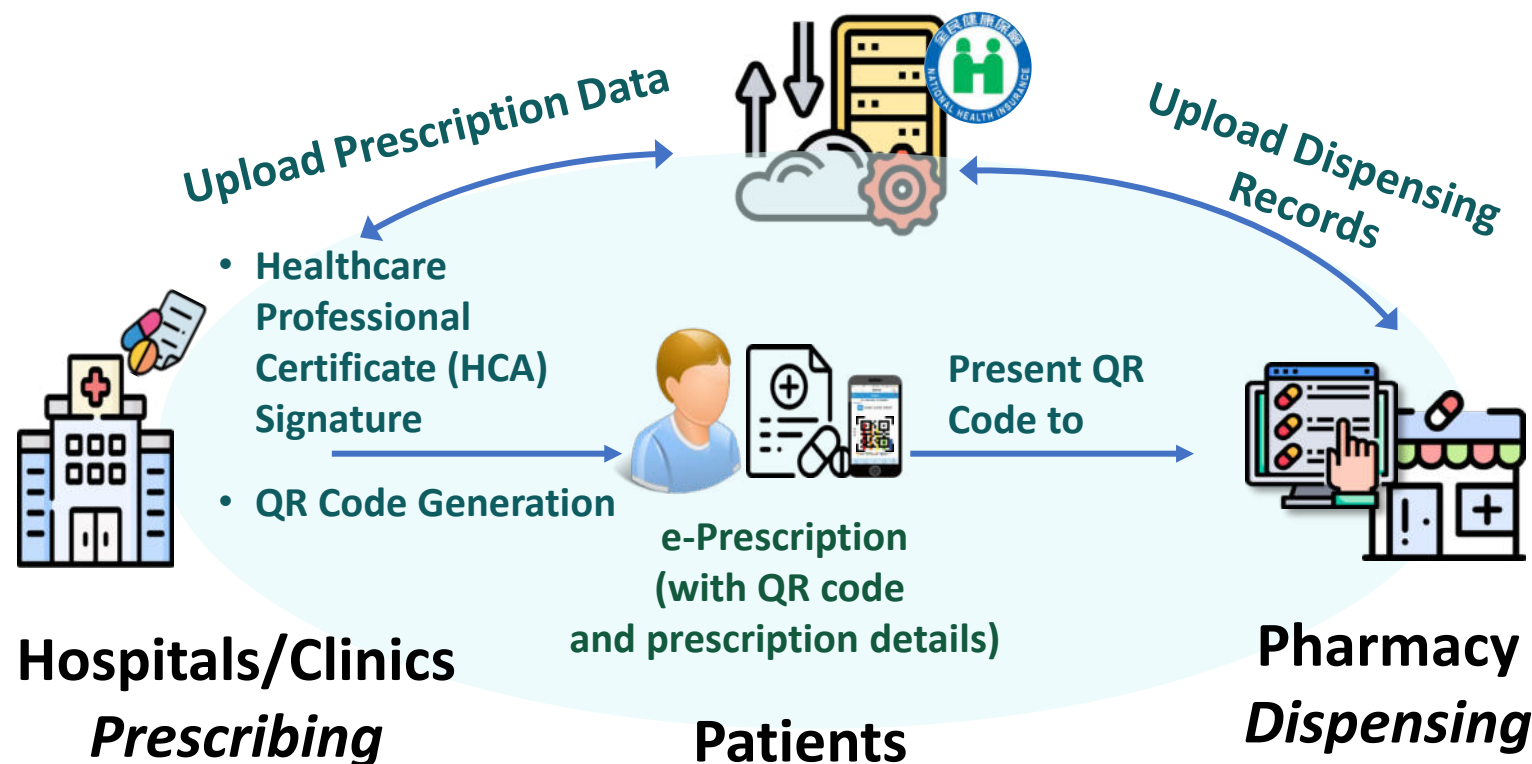


As of December 2024, over 990,000 individuals have registered for a digital NHI card, and approximately 539 medical institutions have submitted claims for services provided to digital NHI card users



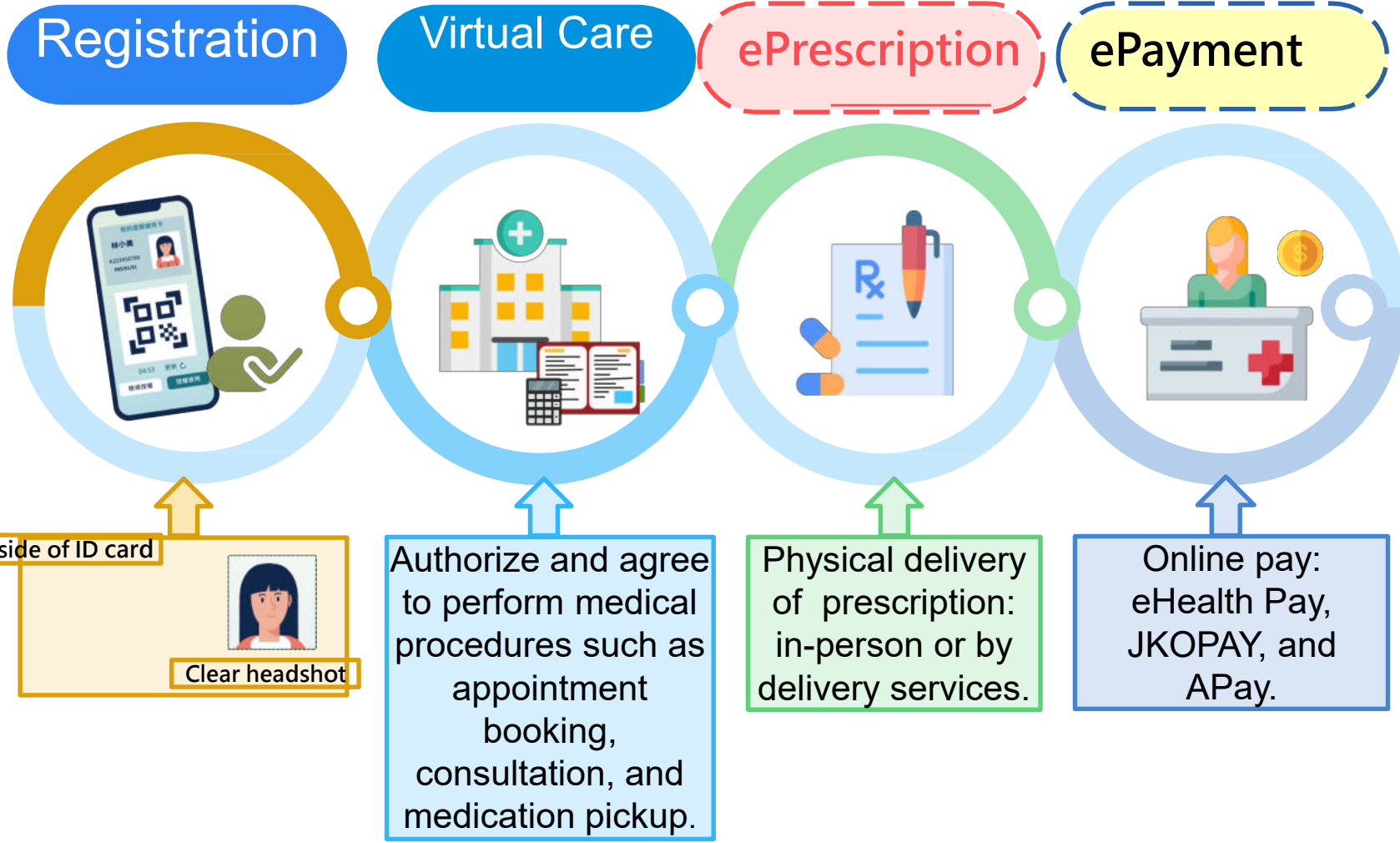
# e-Prescription Platform

- ▶ FHIR format (high interoperability)
- ▶ Healthcare Professional Certificate for digital signatures
- ▶ Pilot program at Hualien Tzu Chi Hospital
- ▶ Expected to reach full implementation in 2025



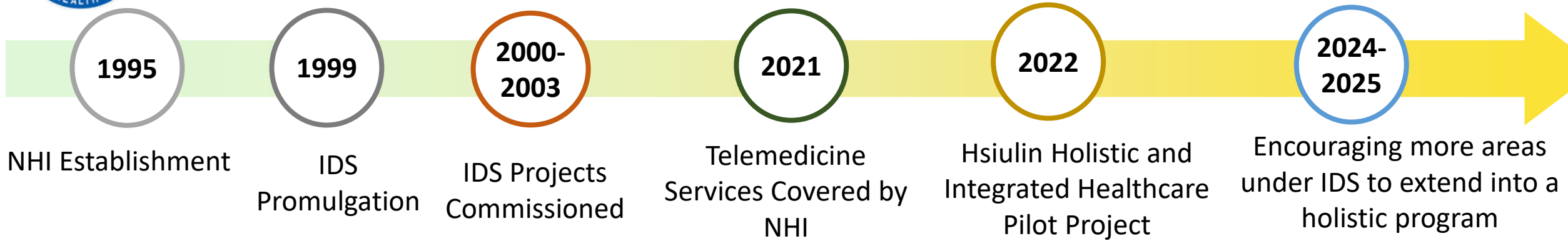


# Total Solutions for Barrier-Free Services in Response to the Digital Healthcare Era





# Enhance Equity through Digital Health



## Specialty Healthcare for People in Remote Areas

### Coverage:

- 100% coverage for people in mountainous areas and offshore islands.

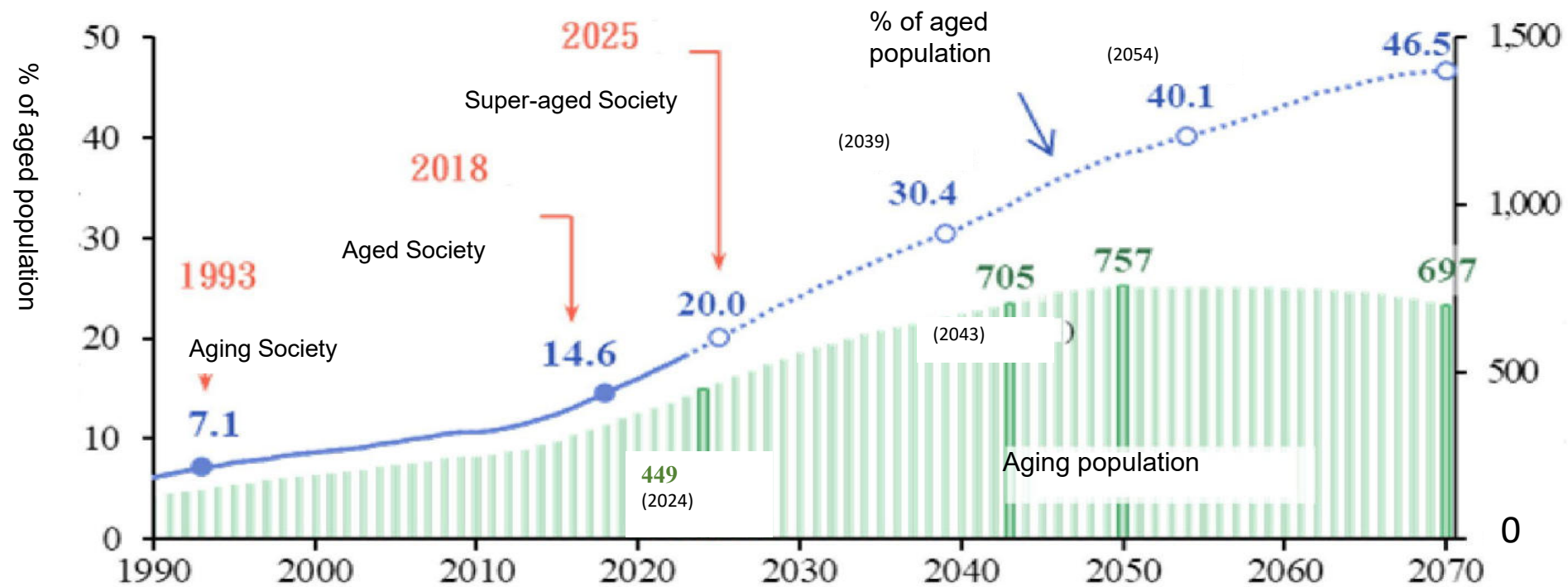
### Telemedicine:

- Since 2021, the NHIA has reimbursed telemedicine for specialty consultations in IDS areas, expanding in 2024 to include underserved regions and correctional facilities



# Rapid Aging Population: The Island Will Be the Super-Aged Society by 2025

- Taiwan became an aging society in 1993, transitioned to an aged society in 2018, and entered a super-aged society in 2025.
- The proportion of elderly will continue to rise, exceeding 30% by 2039 and reaching 46.5% by 2070.





# Super-Aged Society: Challenges for the Healthcare System

## Super-aged society

- Accelerating population aging
- Growing demand for home healthcare

## Increasing Burden of Chronic Diseases

- Rising number of cancer and “Three Highs” patients
- Increasing healthcare expenditures

## Empowerment and Capacity Building

- Strengthening self-health management
- Participation in medical decision-making



## Financial Impacts

- Emerging health technologies
- High-cost medications for cancer and rare diseases

## Labor Shortage

- Low fertility rate
- Decreasing workforce population

## Geographical Barriers

- Disparities in healthcare resource distribution
- Limited accessibility to healthcare services



# Roadmap for NHI Reform

## Service Integration

- Providing **patient-centered**, integrated, continuous care, including health promotion, preventive care, acute care, chronic disease management, and palliative care

## Resource Integration

- Utilizing the team approach in **integrating community resources** to achieve locally tailored medical services

## Data Integration

- Integrating personal health data through **the primary care platform** and **innovative digital tools** to improve the efficiency of health management and empower the public



# National Health Insurance Administration

Ministry of Health and Welfare

*Thank you!*



<https://www.nhi.gov.tw/en/mp-2.html>