

# Catastrophic Health Expenditure in an Urban City Seven Years after the Universal Coverage in Thailand



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Jain Weraphong\*, Supasit Pannarunothai\*  
Terasak Luxananun\*\*, Nongnuch Junsri\*\*

\*Faculty of Medicine Naresuan University  
\*\*Department of social medicine Sawanpracharak Hospital

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## Introduction



**USAID** estimated that by the year 2030, the proportion of urban dwellers is expected to be 61% of the world's population.

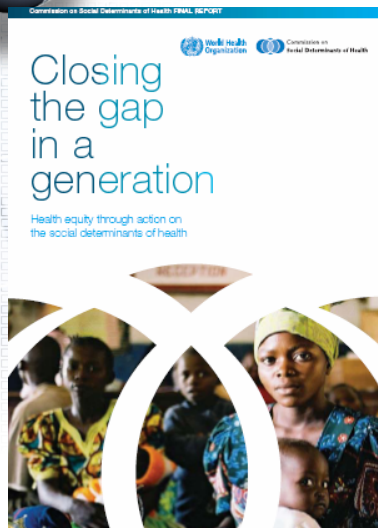
- Urbanization causes health problem of urban dweller
  - Poverty
  - Crowded living conditions
  - Cause ill health and death
- Economic crisis in 2008

Cite : USAID (2004)

: WHO Commission on Social Determinants of Health. Closing the Gap in a Generation: Health Equity through Action on the Social Determinants of Health. World Health Organization, 2008.



## The WHO social determinants of health and health equity



The Commission recommends that:

**9.2 National governments ensure public sector leadership in health-care Systems financing, focusing on tax-/insurance-based funding, ensuring universal coverage of health care regardless of ability to pay, and minimizing out-of-pocket health spending (see Rec 10.4; 11.1; 11.2).**

CITED: [http://www.who.int/social\\_determinants/thecommission/finalreport/en/index.html](http://www.who.int/social_determinants/thecommission/finalreport/en/index.html)



## Evidences in Thailand



### Prior to UC

- Pannarunothai and Mills (1997) : the 1<sup>st</sup> HH income quintile paid 21.2% of household income for health care higher than other groups.
- Sujariyakul (2000): 7.5 percent of total samples incurred catastrophic expenditures (out-of-pocket greater than 15% of income)

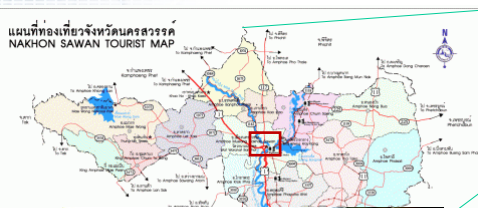
### Post – UC

- Suedee et al (2004) : 6% of a municipality had no health insurance and half of UC card holder faced with barriers in access to health care by administrative reasons.
- IHPP (2005): The incidence of catastrophic health expenditure reduced from 5.4% in 2000 to 3.3% and 2.8% in 2002 and 2004, respectively

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Map of Nakhon Sawan





## Introduction



- Nakhon-Sawan population is covered by health insurance scheme 98.9%, 5.6% is Social Security Scheme (SSS), 8.0% is Civil Servant Medical Benefit Scheme (CSMBS), 85.1% is Universal Coverage (UC) and 0.6% is no insured person (NHSO : 2008)

Cited : <http://eis.nhso.go.th/eis>

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## Research Questions



- Can UC protect urban household from catastrophic health expenditure?
  - How many percentages of households in Nakhon Sawan municipality pay out-of-pocket expenditure for health care?
  - Do they have household catastrophic health expenditure across socioeconomic group, health benefit scheme and residential area in Nakhon Sawan municipality?
  - Which factors lead to household catastrophic health expenditure in Nakhon Sawan municipality?

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## Research Methodology

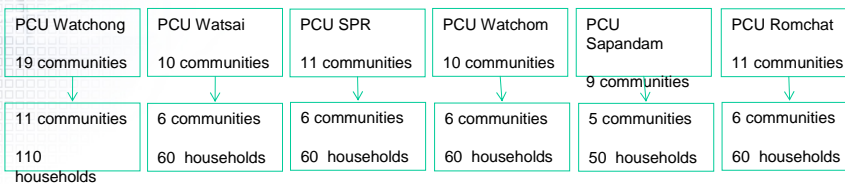


### – Quantitative method

- Sample size
  - Cochran W.G (1997) formula = 388 Households

### Multistage -stage sampling

#### 1<sup>st</sup> stage



#### 2<sup>nd</sup> stage

- Systematic random sampling in each community from poor and non-poor household list
- 5 poor and 5 non-poor households in each community are the sampling household <sup>9</sup>



## Operative definition



- Poverty line (1575.2 ฿ or 45 US.\$ / month)
- Catastrophic health expenditure (household out-of-pocket health expenditure exceeds 10% of total household expenditure in a month)



## Demographic characteristics



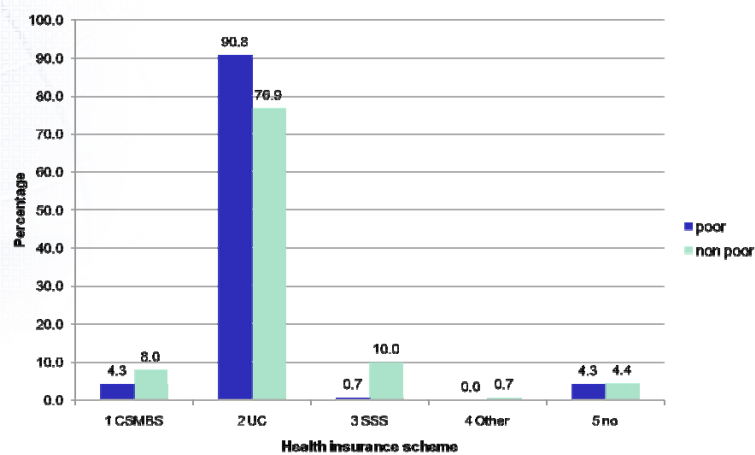
Factor	n	percentage
Residential area		
- General urban	281	68.5
- Slum	129	31.5
Household reported illness		
- report	275	67.1
- not report	135	32.9
Treatment (383 Patients)		
- sought care	378*	98.7
Poor (less than 1,726.31 ₪ / month)	59	14.4
Non poor (more than 1,726.31 ₪ / month)	351	85.6

\* 1 household had more than 1 case

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## Individual health insurance by socioeconomic status



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## Ten leading diseases by socioeconomic group



Poor			Non poor		
diseases	n	MR/1000	diseases	n	MR/1000
Hypertension	16	113.5	Hypertension	78	60.9
Diabetes	10	70.9	Diabetes	60	46.8
Common cold	6	42.5	Common cold	35	27.3
Psychiatric	2	14.2	Stomach	8	6.2
Paralyze	2	14.2	Paralyze	7	5.5
MCA	2	14.2	Allergy	7	5.5
Asthma	2	14.2	Head Ache	6	4.7
Cataract	2	14.2	Leg pain	6	4.7
Heart	2	14.2	Tooth ache	5	3.9
<b>All patients</b>	<b>57</b>	<b>404.3</b>	<b>All patients</b>	<b>326</b>	<b>254.5</b>

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## Health seeking behavior of poor and non poor patients by health providers




Facility (All cases)	Poor		Non poor	
	n = 67*	%	N = 367*	%
Health center (2)	0	0	2	0.5
Municipal health center (10)	0	0	10	2.7
Primary care unit (121)	22	32.8	99	27.0
Private clinic (30)	4	6.0	26	7.1
Regional hospital (155)	26	38.8	129	35.1
Alternative medicine (2)	0	0	2	0.5
Drug store (49)	8	11.9	41	11.2
Other gov. hospital (20)	2	3.0	18	4.9
Private hospital (45)	5	7.5	40	11.9

\* patient uses more than 1 provider


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### Household out of pocket health expenditure (Indirect cost)



expenditure	Poor Pt.			Non poor Pt.		
	n	%	Median (B)	n	%	Median (B)
Transportation	34	57.9	40.0	240	73.6	40.0
Food	20	36.8	30.0	83	25.5	50.0
Loss working time	3	5.3	150.0	27	8.3	200.0
Income loss of patient	1	1.7	150.0	15	4.1	280.0
Income loss of care giver	0	0	0	9	2.8	150.0
Other expenditure	4	7.0	25.0	1	0.3	50.0




### Factors related to household catastrophic health expenditure




Factor	Catastrophe	CI	P-value
Residential area			
Slum	OR = 0.98	0.58 – 1.67	0.93
Health insurance scheme			
CSMBS (Base)	OR = 1.00		
UC	OR = 0.35	0.17 – 0.75	0.01*
SSS	OR = 0.21	0.13 – 1.31	0.21
Have no insurance	OR = 0.67	0.14 - 3.17	0.93
Poverty (poverty line)			
Poor	OR = 2.05	1.10 – 3.8	0.03*

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### Factors related to household catastrophic health expenditure




Factor	Catastrophe	CI	P-value
<b>Health seeking behaviour</b>			
Primary care unit (Base)	OR = 0.71	0.46 – 1.09	0.15
Private Clinic	OR = 1.09	0.52 – 2.33	0.96
Regional hospital	OR = 0.71	0.48 – 1.08	0.14
Drug store	OR = 2.58	1.32 – 5.03	0.007**
Other gov. hospital	OR = 1.03	0.41 – 2.52	0.85
Private hospital	OR = 1.99	1.22– 3.88	0.05*

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### Factors related to household catastrophic health expenditure



Factor	Catastrophe	CI	P-value
<b>Indirect cost</b>			
1-100 Baht	OR = 0.35	0.21 – 0.60	0.001**
101 – 200 Baht	OR = 2.23	1.04 – 4.78	0.05*
201 – 300 Baht	OR = 1.21	0.51 – 2.92	0.83
300+ Baht	OR = 5.78	1.97 – 16.93	0.001**

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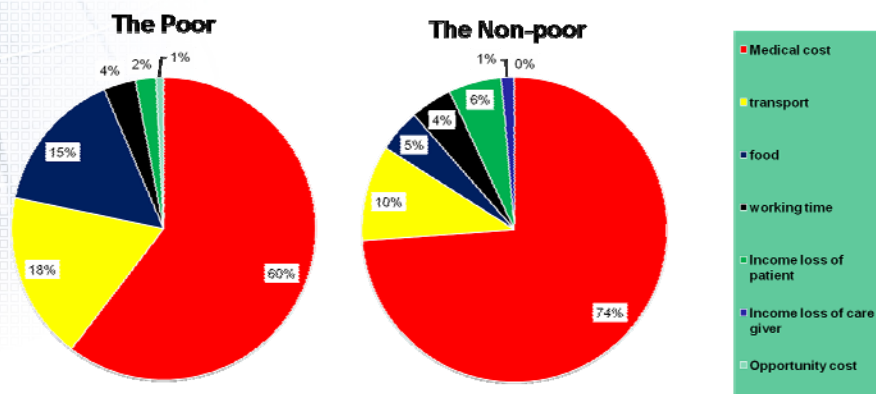
**Percentage of CHE. compared between direct and indirect payment among socioeconomic groups**



Socioeconomic groups	Direct cost			Indirect cost	
	All HH	Catastrophe	%	Catastrophe	%
Poorest (Q1)	89	7	7.9	21	30.4
Poor (Q2)	82	3	3.6	14	17.1
Moderate (Q3)	95	6	6.3	16	16.8
Rich (Q4)	82	5	6.1	15	18.3
Richest (Q5)	82	8	9.7	14	17.1



**Proportion of household OOP in the poor and the non-poor**





## Discussion

- The sample selection technique of half poor and non-poor household led to over representation of the poor
- Accessibility of the UC cardholder to PCU was low because of inadequate number of PCU compare to the number of drugstore (not covered by UC)
- Health seeking behavior of UC cardholder in using drug purchasing and private clinic led to CHE.

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## Discussion

- SSS beneficiaries had low risk of CHE despite using high private hospitals because the scheme cover services in contracted hospital.
- Indirect out-of-pocket health expenditure causes household catastrophic health expenditure rather than direct cost in the poor.

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## Policy implication

- Poor accessibility to benefit package causes CHE. Policy should consider providing accessibility to private sector:
  - Drug store
  - Private hospital
  - Private clinic

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# Home

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