

## Local level responses to budget allocation under the Universal Health Care Coverage policy in Thailand

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## GLOSSARY

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AE	Accident and Emergency
CSMBS	Civil Servant Medical Benefit Scheme
CUP	Contracting Unit for Primary Care
DH	District Hospital
DHB	District Health Board
DHCC	District Health Coordinating Committee
DHF	Dengue hemorrhagic fever
DHO	District Health Office
DHS	District Health Service
DRG	Diagnostic Related-Group
EMS	Emergency Medical Service
FY	Fiscal year
HC	Health Centre
IHPP	International Health Policy Program
IP	Inpatient
LIC	Low-Income Card
LG	Local Government
MD	Medical Doctor
MOPH	Ministry of Public Health
NHSO	National Health Security Office
OOP	Out of pocket
OP	Outpatient
PCMO	Provincial Chief Medical Officer
PCU	Primary Care Unit
PH	Provincial Hospital
PHO	Provincial Health Office
PHSC	Provincial Health Security Committee
PP	Disease Prevention and Health Promotion
PQ	Price-quantity
RW	Relative weight
SSS	Social Security Scheme
UC	Universal Health Care Coverage

## EXECUTIVE SUMMARY

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The Universal Health Care Coverage (UC) policy was a major reform in Thailand. It established a national health insurance scheme to which all Thai citizens are entitled to. It reduced geographical barriers and financial barriers to accessing health care and promoted equitable access through setting the expectation of a high quality primary health care unit for every 10,000 population. The major affect on Ministry of Public Health (MOPH) (state health) providers was a change in budget allocation, with budgets being linked to the number of UC beneficiaries rather than to the costs of providing care.

This study aims to explain how the health care providers and health managers at local level responded to national changes in the budget allocation of the UC Scheme; to determine the main factors that shaped these actors' responses; and, to explore the extent to which equity concerns were taken into account in decision making on the budget arrangement at local level.

The study found that the implementation of the UC resource allocation tended to involve a bottom-up approach. Decision-making powers were delegated to Provincial Health Boards and Boards of Contracting Units for Primary Care (CUP). The results of the decisions depended on how power was distributed among members of these Boards (networks) and their relationships with each other. The responses of the local actors depended on the pressures they faced, with levels of available health resources the main cause of difficulty in implementing the UC policy.

Where the experience and knowledge of the central administration could not properly guide the implementation at local level, the local implementers needed more time to learn how to execute the policy by trial and error.

The UC payment system could somehow push the providers to change their organizational behaviors to improve efficiency in service delivery and, at the same time, to develop primary care units.

The implications for implementation drawn from this study are as follows:

1. The provincial authority is well positioned to manage the smooth implementation of the budget allocation reforms; therefore, for its behavior to be trusted by the provider network, it should promote consensus in decision-making and demonstrate good progress in implementation.
2. In resource reallocation, a budget increase should not exceed the providers' capacity to absorb new funds. By contrast, a budget decrease should not result in too great a gap between current expenditure levels and the budget level. Phasing of budget changes is recommended.
3. CUP Boards require capacity strengthening to respond to the new budgetary system, especially in supervising health centers in planning for disease prevention and health promotion services; and health centers require capacity strengthening to absorb increased budgets from the new system of budget allocation.

## 1. INTRODUCTION

The literature on health sector reforms in developing countries has illustrated limited achievement in actioning policies, owing to several obstacles in the policy development and implementation stages. In many instances, integrating new strategies, including financing arrangements, into existing health service delivery results in unsatisfactory outcomes or faces opposition from peripheral health officials and professionals (Atkinson, 1997; Carrin, 2002; Penn-Kenaka et al., 2004). Resource shortages, overburdening of service provision, insufficient institutional capacity, ambiguous policy prescription from central departments, inadequate preparation, poor communication and a lack of consultation among government agencies, individual workers, and consumers have been identified as implementation deficits.

To deal with these difficulties, street-level health workers develop different coping mechanisms, some of which undermine service quality as well as hindering access to treatment, especially amongst low-income people (Kajula et al., 2004; Collins, 2003), which, in turn, can stir up a debate on the health equity issue. In addition to these obstacles, equity-promoting policies often challenge the traditions, norms and hierarchies shaping health professionals' practice in the health systems, which may encourage resistance from these key stakeholders (Gilson, 2005)

Examination of the attitudes, roles and positions of the front-line service providers in response to the introduction of equity-promoting policies within a particular context, such as in the Thai setting, will, thus, provide understanding on how to minimize the gaps between policy objectives and implementation practice. Although lessons drawn from this study cannot directly be compared with experience of different issues in other countries, the Thai findings may be useful in constructing a common conceptual framework for better insight into the challenges around the introduction of policies to address equity problems in the health sector.

This study aims to explain how the health care providers and health managers at local level responded to the national changes in the budget allocation of the UC Scheme, to determine the main factors that shaped these actors' responses, and to explore the extent to which equity concerns were taken into account in decision making on the budget arrangement at local level.

A policy analysis framework is employed as a general framework, comprising four elements; content, context, actors, process (Walt and Gilson, 2004). The case study approach was used to explain the changes in the context of each studied province. A network approach was used to explore the power and relationship amongst actors, and an in-depth analysis of the local actors' responses has investigated whether street level bureaucracy theory can explain this case and how the context contributed to the responses.

This report provides background to the policy changes in section 1.1, followed, in section 2, by a discussion of methodologies used, in section 3 the results, and in section 4, the implications of implementation.

### 1.1. Policy changes and possible impacts to health care providers

#### *1.1.1 The establishment of the universal health care coverage policy in Thailand*

One of the major reforms initiated recently in Thailand's health system was the instigation of the Universal Coverage (UC) policy. The UC policy was considered a health sector reform in at least two aspects. First, it established a national health insurance scheme to which all Thai citizens are eligible by entitlement. This reduced geographical barriers to health care access and promoted equitable access to health care through setting an expectation of a high quality primary care unit for every

10,000 population. Second, it reformed financing mechanisms for healthcare to promote equity in health financing. This reduced financial barriers by using government general tax revenue to fund the scheme and so, lowering households' regressive out-of-pocket payments on health expenditure.

In order to promote equity of access to healthcare, the policy restructured the Ministry of Public Health by establishing an autonomous institute, the National Health Security Office, to manage the UC budget and to contract providers for healthcare services for the UC beneficiaries. The budget allocation for health care for MOPH hospitals changed from a supply-side based allocation to a demand-side based allocation with per-capita budgeting. In every province, networks of health organizations operating at provincial level were established as Provincial Health Boards, and were responsible for making decisions on resource allocation at the provincial level. Similarly, networks of providers, Contracting Units for Primary Care (CUPs), were established as fund holders for health services for the UC beneficiaries. The Board of a CUP was composed of representatives from providers who joined together as a CUP and usually included a hospital and all health centers in the same district. The CUP's Board had authority to make decisions to allocate resources between providers of health services.

Major milestones of the UC development are summarized in chronological order, as follows.

JANUARY 2001: Thai Rak Thai political party won the national general election

- Proposition on a universal health insurance with the slogan "30 Baht treatment of all diseases".

MARCH 2001: National workshop on an implementation of the UC principles, which included:

- Universal access to quality health care.
- Merging public health insurances into a single scheme.
- A single benefit package, using the Primary Care Unit (PCU) as the gatekeeper.
- Close-end provider payment through provincial authorities.

APRIL 2001: Phase I UC pilot in the 6 provinces in which the 1998 Health Care Reform Project had been implemented.

- Extension of the low-income card (LIC) scheme to the uninsured population.
- Development of new budget decision network at provincial and district level. Provincial Health Boards were established and allowed to choose the provider payment methods and CUP Boards were established to make decisions on resource allocation among providers under the CUPs.
- On top non-salary per-capita budget was allocated to the six provinces.

JUNE 2001: Phase II UC extension

- Extension to 15 provinces with private health sector collaboration.
- Full figure of 1,202 baht per capita was used for allocating the budget to private hospitals.

OCTOBER 2001 (beginning fiscal (FY) year 2002): Nationwide UC implementation

- Extension to all 76 provinces (except inner Bangkok).
- Provinces received the salary-included budget of 1,202 Baht per capita.
- Provincial Health Boards had choices of provider payment between IP-exclusive (in-patient care budget is excluded from the capitation fee) vs. inclusive capitation payments.
- Provincial Health Boards had choices of salary deduction i.e. whether to deduct the salary from the UC budget at the provincial level or at the CUP level.

JANUARY-APRIL 2002: First UC achievement

- Expansions of implementation to cover inner Bangkok.

OCTOBER 2002 (beginning FY 2003): The second year of UC

- IP-Exclusive capitation for all (IP paid by DRG system, separately from OP capitation).
- Salary deduction at the national level only.

NOVEMBER 2002: National Health Security Act enacted (Parliamentary process since Nov 2001)

- Establishment of the National Health Security Office (NHSO) as the UC national manager.

### *1.1.2 Financing system of the UC and budget allocation from the national to provincial level*

The UC policy changed budgeting both upstream and downstream. Per capita budgeting was used instead of the historical incremental budgeting, and the budget flowed to provinces as a capitation payment according to the number of UC beneficiaries in the provinces. Decision-making on resource allocation in the provinces was decentralized to the Provincial Health Board, and the CUP Board was authorized to allocate the money among the providers and services. This section provides the background and describes the changes of execution at the national level.

Before the UC initiation, poor people in Thailand had to spend a significant portion of their incomes and consumption when they needed care for illnesses (Pannarunothai et al., 1997). For household economies, UC has alleviated the catastrophic and poverty impacts of out-of-pocket (OOP) health payments (Limwattananon et al., 2005; Limwattananon et al., 2007). In addition, it has demonstrated the pro-poor nature of health care provision and public subsidy to the UC recipients (Prakongsai et al., 2007). The pro-poor financing and services of UC are evident at the district health service (DHS) level, whereby health centers (HC) and district hospitals (DH) play a dominant role in service provision through the PCU.

A recent survey of provincial health officers revealed their perceptions of a major improvement toward the equity goal in health system after the implementation of UC, with respect to the issues of health service utilization and OOP payment by households (Tangcharoensathien et al., 2006). Inequities due to economic and urban-rural disparity were, however, perceived as issues of high priority, but of low feasibility to be resolved.

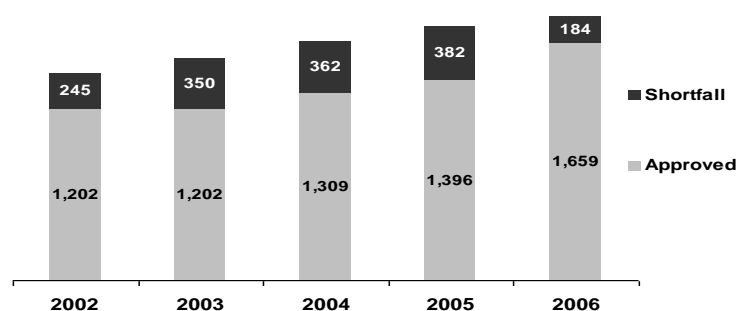
For health care providers, the UC policy introduced a marked change in the reimbursement mechanism from one based on past costs to one based on an equal per capita allocation. The UC national program managers translated the concept and implemented the equal per-capita budget, originally expected to be managed by primary care providers. A new form of network, the CUP, was established to manage the fund for health care services for its registered population. CUPs were normally led by District Hospitals at the District Health Service (DHS) level (located outside the provincial city) or by Provincial Hospitals (PH) located inside the provincial city. In 2002, the policy successfully allocated budget to each CUP on an equal per capita basis; i.e. the budget was proportional to the total number of UC population registered in the CUP-designated catchment's area. However, the equal per capita allocation system did not last long because of the budget deficits in several hospitals in 2002 and 2003. The MOPH realised the difficulties and took action both to exclude the salary budget from the capitation and to manage it the national level in mid 2003. This was retrospectively enacted for the whole fiscal year budget of 2003.

There have been substantial interactions among key policy makers and stakeholders over time in relation to the UC financial arrangements and disbursement practices. The emergence of the NHSO, which under the National Health Security Act has acted as the national manager and purchaser of the UC scheme since 2003, was perceived by MOPH staff at national and provincial level as a major threat, due to the downsizing of the Ministry of Public Health which had previously been the key health budget holder.



Once the annual UC expense is estimated by the NHSO, the government UC budget has to go through a negotiation process with the Bureau of Budget in the Ministry of Finance. Since the policy's inception in 2002, the capitation rate approved at the national level has never met the demand (Figure 1). Even after adjustment for reduced health care utilization due to scheme non-compliance, the estimated budget shortfalls for the UC population were, in total, still as much as 8,241 million Baht in 2003 and 4,292 million Baht in 2005 (IHPP, 2005). These financial constraints were consequently passed to the provincial level. As a result, health facilities at the local level unavoidably had to accommodate policy uncertainties and to shoulder the financial burdens.

**Figure 1:** Approved capitation rates (in Baht) for UC and shortfalls, 2002-2006



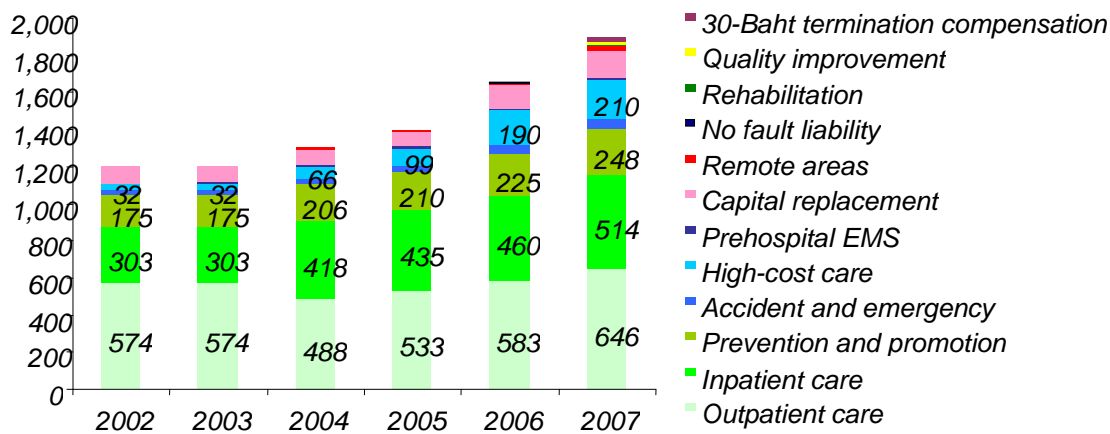
At the national level, calculation of the UC budget is generally based on the price-quantity (PQ) approach. This takes into account both propensity and intensity of the health service use per capita, and health care cost per unit of use. The overall capitation rate is partitioned into various components related to patient services and non-service components: the latter includes items such as capital replacement, adjustment for remote areas, and no-fault liability; the budget for patient services covers IP and OP care, disease prevention and health promotion (PP) at the personal and community levels, and other services defined by their unique PQ natures, such as accident and emergency (AE), pre-hospital emergency medical service (EMS), and high cost care. More than three quarters of the total capitation amount belongs to the curative OP and IP services and the PP programs (Table 1 and Figure 2).

**Table 1:** The allocation of UC budget at the national level, divided by type of services; OP, IP, and PP care, and other components, Year 2002-07

	2002	2003	2004	2005	2006	2007
Combined OP-IP-PP	88%	88%	85%	84%	77%	74%
- OP fraction	55%	55%	44%	45%	46%	46%
- IP fraction	29%	29%	38%	37%	36%	37%
- PP fraction	17%	17%	19%	18%	18%	18%
Other components	12%	12%	15%	16%	23%	26%

Although the total UC budget was increased annually, the portion of the UC budget allocated to provinces, which consisted of the OP-IP-PP portion, was not proportionally increased. Indeed, this budget portion was slightly decreased from 88% in 2003, to 84% in 2005, and dramatically, to 77% in 2006. In contrast, the portion of the UC budget which was taken off at national level, especially the budget for high cost care and for capital replacement, was much increased with, for example, the high cost care budgets increasing from the year 2003, twofold, threefold and sixfold to 2004, 2005, and 2006 respectively (Figure 2).

**Figure 2:** Components of UC capitation budget (in Baht per capita), 2002-2005

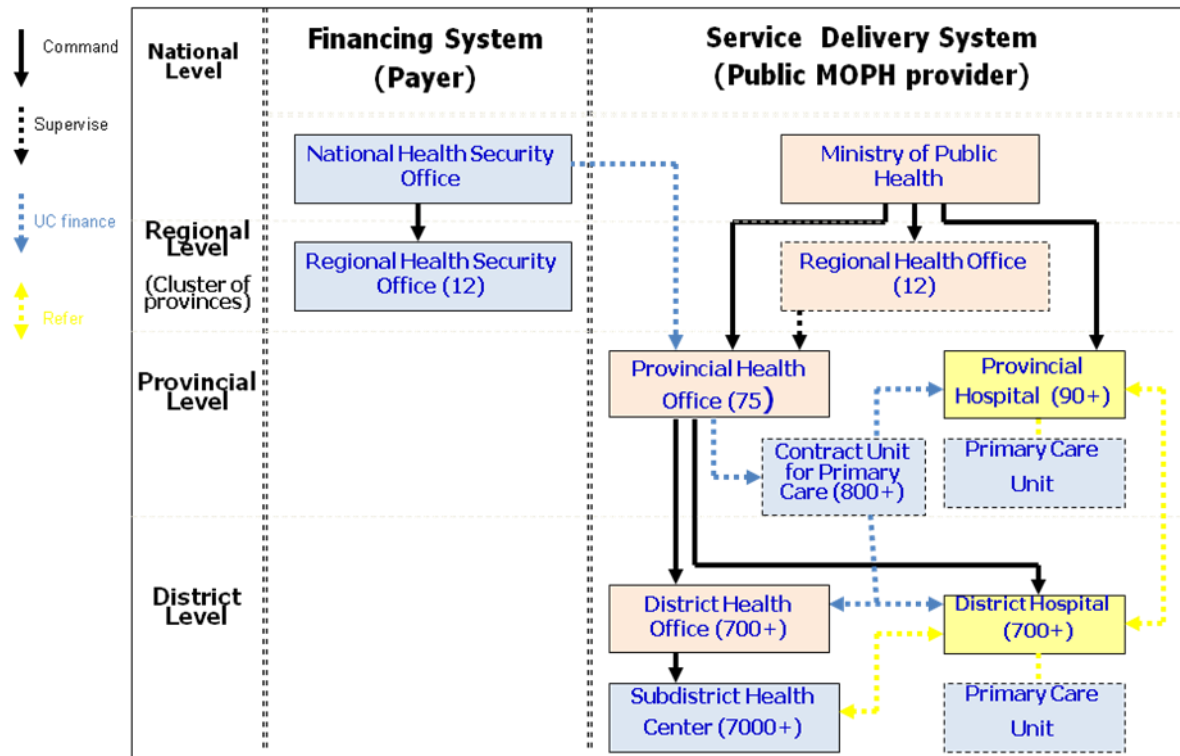


In addition, UC funding for IP care has been increasing at the expense of OP care, although the PP component has been relatively stable over time. The IP fraction increased from 29% in 2002 to 37% in 2007 whereas the OP fractions decreased from 55% in 2002 to 46% in 2007 (Table 1). This trend probably reflected a national level response to local level pressures, especially from the relatively large hospitals within provinces which consistently demand an increased budget for IP services, especially for patients referred from other catchment areas.

The component-based feature of UC capitation set at the national level by the NHSO was transferred to the Provincial Health Office (PHO) as a guide for further budget allocation to health facilities in each CUP. At the provincial level, Provincial Chief Medical Officers (PCMO) in some PHOs may accommodate this budgeting guideline with an internal adjustment dependent upon their own agenda and the current financial situation of their health facilities.

Under the National Health Security Act 2002, allocation of the UC budget from the national level to the provincial level has been centrally managed by the MOPH during the transitional period (2002-2006). The prospective capitation payment was then transferred indirectly to the end providers at the health facility level (i.e., 7,000+ HC, 700+ DH, and 90+ PH) through the 75 PHOs' health insurance units, with a certain amount adjusted by the central MOPH. The top health managers at provincial level, namely the PCMO of PHO, disbursed the allocated budget to each CUP in their provinces and the money flowed to the health facilities according to the NHSO guidelines (Figure 3). In practice, the formula used at provincial level for budget disbursement to CUPs varied substantially, both across provinces and across time.

**Figure 3:** Purchaser-provider network of UC budget allocation, 2002-2006 (excluding Bangkok and non-MOPH facilities)



To summarise, three main issues of budget allocation at the national level should be noted.

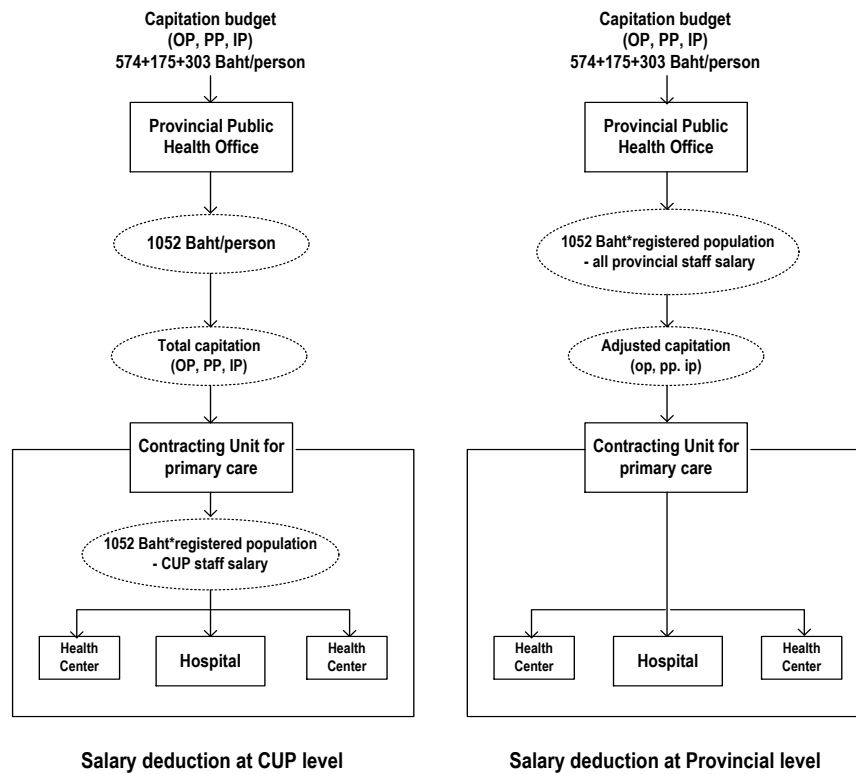
1. Contracting Units for Primary Care have been established to hold and manage the per capita budget for their beneficiaries since 2002.
2. The composite of the per capita budget was changed from the total cost (salary included) in 2002 to the cost without salary in 2003. In 2003, the equal per capita budget basis was still used with the adjustment for the proportion of received salary starting in 2004.
3. The budgets approved by the Government had a shortfall of about 17 % of the estimated expenditure in 2002. The annual budget shortfall has reduced and was about 10% in 2006.

### 1.1.3 UC budget allocation under provinces

As recipients of the capitation budget, the Provincial Health Boards were encouraged to make decisions on the salary deduction and provider payments in the provinces. This section explains how the provinces have made decisions on the budget allocation.

During the first UC year in 2002, provinces could choose to receive the UC operating budget allocated by deducting the salaries of their health personnel at either the CUP level or the provincial level (Figure 4): in other words, they could decide on which level they would like to pool their salary budget. Provinces not only had free choice on the level of salary deduction, but could also choose the method of payment for health facilities, whether by inpatient (IP)-inclusive system or by IP-exclusive system (in other words, pooling IP costs).

**Figure 4:** The UC budget amounts as received by CUP, compared between the CUP-level and the province-level salary deductions



Source: Pokpermddee (2005)

This budget allocation formula was implemented for only one year and, since the FY year 2003, the allocation of UC operating budget has switched to a single system of the national deduction of personnel salary.

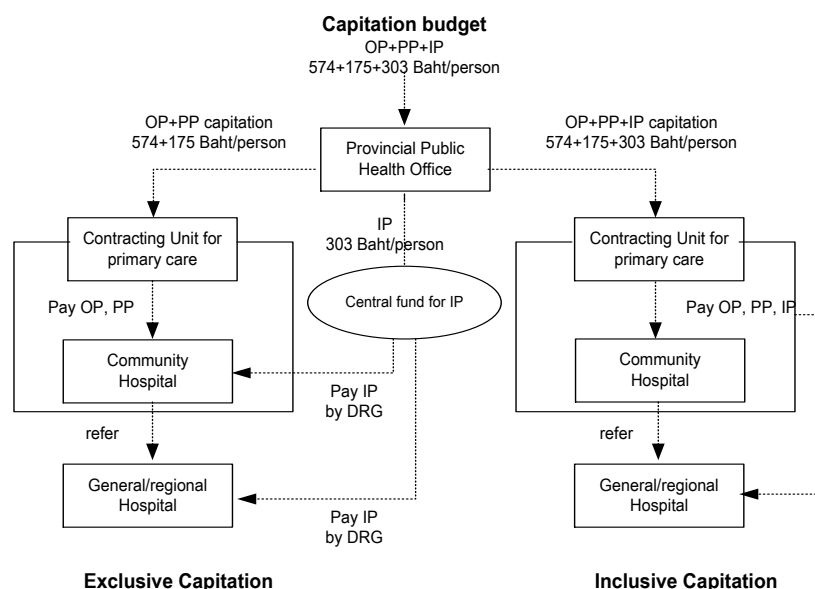
The NHSO designated the health insurance unit of the PHO to act as the area-based purchaser by expediting the allocated budget through the Provincial Health Security Committee to each CUP of all providers. By default, the Provincial Chief Medical Officer acts as the chairperson of this provincial committee, and the committee members usually include PHO staff (the health insurance unit is typically the committee secretary), director and staff of PH, directors of representative DH, heads of representative District Health Office (DHO), and a very limited number of representatives from non-health sectors, private sectors, and civil society.

In the first UC year (2002), half of the provinces relied on the IP-inclusive capitation payment basis. By this type of budget allocation, a health facility took a direct financial risk: if it later referred the UC patients to another facility outside its own CUP, it was required to pay the full cost from the UC budget received prior to the events.

In the provinces that pooled the IP budget at provincial level, hospitals were paid for IP care from the provincial pooled IP budget and were paid for OP and PP services from the IP excluded capitation. The PHO assumed the role of managing this reinsurance pool by paying each hospital in proportion to the diagnostic related group (DRG)-based relative weights (RW) incurred. With a relatively large amount of the provincial pool like this, the PCMO as the PHO leader could exercise discretionary power to manipulate or to adjust the budget disbursement plan if the provincial committee members did not object. Figure 5 illustrates flow of the UC budget allocated through the IP-exclusive capitation as compared with the inclusive system (in 2002).

Since the mid year of 2003 when health personnel salaries were deducted from the UC budget at the national level and the rest of money allocated by equal per-capita basis, all provinces pooled IP budget at the provincial level.

**Figure 5:** Comparison of IP excluded capitation and inclusive capitation payments



Source: Pokpermdée (2005)

At district level, the District Health Coordinating Committee (DHCC) acted as the focal point for managing the disbursed UC budget within a CUP. The DHCC would be led alternately by the director of the DH and the director of the DHO. The DHO is an administrative body for HC, according to the line of command (See Figure 3). Its primary responsibility is to oversee public health issues and primary care (outside the district centre) for DHS, and the role of director is assumed by senior health workers. The DH takes the primary role for secondary care services and public health issues (inside the district centre), and it is led Medical Doctors (MD).

There is a long history of conflict between DH and DHO or HC due to the different educational backgrounds and lines of command of their senior staff. The Head of the DHO is an MOPH officer who has to report to the District Chief under the Ministry of Interior according to the provincial administration system. Since a major portion of the UC capitation rate was allocated for the curative OP-IP services, the UC budget account was administered by the DH. The chair of the DHCC (so called CUP Board), usually being the Hospital Director will consult with DHO and HC on the allocation of UC budget within CUP. For example, the PP budget was set aside according to the total population in the area served by the hospital and each HC, while the hospital held the OP and IP portion and then supported health centres with drugs and medical supplies<sup>1</sup>.

To summarise, the changes of the budget amount between 2002 and 2003 according to the new criteria of allocation forced the provinces which had relied on inclusive capitation in 2002 to pool their IP budget at the provincial level in 2003. At the district level, the budget that was managed in the provinces, which relied on inclusive capitation in 2002, was reduced from the total capitation (OP, IP,

<sup>1</sup> Non-salary, non-service operation budget for public utility expenses and maintenance costs of HC was usually allocated separately and directly from the PHO and justified by the facility size not by number of the population served

and IP together) to the portions of OP and PP budgets.

## 2. RESEARCH QUESTIONS AND METHODS

### 2.1 Research questions

Disparity in the received budget per capita across provinces occurred when the ratio of health care providers to size of UC population served differed across geographical areas. The seemingly equal net-of-salary operating budgeting system de facto punished certain provinces and CUP where a large number of population were enrolled in UC but health personnel was sparse (for example, in the Northeast of Thailand). In contrast, it rewarded the provinces and CUP that contained relatively large numbers of health personnel (for example, in the Central Region).

Tables 2A and 2B present the expected impacts on the amount of UC budget allocated to provinces due to the policy change since 2003. The total and per-capita amounts of the UC budget received by the provinces (in each of the four cells: A to D), which are broken down into salary, non-salary, and both components, will depend on the varying health personnel-population mix within the provinces, and this will interact with the levels of personnel salary deduction.

**Table 2A:** Expected UC budget by province with different personnel-population mix – first UC year (CUP-level salary deduction in 2002)

Amount received (salary / non-salary / both)	Small proportion of health personnel per 10000 population	Large proportion of health personnel per 10000 population
Low UC population province	A	B
- Total UC budget	++ / ++ / ++	++++ / ++ / +++
- Per capita budget rate	++ / ++ / ++	+++ / ++ / +++
High UC population province	C	D
- Total UC budget	++ / ++++ / +++	++++ / ++++ / ++++
- Per capita budget rate	+ / ++ / +	++ / ++ / ++

**Table 2B:** Expected UC budget by provinces with different personnel-population mix – Second UC year and thereafter (national-level salary deduction in 2003 onward)

Amount received (salary / non-salary / both)	Small proportion of health personnel per 10000 population	Large proportion of health personnel per 10000 population
Low UC population province	A	B
- Total UC budget	++ / ++ / ++	++++ / ++ / +++
- Per capita budget rate	++ / ++ / ++	+++ / ++ / +++
High UC population province	C	D
- Total UC budget	++ / ++++ / +++	++++ / ++++ / ++++
- Per capita budget rate	+ / ++ / +	++ / ++ / ++

+, ++, +++, ++++ denote the relative amounts of the UC budget received.

From the above four hypothetical scenarios of the provinces with variation in the sizes of their UC population and proportion of health personnel, the UC budget amounts effectively allocated to (or

received by) the province with the small sizes of population and health personnel (Cell A) and to the province with large population and personnel (Cell D) was not much changed following the introduction of the national-level salary deduction system. Though provinces in Cell A and Cell D have got the low per-capita budget rate, the provinces in Cell D have got a large size of budget in total. Big changes fell to provinces in Cell C and Cell B. The province that had a large population but small proportion of personnel (Cell C) lost out financially, in both total amount and per capita amount of the UC budget received (by most part through the relative reduction in the salary component). The province with low population but a large number of personnel (Cell B) gained (through the relative increase in the salary amount) by the new allocation system.

The UC budget amounts were equally distributed per capita across the provinces in these four cells in the first year (2002) of UC. With a change to the national-level deduction of salary (from 2003 onwards), the UC budgets were transferred from provinces in Cells C to B, even though the non-salary budgets still equally distributed across the four cells. In effect, the total UC budget per capita under the current allocation system discriminates against provinces with a low density of the health personnel-UC population ratio.

Inequitable allocation across provinces and health facilities, and chronic shortfalls of the UC budget for the whole UC population create problematic circumstances, from which a number of research questions are raised:

- Why and how did health care providers in the worse-off provinces manage to survive over the past couple of years?
- How and, to what extent, did the provincial health managers adopt and adapt the centrally allocated budget to their local level subordinates?
- Did the budget system have an impact on personnel arrangement and service deliveries, especially for primary care at the DHS level which is believed to preferentially benefit the poor?

Variations in the information relating to past experiences and future prospects which have been given by both health care providers and health managers across the local area levels in response to such budget allocation are worth explaining. This study selected the provinces categorized in Cell C (ie those that lost out over time due to budget allocation changes) to investigate the responses of local actors in detail.

## 2.2 Research objectives

- To explain how health care providers and health managers at the CUP and PHO levels responded to the national changes in the UC budget allocation system from FY 2002 to FY 2003-5.
- To determine the main factors that shaped these actors' responses to the allocation of UC budget.
- To explore the extent to which equity concerns were taken into account in decision making on UC budget arrangements at PHO and CUP levels.
- To examine the influences of different contextual factors on the local policy responses.

## 2.3 Framework of analysis

The framework of policy analysis developed by Walt and Gilson (1994) has proved to be a useful approach for exploring policy implementation (Pitayarangsarit, 2004). It is composed of four elements - content, context, actors, and processes. The network approach is suitable to explore the power and

relationships amongst actors in this study because most of responses to the national changes were collective actions amongst stakeholders; for example, the decisions on resource allocation methods of the provincial committee were influenced by member representatives from each CUP and the PHO, and the decisions to manage the budget for services of the CUP were influenced by the providers within the CUP.

Policy network analysis is useful to define the typology of networks to provide a set of diagnostic criteria concerning the structure of networks and the pattern of interaction within them (Watt, 1995). The in-depth analysis on the individual local actors' responses has, additionally, explored whether the street level bureaucracy theory (Lipsky, 1980) can explain the cases and how the Thai context contributed to such kind of responses.

## 2.4 Methods

The case study approach is considered appropriate to address the objectives in this study. This method is employed in many areas of social research, aiming for an in-depth understanding of complex social events including policy processes. As maintained by Keen and Packwood (1999:51), 'Case studies are valuable where policy change is occurring in messy real world settings, and it is important to understand why such interventions succeed or fail.' In this sense, the information drawn from study settings, i.e., selected PHO and health facilities including HC and DH at the DHS level outside the provincial city, as well as PH inside the provincial city, will provide ample explanation of the financial arrangements in UC policy at a peripheral level.

'Case study' is usually identified as a specific form of investigation, which differs from two other approaches mainly used in social studies: experiment and survey (Hammersley and Gomm, 2000). Compared to the other two kinds of enquiry, the case study is more relevant in this research for two reasons. Firstly, the emphasis of this study is on the implementation of an ongoing public policy; thus, no intervention and experiment is introduced by the investigators. Secondly, a cross-sectional survey of the various variables potentially involved in the policy execution is possible, and able to cover a wider range of provinces and hospitals; however, such an approach is not appropriate to address the specific objectives set of this study, which are to examine the interactions between different actors and contextual factors, as well as their influence on the local budget administration. Although the transferability of lessons learned from case study research to other settings is limited, the case studies have their strengths in providing insight into compound relationships of social elements and outcome phenomena.

## 2.5 Study sites

Two provinces were selected from the provinces that chose the IP-inclusive payment system and salary deduction at the CUP level in 2002 (N=27 provinces with 238 CUP, 36.6% of total CUP) (Pokpermddee, 2005). Using sampling frame in Table 2, Kampaengpetch province was selected from the provinces categorized in Cell A and Buriram province was selected from the provinces categorized in Cell C. This developed understanding of the local level actors' actual experience on limited resources in one province and on the changes from potential gainers (due to the relatively full received budget in 2002) to potential losers from the IP-exclusive payment and nationally salary deduction (since 2003 onward).

Although both Kampaengpetch and Buriram provinces fell into the category of small ratio of health personnel to the population size (Cell C), Kampaengpetch had a relatively low number of UC population and low population density, and a relatively high bed-population ratio. These variations



resulted in differences to the UC budget directed towards the end users (e.g., effective rate of received budget per capita). In terms of facility mixtures and insurance coverage profiles, the two provinces were not unusual in Thailand.

In each province, three CUPs were selected; a CUP with a provincial hospital; a CUP with a 60-bed district hospital; and, a CUP with a 30-bed district hospital. In each CUP, key informants came from the hospital, two HCs, and the District Health Office.

Table 3 compares the health system characteristics and the UC profiles of the two study provinces. Burirum is approximately twice as large as Kampaengpetch in terms of number of health facilities and UC population. About 80% of the populations in both provinces were UC members, and the UC budget was a major source of revenues for health facilities in both provinces (30-44% from non-salary budget and 45-55% from salary budget). Revenues from two other insurance schemes (CSMBS and SSS) generated approximately 10-12%. The per capita amount of non-salary budget in Burirum was relatively lower (535 Baht) and we can assume that, due to the low bed-population ratio, the per capita amount of salary budget was also relatively lower. The amount and mix of health resource use per unit of service outputs, as reflected by costs in these two provinces, were not much different.

**Table 3:** Characteristics of health services and health insurances in the study provinces – 2005

	Kampaengpetch	Burirum
Number of provincial/district hospitals	1/10 hospitals	1/20 hospitals
Total number of beds in public hospitals	334/380 beds	590/1,056 beds
Number of UC members	575.7 thousands	1,260.1 thousands
UC members as % of total population	77.4%	81.3%
Bed-population ratio per 10,000 pops (average across provinces was at 12.4)	9.4	8.7
Doctor- population ratio per 100,000 pops (average across provinces was at 10.6)	8.9	8.9
UC budget		
Total UC budget allocated, net of salary	313.1 million Baht	673.7 million Baht
UC budget allocated per UC member	547 Baht	535 Baht
UC share of net hospital revenue	30.3%	43.8%
CSMBS share of net hospital revenue	8.7%	11.4%
SS share of net hospital revenue	1.3%	1.0%
Unit costs (Baht)		
Per OP visit -Provincial hospital	368 Baht	407 Baht
Per OP visit -District hospital	267 Baht	271 Baht
Per IP admission -Provincial hospital	6,631 Baht	6,769 Baht
Per IP admission -District hospital	3,739 Baht	3,767 Baht
Human resource share of operating cost	54.9%	53.1%

## 2.6 Data collection methods

### *In-depth interviews*

The investigators held face-to-face conversations with each key informant at the study site, including: the PCMO and health insurance staff of the PHO at the provincial level; directors and health care personnel of the PH and DH; and, heads of the DHO or DHO officers, and health workers in the HC at the DHS level. The interviewees were asked a number of open-ended questions, set as an interview template, to seek explanations for the issues specified in the study's objectives. A relevant array of

questions was introduced for particular groups of key informants, justified by their potential roles in the policy implementation (See Appendix for the interview guides).

### *Documentary analysis*

The investigators explored a wide range of documents in Thai and English, and selected those considered relevant to this study. To understand the policy context and its interaction with key actors and patterns of budget arrangement, the investigators reviewed the literature on Thailand's health sector and the introduction of the UC initiative, as well as literature around health system reforms in developing countries, and the responses of sub-national civil servants and health workers to national policy prescriptions when resources are scarce.

In this study, the quantitative data including number of UC beneficiaries, amount of UC budget received and health care utilization profiles at the hospital levels are presented to illustrate the context of study settings and the policy consequences. In terms of qualitative data, tape-recorded data were transcribed into text before analysis. In analysis of interview transcripts and documents, a content analysis approach, as suggested by May (1997), was employed. The investigators read, interpreted and conceptualized the text, and concomitantly examined the reliability and accuracy of the information. From each information piece, key themes of the actor-context interactions and their implications for the policy implementation process in relation to particular units of study were explored and highlighted. Then, relevant information depicting the roles of particular actors, equity concerns, and the contextual elements which shaped the decisions and practices of health officials, hospital administrators and professionals to manage UC finance, was selected and grouped into four major categories according to the study's specific objectives. Subcategories were created to capture detailed data and to ensure comprehensive information. Finally, the complete information in each particular category was reviewed and interpreted in relation to: how the key actors had a role in the UC policy decisions at peripheral level; how the features of responses to the national policy of local policy participants were explained; and the effects of organizational environment and policy context on the policy implementation, as presented by the data.

## 3. STUDY RESULTS

### 3.1 Investigating local level responses to changes in the UC budget allocation process

The UC policy promoted equitable healthcare access by restructuring the Ministry of Public Health and changing the budget allocations from a supply-side based allocation to a demand-side based allocation with per-capita budgeting. A network of health organizations at provincial level was established as the Provincial Health Board, responsible for making decisions on resource allocation at the provincial level, and networks of providers,(Contracting Units for Primary Care (CUPs)), were established to make decisions on the budget use for health services for the UC beneficiaries.

Here, the main focus is on how the Provincial Health Boards and the CUP Boards made decisions to respond to the changes of the UC budget allocation policy. Interactions among actors to influence the collective decisions on resource allocation were explored through a network approach, including consideration of why the members of the network of decision-makers were changed in response to time and issue. In this study, the type of network to be considered is the policy community (Watt 1995), whose members are involved in decision-making on resource allocation. The type of issues can be categorized by the fraction of resources, namely: budget for salary; budget for IP; budget for OP; budget for PP; and, human resources. Finally, the investigation explored the local actors' responses to the service delivery and how the responses affected the equity of health access while

the local actors dealt with their organizations' survival.

Both Kampaengpetch and Burirum Provinces belonged to the group of provinces that gained budget in 2002 with the induction of UC; but then received reduced budgets in 2003, after the MOPH deducted the salary budget from the per-capita budget at national level. As the population size of Burirum Province is about twice that of Kampaengpetch, there was, however, less constraint of budget in Burirum in implementing the UC budget allocation. This difference, as well as others between the two provinces, generated different decisions and responses by the local actors.

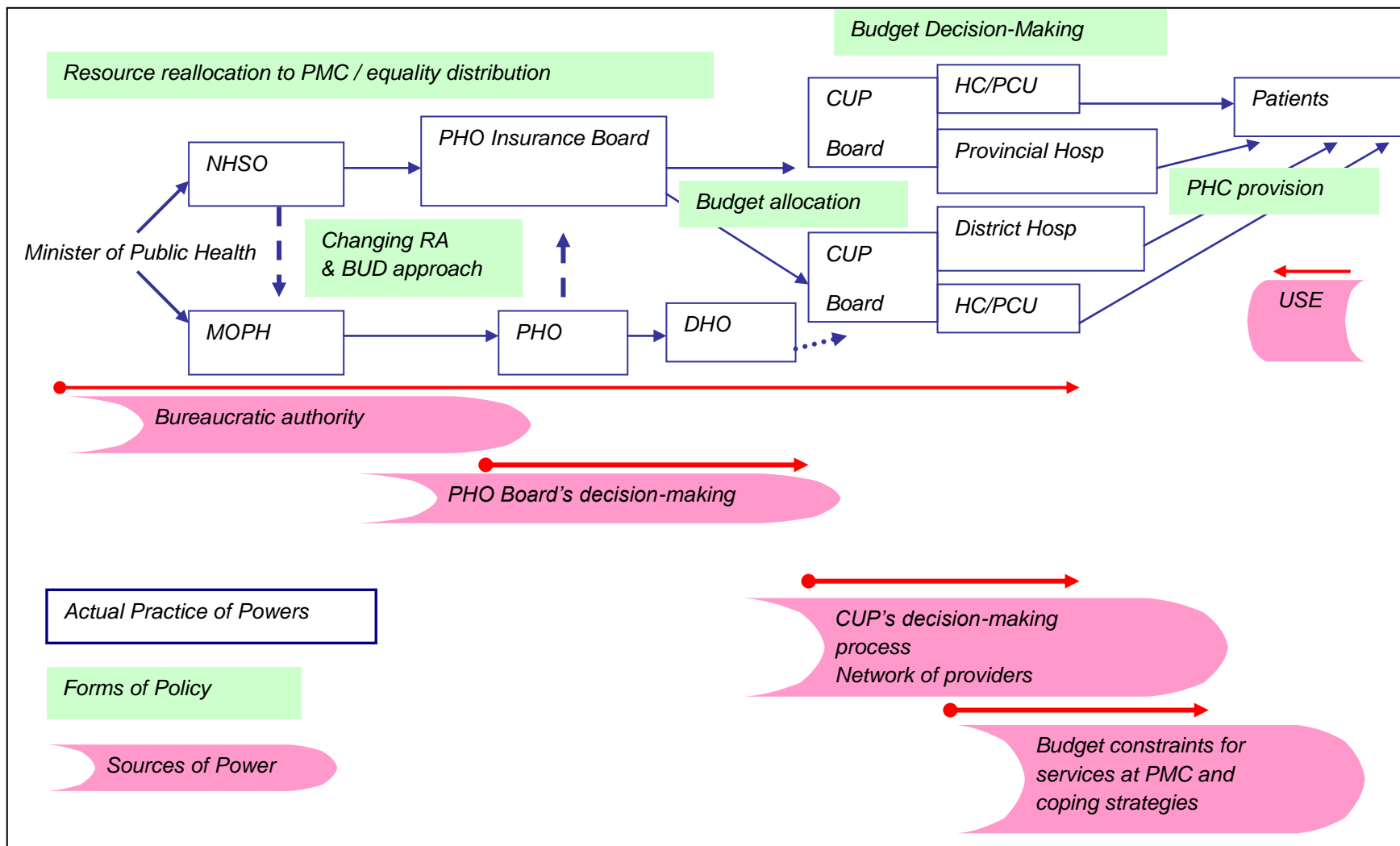
### *3.1.1 How the PHO Boards and the CUP Boards made decisions?*

UC decentralization policy has generated a new form of network, the Contracting Unit for Primary Care (CUP), established to manage the fund for health care services for its registered population. The members of a provider network were responsible for providing services to the UC populations assigned to the CUP with a capitation budget, and shared authority in resource allocation policy within the CUP. The Boards of both Kampaengpetch and Burirum Provinces adopted the IP-inclusive payment system and salary deduction at CUP level in 2002. This was an unusual period in that district hospitals, as CUP's fund holder, held large finances and purchased comprehensive services from PHs, and referral relationships were formed as each CUP linked with other hospitals. It resulted in some good interventions to promote health; however, some CUPs demonstrated inefficient management as a result of the inclusive capitation payment that will be discussed in section 3.1.2 and 3.1.3.

Figure 6 explains the relationships between the actual practice of power, forms of policies and sources of powers in relation to the UC resource allocation. The national UC policy was expected to reallocate the budget directly to primary care services and distribute the health resources to all citizens equally. The NHSO had the power, by law, to contract directly with the healthcare providers; however, the Permanent Secretary Office of the MOPH still had bureaucratic authority over the PHOs, DHOs and the MOPH providers. The change of resource allocation and budget approach then allowed the Provincial Health Boards to exercise power in the decision-making process on provider payment. The Provincial Medical Chief Officer, who was the chair of the PHO Board, was in a position that could influence the decision.

At the CUP level, power was transferred to the CUP Board composed of a group of providers. The CUP had authority to allocate the money between providers in the CUP and make decisions on the type of service provided, following the guidelines of the NHSO. Though the policy was expected to create primary care units (PCUs) with a high standard of quality for every 10,000 populations, the decision to increase the number of PCUs still depended on the CUPs decision. Patients were able to demand the services to meet their expectation via the complaints system arranged under the UC policy execution.

**Figure 6:** Relationships of actual practice of power, forms of policies and sources of power regarding the UC resource allocation



After the national guideline changed in 2003 to allocate the salary cost at national level and pool the IP budget at provincial level, the fractions of the UC budget were decided by different levels of resource networks (see table 4). The members of the decision-making network on IP budget were expanded from CUP level to provincial level on the basis that a bigger pooled budget could manage the financial risk, as several small hospitals lost money because of the high burden of referred patient costs. The change of salary deduction also affected the allocation of other budget fractions. The PHO in Burirum took the opportunity to additionally hold the budget of OP and PP to be reallocated at provincial level. In contrast, Kampaengpetch Province revised the allocation method for the PP fraction, but not for the OP fraction as Kampaengpetch's PHO did not want to adjust the OP fraction for CUPs, despite some district hospitals suggesting a revision. This could have been because the relationship between the Provincial Chief Medical Officer and some DHs' directors was not good, as shown by the phenomenon that the DHs were eager to be independent from the PHO to manage their own resources in 2002.

**Table 4:** Transformations of network boundaries by issue in the UC implementation during 2002-2003 in Kampaengpetch and Burirum Provinces by using resource exchange and decision-making involvement as the means of network connection

Issues of resource allocation	Pre UC	Year 2002	Year 2003	
			Kampaeng petch	Burirum
	Both provinces	Both provinces	Kampaeng petch	Burirum
Budget for salary	National level	CUP level	National level	National level
Budget for operating cost (IP)	National level	CUP level	Provincial level	Provincial level
Budget for operating cost (OP)	National level	CUP level	CUP level	Provincial level
Budget for operating cost (PP)	National level	CUP level	Provincial level	Provincial level
Human resource mobilization	National level	National Level	National level	National level

Note: The level of network boundary assumes the budget and authority in decision-making on resource allocation is pooled at that level.

Why do some providers at district level prefer to have the decision-making authority on resource allocation and utilization at CUP level and why was it not sustained as the initial design? Did the adjusted models promote equity in health care? Messages from key informants in both provinces help explain the reasons for the network transformations, as discussed below.

*1. Why do some providers at district level prefer to have the decision-making authority on resource allocation and utilization at CUP level?*

The decision-making regarding the UC budget allocation at provincial level was based on the Provincial Health Security Committee (PHSC), the so called Provincial Health Board, which was composed of the PCMO, the Director of the PH and representatives from PH, DH and DHO. The PHSC was responsible for developing appropriate criteria and guidelines for the UC budget allocation within the province. In both provinces, and similarly to all provinces in Thailand, the PCMOs, as the

chairs of the PHSCs, were the primary decision-makers due to their position as the top civil servants in the MOPH bureaucratic hierarchy in the provinces. At the CUP level, the budget allocation was based on the DHCC (CUP Board), which was composed of members from DH and a group of 5-10 HC plus one DHO. The Director of the DH usually acted as the chair and was the primary decision-maker because the hospital has a bigger share of health care expenditure than the health centers in same district (see Table 5). Therefore, the power delegated from the PHO to CUPs was in favor of DHs.

Table 5 summarizes the potential powers in the resource allocation at each network level for different budget allocation methods, according to the bureaucratic hierarchy. If the decision was in the hands of the PHO, the PCMO was likely to mobilize the resource crossover to the CUP provider networks and, sometimes, the PHO mobilized the budget for its use without sound reason.

**Table 5:** Powers and influences in decisions on resource allocation for health care in 2002-2003 for both provinces

Network of policy decision on resource allocation	NHSO	MOPH bureaucrats	PHO	Provincial Hosp. (PH)	District Hosp. (DH)	DHO	Health Center	Local Admin. Office
National level	++	++	+	+				
Provincial level			++	+	+	+	+	
CUP level				++	++	+	+	+

Note: “+ +” denotes the core actor and “+” denotes the members who have less influence over decision-making at that level.

In Kampaengpetch Province, the decision to adopt the IP-inclusive capitation and salary deduction at CUP level was influenced by three senior community hospital directors with the support from the PH director in meetings of the PHSC because they had previously suffered from the centralized drug procurement of the PCMO. Although there was resistance from the PCMO as the PHO could lose its power, the PCMO could not influence the decision because the allocation system had been predetermined with a set of alternatives by the MOPH (as judged by a key informant). After the national guidelines changed, the PHO pooled not only the IP budget but also the PP budget. The PP budget was perceived as surplus by the PHO; therefore, the PHO mobilized the PP budget for other public health programs in line with the provincial priorities.

“Before UC was introduced in this province, the PCMO had absolute power to delegate the authority for drug procurement. A new PCMO (at that time) recentralized the authority for drug procurement under the budget of the Health Welfare Scheme. However, we [Directors of District Hospitals] didn’t agree with this. Following a couple debates without a consensus, the PCMO launched an official command to centralize the drug procurement. Fortunately, the authority for disbursement of the budget for medical service belonged to providers, not to the administrative unit which was the PHO, according to the national rule (for Health Welfare Scheme) ... When this province implemented the UC policy, I found it was an opportunity to decentralize the health authority to CUPs”. (Interview: Director of Klongklung DH, Kampaengpetch Hospital)

“The PHO tried very hard to mobilize resources on behalf of the providers in order to maintain its power.... In the second year, we had suggested revising the allocation method for OP and PP budget since the allocation methods of IP budget and salary budget had been changed. The PCMO adjusted all the budget payment methods except the OP budget fraction”.

(Interview: Director of Klongklung DH)

The management of the PP budget in 2003 in Kampaengpetch Province was perceived by some directors of DHs as following the instructions from the national policy.

“It was the MOPH policy that suggested to separate the PP budget account for health centers, [despite the PP budget having been pooled in the CUP’s budget account in the first year]” said the Director of Pran-kratai DH, Kampaengpetch Hospital.

In Burirum, the salary deduction at CUP was used in 2002, and there were not many difficulties as Burirum gained a lot of money from the UC budget allocation in 2002. The reimbursements for referred patients to the provincial hospitals were flexible as there was not much financial constraint.

“In Burirum, we are brothers and sisters. Two big hospitals, Nang Rong and Burirum Hospitals used to clear the debts of small hospitals from patient referring costs to be zero”. (Interview: Burirum PHO staff)

It seems that the relationship and trust between PHO and hospitals were the key factors for the progress of the implementation of the UC budget reform at the provincial level.

## *2. Why was decision making at CUP level not sustained?*

The CUPs’ financial stability was undermined by poor preparation of the provider payment system and poor management by CUPs. A lack of understanding and ineffectiveness of the flat rate capitation system were noted. The national guidelines were not sensitive to the limitations of the economies of scale and the capacity of health facilities in providing comprehensive care; after that flat rate capitation was used as the payment method to CUPs. In fact, if the capitation was pooled at provincial level, the amount would have been enough to pay for the salaries and operational expenses of all the providers in the provinces. Whilst there was a guideline which suggested that the province could adjust the per capita rate, there was no detail on how to adjust it in relation to the population size of the CUPs and the fixed cost of the big hospitals; therefore, both provinces allocated equal rate of per capita budget at the beginning. Difficulties were also experienced in small hospitals and the PH.

Burirum chose salary deduction at the CUP level at the beginning and then adjusted the allocation criteria to share the salary and IP costs at provincial level in the third quarter of the 2002 fiscal year before the national guideline was changed.

“Community hospitals complained about the debts on the referred-out patient costs while Burirum Hospital complained about the high salary costs.... A group of hospital directors urged for changes in a last few months of the 2002 fiscal year. They said that it was likely that the whole system would not survive.... It was in a trial and error period; therefore, we readjusted the money at the provincial level concerning the referred patient costs and the hospital fixed costs, including salary, before sending the cash to the CUPs”. (Interview: A health insurance officer at Burirum PHO)

The guidelines for budget allocation within the CUP were also unclear. CUPs had the authority to manage the OP and PP budget for the fiscal year 2002-2003 until the middle of 2003, as there were complaints from the HC on different payments in different districts.

“In the first year, CUPs managed the PP budget allocation in different ways. There were complaints by other DHs that I allocated too much budget to HCs, while some DHs allocated only a small budget to HCs. ... Later, the PHO pulled its power back and calculated the fix costs and operating costs to be allocated to HCs. ... Then, I was involved a little in the budget plan of the HCs proposed to the PHO (Director of Banmai Chaipot DH, Burirum Province)”.

“As the payment criteria had not been set up, there had been quarrels about the PP budget allocation between hospitals and health centers in many districts. Not until the middle of second year, did the PHO announce a set of criteria”, said an insurance officer at a DH in Burirum Province.

These experiences of high prices for referred patients resulting from overcharging by PH, were shared by Kampaengpetch Province:

“All hospitals over-charged for referred cases and left us, the small hospitals, almost bankrupt. The acceptable criteria of the price schedule for referred cases were undecided at the time the UC launched.... It was worse when the PHO took the role of managing bill clearing. There was no bargaining in that process by the PHO, in contrast to what we had done if we paid by ourselves. The clearing house caused our cash-flow deficit” (Director of Pran-kratai DH, Kampaengpetch Province)

“I would suggest that the criteria of provider payment should be clear-cut and should not encourage quarrels amongst providers. The intention of the purchaser-provider split was to establish the negotiation between purchaser and provider, and it failed” (Klongklung DH).

Since MOPH organizations were familiar with bureaucratic hierarchy, a more senior ranked member of a resource-sharing network usually took more power in influencing resource allocation. When the boundary of a network shrunk to the CUP level, the system seemed to empower the CUP’s leader to use the health care budget on behalf of its registered population, as intended by UC; but this was not to last long beyond 2002.

When the budget management at the CUP level faced an unbalance, in either over or under allocation of the PP budget to HC, the PHO came to influence the management at the CUP level or pulled the budget to be reallocated at the provincial level. This was possible because the PCMO acted as the chair of the Provincial Health Board and the Board had power to change the provider payment methods under the provincial level. Additionally, the PHO had authority in the supervision of the HC, hospitals, and DHO.

In Kampaengpetch, the PP budget allocated to HC in the first year of UC implementation (FY 2002) was not fully utilized for solving the area-based health problems because of the limited capacity to absorb a rapid increase in the PP budget. Instead it was used for the improvement of facility’s infrastructure and landscape in some hospitals and HCs. Therefore, the new PCMO (2003) decided to use this budget to encourage and monitor the performance of HCs directly by the PHO, and to support the DHs that faced financial insecurity<sup>2</sup>. HCs had to compete with those of other districts to bid for the budget request for PP activities from the PHO.

“In the first year, CUP reviewed the PP proposals from HCs. However, the PP activities under performed and the moneys were kept in the HC account. Some other districts had

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<sup>2</sup> PCMO was responsible to manage the smooth transition of UC implementation at provincial level because most of the UC providers were under the MOPH and all of the MOPH budgets for healthcare were replaced by the UC budget. Moreover, the NHSO had designated the PHO to be the purchasing authority of the UC scheme at the provincial level.



invested in refurbishment of HCs. (Interview: A hospital director in Kampaengpetch Province)

In sum, the design of the budget payment which was intended to pay the per capita payment directly to the CUP did not fit with the existing contexts in these two provinces. Where the experience and knowledge of the central administration could not properly guide the implementation at local level, the local implementers needed more time to learn how to execute the policy from their trial and error.

### 3.1.2 Results of the PHO Board's decision-making

After the national guidelines changed in 2003 to allocate the salary cost at national level and pool the IP budget at provincial level, PHOs in the two provinces, through consultation with the PHO Boards, decided upon three main approaches. Firstly, adjusting the per capita budget by paying the provider a fixed cost plus an operating cost calculated by performance of the facilities. Here, Kampaengpetch adjusted the budget mostly by the salary and IP expenses, and distributed nearly equal per capita (OP) budget to CUPs, while the Burirum adjusted the budget by size of the population (fixed cost) and the loads of performance. Secondly, using the budget for PP for the expenses of hospitals to maintain financial security and flexibility of the whole UC system; and, thirdly, mobilizing moneys to subsidize the operation costs of the DHO and PHO, for example, 0.45% of the UC budget of Burirum was mobilized for PHO's activities (see the difference of received budget between CUP and province in Table 6). After a trial and error period in the first year, the two provinces had mobilized resources for their arrangements, for example, 49 Baht per capita was used by the Burirum PHO in 2002 to subsidize the reduced budget for PHO (Table 6).

Since the end of 2002, both provinces have adjusted the budget for a smooth transition. In general, the responses occurred in two aspects. First, a portion of the nationally allocated budget has been preempted by the PHO for some expenses, such as public utility and maintenance costs for HCs, and wages for the temporary positions of the newly graduated health workers who received scholarships from the government. Hence, the per capita rate received by each CUP was lower than the provincial figures (Table 6) and, notably, the deducted fraction varied from year to year. Second, the proportions of OP-IP-PP fractions were adjusted (see Table 7). Unfortunately, the figures of the budget proportions in Burirum can not precisely presented as data on these proportions was not available due to lack of records.

**Table 6:** UC budget per capita by various levels of implementation, Kampaengpetch and Burirum 2002-2005, in Baht

	2002	2003	2004	2005
Nationally approved	1,202	1,202	1,308	1,396
Kampaengpetch Province				
Allocated to Province	na	Na	480 *	547 *
Allocated to CUP	na	Na	465 **	504 **
Burirum Province				
Allocated to Province	699	447 *	450*	494*
Allocated to CUP	650	419 **	430 **	479 **

Note: "na" denotes data not available

\* Net budget, not including salaries

\*\* Net budget, not including salaries and an amount of budget which was deducted at the PHO for HCs' maintenance costs and other non-service expenses.

**Table 7:** OP-IP-PP fractions of the UC capitation as formulated and allocated to the local level in Kampaengpetch, 2003-2005

	2003	2004	2005
NHSO formula	55-29-17%	44-38-19%	45-37-18%
PHO formula	55-29-17%	50-37-13%	47-34-18%
Actual allocated fractions to CUP	58-28-14%	49-35-17%	52-34-13%

Note: Data from Burirum was not available

Figure 7 illustrates the differences in net budget received between three CUPs of the study sites in Kampaengpetch from 2002 to 2005, presented as the total (line graph) and per capita (bar graph) amounts (in Baht) of the UC budgets. The three study sites include one PH (Kampaengpetch Hospital) and two DHs. DH1 (Khanuworalukburi Hospital) is a 60-bed hospital located in the south of Kampaenpetch and DH2 (Prankatai Hospital) is a 30-bed hospital located in the north.

**Figure 7:** Annual trends in the UC net budgets (excluding salary) allocated to CUPs in total and per capita amounts (in Baht), Kampaengpetch 2002-2005

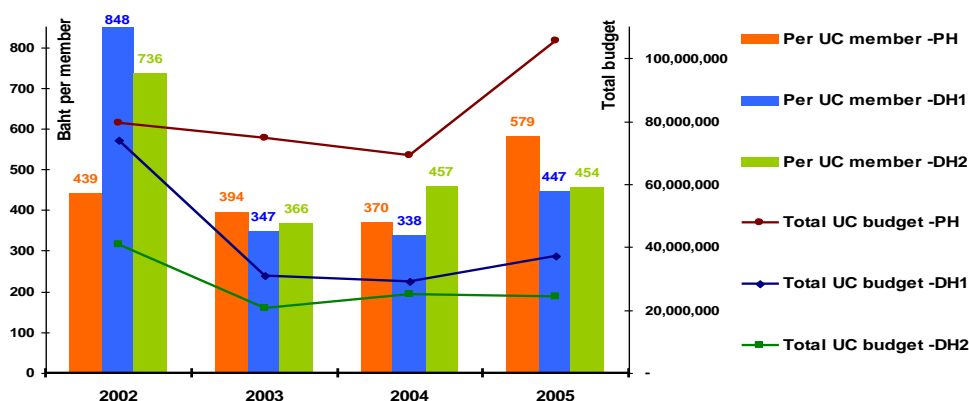
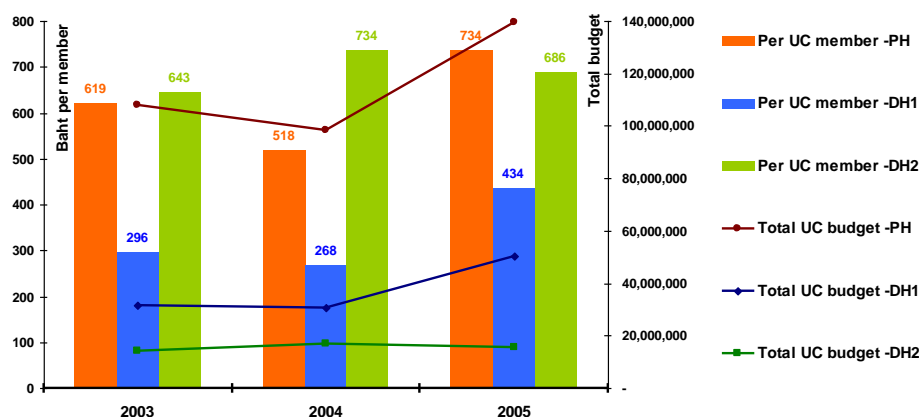


Figure 8 illustrates the differences in budget received between three CUPs of the study sites in Burirum from 2002 to 2005, presented as the total (line graph) and per capita (bar graph) amounts (in Baht) of the UC budgets. The three study sites include one PH (Burirum Hospital) and two DH. DH1 (Sa-tuk Hospital) is a 60-bed hospital and DH2 (Banmai-Chaipoj Hospital) is a 30-bed hospital. The UC population size in the DH2 CUP was approximately 22-23 thousand (which is considered lower than the economy of scale with the minimum cut-point around 30 thousand). The UC populations in PH and DH1 CUP were 8.5 and 5 times larger than that of DH2, respectively. The total UC budget received by DH2 was around 15m Baht, whereas the budget for PH was 6-9 times larger and that for DH1 was only 2-3 times larger.

**Figure 8:** Annual trends in the UC net budgets (excluding salary) allocated to CUPs in total and per capita amounts (in Baht), Burirum 2003-2005



The two provinces have different approaches to adjusting the per capita budget before allocating the budget to CUPs. From Figures 7 and 8, it can be interpreted that Kampaengpetch adjusted the budget mostly by the salary and IP expenses, and distributed nearly equal per capita (OP) budget to CUPs; Burirum, however, adjusted the budget by size of the population (fixed cost) and the loads of performance. After the first year of UC operation, three hospitals in Kampaengpetch received money from the national Contingency Fund. All hospitals in Burirum were financially secured except one DH that had a relatively small UC population but high service loads; however, in the third year of UC operation (2004), 18 hospitals in Burirum had expenses that exceeded revenues.

It is important to note that the financial figures provided by the provinces were the calculated figures for communications between the provinces and the central MOPH and CUPs. The financial statuses, in reality, were coped with by other financial sources as well.

In Burirum, the PCMO employed the equity-based management as “target is the whole province” and “sharing resources among networks”. He mobilized the health care resources and UC budget from areas where there was a large number of UC population to areas where there was a small number of UC population, so that all health facilities survived. The fixed cost approach was used to allocate the first portion of the budget in line with facilities’ requirements, and then the remaining budgets were mainly allocated on performance-based criteria. For this reason, the figures of per capita budget were high in DH2 and the PH.

“There were allocation criteria that will vary year by year and we had to consider the whole sum of money. This year we earned more UC money and thus we need to draw resources from the large CUP, otherwise the rich will become richer and richer (like Prakonechai, Nangrong and Burirum Hospitals). If we do nothing, these hospitals would become millionaires... but we knew that the poor hospitals were in need of money, so budget could be increased for the fixed costs in small district hospitals...which requested this support. Then we could make a balance within this province” (the Burirum PCMO, in 2003-2004).

In sum, there were three main approaches that the PHOs in both provinces used to mitigate the financial difficulties in the provinces.

PHOs adjusted the per capita budget. Kampaengpetch adjusted the budget mostly by the salary and IP expenses and distributed nearly equal per capita (OP) budget to CUPs, while the Burirum adjusted the budget by size of the population (fixed cost) and the loads of performance. At a result, three CUPs in Kampaengpetch requested the Contingency Fund from the central MOPH in 2002 and none

of the CUP in Burirum requested this fund in 2002. However, 18 hospitals in Burirum had a negative balance of budget in 2004.

PHOs used the budget for PP for the expenses of hospitals to maintain financial security and flexibility of the whole UC system. It was observed that HCs in Kampaengpetch increased the earned revenue by receiving 100% of the originally planned PP budget in FY 2002. Some HCs even had an increased revenue to a million Baht and faced difficulties in managing such a large budget (a 'painful windfall'). On the contrary, small hospitals faced a decreased UC budget and financial insecurity. For these reasons, health managers at the provincial level changed the budget management for community-based PP in mid 2005: 60% of the PP budget was shifted to the payment for drug costs and another 40% was earmarked for an implementation of PP activities, according to the national and provincial policy and KPI monitoring system. Such management did, however, result in a conflict of attitude between some DHOs who strongly disagreed with this decision but voiced no opinions to the PHSC.

PHOs mobilized monies to subsidize the operational costs of the DHO and PHO. At the same time, there were delegated roles to the DHO and PHO such as performance monitoring and bill clearing respectively.

### *3.1.3 Organizations' responses to the budget allocation methods and uncertainty of changes*

The new payment system pushed the providers to change their organizations' behavior and performance. The MOPH had offered a Contingency Fund for the CUPs which faced financial deficits and the MOPH expected that those which used it would be able to tolerate the difficulties experienced in the period of adaptation to new budgetary processes. However, the inclusive capitation payment used in the first year generated such speedy and large budgetary changes that it was withdrawn a year later.

Providers observed that the changes under UC were big and too rapid.

"The UC implementation was too rapid. It suited capable organizations that could afford big change. You may observe that only big hospitals were able to cope with the new payment system.... For example, health centers suffered from the load of performance report writing. The new report system required internet connection while the quality of information technology was still poor in remote areas" (Head of Community Medicine Department, Kampaengpetch Hospital).

There were several short-term mechanisms implemented in order to respond to the changes, as outlined below.

#### 1. Capacity strengthening and efficiency improvement

Upon reception of the UC budget through the inclusive capitation payments in the first year (2002), small DHs (UC population < 30,000) in Burirum redesigned their internal management systems dramatically, including health care services and capacity building of health personnel.

"We improved our own work... in the case of HCs, we focused on community outreach, community work, promoting self-care and taking care of population health...in case of the hospitals, we aimed for quality standards, promoting people participation, involving local organizations as the district committee board, joining the meeting of the district health coordinating committee" (DH, Burirum).

“Due to budget shortage, we adjusted the administrative tasks, initiated cost-saving measures, inspected stock and allowed for active participation...head office managed available resources, developed referral guidelines, built up internal consultation with second opinion checking (i.e., rechecked with other medical doctors before a referral) for having further treatment” (DH, Burirum).

This also happened in Kampaengpetch.

“The size of medicine stock was reduced and savings were made from water supply and electricity” (Director of Pran-kratai DH, Kampaengpetch Province).

However, the Director of the Lampraimarch Hospital in Burirum mentioned that the opportunity to improve quality of care locally was lost after the first year, as the salary and fixed cost were then pooled amongst provinces and CUPs.

“It seems that they (hospital directors) cannot make any improvement in the services even they wish. Because of the feeling sympathy to the difficult financial situation, they tried to share resources with each other” (Burirum PCMO).

Comparing the inclusive and exclusive capitation payments, a director of a DH stated that the inclusive payment helped systems’ capacity building but increased national expenditure; however, the exclusive payment limited the development of relatively small hospitals and made them prefer to refer patients.

2. Adjusting the roles and functions of the DHO as a UC coordinating unit for the networks of care at health center level.

In Burirum, operating plans and corresponding budget proposals for PP activities were developed annually by health workers in HCs. These proposals would then be reviewed by the DHO<sup>3</sup> before submission to the PHO for approval.

“We obtain increasing amounts of budget. Also, we could, to a certain extent, make our own decisions to devise PP programs as well as to spend the money accordingly. In the past, we only followed top-down commands” (HC, Burirum).

The new budget allocation provided an increased budget for PP care and it allowed health centers more flexibility to create health prevention and health promotion activities on a project basis. CUP Boards encouraged DHOs to be involved in the coordination of the public health programs and proposal reviews.

3. Facilities in both provinces were pressured to generate more revenue.

In 2002, Burirum Province adopted a measure whereby patients were able to use the health facility named on their UC card for free, but were expected to pay for health services at other facilities. Health personnel would explain about the UC benefits, rights to use the services and other issues such as co-payment measures, prior to providing the health services.

In one study DH, the overtime service clinics were arranged after office hours (i.e. usually in the evening after 5 PM) to provide medical care for patients who were able to pay the service charges.

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<sup>3</sup> DHOs were responsible for coordinating and supervising sub-district health centres.

The hospital earned 7-8 million Baht a year through this service delivery.

Mobilizing resources from the local government (LG) by inviting LG authorities, i.e. sub-district administrative organizations and municipalities, to sit in the DHCC notably contributed to the alleviation of financial resource shortages<sup>4</sup>. In a study district, the LG allocated their budget to promote physical exercise in the community, strengthened the health promotion capacity of community leaders, and subsidized some activities under the dengue hemorrhagic fever (DHF) control programme.

Campaigns to seek donations from surrounding community were occasionally carried out by the DHO and HCs when expensive equipment and materials such as computers and accessories were needed. This measure was effective in the study districts, especially when local temples endorsed the campaigns as Buddhist-related events – the so-called ‘Thod Pha Pa’<sup>5</sup>.

4. Some responses gave negative impacts to the health officers in these two provinces  
Health officials and health workers ended up paying personally for some operating costs of their health facilities, such as mobile phone bills. A further example was provided by an HC nurse who had to use her own motorcycle to make a home health visit to the elderly and disabled in remote villages. In the interview, the chief of this HC asserted that this nurse could not abandon her patients as essential care was needed, for example insertion of new naso-gastric tubes every two weeks. These were, however, rare cases that occurred in Burirum Province which allocated a limited fix-cost budget to health centers; in Kampaengpetch, health centers had a large amount of reserved money, resulting from the first year budget allocation with the per capita budget.

In summary, local actors found their own ways to respond in order to improve capacity and efficiency. A hospital director suggested that “the MOPH contingency program should offer managerial techniques as well, not just the money” (Director of Rumphrimas DH, Burirum Province).

### *3.1.4 How did the adjusted budget allocation models promote equity in health care?*

While health providers expanded services for equitable access, they were also faced with additional pressure from the UC policy, experiencing two significant challenges in the provision of health care following the implementation of UC. First, the demand for health care services by the population in the catchment’s areas had been increasing as access to the facilities was better due to reduced barriers. This included a substantial reduction in the barrier of households’ out-of-pocket payments. Second, the popularity of the UC policy imposed pressure on health care workers<sup>6</sup> through increased demand and higher expectations from the population served by the policy.

Empirical data on the total number of patients who visited OP departments of the study hospitals revealed such a tendency (Figure 9), despite a decreasing number of patients in the first couple of years in one DH. Increasing demand for health due to the UC policy was also reflected through hospital admissions. Figure 10 depicts the quarterly trends in the total number of IP admissions of UC

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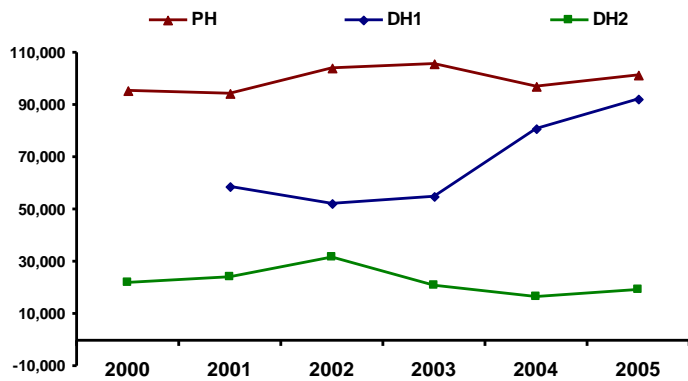
<sup>4</sup> Financial support from local government to public health projects tended to increase. Perhaps this phenomenon took place because of the saturation of budget spending on infrastructure such as roads, sewage drainage system, bridges, playgrounds and meeting halls. In addition, as health and health care were the issues of priority concern among people who were voters in local government election, it was inevitable for local politicians to put significant amounts into initiatives in this domain.

<sup>5</sup> Thod Pha Pa is a religious fund-raising campaign, undertaken by individual persons or organisations to donate money to Buddhist temples. Public institutes and civil society organisations that deliver public services, including hospitals and schools, may raise fund in this way.

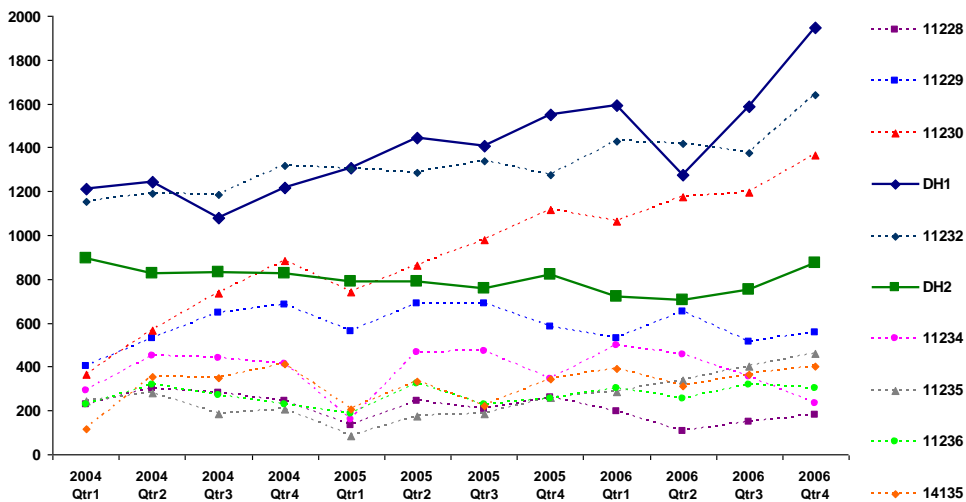
<sup>6</sup> PH and DH at the study sites faced a brain drain problem of human resources, especially for MDs and registered nurses (this was also a major concern raised by the CMO). Once an MD left the hospital, the remaining MD in the same department had to shoulder the overload services.

members in each of the 10 DHs of Kampaengpetch until 2006. The study DH1 (the 60-bed hospital) revealed increasing OP visits along with an increasing trend in the IP admissions, whereas in DH2 (the 30-bed hospital), the IP admissions are relatively stable. This probably reflects the increased IP referrals due to the IP-exclusive capitation system, whereby the IP payment has been reinsured through the central fund pooled at the provincial level.

**Figure 9:** Number of all-scheme ambulatory patients visiting hospitals, Kampaengpetch 2000-2005

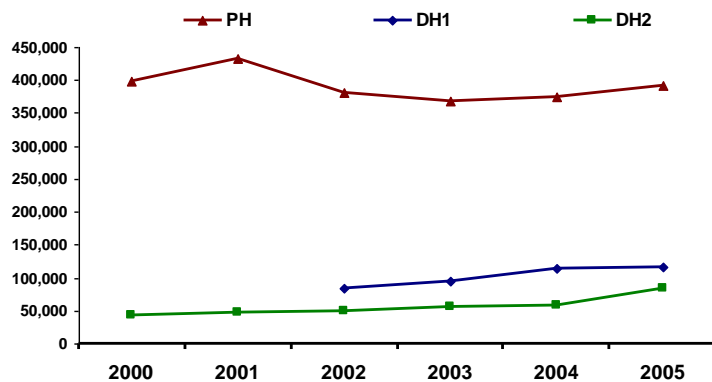


**Figure 10:** Number of IP admissions of UC members in all DHs (N=10), Kampaengpetch 2004-2006

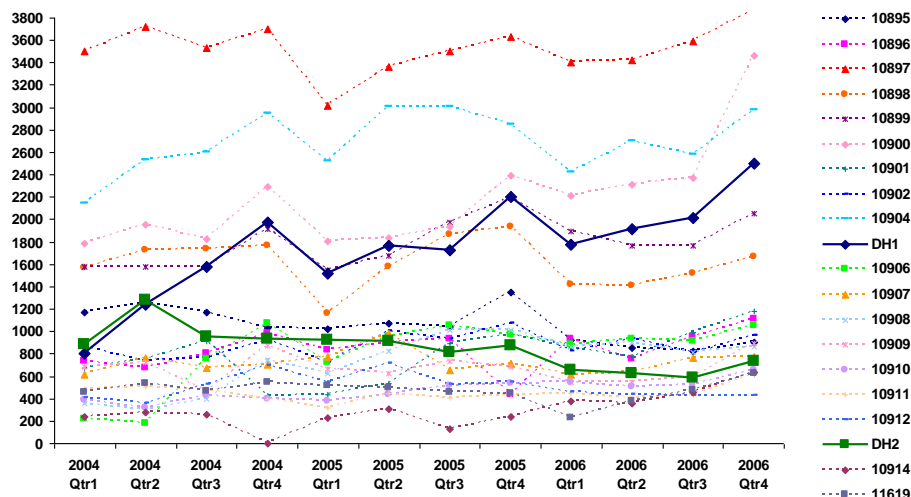


Figures 11 and 12 reveal an increasing trend in OP visits and relatively consistent IP admissions in DH2 over time. Notably, the DH2 service levels are not much lower than those in DH1 (a 60-bed hospital).

**Figure 11:** Number of OP visits of all patients by health facilities, Burirum 2000-2005



**Figure 12:** Number of IP admissions of UC members in all DHs (N=20), Burirum by quarters 2004-2006



What were the providers' responses to promoting equitable health care?

1. Arranging appointment clinics at Primary Care Units (PCUs)

"We arranged appointment clinics for chronic disease patients to receive medicine and follow up at PCUs; therefore, the number of visits at the hospital's OPD was decreased.... The encouraging factor was to reduce the workload of the medical doctors by management, not because of the concept of close-to-home services. Our main problem was the workloads of health personnel, especially key persons such as medical doctors" (Director of Pran-kratai DH).

2. Team building of CUPs in order to provide services for the whole population in the district

The directors of some district hospitals were optimistic about the UC implementation: the UC policy forced them to be concerned with work outside the hospitals, and made them develop a better understanding of the roles and functions of health centers; with regular meetings it enhanced the process of team building.



“In the past, we had no mutual interests because hospital covers only the municipality; out-of-municipality we had no interest. Under the UC policy, we had to be responsible for the whole population in the CUPs. This helped for situation analysis and movement of health...monthly reports such as 11 R .5 also supported financial arrangement within the district... better relationships between health center staff and district health officers...working with the hospitals and health centers as a network of care was also beneficial” (DH, Kampangpetch).

“Before UC, the community medicine section of the PH covered only the urban area. The UC policy made us cover the whole population in this CUP. It let us understand better the changes of health situation of the people as a whole picture of the district because we received reports from health centers as well... we visited health centers and it created good relationships between us [provincial hospital] and health centers and the District Health Officer” (Interview: Head of the community medicine section of K Provincial Hospital).

### 3. Establishment of community health service network

Local government staff in both provinces worked together with health workers to carry out public health activities such as space spraying of insecticides to reduce the number of DHF mosquitoes. Networks of public health agencies and municipalities also existed in Stuek District, where joint campaigns to promote food safety, clean markets and mental health in the elderly were introduced. A team of inspectors comprising of officials from municipality, DHs and the DHO was responsible for collecting food samples from restaurants, markets and street food vendors, and identifying food contaminants. Explicitly, there were exchanges of resources among network members; while the LG provided financial and workforce support to the programs, technical expertise was shared by the health workers.

A number of village health volunteers in the study districts were elected to be members of the Local Administrative Boards. This enhanced the relationships between the LG, DHO and HC. As said by an interviewee, “as we know each other – we used to work together, and they understand health problems in their vicinity and public health measures very well, these health volunteers were easy to access and talk to – it is easy to create and strengthen partnerships with them when they sit on local government board.”

### 4. Referring patients to adjacent or superior provider networks

A director of a small hospital stated that he had established a capacity strengthening system for specialized care in his hospital because he wanted to contain the IP budget for his hospital. However, the new salary deduction and the IP budget sharing led him to reconsider, and to refer almost all the patients with sophisticated illnesses. “My hospital saved money; however, the whole system may not be efficient”, said the director of a DH.

Other DHs also perceived the reduction of medical care budget for the hospitals in their provinces. “We subsidized the salary costs of other provinces, and then the budget left for medical care in our province was reduced” (Director of Khanu-waraluck, K Province).

### 5. Counteraction to the human resource shortage

There were a few approaches to tackling the human resource shortage although it is not possible to apply the market rules to the recruitment of the health workforce because the resource is scarce. In contrast, the market is usually influenced by a drainage of health staff. Actions were taken, however, such as, pooling a portion of the UC budget at provincial level to pay for financial incentives for

registered nurses who were working at rural districts; or using nurse practitioners to fill-in in PCUs was an approach to solving the lack of medical doctors.

Other factors that had broad effects on the decision to provide access to primary care services.

Staff shortage and brain drain influenced the support for medical care at PCU

Health administrators at provincial and CUP levels responded similarly that human resource management should have been developed to support the implementation of UC. As suggested by the health administrators, solving shortages of health personnel, namely doctors, nurses and public health officers, should be a priority.

One province, Kampaenpetch, experienced a great difficulty in that more than 50% of the medical specialists (gynecologists/obstetricians and surgeons) have resigned claiming over-work and lawsuit problems after UC implementation. The number of medical doctors was low and decreased; as a consequence, supporting medical care at PCUs outside the hospitals was in difficulty.

Perceptions of equity ideology influenced the idea of co-payment

Opinions by health administrators in all health facilities towards the UC policy were consistent concerning the concept of a health insurance system. The UC policy was not viewed as a governmental social welfare scheme but, instead, a system of financial risk pooling; hence, UC should provide health care coverage free of charge for all people. Some providers, however, argued that they agreed to provide free services to the poor but not to those who could afford the costs. In fact, the rich should have some co-payments per service encounter. In a sense, equity and equality were not the same.

The director of a PH pointed out that health equity means medical treatment that meets the same standard of practice but this does not have to mean that everyone has an equal right to have the service. Equity does not mean free for all: instead, some who can pay should pay so that they will not be a burden to the others; inappropriate free care will not be beneficial but be a burden of the country. In several cases, they could not distinguish between pre-paid financing and paying at the counter of services; therefore, providers inclined to charge the patients when they could not fulfill the UC scheme's criteria.

Perceptions of primary care concept

The response from the director of a PH reflected the unclear picture of the principle of primary care that "UC makes no systems changes, just requests to set up PCUs in the hospital, but the benefit still doubtful", whereas the DHO emphasized that the principle of UC was good, especially in relation to the development of primary care. Since hospital directors had high power in the CUPs' decision-making, their perceptions against PCU development could lead to resistance of the implementation.

#### 4. DISCUSSION AND CONCLUSION

This report provides the background of the UC policy and the budget allocation process, analyzes how the changes of budget allocation policy were implemented, and explores whether the local responses concurred with the direction of the policy. The study found that the implementation of the UC resource allocation tended to adopt a bottom-up approach. Decision-making powers were delegated to provincial health boards and CUP boards, and the results of the decisions depended on how power was distributed among members of the network and on the relationships between the members of the network. Responses of the local actors depended on the pressure they faced, with existing health resources the main cause of difficulty in implementing the UC policy.

The key factor which made the responses different between Buriram and Kampaengpetch Province was that the population size of Buriram Province generated a smaller budget constraint. More hospitals in Kampaengpetch Province suffered from a budget deficit than in Buriram Province because of the high bed-population ratio and the generosity in allocating the budget to primary care at HCs in the first year of implementation. The inclusive capitation payment in the first year in Kampaengpetch Province mobilized a lot of resources to HCs and the adjusted budget a year later still provided flexibility for HCs to use the UC budget with an additional budget from the PP project based budgeting. However, the HCs centers in Buriram Province had limited access to UC budget and received a limited fixed-cost budget for routine care; additional budgets were derived from the PP project based budgeting.

Where the experience and knowledge of the central administration could not properly guide the implementation at local level, the local implementers needed more time to learn how to execute the policy by trial and error.

The UC payment system could somehow push the providers to change their organization behavior to improve efficiency in service delivery, and at the same time, to develop PCUs.

The implications for implementation that could be drawn from this study are:

- Provincial authority is in a good position to manage smooth implementation; therefore, for its behavior to be trusted by the provider network, it should promote a consensus in decision-making and demonstrate good progress in implementation.
- In the resource reallocation, budget increase should not exceed the providers' capacity to absorb the budget. By contrast, budget decrease should not result in too large a gap between expense and budget. Phasing of budget size change is recommended.
- CUP Boards require capacity strengthening, especially in the supervision capacity for HCs in planning for PP care, to respond to the new budgetary system; HCs require capacity strengthening to absorb the budget from the new system of budget allocation.

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