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# **Universal Coverage Scheme in Thailand: Equity Outcomes and Future Agendas to Meet Challenges**

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## **1 Background**

Prior to achieving universal coverage (UC) in 2002, approximately 30% of the Thai population was uninsured despite the consistent coverage extension of (1) the Medical Welfare Scheme to the poor, the elderly and children under twelve years; (2) the social health insurance (SHI) scheme for private sector employees; (3) the Civil Servant Medical Benefit Scheme (CSBMS) for government employees, retirees and dependants; and (4) publicly subsidized voluntary health insurance for the informal sector. It took 27 years, from the 1975 launch of free medical care for the poor to reach UC in 2002. Beneficiaries of the Medical Welfare Scheme for the poor and publicly subsidized voluntary insurance, and the residual uninsured were combined and covered by a new scheme called the UC scheme, financed by general taxation.

A National Health Account was initiated in 1994 and is sustained by the International Health Policy Program (IHPP) to-date. Two national representative household surveys, the Socio-Economic Survey (SES) and the Health and Welfare Survey (HWS), conducted every one or two years by the National Statistical Office (NSO) have been used to monitor equity of access and financial risk protection. These three data sources are the national assets for evidence-based health policy formulation, implementation and equity monitoring (Tangcharoensathien et al., 2007).

This short paper analyses the evidence on equity achievements as a result of strategic purchasing through the UC scheme, evokes a number of future challenges and provides policy recommendations needed to sustain these achievements.

## **2 Achievements to Date**

As a result of knowledge-based health systems reform (Tangcharoensathien et al., 2004), empirical evidence reveals an improving trend in health equity in terms of both access and financial protection (O'Donnell et al., 2007). First, the predominantly general tax financed scheme in the UC scheme and CSMBMS resulted in progressive financial incidence. The Concentration Indexes (ranges from -1 to +1, the more positive, the more progressive, where the rich pay more) were consistently progressive, 0.5719, 0.5822 and 0.5593 in 2002, 2004 and 2006 respectively (Prakongsai et al., 2009), see Table 1.

**Table 1** Progressivity of health financing contribution, 2003-2006

Financing sources	2002		2004		2006	
	<i>CI<sup>a</sup></i>	<i>Fraction<sup>b</sup></i>	<i>CI<sup>a</sup></i>	<i>Fraction<sup>b</sup></i>	<i>CI<sup>a</sup></i>	<i>Fraction<sup>b</sup></i>
Direct tax	0.8221	0.20	0.8162	0.21	0.7687	0.23
Indirect tax	0.5594	0.38	0.5958	0.37	0.5512	0.33
Social insurance contribution	0.4975	0.06	0.4561	0.07	0.4492	0.08
Private insurance premium	0.3785	0.09	0.4221	0.09	0.4188	0.08
Direct payment	0.4883	0.27	0.4626	0.26	0.4705	0.28
Overall	0.5719	1.00	0.5822	1.00	0.5593	1.00

<sup>a</sup> Concentration index (CI) > 0 indicates concentration among the economically better off. This means 'progressive' taxation, where the rich pay relatively more than the poor.

<sup>b</sup> Fraction of total health expenditure from National Health Accounts

Source: Prakongsai, et al. (2009)

Second, the use of health services is in favour of the poor as reflected by the negative Concentration Indexes, in Table 2. The district health system, including health centres and district hospital as the contractor provider, plays a crucial role in pro-poor health service provision, due to its geographical proximity to the rural population, which is mostly poor (Prakongsai et al., 2009); and transport costs paid by households to access services is minimal. Equity in the use of admission services was also achieved. An in-depth analysis of the 2006 Multi Indicator Cluster Survey on the use of maternal and child health services found perfect equity across the household wealth index (Limwattananon et al., 2010) (see Table 3) though poor maternal and child health outcomes such as teen-pregnancies, child stunting and wasting were concentrated among the poorest quintiles.

**Table 2** Concentration Index of Healthcare Utilization by Providers, 2001 and 2003

Provider type	Ambulatory service		Hospitalization	
	2001	2003	2001	2003
Health centre	- 0.2944	- 0.3650	NA	NA
District hospital	- 0.2698	- 0.3200	- 0.3157	- 0.2934
Provincial hospital	- 0.0366	- 0.0802	- 0.0691	- 0.1375
Private hospital	0.4313	0.3484	0.3199	0.3094

Concentration index (CI) < 0 indicates concentration of the economically worse off

Source: Prakongsai et al. (2009)

**Table 3** Maternal and Child Health Interventions-Concentration Index and Coverage Ratio

MCH intervention	Concentration index	Coverage ratio between wealth quintiles 5 and 1
Family planning	- 0.0005	0.99
Prenatal care by skilled health worker	0.0078	1.05
Delivery care by skilled health worker	0.0172	1.10
Delivery care in health facility	0.0173	1.10
ORS/ORT for child diarrhoea	0.0220	1.22
Appropriate provider for child pneumonia	-0.0164	0.92
Immunization coverage of		
- BCG	- 0.0104	0.94
- MMR	- 0.0041	0.91
- OPV	0.0002	0.99
- DPT	0.0002	0.99
- HBV	- 0.0052	0.97

Source: Limwattananon et al. (2010)

Third, evidence indicates a minimal incidence of catastrophic health expenditure, which is defined as out-of-pocket (OOP) payment for health exceeding 10% of total household consumption expenditure. The catastrophic incidence dropped from 5.4% in 2000 for all quintiles (before UC) to 3.3% in 2002, 2.8% in 2004, and 2.0% in 2006 for all households when UC was achieved (see Table 4). This declining trend was evident both in the poorest and richest quintiles, though a larger reduction of catastrophic costs due to medical payment was observed in the poorest quintiles. The incidence of impoverishment or poverty resulting from medical payments for in-patient services reduced significantly from 11.9% in 2000 (prior to UC) to 4.3% in 2002 and 2.6% in 2004 when UC was achieved (Limwattananon et al., 2007).

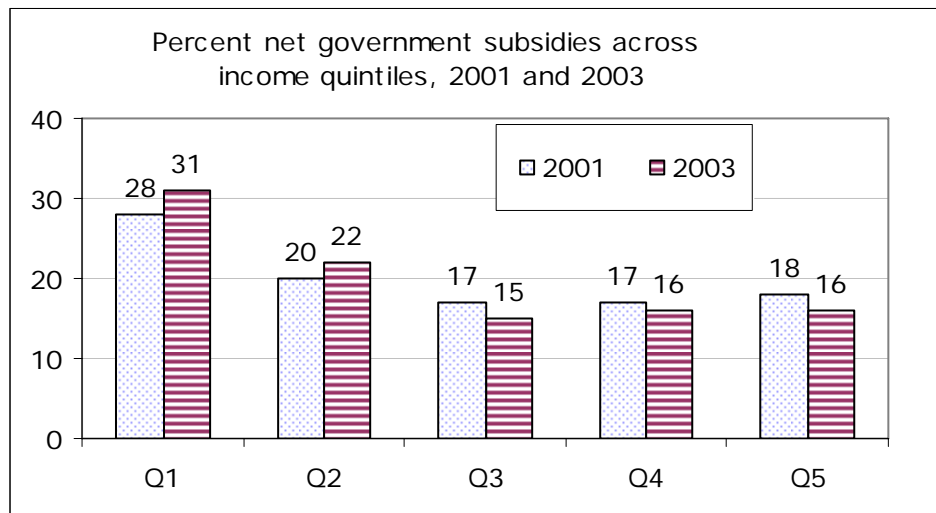
**Table 4** Incidence of Catastrophic Health Expenditure by Quintile of Consumption Expenditure

Consumption expenditure	2000	2002	2004	2006
Quintiles 1	4.0%	1.7%	1.6%	0.9%
Quintiles 5	5.6%	5.0%	4.3%	3.3%
All quintiles	5.4%	3.3%	2.8%	2.0%

Source: Prakongsai P. et al. (2009)

Fourth, benefit incidence analysis shows that government health budget spending was in favour of the poor prior to UC in 2001, where the CI was -0.044 and increasingly favoured the poor after UC in 2003, when CI was -0.123. This is because of more equitable use of health services in district health systems by the poor and services being fully subsidized at this level (Prakongsai et al., 2009) (see Figure 1)

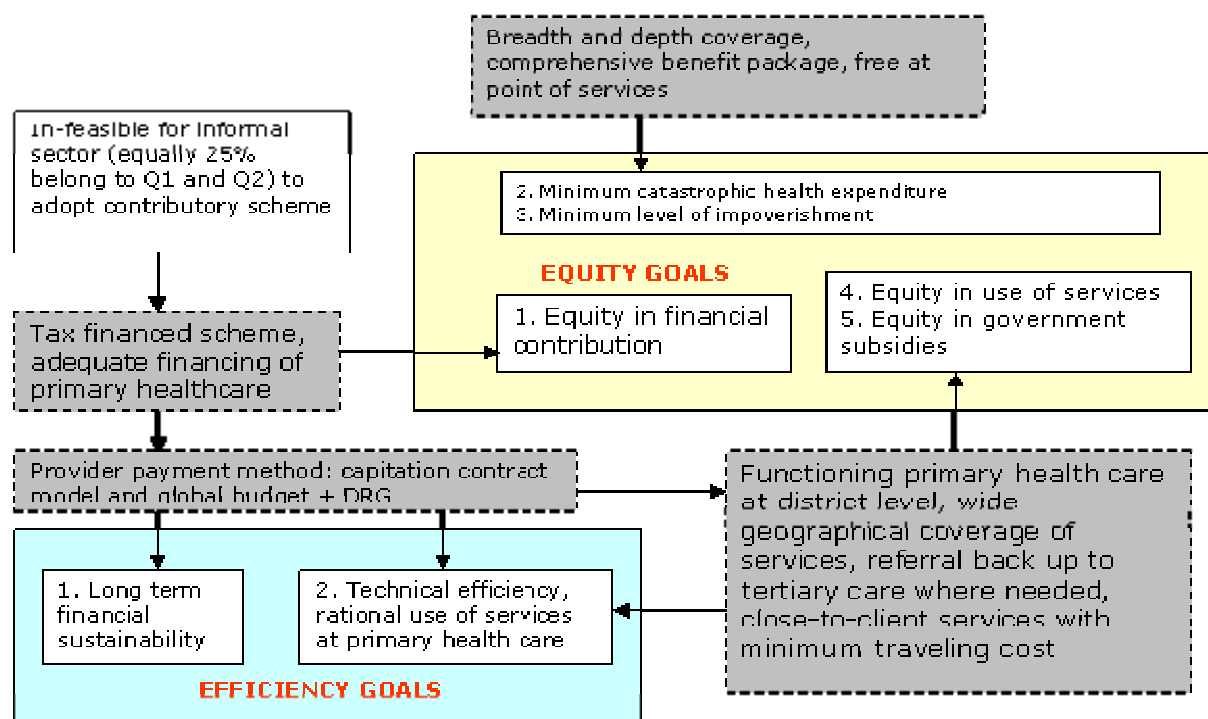
**Figure 1** Equity in budget subsidies, benefit incidence analysis 2001 and 2003



Source: Prakongsai, et al. (2009)

Figure 2 shows the different scheme components that determine the achievement of greater equity and efficiency (Prakongsai et al., 2009). For example, the depth of coverage provided by the comprehensive benefit package for which services were provided free at point of use, by a functioning district health system network as contractor, ensured better financial risk protection, with minimal catastrophic health expenditure and impoverishment. More equitable health care finance is a result of the tax financed basis of the UC scheme, and adequate levels of funding for primary healthcare.

**Figure 2** Explanatory frameworks on equity and efficiency achievement



The equity achievements in service utilization, relying partly on government subsidies, need to be examined in parallel with the progressive financing of the UC scheme. The decision was made to finance the UC scheme through progressively levied general tax revenue rather than a contributory UC scheme which was disregarded as being not only administratively difficult from the point of view of collecting and enforcing contribution by people in the informal sector, but also less progressive than general tax. Financing out of general tax revenue, not only resulted in a more progressivity of financial incidence, but also enabled the scale to universality to happen in one year (between 2001 and 2002). This was also a reflection of the government's effectiveness in translating policy intention into effective programme implementation. Government effectiveness is one of the key worldwide governance indexes. (Kaufmann D et al., 2009)

The adoption of a contracting model and closed-end provider payment methods such as capitation for outpatient and global budget with the application of DRG for hospitalization ensured long term cost containment and systems efficiency. The contracting of primary healthcare services and referral backup ensured the rational use of resources by level of care and prevented bypassing to specialist hospital care.

### **3 Future Challenges**

Despite a reduction in child mortality due to the provision of extensive primary health care services (Rohde et al., 2008) and improvements in both equity and efficiency under the recent universal coverage scheme, (Prakongsai et al., 2009), several challenges require immediate policy responses. One of the strengths of strategic purchasing is the application of the capitation contracting model as the major mode of provider payment for the Social Health Insurance (SHI) and UC Schemes. Compared to the fee for service reimbursement model, the capitation contracting model has better prospect of long term cost containment (Langenbrunner et al., 2009).

#### **3.1 Managing Cost Drivers**

Despite improved cost containment in both the SHI and UC schemes, due to strategic purchasing, three cost drivers continue to challenge long term financial sustainability as the majority of financing comes from general tax revenue:

***The demographic transition.*** The proportion of elderly people (more than 60 years) has increased from 5.4% of the total population in 1960 to 11.8% in 2010 (Chunharas, 2008). The service utilization rate among the elderly is 2.3 times that of the general population. With an increased proportion of elderly, there has thus been a substantial increase in demand for health services.

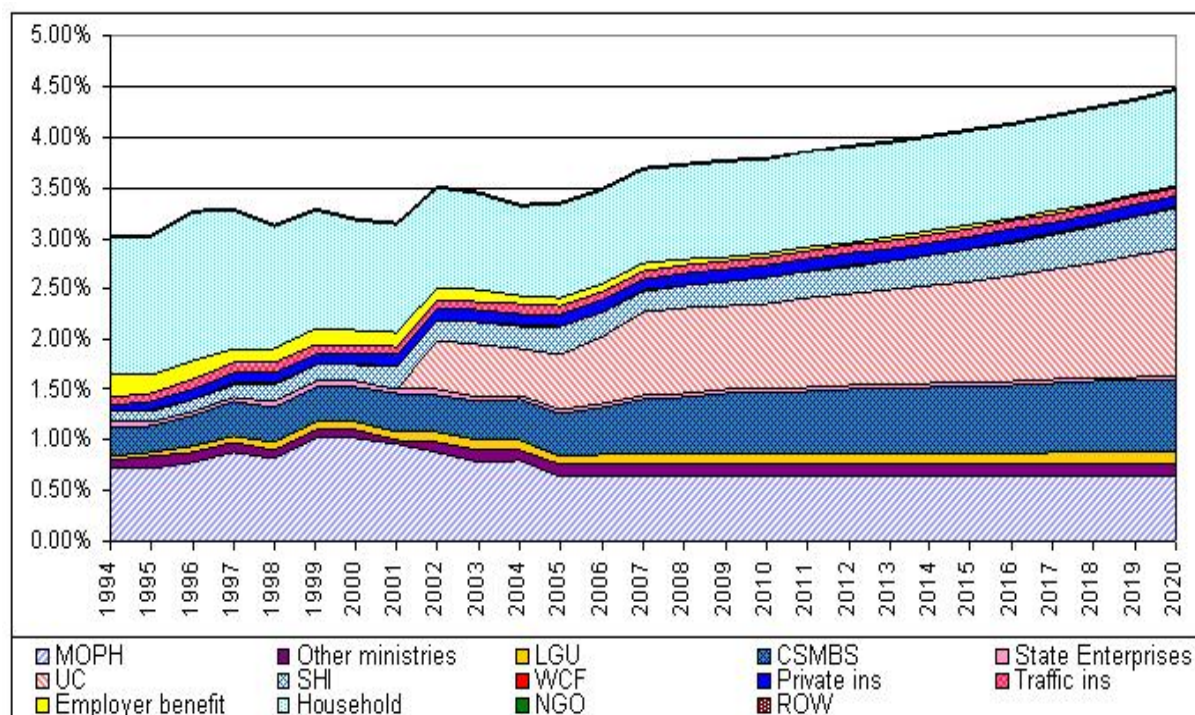


**The epidemiological transition.** The 2004 Burden of Diseases (BOD) report confirms the 1999 BOD studies, showing that non-communicable diseases contribute to Disability Adjusted Life Year (DALY) loss more than communicable, nutritional, childhood and maternal diseases and injuries (The Thai Working Group on Burden of Disease and Injuries, 2007). The proportion of DALYs attributed to non-communicable diseases also increased from 58.9% in 1999 to 65.7% in 2004.

In the light of scientific advancement and genomic era, new technologies such as pharmaco-genomics, surgical procedures and diagnostic imaging are expensive and unaffordable. OECD experiences have shown that technological advancement is one of the most important drivers of cost. (Oxley and MacFarlan, 1994) It is therefore necessary to introduce appropriate mechanisms to generate data on cost effectiveness and other parameters to inform decisions related to technology adoption.

As a result of these three concerns, a long term, twenty-year financial projection was undertaken, based on the analyses of data from various sources, including a health and welfare survey, national health accounts, hospital input-output reports and administrative inpatient database, as well as the social budgeting models of the International Labour Organization (ILO), see Figure 3 (Sakunphanit et al., 2009).

**Figure 3** Long term health financing projection 2006-2020, Total Health Expenditure as a percentage of GDP



Source: Sakunphanit et al. (2009)

By 2020, total health expenditure of approximately 4.5% of GDP will be within the capacity of the government to afford, with general taxation constituting the bulk of funding for universal coverage, followed by the Civil Servant Medical Benefit Scheme expenditure. Private household spending will be equivalent to the expenditure through the Social Health Insurance Scheme. Historically, donors' resources play an insignificant role in financing health in Thailand, less than 0.05% of total health spending.

It is not possible to halt demographic transitions; however, maintaining a healthy ageing population through the effective primary and secondary prevention of chronic NCD for the middle age groups can minimize future demand for expensive services (WHO Report, 2005). Effective interventions are needed to tackle shared risk factors, namely: tobacco use, unhealthy diet, physical inactivity and the harmful use of alcohol. It is necessary therefore to use both health policy and influence general public policies to bring about change (WHO, 2008).

Despite the cost-ineffectiveness of renal replacement therapy for UC members who have end-stage renal diseases, inequities across insurance schemes, catastrophic health spending and household impoverishment prompted the government to absorb dialysis into the benefit package of the UC scheme in 2008. Once adopted, it is not possible to withdraw it from the benefit package except in the future where co-payments may be introduced.

### **3.2 Managing Benefit Package**

Even rich governments cannot afford to adopt all of the available advanced health technologies. There is therefore a need for institutional capacity to generate evidence on the effectiveness, cost-effectiveness and long term budget impact of new health technologies to guide decisions on how to adapt the benefit package. The Health Intervention and Technology Assessment Program (HITAP), a budding unit of IHPP will, in the future, evolve as a national focal point in technology assessment for the country (Chaikledkaew et al., 2009).

Two major decision platforms are worth mentioning: first, the National Subcommittee on Essential Drug (ED) List which reports its work to the National Committee on Drug Systems Development chaired by the Prime Minister and is responsible for reviewing and updating which medicines should figure on the national ED list. The ED is referred to by all three insurance schemes as the drug benefit package; there must be evidence of cost effectiveness for drugs to be included or excluded from the list

Second, the Sub-committee on Benefit Package, which reports to the National Health Security Board chaired by Minister of Health, is responsible for reviewing and updating, including and excluding health interventions in the benefit package.

The assessment of interventions will involve a broad based stakeholder engagement on topics submission and selections - for example, policy makers, royal colleges, industries, civil society, patient groups and the general lay public. The results of technology assessment would then be submitted to the two sub-committees for review and further decisions by the relevant bodies.

The performance of the two sub-committees ensures that the benefit package is updated based on hard evidence. The societal benchmark is adopted and an intervention is deemed cost effective and worth public investment if its cost does not exceed one GNI per capita to gain one QALY from the said intervention (Tangcharoensathien and Kamolratanakul, 2008).

### **3.3 Managing health systems**

There is a need to actively manage the health system in response to demographic and epidemiological transitions. With regard to the adequate and equitable distribution of health infrastructure, there is no significant need for new investment other than to maintain effective operations.

The current health system's performance has been hampered by limited human resources relative to other middle income countries, if looked at from the human resources for health to population ratio perspective. The human resource shortage problem is aggravated by the inequitable distribution across geographical regions, though disparities have gradually reduced.

In the context of trade in health services and the regional trade agreement in the ASEAN, there is a major trend outflow of experienced professionals from public to private sectors within the country and out of the country through migration.

The health system is not very well equipped to provide a high level of effective coverage of essential interventions for chronic NCDs, in particular diabetes and hypertension. For example, the 3rd National Health Examination Survey of 2004 reported that only 36.7% of patients with high blood pressure and 29.2% of diabetic patients have adequate control of their conditions. Although the 4th National Health Examination Survey of 2009 reported a substantial improvement in these numbers (50.6%, 54.5% respectively), there is still room for improvement.

There is also limited financial and systems investment, as well as a lack of effective interventions designed to keep the pre-elderly population group healthy as a preparation for healthy old age.

Long term care and the effective referral to and from acute hospital care and community based care designed to accommodate the increasingly frail elderly who need health and social support, require clear policy and significant investment. Intersectoral initiatives between health and social welfare departments have yet to be strengthened.

Despite clear NPHSO policy to strengthen primary health care, the quality of health services offered by primary care provider has still not satisfied or created public confidence. The devolution of health centres, which are the main public primary care providers in the rural area, to work under the direct supervision of local authorities, was started in 2007 but without any indication of improvement. However, according to the Thai Constitution of 2007, the devolution of health service provision to local authorities, especially at the primary health care level, seems to be unavoidable and could affect health systems management.

#### **4 Conclusion**

The future challenges faced by Thailand with regard to maintaining health equity and efficiency achievements while keeping healthcare costs appropriate to the level of the country's economic development are daunting. To meet these challenges, there is a need to strengthen institutional capacities to generate evidence as well as effective mechanisms to serve as an interface for evidence and policy decisions.

Experiences and contributions from “think tank” or “arm’s-length research” agencies in developing countries which are not too close to policy makers to lose scientific independence and not too distant to be irrelevant are important platforms for evidence based decisions (Pitayarangsarit and Tangcharoensathien, 2009; Pitayarangsarit and Tangcharoensathien, 2007).

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