New Era of National Health Insurance in Taiwan

Huang San-Kuei
Director General, National Health Insurance Administration
October 31, 2014
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1. Current Development and Challenges
2. Innovation in NHI
3. Future Perspective
## Profile of Taiwan

<table>
<thead>
<tr>
<th>Category</th>
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<tbody>
<tr>
<td>Population</td>
<td>23 millions</td>
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<tr>
<td>Land Area</td>
<td>36,191 km²</td>
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<tr>
<td>Population aged over 65</td>
<td>11.5%</td>
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<td>GDP (2012)</td>
<td>US$20,423 Per Capita</td>
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<td>US$38,462 Per Capita (ppp)</td>
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<td>NHE (2012)</td>
<td>US$1,350 Per Capita</td>
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<tr>
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<td>US$2,546 Per Capita (ppp)</td>
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<tr>
<td>NHE in GDP (2012)</td>
<td>6.6%</td>
</tr>
<tr>
<td>Life expectancy (2013)</td>
<td>76.69 (M) / 83.25 (F)</td>
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</table>

**Source:** Directorate-General of Budget, Accounting and Statistics; ROC; MOHW
Development of social insurance in Taiwan

- 1950: Labor Insurance (40.1%)
- 1958: Government Employees’ Insurance (8.5%)
- 1985: Farmers’ Insurance (8.5%)
- 1995: National Health Insurance (99%)
- 2013: 2nd Generation NHI
- 2017: Long-term Care Insurance
Current Development and Challenges
Current status of National Health Insurance in Taiwan

Compulsory program / single payer

- Universal coverage
- Guarantee equal access to health care service
- 20,325 contracted providers, including 493 hospitals (100% contracted) in 2013

Advantage

- Low administrative costs
- Low co-payment, below 10% on average
- Comprehensive medical services, including outpatient services, inpatient services, dental, and traditional medicine, etc.
- Big database

Coverage rate is 99.62%
1. Universal coverage

Covered 23 millions population (coverage rate: 99.62%), 2013

2. Easy & Equitable access

Benefit/Contribution Ratio for Low-income Households is Higher than 5.2

- Low income household = 5.3
- High income household = 2.2

3. Affordable Cost

-NHE as to GDP: 6.6%
-Per capita NHE Expenses: US $2,546
4. Up-to-Standard Quality

- **Five-year Survival Rates for Cancer**
  
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<td>Lung Cancer</td>
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<td>Breast Cancer</td>
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<td>86</td>
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- **Organ Transplant Survival Rates**
  
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<tr>
<td>Kidney graft</td>
<td>2727</td>
<td>90.3%</td>
<td>96.9%</td>
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<td>Liver graft</td>
<td>2286</td>
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<td>Heart graft</td>
<td>1721</td>
<td>88.2%</td>
<td>83.8%</td>
<td>90.0%</td>
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5. High Public Satisfaction

- The public satisfaction rate as improved from 39% in the first year of the program to 80% recently

6. International Recognition

- 2014: The United States Senate Subcommittee Hearing - Access and Cost: What the US Health Care System Can Learn from Other Countries
- 2012: Taiwan’s Progress in Health Care by Uwe E. Reinhardt
- NICIDocumentary featuring “Taiwan’s Medical Miracle”
- Health Insurance is for Everyone by Fareed Zakaria
- The Global Lessons from Taiwan’s Healthcare System
- GPS Special: Global Lessons - The GPS Road Map for Saving Health Care
- 5 Myths about Health Care Around the World by F. K. Reid
- Taiwan featured in one of the U.S. Public Broadcasting Service’s (PBS) Frontline series called “Sick around the World”
- “Pride, Prejudice, Insurance” by Paul Krugman
- “NYT: Global Lessons from Taiwan’s Healthcare System”
NHI expenditures have grown at an average of 4.89% a year (1996-2013)
NHI revenues have grown at an average of 5.03% a year (1996-2013)
Medical expenditure vs. GDP

Note 1: GDP(1997) is reference year. Ratio = 100 x [GDP(Year) / GDP(1997)].

Note 2: GDP(1997) is 8.57T-NTD. 2013 is 14.56T-NTD and growth rate is 69.8%;
Medical expenditure is 259.69B-P in 1997. 589.27B-P in 2013 and growth rate is 126.9%.
## Aging Across Region

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**Source:**
Prof. Alan Cass  
Senior Director  
The George Institute for Global Health  
Chair, Scientific Committee, Australasian Kidney Trials Network
The elderly people represent 11.6% of population, who used 34.6% NHI medical expenditures in 2013.
Catastrophic Illnesses

- There are more than 920 thousand catastrophically ill patients, or about 3.9% of all those insured under NHI program.
- Their medical expenditure in 2013 costs NT$ 162.6 billion, or 27.1% of all NHI expenditure.
Medical Expenditure of Chronic Disease

Chronic Disease in Ambulatory

Expenditure (million)

Chronic Disease in Ambulatory
Total ambulatory expenditure

<table>
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<tr>
<th>Year</th>
<th>Chronic Disease</th>
<th>Total ambulatory expenditure</th>
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<td>2007</td>
<td>96,713</td>
<td>304,811</td>
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<td>2008</td>
<td>103,878</td>
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<td>2009</td>
<td>106,784</td>
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<td>2010</td>
<td>106,998</td>
<td>348,431</td>
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<td>2011</td>
<td>115,903</td>
<td>368,457</td>
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<td>2012</td>
<td>117,205</td>
<td>379,785</td>
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<td>2013</td>
<td>128,851</td>
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NHI Pharmaceutical Expenditure

(x 10 Million NTD)

- Pharmaceutical expenditure
- % of pharmaceutical exp. as total medical exp
Innovation in NHI
Healthcare Innovation 2014

NHIA

Outliers Detection System

Claim Data

Payments

NHI IC Card

Premium

My Health Bank

NHI PharmaCloud

Insured

Providers

Healthcare Services

Copayment
-My Health Bank-
Multiple Sources

Scope of Benefits

• Inpatient care
• Outpatient care
• Prescription drugs and certain OTC drugs
• Dental services
  (orthodontics, prosthodontics excluded)
• Traditional Chinese medicine
• Day care for the mentally ill
• Home nursing care
• Allergy & Vaccine records*
High Quality-Medical Claim Data

Medical Claim Data Flow (Monthly)

Claim reception
- Network
- Electronic media
- Paper (<1%)

Provisional payment
- 80-90% (according to previous deduction rate)

Claim review
- Automatic adjudication rules
- Profile analysis
- Professional Peer Review

Approval & payment
- Web site

Calculate point value
- Global budget

Data warehouse system
NHI IC Card for Each Patient

Functions of NHI IC Card

- Simplification of management process
- Daily update of medical visit data
- Infectious disease tracing & monitoring
- Heavy-user detection & management
Providing Personal Medical Data

• **Personal medical data accessibility**
  – Self-managing healthcare records
  – Alerting hospital to claim accurate data
  – Facilitating discussion between doctors and patients

• **Personal privacy**
  – Certificate identity
  – Security for downloading files
How soon to get the data?

Apply Date: Sep 16, 2014
Download Date: Sep 17, 2014

Medical Data Period: 2013/9/1~2014/9/14

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<th>申請日期</th>
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The NHI Pharma Cloud

- 488 Hospitals
- 19,669 Clinics
- 5,411 Pharmacies
- Pharmaceutical Records Database

- A patient-centered medication information system established in July 2013
- Information updated on a rolling daily basis
- Allowing practitioners to view real-time medication records with patient’s consent
- Subject to strict privacy and security through VPN network
Inquiry Platform

Insert the medical personnel IC card and enter password (PIN code)
1. Search criteria can be set.
2. “ATC5 name”, “Drug name”, “Date of consultation”, “Remaining drugs” can be selected to set search criteria.

“No content available” will be displayed if the patient has no drug history.
# Pharma Cloud Query Result

<table>
<thead>
<tr>
<th>Source</th>
<th>Active Ingredient</th>
<th>Drug Code</th>
<th>Drug Name</th>
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<th>Date of Dispensing</th>
<th>Day</th>
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</table>
• Offer comprehensive medication information to healthcare professionals to provide patients with high quality care
• Prevent duplication of prescriptions and prescription fraud
• Protect patients from drug interactions and dosage errors
• Save the cost of drug expenditure
Development and applications

- Upgrade the bandwidth of the VPN
- Continuous improvement of system stability and inquiry efficiency
- Allow the information to be downloaded into hospitals’ system if patient’s consent was obtained.
  - Integrate patients’ allergy history and drug interaction alarm check into the HIS system of hospitals
- The application of the system will be gradually expanded
  - 2,459 hospitals and clinics have the access to the system so far and increases continuously.
  - 2,492,698 patients were inquired until September 2014.
Future Perspectives
Solution for Healthcare

**Insured**

- **My Health Bank**
  - Outpatient,
  - Inpatient,
  - Prescriptions,
  - Medical Test,
  - Rehabilitation

- **Quality Relevant**
  - Routine Statistical Reports, Quality Index revealed

- **Information Querying**
  - Fee Schedule, Drug, Self-paid Medical Devices etc.

**Providers**

- **NHI Pharma Cloud**
  - Prescriptions, Prevent and Drug Interaction

- **ODS**
  - Outliers Detection System

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Next step in the Healthcare

Microsoft

Softbank

Apple

Google

Security Channel

Healthcare Platform

Prevention

Health Promotion

Medical Records

L.T.C.

Hospice
Vision to Holistic Care

Womb

Health Maintenance
Self-Care, Wearable Devices, Innovative APP, Care Channel...etc

Health Insurance
Health Improvement, Medical Promotion, Data Organization, Accessibility

Post Acute Care
Follow-up care, Medical Treatment, Secondary Care

Long Term Care
Home Care, Nursing Home, E-health, Pharma Cloud

My Health Bank (MHB)
Thanks For Your Attention

Chia-Ming Lake (the Tears of Angel) Taiwan photo by Joe Joe Huang