Health System Reforms in China: Progress and Further Challenges

PECC International Workshop on
Social Resilience Project 2011
12 July 2011

Hiroko Uchimura
Institute of Developing Economies,
IDE-JETRO, Japan

Contents

1. Health systems before the economic reform
2. Health system reforms since late 1990s
   -- re-establish medical insurance systems
   -- 2009 health system reforms
3. Changes in health outputs
4. Further challenges
   -- disparity in insurance coverage and schemes
   -- aging effects on health expenditures
5. Fiscal space for further challenges

Health systems before the economic reform

- Urban population
  - Labor Insurance System (LIS):
    financed by State-owned-enterprises (SOEs)
  - Publicly funded health system

- Rural population
  - Cooperative Medical Scheme (CMS):
    financed by people's communes,
    members contribution and user fees

Effects of the economic reform on health systems…

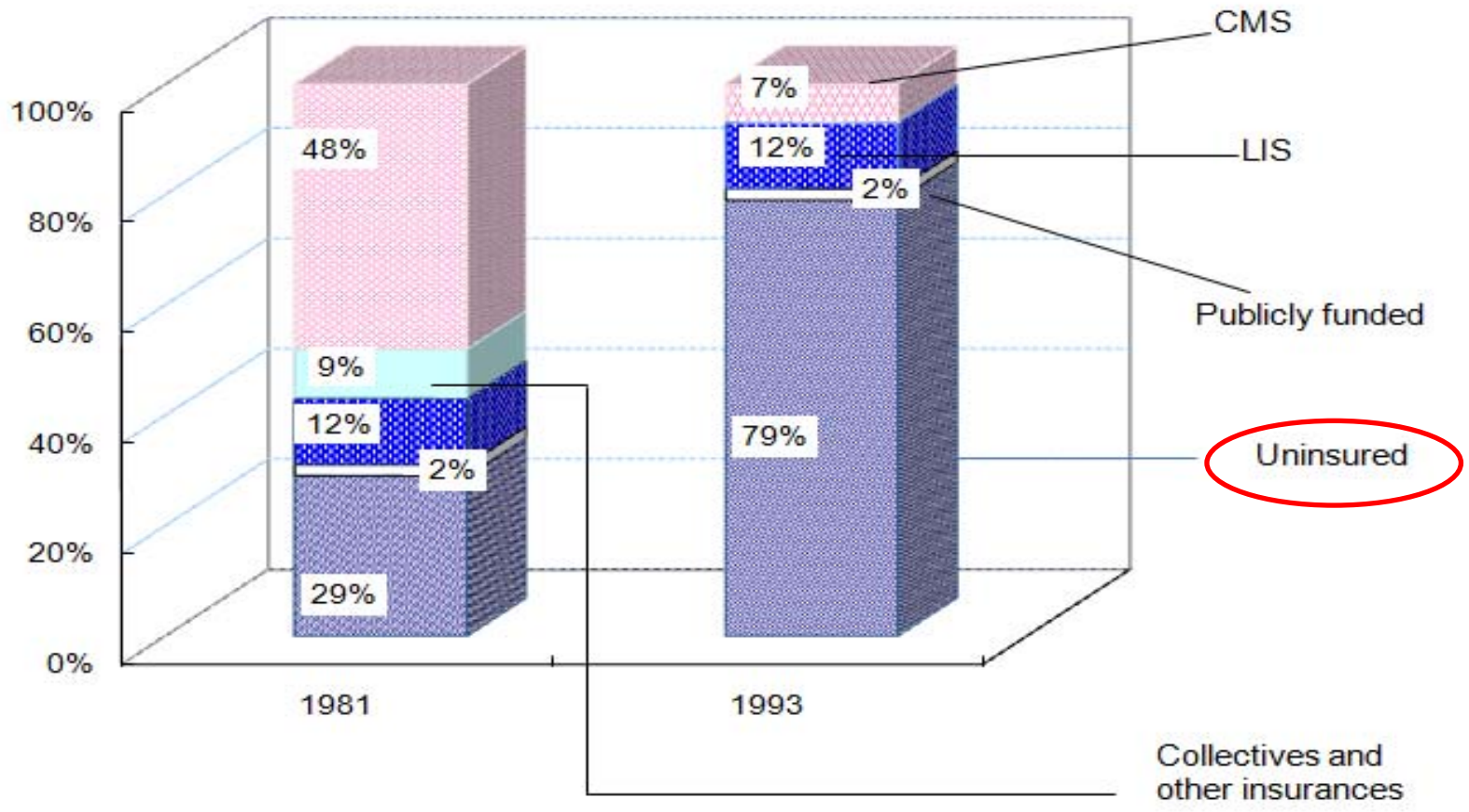
Urban areas: SOEs reforms

- Needed to release SOEs from financial responsibility for health care
- Increased non-SOE types enterprises

Rural areas: HH production responsibility system

- Disbanded people's communes
- Weakened the function of CMS

Sharply increased uninsured population…



Note: Author's compilation based data from *Financing Health Care: Issues and Options for China*, p. 15, World Bank, 1997.

Re-establish medical insurance systems

- Urban population:

  - Urban Employee Basic Medical Insurance (UEBMI): 1998
  - Urban Resident Basic Medical Insurance (URBMI): 2007

- Rural population:

  - New Cooperative Medical Scheme (new CMS): 2003

New insurance schemes: urban population

UEBMI: urban formal employees, retirees

- fund: employees and employers contribution, user fees
- benefit: in-patient, out-patient
- enrollment unit: individual

URBMI: self-employed, dependent family members, etc.

- fund: members contribution, govt subsidies, user fees
- benefit: mostly in-patient
- enrollment unit: individual

- Fund-pooling level: city level

Practical schemes may differ between cities.

New insurance schemes: rural population

New CMS: rural population

- fund: members contribution,
  govt subsidies, user fees
- benefit: mostly in-patient and low
- enrollment unit: household

- Fund-pooling level: county

Practical schemes may differ between counties.

Changes in insurance coverage

	Rural population	Urban population		
	new CMS coverage (%)	Total coverage (%)	UEBMI enrollment (10000 persons)	URBMI enrollment (10000 persons)
2004	9.1		12,404	
2005	20.0		13,783	
2006	46.0		15,732	
2007	82.7	51.8	18,020	4,291
2008	92.4	72.4	19,996	11,826
2009	94.3			

Note: Author's compilation based on data from *Health Statistical Yearbook of China* .

Health System Reform 2009 - 2011

- The health system reform plan for

  solving the problem of 'difficult and costly access to health care services'.

  including fiscal investment of CNY 850 billion (US$ 130 billion).

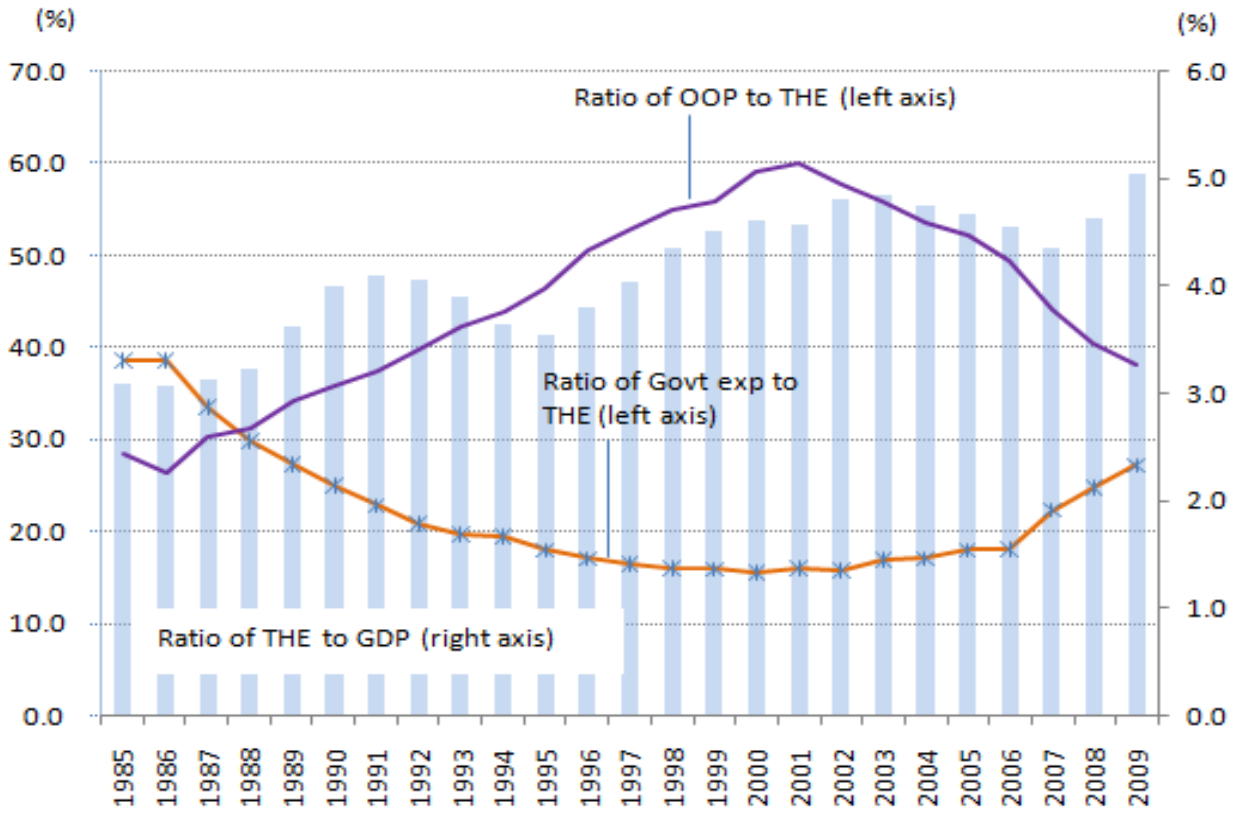
Five targets

1) Medical insurance system
   (UEBMI, URBMI, new CMS)
2) National essential medicine system
3) Health services at grass-roots levels
4) Basic public health services
5) Public hospital reform

To improve …

- Financial risk control
- Quality and affordability of the services
- Physical accessibility
- Cost containment

Out-of-Pocket (OOP) payment and Government expenditure ratios to Total Health Expenditure (THE)



Note: Author's compilation based on data from *Health Statistical Yearbook of China*.

Source of revenue for health institutions: % share of government subsidy, operating revenue, revenue from medicine

	2005	2006	2007	2008	2009
Public hospital					
Govt subsidies			8.5	8.4	8.8
Operating revenues	92.6	91.6	91.5	91.6	91.2
Revenues from medicine	43.0	41.3	41.3	42.1	42.1
(Ratio of medicine rev. to operaing revenues)	46.4	45.1	45.1	45.9	46.1
Urban community health center					
Govt subsidies			17.8	23.3	23.6
Operating revenues			82.2	76.7	76.4
Revenues from medicine			50.2	51.4	51.3
(Ratio of medicine rev. to operaing revenues)			61.1	67.0	67.1
Township health center					
Govt subsidies			25.9	18.7	20.2
Operating revenues			74.1	81.3	79.8
Revenues from medicine			39.0	43.2	43.9
(Ratio of medicine rev. to operaing revenues)			52.7	53.1	55.0

Note: Author's compilation based on data from *Health Statistical Yearbook of China*.

Coverage ratio of insurance schemes

	Rural population			Urban population	
	new CMS			UEBMI + URBMI	
	2007	2008	2009	2008	2009
Total (%)	82.8	92.5	94.4	51.8	72.4
Std. Dev. (between provinces)	12.0	10.2	10.3	15.7	15.5
The highest province (%)	100.0	100.0	100.0	99.8	100.0
The lowest province (%)	62.9	68.2	68.9	34.2	49.0

Note: Author's compilation based on data from *Health Statistical Yearbook of China*.

Disparity in medical insurance ..

- Disparity in coverage between localities
- Disparity in benefits between insurance schemes (UEBMI, URBMI, new CMS)

◆ Insurance schemes may differ between localities.

→ insurance benefits may differ between localities.

Why disparity?

- Individual income level

  +

  -- local govts fiscal capacity for health

  -- local health service availability

Simple estimation <rural population>

: effects of possible factors on insurance coverage differences between provinces

Dependent variable	Insurance coverage									
	(a)		(b)		(c)		(d)		(e)	
Independent variables										
per capita rural household net income (ln)	0.14	(0.04)**			0.09	(0.05)*	0.14	(0.04)**	0.15	(0.06)**
per capita provincial health expenditure (ln)			0.08	(0.02)**	0.06	(0.02)*				
per capita rural health center beds							0.02	(0.00)**		
per capita health personnel at county level									-0.02	(0.12)
time dummy for 2007	-0.06	(0.01)**	-0.04	(0.01)**	-0.04	(0.02)*	-0.03	(0.01)*	-0.06	(0.01)**
No. of observation	93		93		93		93		93	
R2	0.50		0.56		0.55		0.66		0.50	

Notes: Numbers in parentheses are standar error.
* indicates significance at the 5% level.
** indicates significance at the 1% level.

Unit of observation: province
Period: 2007 – 2009
Method: panel data analysis, random-effects model

Simple estimation <urban population>

: effects of possible factors on insurance coverage differences between provinces

Dependent variable	Insurance coverage									
	(a)		(b)		(c)		(d)		(e)	
Independent variables										
per capita urban household disposal income (ln)	0.82	(0.10)**			0.48	(0.12)**	0.71	(0.12)**	0.81	(0.13)**
per capita provincial health expenditure (ln)			0.38	(0.05)**	0.23	(0.05)**				
per capita hospital beds							0.58	(0.42)		
per capita health personnel									-0.04	(0.21)
No. of observation	62		62		62		62		62	62
R2	0.84		0.82		0.85		0.85		0.84	

Notes: Numbers in parentheses are standard error.
* indicates significance at the 5% level.
** indicates significance at the 1% level.

Unit of observation: province

Period: 2008 – 2009

Method: panel data analysis, random-effects model

To reduce the disparity …

- Strengthen fiscal capacity for health responsibility at local levels
- Improve physical facility of rural health centers

… Further financial needs

Another challenge in near future: Aging in China

Simple estimation: effects of demographic structure on health expenditures

Dependent variable	per capita provincial health expenditure in real terms (ln)			
	(a)		(b)	
Independent variables				
per capita provincial GDP in real terms (ln)	1.04	(0.17)**	1.08	(0.17)**
ratio of over 65 to total population	0.06	(0.02)**		
ratio of between 15 to 64 to total population			-0.03	(0.01)**
time dummy:				
2003	-0.71	(0.14)**		
2004	-0.66	(0.13)**	0.07	(0.03)**
2005	-0.64	(0.11)**	0.09	(0.05)**
2006	-0.57	(0.08)**	0.19	(0.07)**
2007	-0.33	(0.06)**	0.45	(0.10)**
2008	-0.24	(0.04)**	0.54	(0.13)**
2009			0.80	(0.15)**
No. of observation	217		217	
R2	0.96		0.96	

Notes: Numbers in parentheses are standard error.
** indicates significance at the 1% level.

Unit of observation: province

Period: 2003 – 2009

Method: panel data analysis, fixed-effects model

Demographic structure

	1990	1995	2000	2005	2009
Total population (10000 persons)	114333	121121	126743	130756	133474
	ratio to total population (%)				
0 - 14	27.7	26.6	22.9	20.3	18.5
15 - 64	66.7	67.2	70.1	72.0	73.0
over 65	5.6	6.2	7.0	7.7	8.5

Note: Author's compilation based on data from *China Statistical Yearbook* .

The ratio of over 65 to total population is prospected to reach 14% in 2027 (Xiao 2007).

… Further financial needs for health

Xiao, Caiwi. 2007. "Population Aging and the Policies of China," *China National Committee on Aging*.

Fiscal space for further challenges

Fiscal space defined…

The availability of budgetary room that allows a government to provide resources for a desired purpose without any prejudice to the sustainability of a government's financial position (Heller 2005, UNICEF 2009).

Sources of fiscal space for health…

- Potential to increase tax revenues
- Re- prioritize fiscal expenditures
- Establish social insurance schemes
- Increase borrowing internal/external
- Increase receipt of grants

Heller, Peter. 2005. *Understanding Fiscal Space*. IMF Policy Discussion Paper.
UNICEF. 2009. *Fiscal Space for Strengthened Social Protection.*

Possible fiscal space for China

- Potential to increase tax revenues
  - economic growth
  - tax policy
  - tax administration

	1990	1995	2000	2005	2009
(%) Ratio of:					
fiscal rev to GDP	15.7	10.3	13.5	17.1	20.1
health exp to total fiscal exp				3.1	5.2

Note: Author's compilation based on data from *China Statistical Yearbook* .

Possible fiscal space for China

- Re-prioritize fiscal expenditure

  - increase ratio of fiscal health expenditure to total fiscal expenditure

  - strengthen fiscal responsibility of the central government

  (more than 90% of fiscal health expenditures financed by local governments in China..)

Possible fiscal space for China

- Reform insurance schemes
  - include dependent family in UEBMI
  - include rural migrants in UEBMI
  - scaling up the fund level
  - contribution (premium) of insured:
    to be proportionate to each income level

For further reforms..

- Demand-side:

- Reduce disparity in insurance coverage by strengthening fiscal capacity of local govt
- Integrate the schemes of medical insurance into a unified scheme:
  ← Schemes between urban and rural population
  ← Schemes between localities

For further reforms..

- Supply-side:

- physical condition of health institutions, particularly rural areas/lower tiers
- Primary health care system

- Financing for the reforms

- Budgetary sources: additional sources
- Insurance schemes/pooling level: efficiency of insurance fund
- Health care at the primary level: efficiency of financial sources for health