

# Budgeting and paying for services under Thailand's Universal Coverage Scheme

Viroj Tangcharoensathien\*, Walaiporn Patcharanarumol\*, Taweetri Greetong\*\*, Waraporn Suwanwela\*\*, Nantawan Kesthom\*\*, Shaheda Viriyathorn\*, Nattadhanai Rajatanavin\* and Woranan Witthayapipopsakul\*  
\* International Health Policy Program (IHPP), Ministry of Public Health  
\*\* National Health Security Office



## Introduction

Health financing is a component of the health system, crucial in achieving universal health coverage (UHC). Careful design of its three main functions, resource mobilisation, pooling and allocation, ensures improved access to essential health services and financial risk protection for the population. This policy brief details the use of mixed provider payment methods, an important tool for resource allocation, drawing on lessons from Thailand's largest public health insurance scheme, the Universal Coverage Scheme (UCS).

## Public health insurance in Thailand: Background

Thailand achieved UHC in 2002 with the introduction of UCS. Since then, all people have been covered by one of three public health insurance schemes: Civil Servant Medical Benefit Scheme (CSMBS) for government employees; Social Health Insurance (SHI) for formal employees in the private sector and UCS for the rest. Tax-financed UCS covers nearly 72% of the population and is managed by the National Health Security Office (NHSO), an independent agency established by the National Health Security Act 2002. Unlike CSMBS and SHI, UCS is not linked to employment status and entitles all Thai citizens to essential health services.

## Public health insurance in Thailand: Designing purchasing and payment mechanisms

All three public health insurance schemes apply different payment methods for outpatient (OP) and inpatient (IP) services, impacting costs and service utilisation. CSMBS applies a fee-for-service approach towards OP payments, with IP services paid through DRGs under open-ended budget. SHI applies capitation (a fixed per capita payment to the health provider) for both OP and IP services, although more resource-intensive treatments are paid using DRG under a global budget. This contrasts with UCS, which applies capitation for OP services, and uses DRG under global budget for all IP services. UCS also allocates a small portion of the total budget via fixed fee schedule for select high-cost items. Details of each are further explained in Table 1.



**Table 1: Pros and cons of different financing methods**

Payment methods	Description	Pros	Cons
Fee-for-service	<ul style="list-style-type: none"> <li>• Health provider sets per patient charges for each resource used, or service provided during treatment</li> </ul>	<ul style="list-style-type: none"> <li>• Increases utilisation rate</li> <li>• No incentive to under-provide care</li> <li>• Increased access to high-cost medicines</li> </ul>	<ul style="list-style-type: none"> <li>• Inefficient service delivery</li> <li>• Increased provision of unnecessary care</li> <li>• Greatest scope for cost escalation</li> </ul>
Fixed fee schedule	<ul style="list-style-type: none"> <li>• Payment for health services based on a list of fixed fees for different services and items.</li> </ul>	<ul style="list-style-type: none"> <li>• Guaranteed rate for health providers</li> <li>• Increases utilisation rate</li> </ul>	<ul style="list-style-type: none"> <li>• Increased provision of unnecessary and low-quality care if fixed fee is higher than cost</li> <li>• Decreased provision of necessary care or incentive to provide low quality care if fixed fee is lower than cost</li> <li>• Cost-escalation and inefficiency, although less than fee-for-service</li> </ul>
Capitation	<ul style="list-style-type: none"> <li>• Healthcare provider receives a fixed per capita payment for registered population</li> </ul>	<ul style="list-style-type: none"> <li>• Incentivises efficient service provision</li> <li>• Flexibility of budget management</li> </ul>	<ul style="list-style-type: none"> <li>• Under-provision of necessary care affecting overall quality of care</li> <li>• Incentive to turn away high-cost demographics</li> <li>• Financial risk for hospitals with few registered patients, as budget received may be less than average costs</li> </ul>
Age-adjusted capitation	<ul style="list-style-type: none"> <li>• Capitation payment levels adjusted for age composition of registered population, with higher cost demographics receiving higher capitation payments</li> </ul>	<ul style="list-style-type: none"> <li>• Reduces risk of discrepancy between payments received and costs incurred, reducing financial risk for providers</li> </ul>	<ul style="list-style-type: none"> <li>• More complex to develop, requiring strong technical capacity and demographic information</li> </ul>
Diagnostic Related Groups (DRG)	<ul style="list-style-type: none"> <li>• Hospital cases are classified by resource use and payment levels are adjusted by classification [based on factors such as patient characteristics (principal diagnosis, co-morbidities, etc.) and services required (procedures involved etc.)]. Degree of payment adjustment is determined by the 'Relative Weight' or 'Adjusted Relative Weight'</li> </ul>	<ul style="list-style-type: none"> <li>• May increase admission rate</li> <li>• Cost control through incentive to reduce cost per admission</li> <li>• Incentivises provision of the appropriate care option</li> <li>• Designed to ensure fair repayments to providers that align with required resource use</li> </ul>	<ul style="list-style-type: none"> <li>• Some providers might incur a loss if their facility is less efficient than the average and it incurs higher than average costs when providing treatment</li> <li>• Quality of service may be lower as providers attempt to reduce costs</li> <li>• Incentive to discharge patients early</li> <li>• Risk of financial loss to providers if DRG weights are not accurately set and payments do not cover resources required to deliver treatment</li> </ul>

Payment methods	Description	Pros	Cons
Open-ended budget	<ul style="list-style-type: none"> <li>No upper limit on payments to providers</li> </ul>	<ul style="list-style-type: none"> <li>No financial risk to providers</li> </ul>	<ul style="list-style-type: none"> <li>Financial unsustainability and inefficiency as no limit on total cost of services, encouraging unnecessary use of expensive drugs</li> </ul>
Close-ended budget or global budget	<ul style="list-style-type: none"> <li>Payments to providers only up to the level of the fixed budget</li> </ul>	<ul style="list-style-type: none"> <li>Cost containment</li> <li>Financial sustainability and efficiency</li> </ul>	<ul style="list-style-type: none"> <li>Some providers might incur a loss if their costs exceed maximum reimbursement</li> </ul>

Evidence shows that fee-for-service used by CSMBS results in per capita government payments of around four times that of UCS, largely attributable to fewer limits on using branded medicines under CSMBS. Data shows that these drugs were reimbursed at full cost plus a 20-25% margin by the Comptroller General's Department.

In contrast, SHI has adopted a capitation contract model since its inception in 1991, whereby an agreement on the services to be provided is made between the insurance scheme manager and public and private health providers. The capitation contract model pays a pre-defined amount per patient, under global budget, incentivising more efficient care and effective control of the total annual budget. NHSO, learning from SHI, now uses the capitation contract model under a global budget for OP services under UCS. For IP services, UCS, from conception, pursued cost containment using DRGs under global budget, rather than capitation, as the scheme covered a heterogeneous population in comparison to SHI, which was limited to the working age population.

There are other sources of efficiency in the system. NHSO exerts monopsonist purchasing power (a single large buyer purchasing from multiple, competitive sellers) and cost savings from price negotiations provide additional resources, offering higher benefits to UCS members. Additionally, the UCS primary care gate-keeping system requires that patients first visit their registered, contracted primary provider in all non-emergency cases, enhancing appropriate and efficient provisioning of care.

## Payment to health care providers under UCS

The annual UCS budget is a full-cost subsidy, covering all expenses associated with service delivery, including cost of labour, material and capital depreciation; providers should not require any additional co-payment from the patient. Originally, UCS required a co-payment of 30 baht (approximately 1 USD) for each patient at the point of service, although exemptions were made for various groups. In practice, very few patient contributions were received, resulting in policy discontinuation. Chief features of payment methods used by NHSO are outlined below:

- OP services:** Per capita budget for OP care is estimated through the "Price and Quantity (PQ)" approach which combines data on unit cost of a comprehensive benefits package (OP, IP, high-cost care, prevention and health promotion services) with their respective utilisation rates from a routine administrative dataset. OP capitation rate is paid based on population size for which a primary healthcare provider network has been contracted. However, total payment is then adjusted by age group, given different utilisation patterns. These age adjustments, conducted every three or four years, aim to reduce incentives to turn away higher-cost population groups.

- **IP admissions:** DRGs under a global budget are applied to payments for IP admissions, using a DRG base rate with adjusted relative weight. The global budget, fixed for the year, is the portion of total capitation budget allowed for use towards IP care.

- **High-cost services:** To ensure better access, NHSO pays health facilities for high-cost services such as renal replacement therapy or antiretroviral treatment through a central reimbursement system from an extra budget, currently not included in the capitation or DRG budget. UCS provides both cash and non-cash (in kind) payments for distribution of dialysis solutions, medical devices, and medicines.

- **Monitoring, auditing and complaint management systems:** NHSO utilises monitoring, auditing, and complaint management systems for UCS to collect data on a routine basis and provide feedback. This helps NHSO ensure fair payment mechanisms which improve health system efficiency and patient access to healthcare, without a price barrier. This data can also be used by NHSO to adjust and improve the scheme, as necessary.

## References

- Tangcharoensathien V., Witthayapipopsakul W., Panichkriangkrai W., Patcharanarumol W., and Mills A. Health systems development in Thailand: a solid platform for successful implementation of universal health coverage. *The Lancet* 2018;391:1205-23.
- Tangcharoensathien V., & Suphanchaimat R., & Thammatacharee N., & Patcharanarumol W., Walaiporn. (2012). Thailand's Universal Health Coverage Scheme. *Economic and Political Weekly*. 47.
- Tangcharoensathien V., Pitayarangsarit S., Patcharanarumol W., Prakongsai P., Sumalee H., Tosanguan J., and Mills A. Promoting universal financial protection: how the Thai universal coverage scheme was designed to ensure equity. *Health Research Policy and Systems* 2013;11:25.
- Tangcharoensathien V., Suphanchaimat R., Thammatacharee N. and Patcharanarumol W. Thailand's universal health coverage scheme. *Economic & Political Weekly* 2012;47:53-7.
- Tangcharoensathien V., Teerawattananon Y., Prakongsai P. Budget for universal health care coverage: how was the 1,202 baht capitation rate derived? *Journal of Health Science*. 2001;10(3):381-90.
- Tangcharoensathien V., Patcharanarumol W., Greetong T., Suwanwela W., Kesthom N., Viriyathorn S., Rajatanavin N., Witthayapipopsakul W. Thailand Universal Coverage Scheme. Price Setting and price regulation in health care: Lessons for advancing Universal Health Coverage. *OECD-WHO Case studies*. 2019; 219 -53.
- NHSO Archives 2018. UCS budget allocation: contribution to health care financing reform. Available from <https://bit.ly/2APU7hv> [Cited 2018 December 4]

## Acknowledgement

This policy brief was produced on 10<sup>th</sup> April, 2019. Its content is drawn from the report of "Setting and regulating payments for services: A case study of Thailand Universal Coverage Scheme" financially and technically supported by WHO Kobe Center.

## Key lessons for other countries ("do's and don'ts")

Payment methods adopted by NHSO for UCS offer good examples to other low- and middle-income countries in their journeys towards UHC.

### ✓ Do's

#### Provider payments

- Design a system balancing benefits and limitations of different payment mechanisms. For example, paying preventive, OP and health promotion services by capitation based on registered UCS members in the catchment area and disbursing funds prospectively can guarantee revenue to providers. IP admissions can be paid by DRGs retrospectively to ensure payments align with real admissions. Cash as determined in the fixed fee schedule or non-cash support can facilitate high-cost interventions, as necessary.

#### Budgetary decisions

- Ensure fiscal sustainability by using an annual global budget.
- Apply global budgets and audit systems for DRGs to prevent false reporting of additional comorbidities and complications by providers to receive higher payments associated with higher DRG relative weights.
- Apply other non-financial measures for primary healthcare and OP services with proper referral mechanisms to ensure needs-based allocation of resources.
- Use monopsonist purchasing power to negotiate the lowest price with assured quality for drugs and services, expanding efficiency and service coverage.

#### General principles

- Offer free or lowest cost-sharing care to patients at points of service.
- Continuously strengthen individual and institutional capacity in health financing. Adequately invest in data, especially unit cost data, and ensure regular updates. Design corrective measures through monitoring, auditing, and complaint management systems.

### ✗ Don'ts

#### Provider payments

- Apply only one type of payment system such as fee-for-service or capitation. Alone, these methods may lead to uncontrollable health spending and an inefficient system.

#### Budgetary decisions

- Design incoherent systems such as applying a global budget with an open-ended provider payment method (like fee-for-service). This causes a full use of the budget with facilities unable to provide care to all patients. The fixed fee schedule system is preferable to the normal fee-for-service if it needs to be used.

#### General principles

- Create incoherent policies and practices on price-setting, purchasing and regulation across many schemes.
- Underestimate need for strong regulatory and auditing systems.
- Be discouraged by incomplete data; it is not essential for moving towards UHC.



Attribution-Noncommercial  
-No Derivative 4.0 International  
(CC BY-NC-ND 4.0)

Contact: [hiu@hitap.net](mailto:hiu@hitap.net)

This policy brief can be downloaded from [www.globalhitap.net](http://www.globalhitap.net)

