# Catastrophic and poverty impacts of health payments: results from national household surveys in Thailand

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**Objective** To estimate the incidence and describe the profile of catastrophic expenditures and impoverishment due to household out-of-pocket payments, comparing the periods before and after the introduction of universal health care coverage (UC).

**Methods** Secondary data analyses of socioeconomic surveys on nationally representative households pre-UC in 2000 (n = 24747) and post-UC in 2002 (n = 34785) and 2004 (n = 34843).

**Findings** Households using inpatient care experienced catastrophic expenditures most often (31.0% in 2000, compared with 15.1% and 14.6% in 2002 and 2004, respectively). During the two post-UC periods, the incidence of catastrophic expenditures for inpatient services at private hospitals was 32.1% for 2002 and 27.8% for 2004. For those using inpatient care at district hospitals, the corresponding catastrophic expenditures figures were 6.5% and 7.3% in 2002 and 2004, respectively. The catastrophic expenditures incidence for outpatient services from private hospitals moved from 27.9% to 28.5% between 2002 and 2004. In 2000, before universal coverage was introduced, the percentages of Thai households who used private hospitals and faced catastrophic expenditures were 35.8% for inpatient care and 36.0% for outpatient care. Impoverishment increased for poor households because of payments for inpatient services by 84.0% in 2002, by 71.5% in 2004 and by 95.6% in 2000. The relative increase in out-of-pocket impoverishment was found in 98.8% to 100% of those who were poor following payments made to private hospitals, regardless of type of care.

**Conclusion** Households using inpatient services, especially at private hospitals, were more likely to face catastrophic expenditures and impoverishment from out-of-pocket payments. Use of services not covered by the UC benefit package and bypassing the designated providers (prohibited under the capitation contract model without proper referrals) are major causes of catastrophic expenditures and impoverishment.

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Une traduction en français de ce résumé figure à la fin de l'article. Al final del artículo se facilita una traducción al español. الترجمة العربية لهذه الخلاصة في نهاية النص الكامل لهذه المقالة.

#### Introduction

Health care in most Asian countries is financed by out-of-pocket (OOP) payments by individuals. <sup>1,2</sup> A recent study on health equity in 13 countries in the Asia-Pacific region, the EQUITAP project, <sup>3</sup> indicated that Sri Lanka and Thailand had the lowest share of OOP expenditures for health care within this group. <sup>4</sup>

These expenditures have been cited as the major factor jeopardizing an equitable health system in developing countries.<sup>5–7</sup> Where there is no financial risk-pooling mechanism, poor people have to meet the costs of health care from OOP payments; this drives many households into poverty.<sup>8,9</sup>

In Thailand, universal coverage (UC) was launched in 2001 to ensure equitable access to health care for the entire population. The country took

nearly three decades to progress from the targeting approach to the adoption of universal entitlement and citizens' rights to health care. UC provides a comprehensive range of services, including outpatient and inpatient services, disease prevention and health promotion, to populations not covered by the existing Civil Servant Medical Benefit Scheme and Social Security Scheme.

The UC scheme applies a capitation contract model that encourages registered members to use services provided by designated providers. Beneficiaries are required to register for and use services provided by a contractor network, typically a district health system (district hospital and health centres) where they live. Taxes finance this programme, although it requires a nominal payment of 30 baht (US\$ 0.70) per visit or admission. However, those

who bypass the designated providers must provide full payment for services received.

Impoverishment due to health-care costs has clearly declined since the introduction of the UC policy in 2001. 10 The incidence of these catastrophic expenditures was reduced from approximately 5.4% during the period before UC became available to around 3% after UC was introduced. A similar trend was seen in poverty that followed OOP expenditures (impoverishment due to direct payment for health care), which decreased substantially from 18.3% before UC to 8–10% after UC.

Utilization of services also significantly increased with UC, especially in the district health-care system. In addition, evidence indicates that service utilization favours the poor<sup>11</sup> due to their geographical proximity to services.

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Benefit incidence analysis indicated that public subsidies benefited the poor more than the rich when compared to the situation before UC.<sup>12</sup>

In view of these considerable changes in utilization and financing of health care, it is imperative to find out what factors still drive Thai households into health catastrophe and impoverishment, when since 2001 approximately 95% of the population has been covered by the UC scheme and the other two public health insurance schemes.

#### **Objectives**

Seeking to understand why some households still experience catastrophe and impoverishment due to OOP payments under UC, we estimated incidence and described the profile of catastrophic expenditures<sup>13</sup> and impoverishment that led to households being pushed below the poverty line<sup>4</sup> by comparing the period before UC in 2000 with two periods after the introduction of UC, 2002 and 2004.

#### Methods

#### **Data source**

The unit of analysis of health expenditure related to total consumption at the household level. Data were obtained from a nationally representative household survey, the Socio-Economic Survey (SES). This cross-sectional household survey is conducted by the National Statistical Office (NSO) of Thailand every other year and the sample households were not necessarily the same. The numbers of sample households in 2000, 2002 and 2004 were 24 747, 34 785 and 34 843, respectively. Records of household consumption expenditure over 12-month periods covered all items of household spending, including payments for self-medication and outpatient and inpatient services at various levels of health-care facilities.

# Measures of catastrophic expenditure and impoverishment

The measures of catastrophic expenditure and impoverishment have been described elsewhere. Catastrophe is defined as a share of OOP payment on health of more than 10% of total consumption, including expenditures on both food and non-food items. We applied region-specific poverty lines for the measurement of impoverishment.

#### Health-care service use

The types of health care used included outpatient and inpatient services at private and public (district, provincial and tertiary care level) hospitals. Data on the household payments were recorded separately for each type of health care and each level of health service facility.

#### **Data analysis**

Using Stata statistical software version 8, all analyses of the data from respondents were weighted according to the probability of each household unit being sampled to reflect the entire Thai population. The weighting factor is provided by the NSO.

#### **Findings**

#### Catastrophic health expenditure Types of health care

The numbers of households with catastrophic health expenditure in 2000, 2002 and 2004 were calculated as a percentage of all households using each type of health care, as shown in Fig. 1.

Regardless of the health insurance scheme, households facing catastrophic expenditure were mostly those using inpatient services (15.1% and 14.6% in 2002 and 2004 and 31.0% in 2000). The incidence of catastrophe in households using outpatient services only (without any inpatient services) decreased by approximately one-third (from 12.0% in 2000 to 7.9% and 8.3% in 2002 and 2004). The catastrophic incidence from self-medication was very small compared to that from other types of health expenditure.

#### Levels of health service facilities

Table 1 presents the incidence of catastrophic expenditure for outpatient and inpatient services by levels of health service facility, namely public hospitals (district and provincial hospitals) and private hospitals. The data from 2000 did not subcategorize public hospitals (i.e. into district and provincial hospitals). Data for inpatient services in 2002 and 2004 differentiated between provincial hospitals located outside the provinces where the respondent households were located and those hospitals in the same province as the respondents.

The households using the outpatient services of private hospitals had the greatest likelihood of catastrophic expenditure both before and after UC (36.0% in 2000; and 27.9–28.5% in

2002–2004). The second most frequent incidence of catastrophic expenditure was found in the households that used the outpatient services of provincial hospitals (13.2–13.8% in 2002–2004) and of public hospitals (21.7%) in 2000. Using the outpatient services of district hospitals caused the fewest catastrophic expenditures (3.8–3.9% in 2002–2004).

For inpatient services, households using private hospitals faced catastrophic expenditure most often (35.8% in 2000; 32.1% and 27.8% in 2002 and 2004). During the post-UC periods, the use of private and provincial hospitals outside the respondent's home province contributed significantly to catastrophic impacts (34.2 and 38.1% for private hospitals and 28.5 and 20.3% in 2002 and 2004 for provincial hospitals outside the home province) when compared with use of provincial (9.5 and 14.2%) and district (6.1 and 4.8%) hospitals in the respondents' own provinces.

# Impoverishment due to health payments

#### Types of health care

Households whose average consumptions, after payment for health care, were below the national poverty line specific to their regions were considered to be impoverished. Their presence was found to vary with respect to the types and levels of health care used. Households whose consumptions were already below the poverty line before deduction of OOP health payments were referred to as experiencing pre-OOP impoverishment. When OOP expenditure is taken into account, the consumption of some households (net of OOP payments) moved from above to below the national poverty lines; this is referred as to post-OOP impoverishment. Fig. 2 compares the incidence of household impoverishment due to the direct payments for health care of post-OOP with that of pre-OOP.

The highest incidence of combined pre-OOP and post-OOP impoverishment was seen among the users of inpatient care (5.1% and 3.6% in 2002 and 2004 compared to 12.5% in 2000). Households that were impoverished increased significantly after OOP payment for inpatient services. An absolute increase in the post-OOP impoverishment among inpatient care users was noted (4.3 and 2.6 percentage points

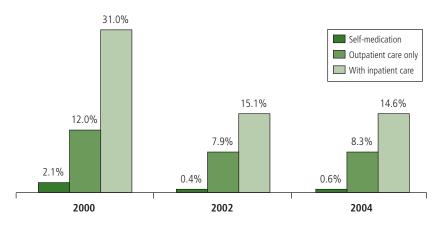
in 2002 and 2004 and 11.9 percentage points in 2000; Fig. 2). This is equivalent to a relative increase in the post-OOP impoverishment of 84.0% and 71.5% in 2002 and 2004 compared to 95.6% in 2000.

The cost of self-medication had the smallest effect on impoverishment: 0.3 percentage points in 2002–2004 and 1.7 percentage points in 2000.

## Amount of OOP payments by type of health care

A comparison of the amount of OOP payments for each type of health care between non-impoverished households and the pre-OOP and post-OOPimpoverished households provides an indication of the size of the economic burden placed on health-care users. Regardless of type of care, households that became poor due to OOP expenditure, paid on average the largest amount of money followed by the non-impoverished households and the pre-OOPimpoverished households. The median amount of money paid OOP per capita by the post-OOP-impoverished households for inpatient care was 667-833 baht (US\$ 16.68-20.83; exchange rate 40 baht to US\$ 1) in 2002-2004 and 583 baht (US\$ 14.58) in 2000 (data not shown). The median amount for the non-impoverished households was

Fig. 1. Incidence of catastrophic health expenditure by types of health care



Source: Thailand Socio-Economic Surveys.

83 and 50 baht (US\$ 2.08 and 1.25) and 250 baht (US\$ 6.25), and only 2 baht (US\$ 0.05) and 21 baht (US\$ 0.53) was paid by the pre-OOP-impoverished households over the same periods.

#### Levels of health service facilities

Table 2 shows the incidence of post-OOP-only impoverishment by levels of health services. This is the absolute increase (percentage point difference) between the percentage of households who became impoverished after OOP health payments and the percentage of pre-OOP-impoverished households.

The people who chose to obtain health care in private hospitals were more likely to make their households poor than those who used public hospitals. This disparity between the impoverishing impact of OOP health payments in private and public hospitals was larger for those who sought inpatient care than for those who sought outpatient care.

The use of private hospitals for inpatient care increased impoverishment by 8.5 and 5.7 percentage points in 2002 and 2004 and by 11.0 percentage points in 2000, which was a stronger effect than that seen for outpatient care. After the introduction of UC, this absolute impact was higher than that of the choice between district (0.9–2.5 percentage points) and provincial (1.6–4.2 percentage points) hospitals.

The absolute impact of using private hospitals on impoverishment of all households in Table 2 was not substantially higher than that of using public hospitals, especially for both outpatient and inpatient care in 2000 and for outpatient care in 2004. However, the impact on post-OOP impoverishment relative to total impoverishment was more evident (Table 3) and even stronger than the relative impact on catastrophic expenditure mentioned in the previous section.

It is notable that all (100%) of the households that obtained health care from private hospitals for both outpatient and inpatient care in every period, except for inpatient care in 2002 (98.8%), and public hospitals outside their own provinces (for inpatient care) became impoverished only because of OOP payments (Table 3).

Table 1. Incidence of catastrophic health expenditure by levels of health service facilities and types of health care

	Outpatient care (%)	Inpatient care (%)
2000		
Public hospital <sup>b</sup>	21.7	26.5
Private hospital	36.0	35.8
2002		
District hospital	3.8	6.5
Provincial hospital	13.2	13.9°
		23.8 <sup>d</sup>
Private hospital	27.9	32.1
2004		
District hospital	3.9	7.3
Provincial hospital	13.8	11.1°
		27.5 <sup>d</sup>
Private hospital	28.5	27.8

Source: Thailand Socio-Economic Surveys.

- $^{\rm a}$  Out-of-pocket expenditures for health that constitute > 10% of total consumption, including food and non-food expenditures.
- b Includes both district and provincial hospitals.
- <sup>c</sup> Provincial hospital located in home province of survey respondent.
- <sup>d</sup> Provincial hospital located outside home province of survey respondent.

Out-of-pocket (OOP) health share > 10% of total consumption including food and non-food expenditures.

### OOP payments by health service facility level

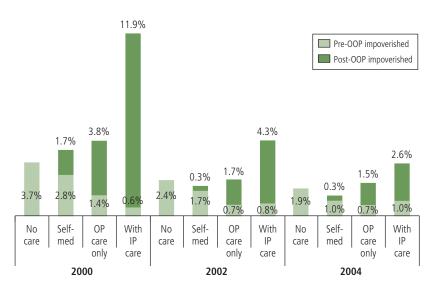
The amount of per capita OOP payment for outpatient services from private and provincial hospitals was highest among the post-OOP-impoverished households, followed by non-impoverished and pre-OOP-impoverished households (data not shown). For district hospitals, the amount of OOP payments was comparable for all the impoverishment categories (the median payment was approximately 30 baht or US\$ 0.75).

For inpatient care, the per-capita OOP amounts paid by the post-OOP-impoverished households to private (median 3167–3333 baht or US\$ 79.18–83.33) and provincial hospitals (median 250–1500 baht or US\$ 6.25–37.50) were much higher than those to district hospitals (median 125 and 114 baht or US\$ 3.13 and 2.85).

#### Discussion

The first study in Thailand on equity in health-care payments<sup>14</sup> reported that the uninsured and those covered by the low-income card (LIC) scheme faced high OOP payments (4.6% and 6.1% of their income, respectively), whereas Civil Servant Medical Benefit Scheme and Social Security Scheme members spent only 1.7% and 0.6%, respectively, of their income on health. Our study

Fig. 2. Incidence of household impoverishment by types of health care



Source: Thailand Socio-Economic Surveys.

Self-med = Self-medication; OP = Outpatient; IP = Inpatient.

further shows that households using inpatient services, especially private and public hospitals outside the respondent's home province, had a higher incidence of catastrophic expenditure and impoverishment from health payments.

This study revealed that the direct payments for inpatient care from private hospitals made by the impoverished households accounted for as much as 72.0–75.7% of per-capita monthly income (14 963 baht or US\$ 374.08 per month for an average 3.4-person household in 2004). In addition, high-cost care such as cancer chemotherapy and renal dialysis that is not adequately covered by the UC scheme can be catastrophic to the users.

Bypassing of designated providers was revealed by a recent study<sup>15</sup> that indicated that approximately 19.1% and 19.5% of the UC members did not exercise their right to free inpatient services in 2003 and 2004, respectively. This percentage was greater for lower outpatient medical bills; 43.4 and 46.7% did not use their entitlements over the same periods. For minor illnesses, UC members often chose self-medication and paid for it in full, instead of using the free institutional care to which they were entitled, or they bypassed the designated providers if they felt their expectations were not met.

Due to geographical monopoly, the only choice for the UC scheme is to contract the existing public-owned district health systems as the contractor network, especially for the majority of UC members who reside in rural areas. Contracts with private providers were limited to urban areas where private and provincial hospitals were competing. However, some private hospitals were reluctant to join the scheme, especially where demand for private care is increasing among the middle classes, who can afford to pay their own bills.

Table 2. Absolute increase in poverty headcounts due to out-of-pocket payments by levels of health service facilities and types of health care

	Outpatient care (%)	Inpatient care (%)
2000		
Public hospital <sup>b</sup>	7.2	10.9
Private hospital	5.5	11.0
2002		
District hospital	0.7	2.5
Provincial hospital	1.1	4.2°
		6.5 <sup>d</sup>
Private hospital	5.2	8.5
2004		
District hospital	2.2	0.9
Provincial hospital	2.5	1.6°
		6.4 <sup>d</sup>
Private hospital	3.2	5.7

Source: Thailand Socio-Economic Surveys.

- <sup>a</sup> Difference in percentage of counts of impoverished households before and after OOP health payment for each level of services, i.e. post-OOP impoverishment only.
- <sup>b</sup> Includes both district and provincial hospitals.
- <sup>c</sup> Provincial hospital located inside the home province of survey respondent.
- <sup>d</sup> Provincial hospital located outside the home province of survey respondent.

a Includes pre-out-of-pocket (OOP) and post-OOP impoverished households (whose consumption expenditures before and after OOP health payments were below Thailand's national poverty lines).

One major intervention, renal dialysis, is not covered by the UC package due to fiscal constraints and long-term budget impact. Some high-cost treatments such as cancer chemotherapy are not fully covered.

In laissez-faire capitalist economies, governments do not introduce controls over prices and services provided by private hospitals. Therefore high costs and ancillary services can lead to catastrophic expenditure and impoverishment. In such a policy context, the government has never considered obliging the private sector to provide free services to the poor.

One methodological issue is that using a cross-sectional household survey does not capture the whole range of high and low expenditures throughout the year, so it is likely to note mostly short-term shocks. The cut-off for health expenditure as a percentage of total consumption or non-food expenditure (capacity to pay) is controversial and requires further research. In this study, payments for health care that account for more than 10% of consumption expenditure are defined as catastrophic. This differs from another definition 16 that used a figure of more than 40% of income after deduction of subsistence needs, especially food. Working backwards, under that definition the food expenditure would have gone up to 75% of total household consumption. This is unrealistically high when verified by actual food consumption in the Socio-Economic Survey. The application of that definition may not be appropriate to a middle-income country setting, but the issue needs further investigation.

#### Conclusion

Since its introduction in 2001, the UC policy has had a major impact on further reducing the overall incidence of catastrophic expenditure (to 3.3% and 2.8% in 2002 and 2004) and hence has reduced the additional numbers of households that fall below the poverty line as a result of OOP payments

Table 3. Relative increase in poverty headcounts due to out-of-pocket (OOP) payments<sup>a</sup> by levels of health service facilities and types of health care

	Outpatient care (%)	Inpatient care (%)
Year 2000		
Public hospital <sup>b</sup>	80.2	96.4
Private hospital	100	100
Year 2002		
District hospital	34.2	62.1
Provincial hospital	58.1	93.5°
		100 <sup>d</sup>
Private hospital	100	98.8
Year 2004		
District hospital	67.8	28.9
Provincial hospital	73.2	74.1°
		100 <sup>d</sup>
Private hospital	100	100

Source: Thailand Socio-Economic Surveys.

- <sup>a</sup> Increase in impoverished households due to OOP health payments relative to all impoverished households; i.e., post-OOP-impoverished/(pre-OOP-impoverished + post-OOP-impoverished).
- <sup>b</sup> Includes both district and provincial hospitals.
- <sup>c</sup> Provincial hospital located inside the home province of the survey respondent.
- <sup>d</sup> Provincial hospital located outside the home province of the survey respondent.

(10.3% and 8% during the post-UC period) and is minimizing the poverty gap. However, despite the literally free UC scheme, some households still faced catastrophic health expenditures and impoverishment. Bypassing the designated services without proper referral may result in the use of inpatient services in private and public hospitals outside the users' home provinces, and services not covered by the package are major causes of catastrophic expenditure and impoverishment.

Although UC has reduced catastrophic expenditure and impoverishment, some households still face these events. This warrants further policy improvements to minimize OOP spending by the poorest deciles, or households in poorer provinces. Supply-side intervention is required to improve quality of care and gain the confidence of users. This in turn will minimize use of the outside contractor network by the poor, and help to ensure proper and prompt

referral to tertiary care hospitals when clinically indicated.

Especially in middle-income countries where the private hospital sector is mushrooming, policy-makers should consider introducing effective measures to regulate price, quantity and quality of care provided.

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Competing interests: None declared.

#### Résumé

# Effets des dépenses de santé à la charge des patients en termes de détérioration profonde de la situation et de paupérisation des ménages : résultats d'enquêtes auprès des foyers réalisées à l'échelle nationale en Thaïlande

**Objetif** Estimer l'incidence et décrire la répartition des dépenses de santé catastrophiques et de la paupérisation résultant des frais à la charge des ménages lors d'une hospitalisation, en comparant la période précédant l'introduction de la couverture universelle par des soins de santé (CU) et la période ultérieure.

**Méthodes** Analyses secondaires de données d'enquêtes socioéconomiques, menées auprès d'un échantillon de ménages représentatif au niveau national en 2000 avant l'introduction de la CU (n = 24747) et après son introduction en 2002 (n = 34785) et en 2004 (n = 34843).

**Résultats** Les ménages dont un membre a été hospitalisé sont les plus nombreux à avoir supporté des dépenses de santé catastrophiques (31,0 % en 2000, mais 15,1 % en 2002 et 14,6 % et en 2004). Au cours des deux périodes postérieures à l'introduction de la CU, l'incidence des dépenses de santé catastrophiques liées à des hospitalisations dans des établissements privés était de 32,1 % en 2002 et de 27,8 % en 2004. Pour les patients hospitalisés dans des hôpitaux de district, l'incidence des dépenses de santé catastrophiques était de 6,5 % en 2002 et de 7,3 % en 2004. L'incidence des dépenses de santé catastrophiques liées à des services ambulatoires dans des établissements privés

est passée de 27,9 % à 28,5 % entre 2002 et 2004. En 2000, avant l'introduction de la CU, le pourcentage de thaïlandais ayant recouru à des soins hospitaliers et confrontés à des dépenses de santé catastrophiques était de 35,8 pour les patients hospitalisés et de 36,0 pour ceux soignés en ambulatoire. L'incidence de la paupérisation par des dépenses d'hospitalisation des ménages déjà démunis s'est accrue de 84,0 % en 2002, de 71,5 % en 2004 et de 95,6 % en 2000. On a constaté une augmentation de la paupérisation due à des dépenses de santé à la charge des patients de 98,8 % à 100 % dans le cas des pauvres ayant subi une hospitalisation dans des hôpitaux privés, indépendamment du type de soins reçu.

**Conclusion** Les ménages dont un des membres est hospitalisé, notamment dans un hôpital privé, ont une plus forte probabilité de subir des dépenses catastrophiques et une paupérisation en raison des frais restant à la charge des patients. Le recours à des services non couverts par la CU ou le fait de ne pas passer par les prestateurs désignés pour obtenir certaines prestations (dont l'accès est interdit aux termes du contrat de capitation sans orientation dans les règles par un praticien) sont les principales causes de dépenses de santé catastrophiques et de paupérisation.

#### Resumen

## Impacto catastrófico y empobrecimiento por gastos médicos: resultados de encuestas nacionales de hogares realizadas en Tailandia

**Objetivo** Estimar la incidencia y describir el perfil de los gastos catastróficos y el empobrecimiento causados por los pagos en efectivo realizados por los hogares, comparando los periodos anterior y posterior a la introducción de la cobertura sanitaria universal (CSU).

**Métodos** Se llevaron a cabo análisis de datos secundarios de encuestas socioeconómicas de unidades familiares representativas a nivel nacional antes de la introducción de la CSU en 2000 ( $n = 24\ 747$ ) y después de la misma en 2002 ( $n = 34\ 785$ ) y 2004 ( $n = 34\ 843$ ).

**Resultados** Los hogares que tuvieron necesidad de asistencia hospitalaria sufrieron gastos catastróficos con mayor frecuencia (31,0% en 2000, frente a 15,1% y 14,6% en 2002 y 2004, respectivamente). Durante los dos periodos posteriores a la introducción de la CSU, la incidencia de gastos catastróficos por pago de servicios de asistencia a pacientes ingresados en hospitales privados fue del 32,1% en 2002 y del 27,8% en 2004. Entre quienes tuvieron que ser ingresados en hospitales de distrito, las cifras de gastos catastróficos correspondientes fueron del 6,5% y el 7,3% en 2002 y 2004, respectivamente. La incidencia de gastos catastróficos por pago de servicios ambulatorios en hospitales privados pasó del 27,9% al 28,5% entre 2002

y 2004. En 2000, antes de la introducción de la cobertura universal, el porcentaje de hogares tailandeses que utilizaron los servicios de hospitales privados y tuvieron que afrontar gastos catastróficos fue del 35,8% para la atención hospitalaria y el 36,0% para la atención ambulatoria. El empobrecimiento aumentó en las familias pobres como consecuencia de los gastos en servicios de hospitalización, en un 84,0% en 2002, 71,5% en 2004, y 95,6% en 2000. El aumento relativo del empobrecimiento por los gastos directos realizados se dio en el 98,8%-100% de los casos de quienes eran pobres después de pagar los servicios proporcionados en hospitales privados, independientemente del tipo de atención recibida.

**Conclusión** Los hogares con algún miembro que tuvo que ser ingresado, sobre todo en hospitales privados, tenían más probabilidades de afrontar gastos catastróficos y empobrecimiento como consecuencia de los pagos directos realizados. El uso de servicios no comprendidos en el conjunto de prestaciones de la CSU y el hecho de puentear a los proveedores designados (lo cual está prohibido en el modelo de contrato de iguala si no se hace la derivación como corresponde) son causas relevantes de gasto catastrófico y empobrecimiento.

#### ملخص

#### الإنفاق على الصحة وآثاره المرهقة ماليا والمفقرة للأسرة: نتائج مسوحات أسرية وطنية في تايلاند

المستشفيات الخاصة، من 27.9% في عام 2002 إلى 28.5% في عام 2000، أي قبل تطبيق نظام التغطية الشاملة، بلغت نسبة الأسر التيلاندية التي استفادت من خدمات المستشفيات الخاصة وواجهت نفقات باهظة 35.8% نتيجة الحصول على خدمات المرضى الداخليين و 36% نتيجة الحصول على خدمات رعاية المرضى الخارجيين. وزاد معدل تعرض الأسر للفقر بسبب الإنفاق على خدمات رعاية المرضى الداخليين بنسبة 8.8% في عام 2000، وبنسبة 35.8% في عام 35.8% ولوحظت زيادة نسبية في الإنفاق النقدي المباشر المسبب للفقر لدى 35.8% إلى 35.8% ممن وقعوا في هاوية الفقر من جراء النفقات التي دفعوها للمستشفيات الخاصة، بغض النظر عن خط الرعابة المقدمة.

الاستنتاج: تشير نتائج الدراسة إلى أن الأسر التي تستفيد من خدمات رعاية المرضى الداخليين، ولاسيما في المستشفيات الخاصة، أكثر عرضة لمواجهة نفقات باهظة وللوقوع في هاوية الفقر بسبب الإنفاق النقدي المباشر. كما بينت النتائج أن الاستفادة من الخدمات التي تخرج عن قائمة خدمات الرعاية الشاملة والتي لا تقدم عن طريق مقدمي الخدمات المعينين (وهو غير مصرح به به وجب نموذج عقود الأجر الفردي بدون إحالة من الطبيب المختص) هي المسببات الرئيسية للنفقات الباهظة وللوقوع في هاوية الفقر.

الغرض: استهدفت هذه الدراسة وصف وتقدير معدل انتشار الإنفاق الباهظ المرهق ماليا والمفقر للأسرة بسبب ما تدفعه الأسرة نقداً للحصول على الرعاية الصحية، مع المقارنة بين الفترة السابقة لتنفيذ نظام التغطية الشاملة بالرعاية الصحية والفترة اللاحقة لها.

الطريقة: تم تحليل البيانات الثانوية الناتجة عن مسوحات اجتماعية اقتصادية للأسرة المعيشية الممثلة للوضع الوطني، قبل تطبيق نظام التغطية الشاملة، أي في عام 2000 (عدد الأسر 24747)، وبعد تطبيق النظام، أي في عام 2002 (عدد الأسر 34843).

الموجودات: لوحظ أن الأسر التي تستفيد من خدمات رعاية المرضى الداخليين داخل المستشفى أكثر تعرضاً للنفقات الباهظة (31% في عام 2000، بالمقارنة مع 15.1% في عام 2000، وفي الفترتين التاليتين لتطبيق نظام الرعاية الشاملة كان معدل التعرض للنفقات الباهظة للحصول على خدمات رعاية المرضى الداخليين في المستشفيات الخاصة 32.1% في عام 2004 و 27.8% في عام 2004. أما من يحصلون على خدمات المرضى الداخليين في مستشفيات المناطق الصحية، فكان معدل تعرضهم للنفقات الباهظة 6.5% في عام 2004، ولوحظ ارتفاع معدل التعرض للنفقات الباهظة نتيجة الحصول على خدمات المرضى الخارجيين في التعرض للنفقات الباهظة نتيجة الحصول على خدمات المرضى الخارجيين في

#### References

- O'Donnell O, van Doorslaer E, Rannan-Eliya RP, Somanathan A, Adhikari SR, Akkazieva B, et al. Who pays for health care in Asia? EQUITAP Working Paper 1, April 2005. Available at: http://www.equitap.org
- Than Sein. A policy brief of health care financing reforms in WHO South-East Asia Region. New Delhi: WHO Regional Office for South-East Asia; 2002.
- EQUITAP. Equity in Asia-Pacific health systems EQUITAP project. 2005. Available at: http://www.equitap.org
- van Doorslaer E, O'Donnell O, Rannan-Eliya RP, Somanathan A, Adhikari SR, Akkazieva B, et al. Paying out-of-pocket for health care in Asia: catastrophic and poverty impact. EQUITAP Working Paper 2, May 2005. Available at: http://www.equitap.org
- Whitehead M, Dahlgren G, Evans T. Equity and health sector reforms: can lowincome countries escape the medical poverty trap? Lancet 2001;358:833-6.
- Hsiao W, Liu Y. Health care financing: assessing its relationship to health equity. In: Evans T, Whitehead M, Diderichsen F, Bhuiya A, Wirth M, eds. Challenging inequities in health. New York: Oxford University Press; 2001.
- Palmer N, Mueller D, Gilson L, Mills A, Haines A. Health financing to promote access in low-income settings – how much do we know? *Lancet* 2004; 364:1365-70.
- OECD and WHO DAC guidelines and reference series poverty and health. Paris: OECD Publishing; 2003.
- 9. The Millennium Development Goals for Health: rising to the challenges. Washington: World Bank; 2004.

- Limwattananon S, Tangcharoensathien V, Prakongsai P. Equity in financing healthcare: impact of universal access to healthcare in Thailand. EQUITAP Working Paper 16, June 2005. Available at: http://www.equitap.org
- Prakongsai P, Palmer N, Tangcharoensathien V. Benefit incidence analysis before and after universal coverage in Thailand. Paper presented at the 69th Health Economists' Study Group, 26–28 July 2006, University of York; 2006.
- Prakongsai P, Tisayatikom K, Palmer N, Tangcharoensathien V. Who benefits from government health spending before and after universal coverage in Thailand? Available at: http://www.ihpp.thaigov.net
- Wagstaff A, van Doorslaer E. Catastrophe and impoverishment in paying for health care with applications to Vietnam, 1993-98. *Health Econ* 2003; 12:921-34.
- 14. Pannarunothai S, Mills A. The poor pay more: health-related inequality in Thailand. *Soc Sci Med* 1997;44:1781-90.
- Vasavid C, Tangcharoensathien V, Tisayaticom K, Patcharanarumol W, Opanapun N. Health and welfare of Thai population after universal health care coverage, part I: illness, utilization compliance of health care services of UC members. J Health Sci 2004;13:428-39.
- Xu K, Evans B, Kawabata K, Zeramdini R, Klavus J, Murray CJL. Household catastrophic health expenditure: a multi-country analysis. *Lancet* 2003; 362:111-7.