Impact of Out-of-Pocket Expenditures on Families and Barriers to Use of Maternal and Child Health Services in Cambodia

Evidence from the Cambodia Socio-Economic Survey 2007

COUNTRY BRIEF

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Summary

- Large inequalities exist in healthcare use by adults and children in Cambodia. Poor and rural Cambodians make less use of both public and private sector providers and of outpatient treatment.
- Private providers are the main source of medical care. The poor, who depend more on public providers, tend to use the services provided by district hospitals and health centers. The nonpoor are more likely to use national and provincial government hospitals when they seek medical care from public providers.
- The inequality in healthcare use exists mainly because (i) the poor are less likely than the rich to recognize that they are ill, and (ii) the cost of treatment is likely to be high.
- Most healthcare visits result in out-of-pocket expenses. For all households, the average out-of-pocket cost of a visit is high at KP 22,755 for a child treated at a government facility, and even higher at a private one.
- Households in Cambodia spend a greater share of their overall budget on medical care (6%) than households in almost any other Asian country, expenditures for the treatment of sick children accounting for 14% of this spending.
- Heavy reliance on out-of-pocket spending for healthcare is burdensome to families. The incidence of catastrophic medical spending in Cambodia is one of the highest in the region, and medical costs impoverish 4.1% of families each month. The medical treatment cost of sick children contributes a considerable share of this burden.
- Out-of-pocket expenditures on medical care are made mostly by richer families. The poorest two-fifths of the population account for only 22% of total out-of-pocket spending on medical care, and 33% in the case of out-of-pocket spending on medical care for children.
- Reducing the financial costs of healthcare borne by poor families is critical to improve access to maternal and child health services in Cambodia.

Background

Cambodia is one of the poorest countries in the Asia and Pacific region, and is still emerging from decades of war, genocide, and social disruption. Despite robust economic growth in the past decade, three out of every ten Cambodians still live below the national poverty line. The destruction of most of the country's health infrastructure and human resources during the years of conflict profoundly damaged the effectiveness of health service coverage, as well as retarded the development of health awareness of much of the population. Overall rates of healthcare use are among the lowest in Asia, reflecting significant physical and financial barriers to access.

Cambodia has made substantial progress in improving child health outcomes and health service coverage. However, maternal mortality and neonatal mortality rates remain among the highest in Asia and the Pacific. Evidence indicates that progress has been slow in areas where outcomes depend more on access to healthcare and the quality of such care (World Bank 2010).

According to national health accounts estimates prepared by the World Health Organization (WHO) (WHO 2012), overall health spending in Cambodia is high relative to such spending in comparable countries in the region—5.6% of gross domestic product in 2010, compared with 2.6% in Indonesia, and 4.5% in the Lao People's Democratic Republic. Private financing, mostly out-of-pocket spending by households, contributes the largest share (63%). A mix of government providers, nongovernment organizations, and private providers deliver healthcare services. Besides the hospitals and health centers run by the government, a diverse range of private hospitals, private clinics, and other private providers offer medical treatment. Government facilities rely heavily on user fee revenues. Informal payments to gain access to healthcare are also widely prevalent in the public sector.

The Government of Cambodia is committed to reaching the Millennium Development Goals (MDGs) and to giving its people better access to adequate healthcare. Recognizing the negative impact of financial barriers on access, the government has tested several approaches to lowering those barriers, including user fee exemptions and health equity funds. User fee exemptions have proved ineffective and unreliable in improving access for the poor. Health equity funds, on the other hand, have been shown to have a positive impact on the use of inpatient and referral hospital care (Annear et al. 2006).

Data Source

This country brief presents findings from analysis of the Cambodia Annual Socio-Economic Survey (CSES) 2007 (National Institute of Statistics 2007). CSES 2007 collects data on illness and on healthcare use and expenditures from a sample of 3,593 households (17,439 individuals). Using the detailed household consumption module of the survey, the analysis in this country brief groups the population into equal quintiles of consumption per adult equivalent, as a measure of relative living standards and socioeconomic grouping. (O'Donnell et al. 2008).

Design limitations reduce the usefulness of the CSES in examining inequalities in use and spending for maternal and child healthcare in Cambodia. Unlike surveys in other countries, the CSES does not ask explicitly which healthcare providers were used and how often each one was visited the previous month. Instead it poses the more ambiguous question "Which provider is usually consulted?" The CSES also fails to bring out the reasons why respondents who reported they were sick did not obtain medical treatment. Asking these reasons would help in reducing the high rate of nonuse of medical care in Cambodia. Moreover, the CSES does not ask for information specific to each visit made in the past month, e.g., whether the visit involved inpatient or outpatient care, and the cost of the visit. A detailed analysis of the patterns of healthcare use cannot be made without this information. Finally, the survey does not include information about the composition of healthcare expenses, by key category (medicines, consultation fees, etc.), a feature of most comparable surveys in the region.

Perception of Illness and Treatment Seeking

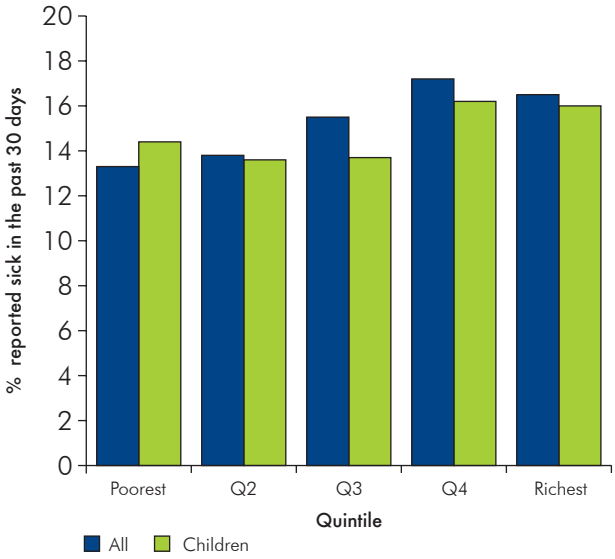
For ill individuals to ask for healthcare, they must first realize they are sick. The CSES asks whether individuals were sick in the 30 days before the survey. In total, 15.3% of all individuals and 14.8% of children below 5 years were reported to have been sick.

However, the self-reporting of illness in a survey is an unreliable indicator of the real level or distribution of illness within the population. In the CSES (Figure 1), illness is more likely to be reported in rich individuals (16.5%) and children (16.0%), than in those in the poorest quintile (13.3% and 14.4% respectively).

On the other hand, available evidence, from such sources as the Cambodia Demographic and Health Surveys, indicates that poor children are more likely to be sick or die from illness. This suggests that inadequate use of healthcare by poorer families in Cambodia might be explained at least partly by a reduced responsiveness to the signs of illness and a higher threshold for recognizing those signs when they appear.

Sickness does not automatically lead to the pursuit of medical treatment. In Cambodia, as in many other countries, the poor who are sick are less likely to obtain treatment than the rich (77% of sick children in the poorest quintile versus 91% in the richest quintile, according to the CSES). Furthermore, adults and children in rural areas are significantly less likely to be taken for treatment (82% of all sick individuals and 81% of sick children) than those in urban areas (89% of all sick individuals and 87% of sick children). Unfortunately, the CSES, as already noted, does not ask why sick individuals did not obtain medical care.

Figure 1: Illness Reporting in Cambodia, by Socioeconomic Status, 2007

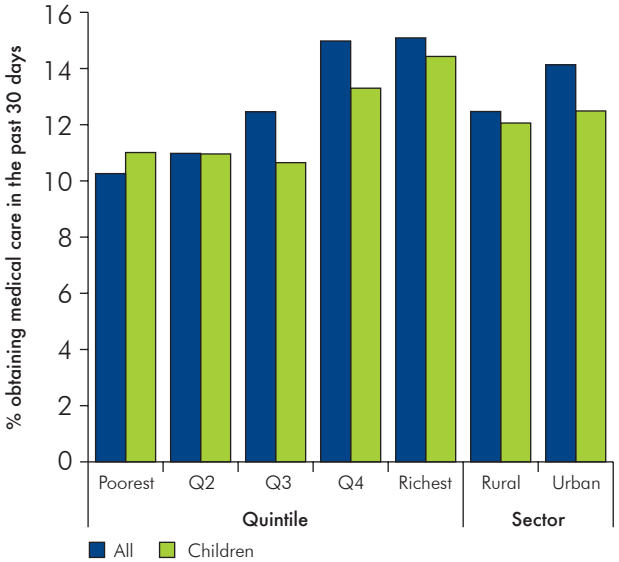


Q = quintile
Source: Authors' analysis of CSES 2007 data set.

Use of Health Services

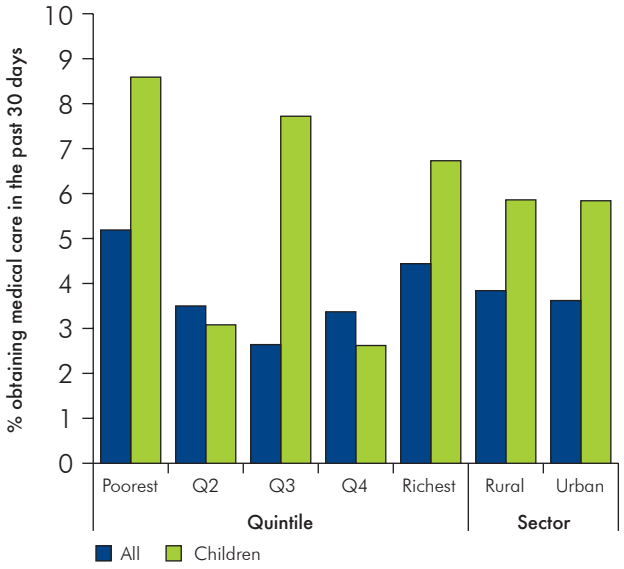
This combination in the poor of less frequent recognition of illness and lower likelihood of seeking treatment when feeling sick results in a strongly pro-rich use of treatment, both overall and in the case of children. In general, those in the richest quintile are almost 50% more likely to use medical services in a given month than those in the poorest quintile (Figure 2).

Figure 2: Use of Healthcare Services in Cambodia, by Socioeconomic Status and Sector, 2007



Q = quintile
Source: Authors' analysis of CSES 2007 data set.

Figure 3: Use of Inpatient Medical Care in Cambodia, by Socioeconomic Status and Sector, 2007



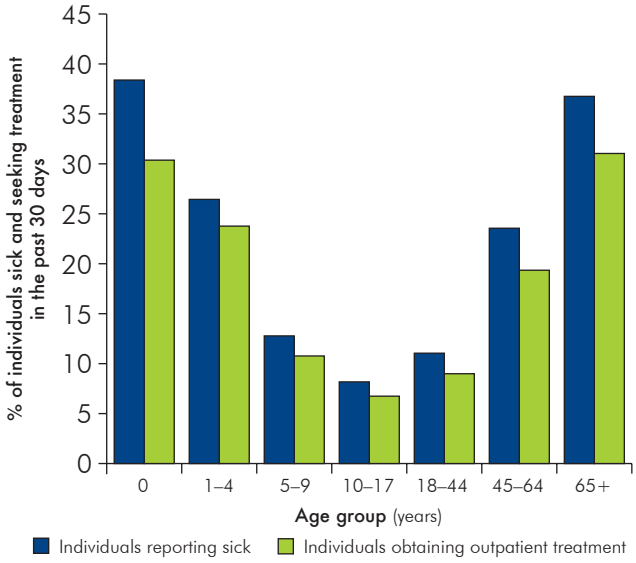
Q = quintile
Source: Authors' analysis of CSES 2007 data set.

However, inpatient care shows no such pattern of use. The poorest and richest quintiles use inpatient care the most (Figure 3), perhaps because hospitalization is associated with serious illnesses, and in these cases the poor are as likely to recognize signs of illness.

Overall use varies according to age. It is higher among infants and young children than among young adults, and increases among older adults (Figure 4). In 2007, infants accounted for 5.1% of healthcare visits, and children (<5 years), for 14.1%.

The data do not allow us to examine how use of healthcare services by pregnant mothers varies by income level.

Figure 4: Illness Reporting and Use of Medical Treatment in Cambodia, by Age Group, 2007

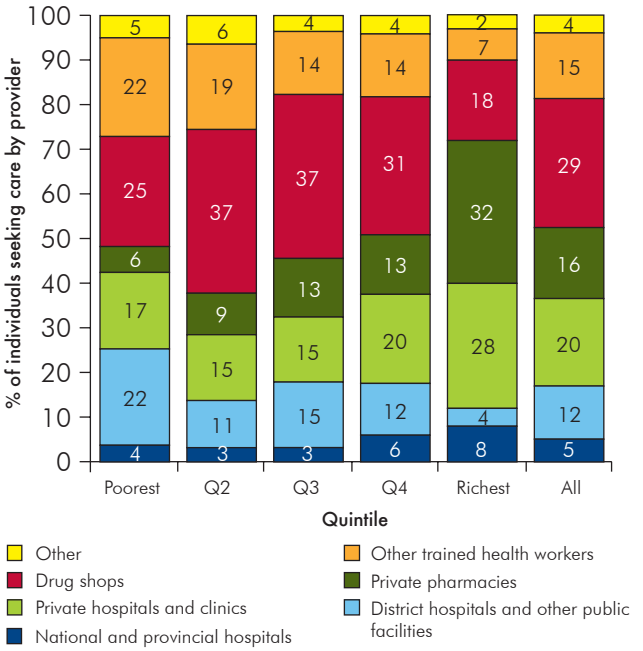


Source: Authors' analysis of CSES 2007 data set.

Individuals seek medical care mostly from private providers. Public hospitals and clinics account for less than one fifth of overall healthcare use (Figure 5) and only 23% of child visits (Figure 6).

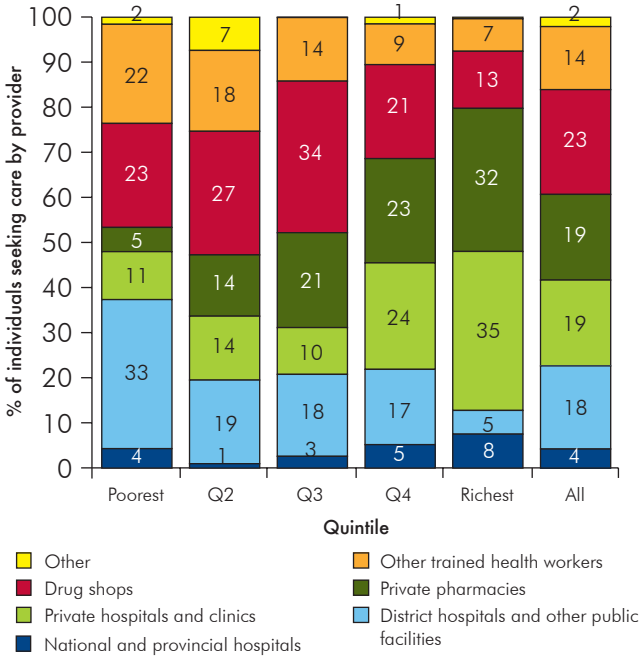
Public sector use is concentrated in district hospitals and lower level facilities where the poor are concerned, and in national and provincial hospitals in the case of the richest households.

Figure 5: Overall Healthcare Use in Cambodia, by Socioeconomic Status, 2007



Q = quintile
Source: Authors' analysis of CSES 2007 data set.

Figure 6: Children's Use of Healthcare Facilities in Cambodia, by Socioeconomic Status, 2007



Q = quintile
Source: Authors' analysis of CSES 2007 data set.

A similar difference is seen in the purchase of medicines: the richest households rely mostly on private pharmacies, while the poorest households depend on drug shops.

Cost of Healthcare Visits

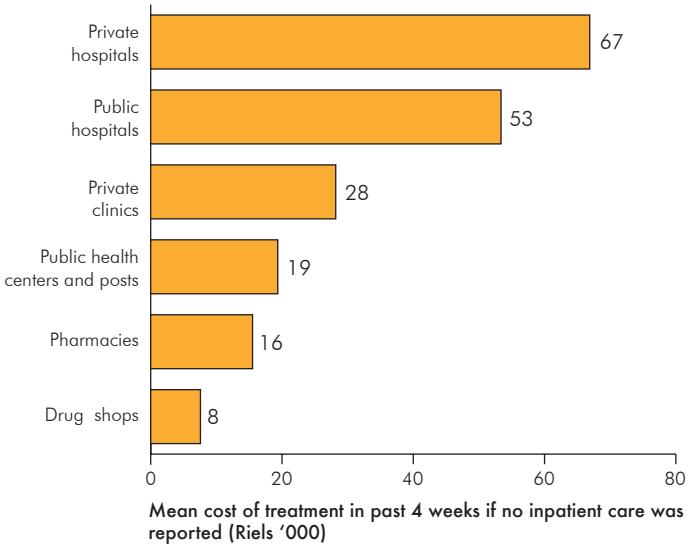
The CSES asks respondents who used a healthcare provider in the past 30 days to identify the provider and to state the total amount spent on healthcare during the same period. If individuals are assumed to have used only one healthcare provider in the past 30 days, the variation in costs between different types of providers and patients can be estimated.

In general, Cambodians must pay for almost all medical care: 96% of all illness episodes and 96% of illness episodes involving children (<5 years) result in some treatment expenses. These figures include almost all public sector visits, although a small proportion (8%) of such visits are reported to be free, unlike visits to other types of providers.

The cost patterns of treatment involving children differ little from those of treatment for adults, except that monthly costs are more modest. The average monthly expenditure on outpatient treatment is KR17,668 for sick children and KR21,756 overall. The monthly costs of inpatient treatment average KR110,627 for children, compared with KR43,296 overall.

Therefore, the average costs of an episode of illness for a child would account for 0.7 days of the household's typical daily consumption of KR23,871 if only outpatient care is obtained, and 4.6 days of household consumption if inpatient care is obtained. This level of costs of medical care must be a significant barrier for most Cambodians, and must contribute to the decreased use of healthcare services.

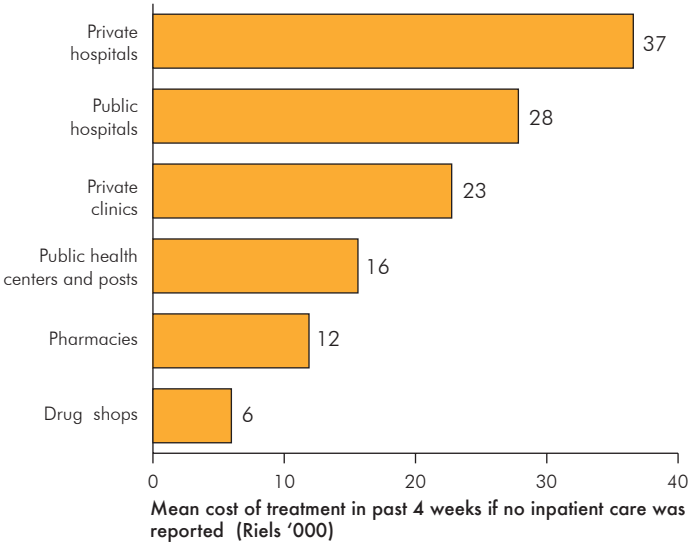
Figure 7: Mean Monthly Cost of Outpatient Care in Cambodia, 2007



Source: Authors' analysis of CSES 2007 data set.

In general, as might be expected, outpatient visits to private facilities cost more than visits to public sector facilities. Outpatient treatment at private hospitals and clinics is more expensive than outpatient treatment at national, provincial, and district public hospitals and public health centers and posts (Figure 7). Outpatient treatment for children has a similar cost pattern (Figure 8). Interestingly enough, visits involving traditional birth attendants cost even higher (mean cost: KR82,000) than outpatient visits to private hospitals.

Figure 8: Mean Monthly Cost of Outpatient Care for Children in Cambodia, 2007



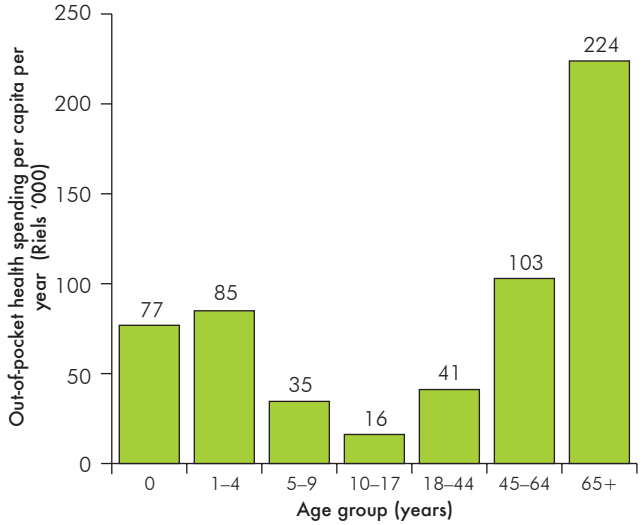
Source: Authors' analysis of CSES 2007 data set.

Out-of-Pocket Spending on Healthcare

Out-of-pocket payments not only discourage households from seeking care, but can also cause considerable hardship and financial impoverishment, especially among the poor. The CSES allows us to examine further the patterns and distribution of out-of-pocket healthcare spending in Cambodia.

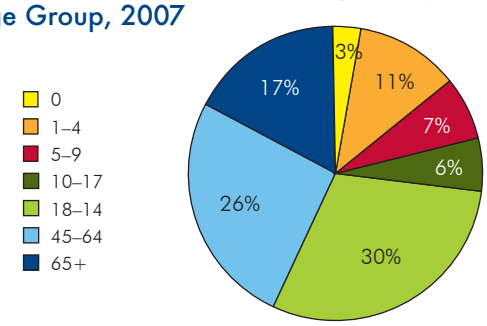
According to the CSES, annual out-of-pocket spending on medical care amounted to KR55,909 per capita in 2007, or 5.6% of total household expenditures. Spending was highest for infants and children and the elderly (Figure 9). Overall, spending on healthcare for infants accounted for 3% of total out-of-pocket health spending in 2007, and 11% of healthcare spending for children (Figure 10).

Figure 9: Out-of-Pocket Medical Spending Per Capita per Year in Cambodia, by Age Group, 2007



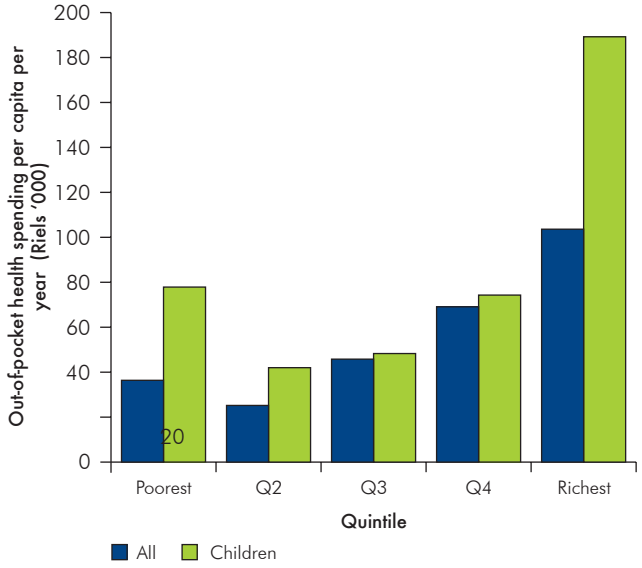
Source: Authors' analysis of CSES 2007 data set.

Figure 10: Out-of-Pocket Medical Spending in Cambodia, by Age Group, 2007



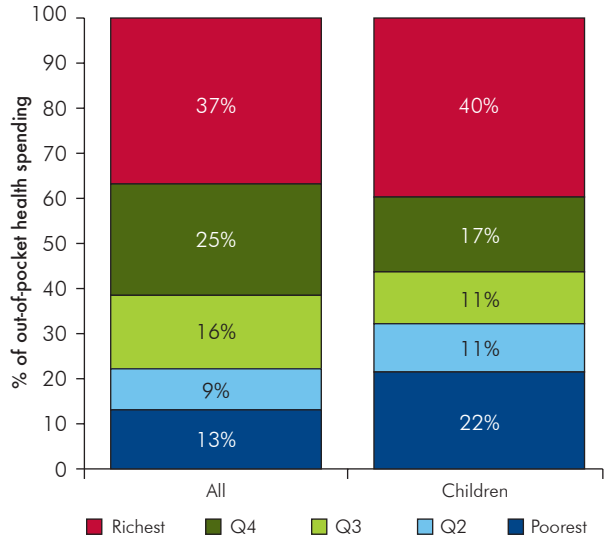
Source: Authors' analysis of CSES 2007 data set.

Figure 11: Out-of-Pocket Medical Spending per Capita per Year in Cambodia, by Socioeconomic Status, 2007



Q = quintile
Source: Authors' analysis of CSES 2007 data set.

Figure 12: Out-of-Pocket Health Spending per Capita per Year in Cambodia, by Socioeconomic Status, 2007



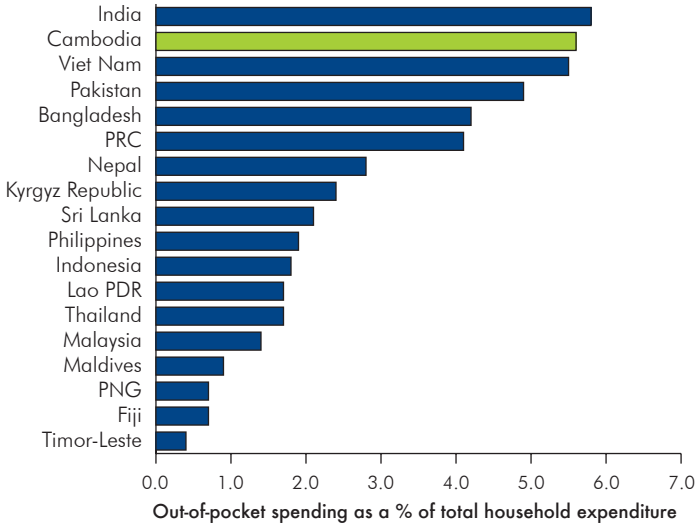
Q = quintile
Source: Authors' analysis of CSES 2007 data set.

However, there are enormous disparities between income levels in out-of-pocket medical spending. Overall, individuals in the richest quintile spend three times more than those in the poorest quintile (Figure 11), and account for almost six-tenths of all out-of-pocket medical spending. This disparity persists when spending for the medical treatment of children is considered. Out-of-pocket spending by the poorest quintile of Cambodians is only 4%–5% of total out-of-pocket medical expenditure, reflecting the lower incomes and ability to pay of that income group (Figure 12).

Financial Impact of Out-of-Pocket Spending on Healthcare

In Cambodia, out-of-pocket medical spending constitutes an exceptionally large share (5.6%) of total household expenditure, among the highest in the region (Figure 13).

Figure 13: Share of Out-of-Pocket Medical Spending in Household Budgets in Regional Countries, Recent Years

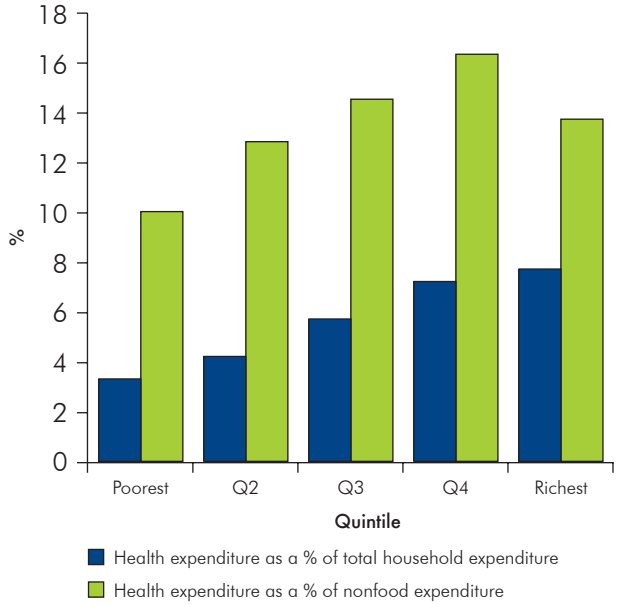


Lao PDR = Lao People's Democratic Republic, PNG = Papua New Guinea, PRC = People's Republic of China
Sources: Authors' analysis of CSES 2007 data set, analyses of Asian Development Bank technical assistance project, van Doorslaer et al. 2007, and forthcoming estimates by Equitap research network for Fiji and Maldives.

Out-of-pocket medical spending accounts for a higher share of total nonfood expenditure among richer households than among poor households, with significant variation between income groups. However, there is little variation between income groups in out-of -pocket medical spending as a share of total household expenditures, indicating the greater burden of these out-of-pocket expenditures on the poor (Figure 14).

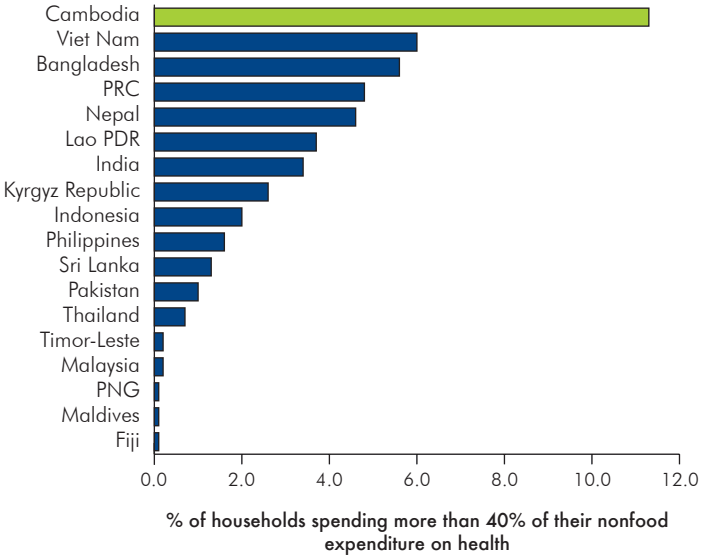
Two broad measures can be used to assess the financial impact of out-of-pocket spending on households. One is the number of households pushed below the poverty line by such spending (impoverishing impact); another is the number of households that must devote a large share of their resources to medical treatment expenses (catastrophic impact). Previous

Figure 14: Share of Out-of-Pocket Medical Spending in Household Nonfood Expenditures in Cambodia, 2007



Q = quintile
Source: Authors' analysis of CSES 2007 data set.

Figure 15: Incidence of Catastrophic Out-of-Pocket Medical Spending in the Region, Recent Years



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studies in Asia have shown that heavy reliance on out-of-pocket spending in health systems results in high medical impoverishment and catastrophic expenditures (van Doorslaer et al. 2006, van Doorslaer et al. 2007). The CSES reveals the high impoverishing and catastrophic impact of out- of-pocket expenditures on health in Cambodia.

Overall, in any given month in 2007, medical spending by households pushed 4.1% of Cambodians below the $1 international poverty line.[1] Among those households that reported any medical spending in any given month that year, 2.2% were impoverished by spending on medical treatment for their children. Correspondingly, the frequency of catastrophic health expenditures was high, whichever definition is used. In any given month in 2007, 5.6% of Cambodian families had to allocate more than 25% of their total household budget, and 11.2% had to allocate more than 40% of their monthly nonfood expenditures to medical treatment costs. These rates of catastrophic health expenditure are among the highest in Asia (Figure 15).

The incidence of catastrophic expenditures (defined as more than 40% of nonfood expenditures) in households that had to spend on medical treatment for children was equally large. Of all instances of catastrophic expenditure in 2007, 15% occurred in households that had to spend on medical treatment for children. Furthermore, of those households that reported any expenditure on medical treatment for children, 5.8% suffered catastrophic expenditures.

The catastrophic and impoverishing impact of maternal and child care could not be analyzed in more detail because of the limitations of the survey discussed earlier in this country brief.

[1] Equivalent to a consumption level of $1.25 (2005 PPP) per day, or KR2,308. This is quite similar to the national poverty line in Cambodia of KR2,473 per day.

Impact of Health Equity Funds

Health equity funds (HEF) are a major recent initiative aimed at reducing the financial barriers to access to health services for the poor in Cambodia. Operating at the district level, the schemes lack uniformity, but their most common element is the payment of inpatient user fees for the poor at referral hospitals. At the start of 2006, HEF schemes were operating in 22 out of 33 operational districts in Cambodia (Annear et al. 2006). Although the CSES was not designed to evaluate the impact of these funds, 20% of the survey sample (1,097 households) was from districts with HEF schemes. The differences between households in HEF districts and those in other districts could thus be examined. No significant differences were found between these two groups of districts in healthcare use and out-of-pocket expenditures. This suggests that at the population level, the overall impact of the HEF schemes in 2007 was negligible, despite evidence of impact at the individual facility level. The individual schemes may be too small to make a difference to overall healthcare use and spending.

Conclusions

CSES 2007 revealed large inequalities in the use of healthcare services in Cambodia. Rich families are more likely to recognize their children as being sick, and more likely to take them for medical treatment. Private providers are the dominant source of treatment. The non-poor predominantly use national and provincial government hospitals when they make use of public services, and the

poor mostly rely on district hospitals and health centers. This general pattern is likely to be closely linked to the overall inequality in maternal and child health outcomes in Cambodia, which favor the rich.

Although the survey did not directly elicit the reasons, it can be inferred that cost is the major factor discouraging parents from taking their sick children for care, or from using public sector providers. Almost all visits to public facilities result in out-of-pocket expenses for households.

The average out-of-pocket cost of medical visits is high for most households. Households spend 5.6% of their overall budgets on medical care. This proportion is higher than that in almost all other Asian countries. Expenditures on sick children account for 14.3% of this spending. As a consequence, the incidence of catastrophic medical expenditures in Cambodia is very high by regional standards, and many families are impoverished by the medical treatment of sick children. At the same time, poor families account for only a small fraction of overall out-of-pocket spending.

The CSES data permit comparison of healthcare use and expenditures between districts with health equity funds and other districts. No significant differences between HEF and other districts were found, suggesting that the impact of HEF schemes was too small to make a substantial difference at the population level. To improve access to maternal and child health services and the outcomes of such services, Cambodia will need to substantially increase public investment to reduce financial barriers to accessing healthcare facilities, and further reduce the costs of obtaining treatment at public facilities, in particular.

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ADB RETA 6515 Country Brief Series

Poor maternal, neonatal, and child health adversely affects women, families, and economies across the Asia and Pacific region. This burden of illness must be reduced if the Millennium Development Goals (particularly 4 [reduce child mortality] and 5 [improve maternal health]) are to be achieved and improvements made in the health and economic well-being of households and nations. Progress in this regard will require an increased supply of effective healthcare services, as well as demand for such services. This series of country briefs provides evidence from national household surveys on the financial burdens imposed on the poor by private expenditures on public and private healthcare services. Countries can use this information in building awareness within health systems and policy bodies of financial constraints on healthcare, and in designing demand-side interventions to increase the use of maternal, neonatal, and child health services. Summaries of the analysis of household data from Bangladesh, Cambodia, the Lao People's Democratic Republic, Pakistan, Papua New Guinea, and Timor-Leste, and a summary overview, are included in the series.

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Australia is taking a leading role in global and regional action to address maternal and child health. A key part of this is to strengthen the evidence for increased financial support and the most effective investments that governments and donors can make to meet Millennium Development Goals 4 and 5. Australia supported this technical assistance project as a part of this commitment.

About the Asian Development Bank

ADB's vision is an Asia and Pacific region free of poverty. Its mission is to help its developing member countries reduce poverty and improve the quality of life of their people. Despite the region's many successes, it remains home to two-thirds of the world's poor: 1.7 billion people who live on less than $2 a day, with 828 million struggling on less than $1.25 a day. ADB is committed to reducing poverty through inclusive economic growth, environmentally sustainable growth, and regional integration.

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