

# Impact of Out-of-Pocket Expenditures on Families and Barriers to Use of Maternal and Child Health Services in Asia and the Pacific

Evidence from National Household Surveys of Healthcare Use and Expenditures

SUMMARY TECHNICAL REPORT





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Printed in Sri Lanka.

ISBN 978-92-9254-228-3 (Print), 978-92-9254-229-0 (PDF)  
Publication Stock No. RPT135429-3

#### Cataloging-In-Publication Data

Rannan-Eliya, R.P., C. Anuranga, J. Chandrasiri, R. Hafez, G. Kasthuri, R. Wickramasinghe and J. Jayanthan.  
Impact of out-of-pocket expenditures on families and barriers to use of maternal and child health services in Asia and the Pacific: Evidence from national household surveys of healthcare use and expenditures—summary technical report  
Mandaluyong City, Philippines: Asian Development Bank, 2012.

1. Maternal, newborn and child health 2. Out-of-pocket expenditures I. Asian Development Bank.

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## PREFACE

This report was prepared under an Asian Development Bank (ADB) technical assistance project, *Impact of Maternal and Child Health Private Expenditure on Poverty and Inequity*. The Institute for Health Policy in Sri Lanka and the authors gratefully acknowledge the funding made possible by ADB that was financed principally by the Government of Australia.

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.

## ACKNOWLEDGMENTS

The country analyses in this report were undertaken by a team of researchers at the Institute for Health Policy in Colombo, consisting of Chamara Anuranga, Jayalal Chandrasiri, Reem Hafez, Gayani Kasthuri, Ruwani Wickramasinghe, and Janaki Jayanthan, led by Ravi P. Rannan-Eliya.

Ian Anderson, Indu Bhushan, and Patricia Moser of the Asian Development Bank provided valuable comments and feedback on the various analyses. Kimberly Fullerton worked on the layout and copy editing. Artwork and graphic design were rendered by Harees Hashim of the Institute for Health Policy.

The authors thank the Asian Development Bank and Australian Agency for International Development for their funding support through the technical assistance project, without which this study would not have been possible.



## ABBREVIATIONS

ADB	–	Asian Development Bank
DMC	–	developing member country
Lao PDR	–	Lao People’s Democratic Republic
MNCH	–	maternal, neonatal, and child health

## NOTE

Timor-Leste cover photo (bottom, right) credit: UN Photo by Martine Perret.

## EXECUTIVE SUMMARY

Despite substantial improvements in the region in recent decades, the burden of poor maternal, neonatal, and child health (MNCH) remains unacceptably high in many developing member countries (DMCs). Large disparities also continue in MNCH outcomes within DMCs, with outcomes substantially worse in poor families and in those living in rural and remote areas. These disparities are greatest in DMCs with the largest burdens of maternal and child ill health and are linked to inequalities in access to healthcare services. Improving access to and coverage by effective MNCH services, which is a prerequisite to achieving Millennium Development Goals 4 and 5, will require efforts to reduce the barriers to access that often discourage utilization and increased use of services. One of the most important barriers to care is the frequent need for households to pay out-of-pocket for healthcare. These payments not only deter use of needed services, but also financially impoverish families.

To shed light on the barriers to healthcare access and the impact of out-of-pocket payments, the ADB technical assistance project (RETA-6515) analyzed the data from routine national household expenditure surveys in six DMCs: Bangladesh, Cambodia, the Lao People's Democratic Republic (Lao PDR), Pakistan, Papua New Guinea, and Timor-Leste. The surveys contained both a general household expenditure module, which was used to examine overall household health spending, and a health module, which asked questions about illness, healthcare use, and spending. Limitations in the survey designs meant that utilization and expenditures related to maternal care could not be examined reliably, but those related to children could to some extent.

With the exception of Pakistan, in all of the surveys analyzed, the poor reported less illness in their children and overall than the nonpoor did, despite the fact that other data consistently show the poor to be sicker and suffering higher rates of child and maternal mortality. This is consistent with findings elsewhere that the poor and less educated in developing countries are less likely to recognize and report symptoms of illness. However, the data from Bangladesh and Timor-Leste indicate that these disparities are reducing over time, as overall health awareness improves. Of those who reported illness, the poor and rural households were consistently less likely to obtain care for their sick children and overall. Combined with the disparities in reporting illness, this contributes to significant inequalities in the use of healthcare services by children and other family members in all of the DMCs. These inequalities are greatest in Papua New Guinea, Cambodia, the Lao PDR, and Timor-Leste.

A range of other factors also contributes to the observed disparities in healthcare use, including the cost of treatment, distance and transport costs, and perceptions about the competency and behavior of healthcare providers. Although all play some role, their relative importance varies considerably. The financial costs of treatment were the key barrier to obtaining healthcare in Bangladesh and Pakistan, and probably in Cambodia. In contrast, financial costs were negligible in Timor-Leste and Papua New Guinea, where distance and transport difficulties were reported as the predominant barrier. In Timor-Leste, most visits to public providers also result in no out-of-pocket costs, in contrast to the majority of such visits in Bangladesh, Cambodia, and the Lao PDR, where public facilities charge substantial user fees.

These findings indicate that in some DMCs, such as Timor-Leste and Papua New Guinea, the major barrier to care is the physical difficulty in accessing healthcare providers and not costs. In these DMCs, the main focus for improving access to MNCH care should be increasing the availability and density of government healthcare facilities, especially in rural areas. In Bangladesh and Pakistan, where costs were reported as the leading barrier, the results indicate that government efforts to make free or near-free services available through public facilities are not effective, because government facilities remain costly to access. The survey

data also show that the main cost barrier at government facilities in Bangladesh was the need to purchase medicines, suggesting that Bangladesh and many other DMCs with similar policies of providing free government services should focus on reducing the actual costs faced by patients at these facilities. In the Lao PDR, a mix of financial costs and travel barriers emerge as the main barriers discouraging care, indicating that improving access to MNCH care services should focus both on increasing the availability of healthcare facilities in rural areas as well as reducing the financial costs faced by patients at public facilities due to the reliance on user fees.

With the exception of Papua New Guinea, in the DMCs where the question was asked, quality-related factors were not significant in discouraging access overall or for children. This was quality as perceived by patients, and not quality of clinical care. In most study countries they were consistently negligible in the case of the poor, and only important for the richest quintile of patients. In the case of Papua New Guinea, after physical barriers, poorer families next identified poor quality services as a major reason for not seeking treatment when children were sick, which implies that poor quality services also discourages use. Improving quality of care in all its aspects is important to improving healthcare coverage, but most survey findings show that it was not as important a barrier as cost and travel and should not be the priority for efforts aiming to improve access by the poor.

There is a large variation in DMCs and in the study countries in the overall share of household budgets that are allocated to out-of-pocket spending on healthcare. The spending share varies from negligible (i.e., less than 1.0%) in Fiji, Timor-Leste, and Papua New Guinea to substantial (i.e., 4.0%–7.0%) in countries such as Bangladesh, Cambodia, the People's Republic of China, India, Pakistan, and Viet Nam. Richer households spent more out of pocket than poorer households in all of the surveys analyzed, with both the per capita level and the share of household budgets allocated to health increasing with the income level of households. However, the burden of out-of-pocket expenses on the poor was usually greater, since it accounted for a larger share of their discretionary nonfood expenditures.

Using standard measures, the incidence of catastrophic medical expenditures is highest in Bangladesh, Cambodia, and the Lao PDR, and very low in Timor-Leste. The incidence of impoverishing expenditures parallels these results to some extent. In any given month, medical spending by households pushed 4.1% of Cambodians below the \$1 international poverty line in 2007, but only 0.7% of Bangladeshis in 2010. In these countries, improving financial risk protection should be a priority for governments seeking to expand healthcare coverage. The incidence of catastrophic expenditures is negligible in Timor-Leste and Papua New Guinea. The incidence of both catastrophic and impoverishing expenditures in the study DMCs is closely related to the extent to which the DMCs rely on out-of-pocket expenditures to finance their healthcare systems. However, the differences between DMCs, such as Bangladesh and Cambodia that share high levels of reliance on out-of-pocket financing, point to differences in the way out-of-pocket expenses are distributed and forced on households. In Bangladesh, out-of-pocket spending is more concentrated in the rich households, due to the voluntary choice of private care, than is in Cambodia, resulting in less-impoverishing expenditures.

This study demonstrates that the national household expenditure surveys administered in most ADB DMCs are a significant source of evidence and data on the barriers facing households in accessing healthcare and the financial impacts of out-of-pocket expenditures. This resource provides a means to assess these problems in most DMCs, without having to commission expensive new surveys. The findings provide important new information on the problems of access in several DMCs, which not only has implications for ongoing policy debates but also answers previously unresolved policy questions. More can be done to make use of these routine data to understand the barriers faced by families in accessing healthcare, including support for efforts, such as by the regional Equitap network, to build national capacities to examine equity questions using household survey data.



## I. INTRODUCTION

### Background

Despite substantial gains in health in Asia and the Pacific over the past few decades, the burden of poor maternal, neonatal, and child health (MNCH) varies across countries, with some of the highest burdens in the world found within the region. In addition, large disparities continue with regard to MNCH outcomes within countries, with these outcomes substantially worse in the poor and those living in rural and remote areas. These disparities typically are greatest in countries with the largest burdens of maternal and child ill health.

A range of cost-effective, proven healthcare interventions now exist that can substantially reduce maternal and child mortality. These include both preventive services, such as immunizations, and curative care, such as the treatment of malaria or lower respiratory tract infections with appropriate medicines. As shown by the experience of countries like Malaysia, Sri Lanka, and Thailand (Pathmanathan et al. 2003), when families have unhindered access to and make good use of these interventions, it is possible to lower maternal and child mortality rates, even in the midst of continuing poverty. Improving access to and coverage by these services, which is a prerequisite to achieving Millennium Development Goals 4 and 5, will require both supply- and demand-side efforts to reduce the barriers to access that often discourage utilization of such services.

One of the most important barriers to care is the frequent need for households to pay out of pocket for healthcare. These payments not only deter the use of needed services but also impoverish families. In much of the region, public funding of healthcare is low, forcing most households to pay essential healthcare bills out of their own pockets. These payments hit the poor particularly hard. A 2006 study of 11 countries in the region estimated that as many as 78 million people fell below the \$1-a-day poverty line because of healthcare payments (van Doorslaer et al. 2006). MNCH care costs can be a specific cause of financial distress for the poor (Bonu et al. 2009), as these are often significant, are often sudden and unexpected, and occur with greater frequency. The poor tend to have more children, and those children often suffer from worse health. These costs not only impoverish but can also increase inequity in healthcare utilization and in overall health outcomes.

Understanding to what extent financial costs burden and impoverish families, as well as their importance in reducing access to critical services, can help developing member countries (DMCs) of the Asian Development Bank (ADB) and their development partners identify the scale and intensity of the problem, possible policy responses, and likely budgetary implications for improving equity and access to essential MNCH care. Given the complexity and specifics of each national situation, intensive research and data collection are usually needed in each country to analyze the range of barriers to access faced by mothers and children as well as possible solutions. This is expensive, and such work often takes years. However, in almost all DMCs, household surveys of healthcare use and expenditures represent an existing data source that can be readily exploited to assess the overall situation.

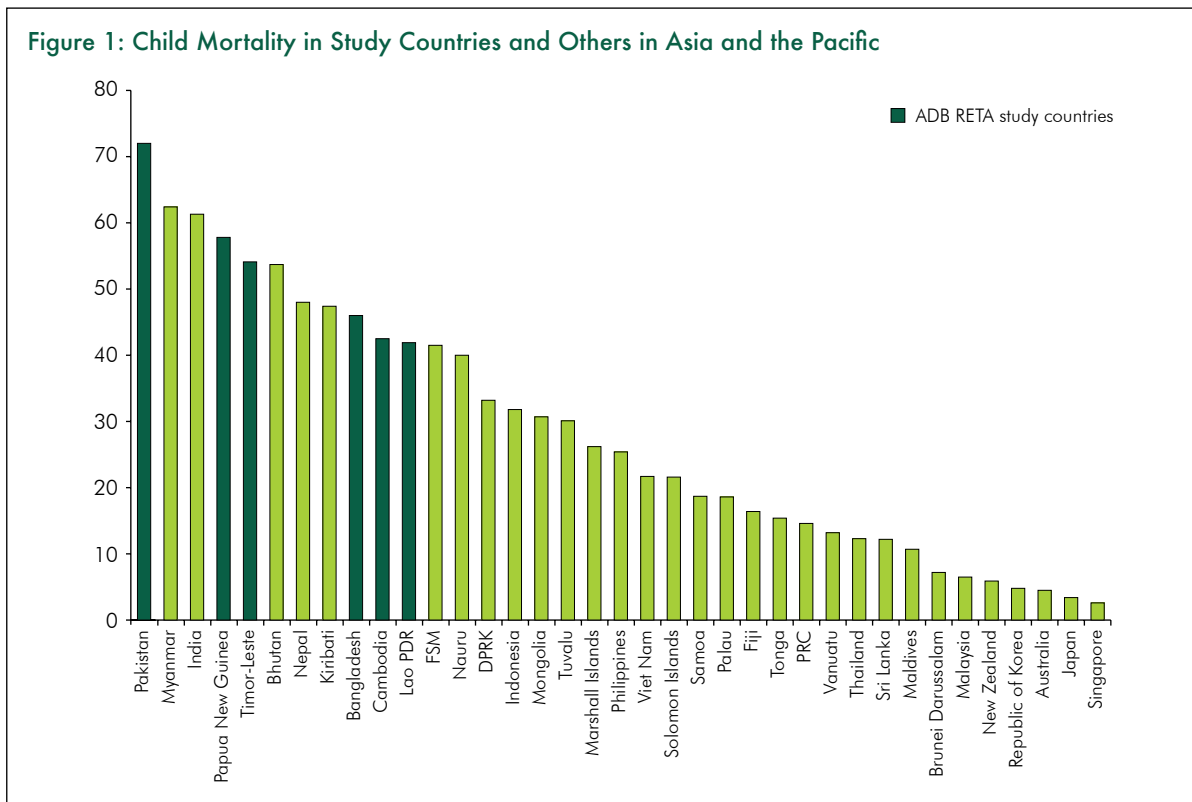
To examine existing data on access barriers to MNCH care and the impacts of financial costs on families, ADB's Impact of Maternal and Child Health Private Expenditure on Poverty and Inequity technical assistance project analyzed the data from such household surveys in several DMCs (ADB 2008). This report presents the findings and discusses their implications for improving access to essential MNCH services and accelerating poverty reduction in the region.

## Country Settings

From the 16 DMCs included in the original scope of the project, 6 were selected for analysis: Bangladesh, Cambodia, the Lao People's Democratic Republic (Lao PDR), Pakistan, Papua New Guinea, and Timor-Leste. Each faces significant challenges in reducing maternal, neonatal, and child mortality; has inadequate levels of coverage by effective MNCH services; and has national household surveys available for analysis. Together, they span the various parts of the region and represent the diverse national contexts in which MNCH services must be delivered. In addition to these six DMCs, results from several other countries are sometimes shown for comparison in this report, taken from a parallel set of analyses undertaken by the Institute for Health Policy and members of the Equitap research network, funded, in part, by an Australian Development Research Award grant made by the Australian Agency for International Development to the Institute for Health Policy.

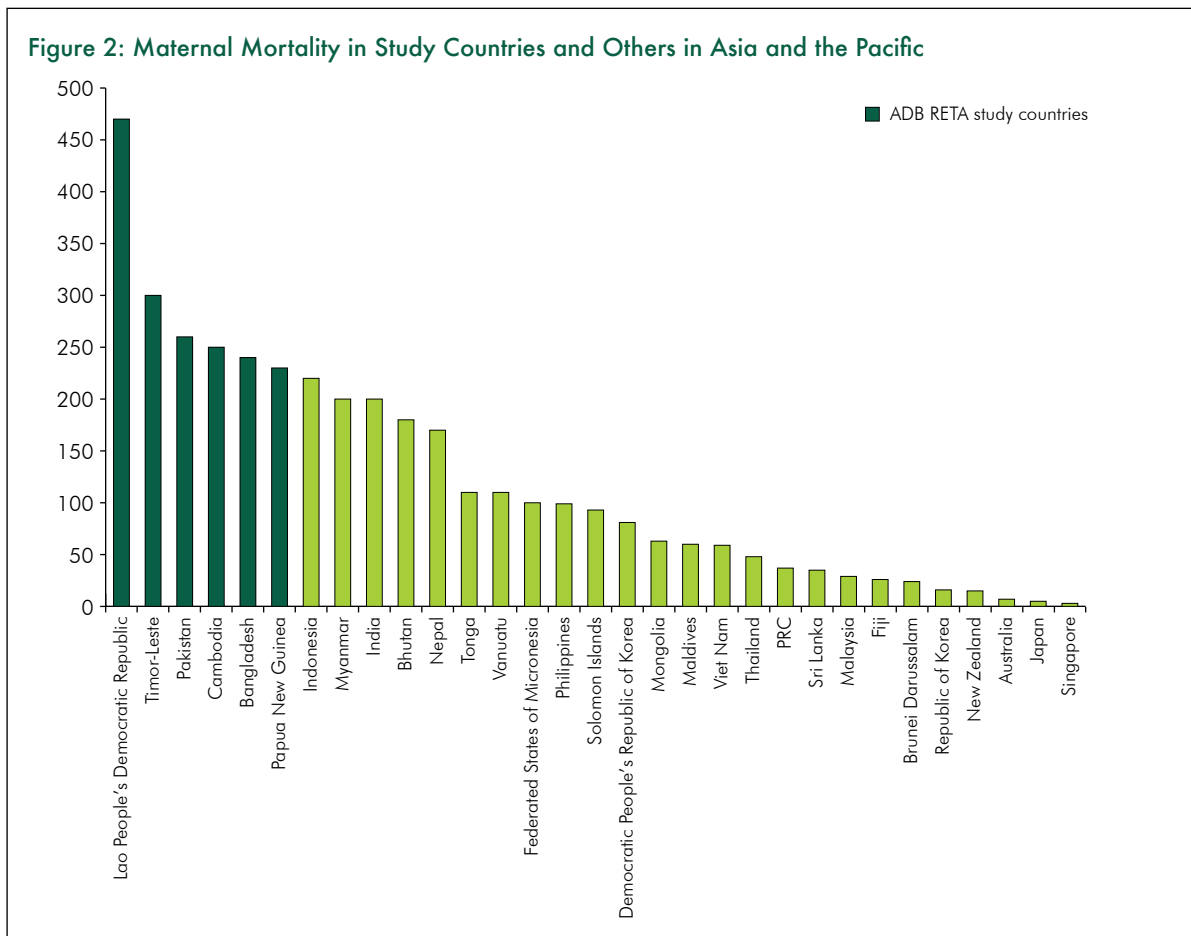
High levels of both maternal and child mortality characterize all six DMCs. Mortality in those aged less than 5 years ranges from 42 in the Lao PDR to 72 per 1,000 children in Pakistan, which are among the highest levels in both the region and world (Figure 1). Similarly, maternal mortality ranges from 230 in Papua New Guinea to 470 per 100,000 live births in the Lao PDR, again among the highest levels seen anywhere (Figure 2). These high levels of mortality are, in turn, linked to low levels of coverage by critical MNCH interventions. Access to skilled birth attendance is low in all of the study DMCs, and immunization coverage for critical immunizations, such as measles and diphtheria is less than 90% in the Lao PDR, Pakistan, and Papua New Guinea (World Health Organization 2012).

**Figure 1: Child Mortality in Study Countries and Others in Asia and the Pacific**



DPRK = Democratic People's Republic of Korea, FSM = Federated States of Micronesia, Lao PDR = Lao People's Democratic Republic, PRC = People's Republic of China. RETA = regional technical assistance.

Source: United Nations Children's Fund.



PRC = People's Republic of China.

RETA = regional technical assistance.

Source: United Nations Population Fund.

This pattern of poor MNCH outcomes and inadequate coverage by essential interventions is invariably linked to large disparities in outcomes and service coverage between poor and nonpoor households. Where coverage by critical interventions is less than universal, poorer families invariably have worse coverage.

## II. DATA SOURCES AND METHODS

### Data Sources

The project analyzed data from household expenditure surveys conducted in the six DMCs. All were general budget or living standards surveys, which are conducted in almost all countries to collect information on household consumption patterns and poverty levels. The surveys analyzed are listed in Table 1 with details of their timing and sample size. All were designed to be nationally representative.

**Table 1: Details of Household Surveys Analyzed in the Study**

Country	Survey	Agency	Time Period	Sample - Households	Sample - Individuals
Bangladesh	Household Income and Expenditure Survey (2000)	Bangladesh Bureau of Statistics (BBS), Statistics Division, Ministry of Planning	2000	7,440	38,515
Bangladesh	Household Income and Expenditure Survey (2005)	Bangladesh Bureau of Statistics (BBS), Statistics Division, Ministry of Planning	2005	10,080	48,969
Bangladesh	Household Income and Expenditure Survey (2010)	Bangladesh Bureau of Statistics (BBS), Statistics Division, Ministry of Planning	2010	12,240	55,580
Cambodia	Cambodia Socio-Economic Survey (2007)	National Institute of Statistics (NIS), Ministry of Planning	2007	3,593	17,439
Lao PDR	Expenditure and Consumption Survey (2008)	Lao Statistics Bureau, Ministry of Planning and Investment	2007–2008	8,296	48,021
Pakistan	Pakistan Social and Living Standards Measurement Survey (2006)	Federal Bureau of Statistics	2005–2006	15,453	110,816
Pakistan	Core Welfare Indicators Questionnaire Survey (2007)	Federal Bureau of Statistics	2006–2007	73,953	496,060
Papua New Guinea	Household Survey (1996)	Unisearch PNG and Institute of National Affairs	1995–1996	1,200	6,986
Papua New Guinea	Household Income and Expenditure Survey (2009–2010)	National Statistical Office (NSO)	2009–2010	4,081	22,719
Timor-Leste	Timor-Leste Survey of Living Standards (2001)	National Statistics Directorate (NSD)	2001	1,800	9,117
Timor-Leste	Timor-Leste Survey of Living Standards (2007)	National Statistics Directorate (NSD)	2007	4,477	25,000

Lao PDR = Lao People's Democratic Republic.



Since the main purpose of these surveys is to assess overall living standards, all of them, except the Pakistan Core Welfare Indicators Questionnaire Survey 2006–2007, collected data on aggregate household spending on all goods and services. This information was used to estimate total household spending and the proportion of that allocated to healthcare expenses. However, as this information applied to a household as a whole, the data could not be used to analyze out-of-pocket expenses that were incurred specifically for mothers and children.

All of the surveys, except the Pakistan Social and Living Standards Measurement Survey 2005–2006, also contained a health module that collected more detailed information about illness and healthcare use. This module first asked whether each household member had been sick in the past 30 days. Depending on the survey, it might then ask whether the individual sought medical treatment in response to the illness and where, and if he or she did not seek care, the reasons why. In some surveys, the module also asked detailed questions about the expenses that the household incurred during the reported treatment visits. Table 2 gives details of the items covered by these health modules.

**Table 2: Items Covered by Survey Health Modules**

Country	Survey	Reasons for Not Seeking Treatment	Provider Used in Illness Episode	Expenses Specific to Treatment Visits
Bangladesh	Household Income and Expenditure Survey (2000)	Yes	Yes	Yes
Bangladesh	Household Income and Expenditure Survey (2005)	Yes	Yes	Yes
Bangladesh	Household Income and Expenditure Survey (2010)	Yes	Yes	Yes
Cambodia	Cambodia Socio-Economic Survey (2007)	No	No	No
Lao PDR	Expenditure and Consumption Survey (2007–2008)	Yes	Yes	Yes
Pakistan	Core Welfare Indicators Questionnaire Survey (2006–2007)	Yes	Yes	No
Papua New Guinea	Household Income and Expenditure Survey (1995–1996)	No	Yes	No
Papua New Guinea	Household Income and Expenditure Survey (2009–2010)	Yes	Yes	Yes
Timor-Leste	Timor-Leste Survey of Living Standards (2001)	Yes	Yes	Yes
Timor-Leste	Timor-Leste Survey of Living Standards (2007)	Yes	Yes	Yes

Lao PDR = Lao People's Democratic Republic.

The availability of a health module and its design determined the types of analysis. Only in those surveys where the health module collected data on expenses incurred during specific episodes of illness was it possible to link out-of-pocket expenses to specific individuals and to analyze spending specifically on mothers and children. For Cambodia and Pakistan, such analysis was not possible. In general, if DMCs want to improve tracking of household expenditures on MNCH, revising the design of these national surveys to bring them up to regional best practices would be a major contribution. Specifically, DMCs can revise the design of routine surveys with health modules to include a specific question on recent illness, and then ask separately about inpatient and outpatient treatment visits and associated expenses for each household member.

## Methods

### Estimation of Living Standards

The general expenditure section of each survey was used to estimate the overall monthly consumption by the household and then to compute consumption per adult equivalent, as a measure of relative living standards (O'Donnell et al. 2008). However, for the Pakistan Core Welfare Indicators Questionnaire Survey 2006–2007, which lacks a detailed household expenditure module, a measure of relative living standards was constructed by computing a wealth index for each household, applying principle component analysis to the data on household assets (Filmer and Pritchett 2001). Once these measures were estimated, the households in each survey were ranked into quintiles of equal population size, and these were used when analyzing differences in healthcare utilization and expenditures by socioeconomic status.

### Analysis of Illness and Healthcare Seeking

First, the health module question on recent illness in the past 30 days was used to analyze the level and inequalities in self-reported sickness in children and in all age groups. It was not possible to do this or any of the other analyses for mothers, as none of the surveys separately identified pregnant or recently delivered mothers. The main focus was on disparities by socioeconomic status, but differences by urban and rural residence and by educational level were also examined.

The analysis then examined the likelihood of obtaining medical treatment if a household member was reported sick in the past 30 days, and the overall inequality in use of medical treatment. This provides general information on potential disparities in access to medical care. Where the survey also asked the reasons care was not sought for sick individuals, these were examined with particular focus on differences between poor and nonpoor households to shed further light on the barriers to healthcare use.

### Analysis of Treatment Choices and Expenditures

The choice of healthcare provider was examined when the surveys asked this question, and patterns in the choice were analyzed in relation to socioeconomic status. Where expenditures were available by type of provider, the average costs of visits to different providers were estimated. This often shed light on the choice of providers that was observed.

### Analysis of Impact of Out-of-Pocket Expenses on Households

To analyze the impact of out-of-pocket health expenditures on households, data in the general expenditure sections of each survey were used and not the expenditure questions in the health modules, if these were duplicates. In several surveys, healthcare expenses were recorded twice, once in the general expenditure section and again in the health module, because there are always biases in the reporting of expenditures by households in surveys (Rannan-Eliya and Lorenzoni 2010). Further, when health expenditures are asked about in a health module, they tend to be over-reported in comparison with other expenditures collected in the general expenditure sections of a survey.

Two aspects of household health expenditures were examined. The first was the general level and variation in household out-of-pocket expenditures. The second was the impact on households of out-of-pocket expenditures on health. This impact was measured in two ways: the frequency of catastrophic expenditures, and the frequency of impoverishing expenditures. For each of these, standard definitions were used as in other studies (van Doorslaer et al. 2006; van Doorslaer et al. 2007; O'Donnell et al. 2008).

### III. FINDINGS

#### Perception of Illness and Illness Reporting

A key driver of whether ill individuals seek healthcare is whether they perceive themselves as sick, or in the case of children, whether their adult caregivers do. The most recent surveys from the study DMCs asked whether each household member had been sick in the previous 30 days. Tables 3 and 4 present the answers for each survey, for all individuals and for children alone. The overall rate of illness reported ranges from 6.3% in Pakistan to 29.4% in Papua New Guinea. Similar variations are seen in the case of children, for whom higher rates of sickness were reported, except in the Lao PDR.

**Table 3: Proportion of All Individuals Reported as Sick in the Past 30 Days by Socioeconomic Status (%)**

Survey	Poorest	Q2	Q3	Q4	Richest	Overall
Bangladesh Household Income and Expenditure Survey (HIES) 2010	17.5	19.3	21.5	22.9	24.2	21.1
Cambodia Socio-Economic Survey (CSES) 2007	13.3	13.8	15.5	17.2	16.5	15.3
Lao Expenditure and Consumption Survey (LECS) 2007–2008	9.8	9.5	9.5	10.2	11.5	10.1
Pakistan Core Welfare Indicators Questionnaire Survey (CWIQ) 2006–2007	6.6	6.9	6.33	6.0	5.6	6.3
PNG Household Income and Expenditure Survey (HIES) 2009–2010	29.7	27.8	27.3	31.2	32.8	29.4
Timor-Leste Survey of Living Standards (TLSLS) 2007	22.3	23.5	21.6	22.8	25.1	23.1

PNG = Papua New Guinea.

Q = quintile.

Source: Authors' analysis of Bangladesh HIES 2010, CSES 2007, LECS 2007–2008, Pakistan CWIQ 2007, Papua New Guinea HIES 2009–2010, and TLSLS 2007.

**Table 4: Proportion of All Children (Aged Less than 5 Years) Reported as Sick in the Past 30 Days by Socioeconomic Status (%)**

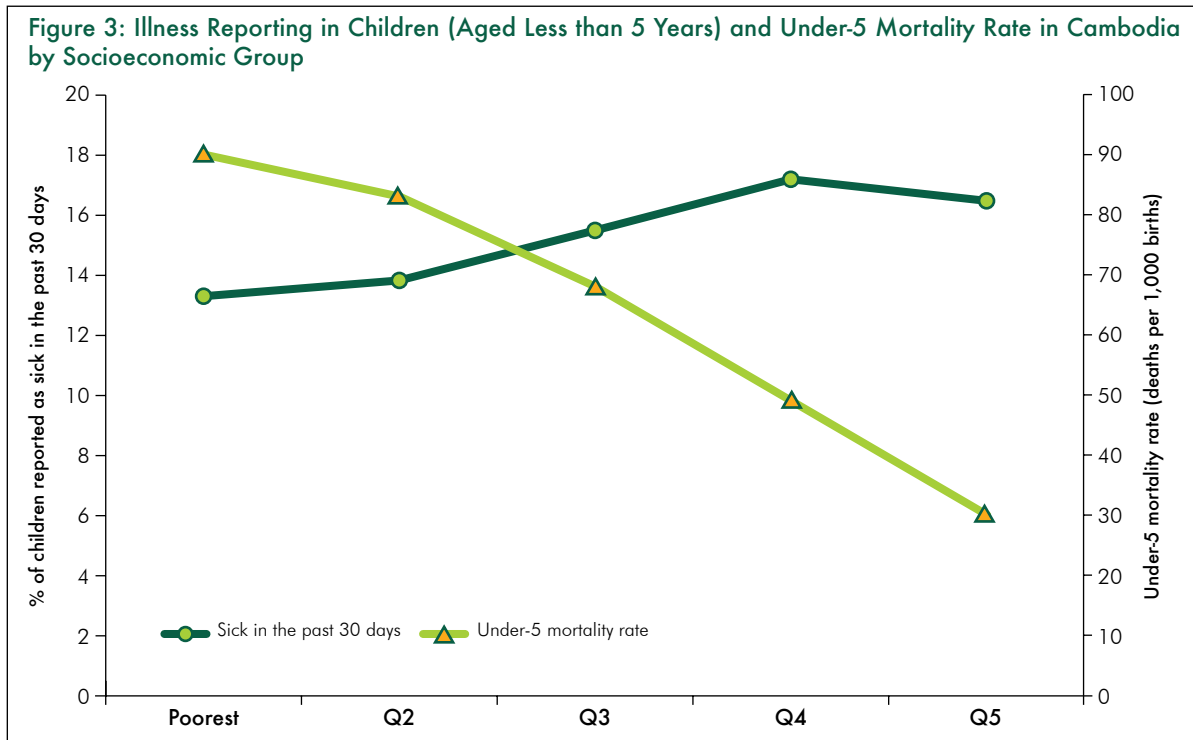
Survey	Poorest	Q2	Q3	Q4	Richest	Overall
Bangladesh Household Income and Expenditure Survey (HIES) 2010	30.2	31.8	32.9	36.7	35.2	33.0
Cambodia Socio-Economic Survey (CSES) 2007	14.4	13.6	13.7	16.2	16.0	14.8
Lao Expenditure and Consumption Survey (LECS) 2007–2008	10.3	10.6	10.6	10.4	13.3	10.9
Pakistan Core Welfare Indicators Questionnaire Survey (CWIQ) 2006–2007	12.0	12.7	11.8	10.5	10.7	11.6
PNG Household Income and Expenditure Survey (HIES) 2009–2010	31.3	35.8	35.7	38.5	43.5	37.0
Timor-Leste Survey of Living Standards (TLSLS) 2007	40.9	46.5	45.7	41.3	42.2	43.4

PNG = Papua New Guinea.

Q = quintile.

Source: Authors' analysis of Bangladesh HIES 2010, CSES 2007, LECS 2007–2008, Pakistan CWIQ 2007, Papua New Guinea HIES 2009–2010, and TLSLS 2007.

With the exception of Pakistan, in none of the DMCs did the poor report higher rates of sickness than the nonpoor, and the general pattern is for the richest quintiles to report rates of sickness 10%–20% higher than the poorest quintile. This can be contrasted with the evidence from other data sources, such as demographic and health surveys, that morbidity and mortality rates are higher in poorer children in all of these DMCs. For example, in Cambodia, the under-5 mortality rate is three times higher in the poorest quintile of families than the richest (National Institute of Statistics, Directorate of General Health, and ICF Macro 2011), but the level of sickness reported in children is 20% less in the poorest families compared to the richest quintile (Figure 3).



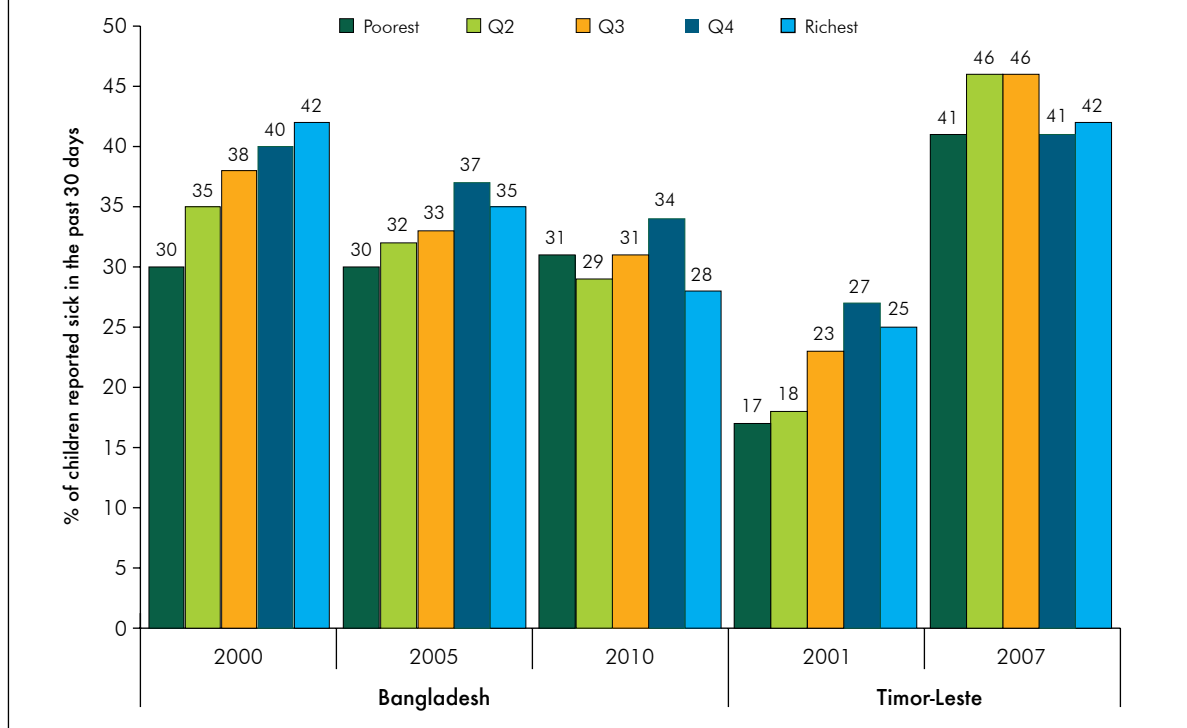
Q = quintile.

Source: Authors' analysis of Cambodia Socio-Economic Survey 2007 data set, and National Institute of Statistics, Directorate of General Health, and ICF Macro (2011).

This disparity between reported and actual rates of illness is consistent with evidence from most developing countries. Self-reporting of sickness in a survey is an unreliable indicator of the real level of illness, and in most, the poor and less educated are less likely to report that they are sick when they actually are. Consequently, the poor can be sicker and experience higher mortality rates than the nonpoor but report lower levels of illness when asked in surveys (Manesh et al. 2008). However, this disparity can improve with time as overall health awareness increases and differences in health knowledge between subgroups decrease. This also means that if overall health conditions are improving, overall rates of reported illness in surveys may either increase (i.e., a trend dominated by increasing health awareness) or decrease (i.e., a trend dominated by the improving health status). Both trends can be seen in Bangladesh and Timor-Leste, where the disparity in illness reporting in children decreased over the decade, with overall rates of reporting increasing in Timor-Leste and falling in Bangladesh (Figure 4).

A large part of the disparity seen in healthcare utilization by children in Bangladesh, Cambodia, the Lao PDR, and Timor-Leste is driven by differences in health awareness. At the same time, as evidenced by the trends in Bangladesh and Timor-Leste, this driver of disparity can be reduced over time by increasing overall health awareness.

**Figure 4: Trends in Illness Reporting in Children (Aged Less than 5 Years) in Bangladesh and Timor-Leste by Socioeconomic Group, 2000–2010 (%)**



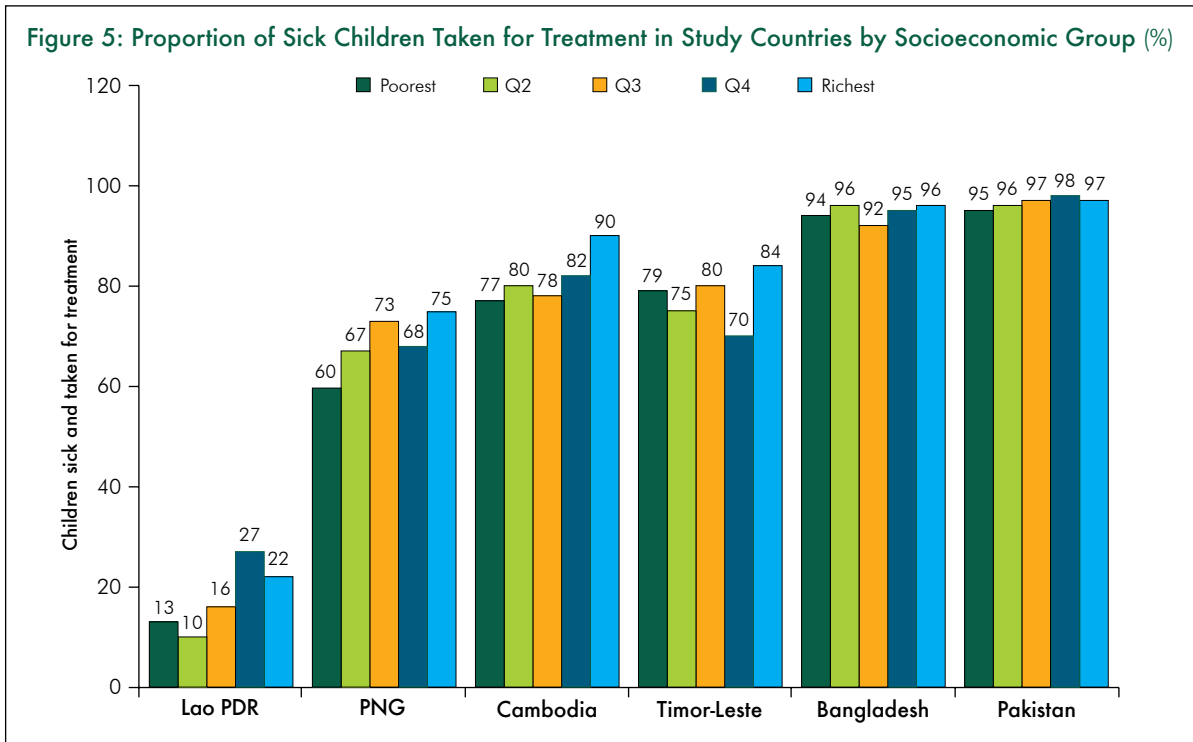
Q = quintile.

Source: Authors' analysis of Bangladesh Household Income and Expenditure Surveys 2000, 2005, and 2010, and Timor-Leste Survey of Living Standards for 2001 and 2007.

## Treatment Seeking and Choice of Healthcare Provider

### Treatment Seeking

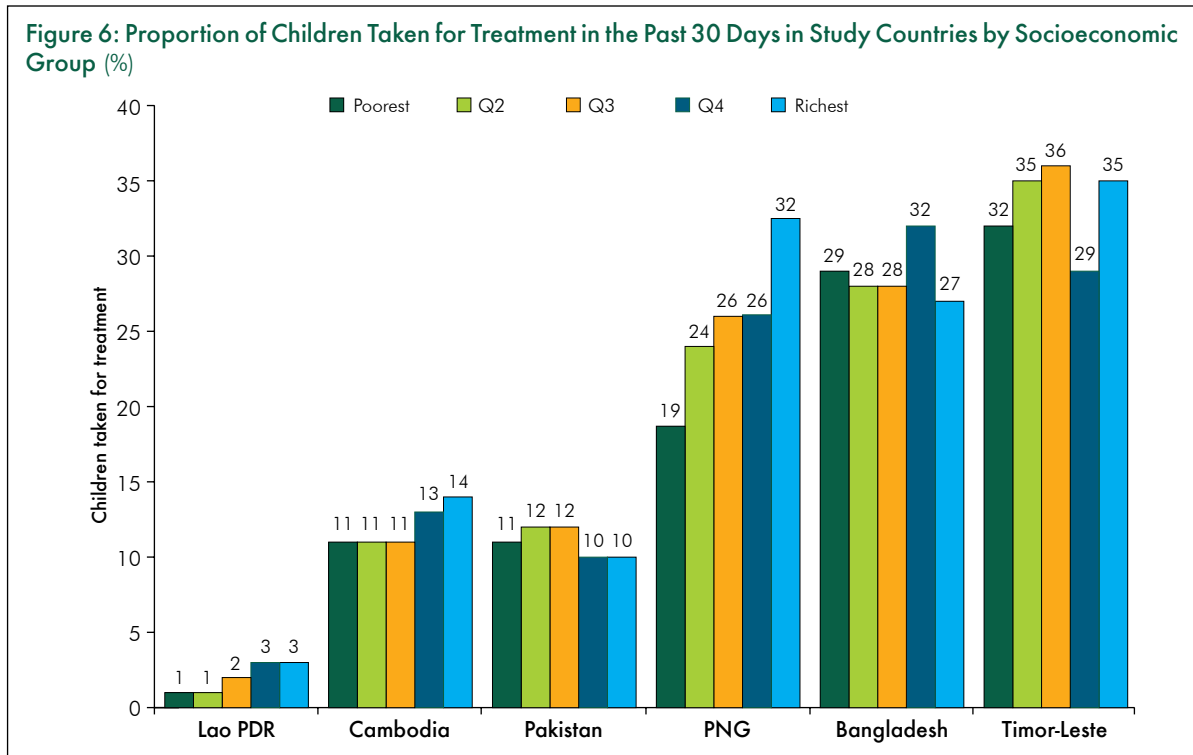
Not all children or adults who recognize themselves as sick are taken for treatment. In all of the study DMCs, the poor, who think themselves sick, were less likely to obtain treatment for their children than the nonpoor, with the differences being the most substantial in Papua New Guinea, Cambodia, and the Lao PDR (Figure 5). Combined with the disparities in most of the DMCs between the poor and nonpoor in recognizing and reporting illness, this leads to significant inequalities in the overall rates of utilization of medical services by children (Figure 6). Disparities are seen in Papua New Guinea, Cambodia, the Lao PDR, and Timor-Leste. In the case of Bangladesh, where it was possible to assess changes over time, the overall utilization of medical treatment by children became less pro-rich over time (Figure 7).



Lao PDR = Lao People’s Democratic Republic, PNG = Papua New Guinea.

Q = quintile.

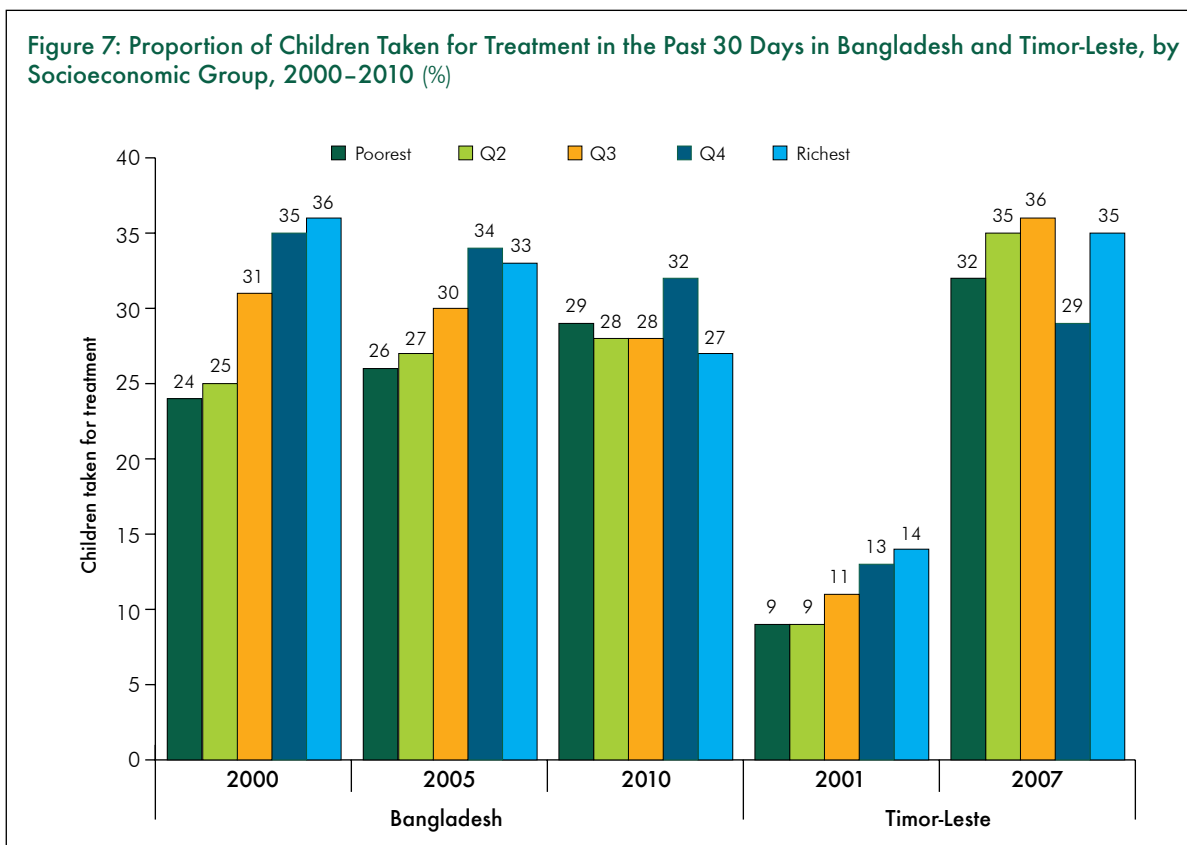
Source: Authors’ analysis of Bangladesh HIES 2010, CSES 2007, LECS 2007–2008, Pakistan CWIQ 2007, Papua New Guinea HIES 2009–2010, and TLSLS 2007.



Lao PDR = Lao People’s Democratic Republic, PNG = Papua New Guinea.

Q = quintile.

Source: Authors’ analysis of Bangladesh HIES 2010, CSES 2007, LECS 2007–2008, Pakistan CWIQ 2007, Papua New Guinea HIES 2009–2010, and TLSLS 2007.



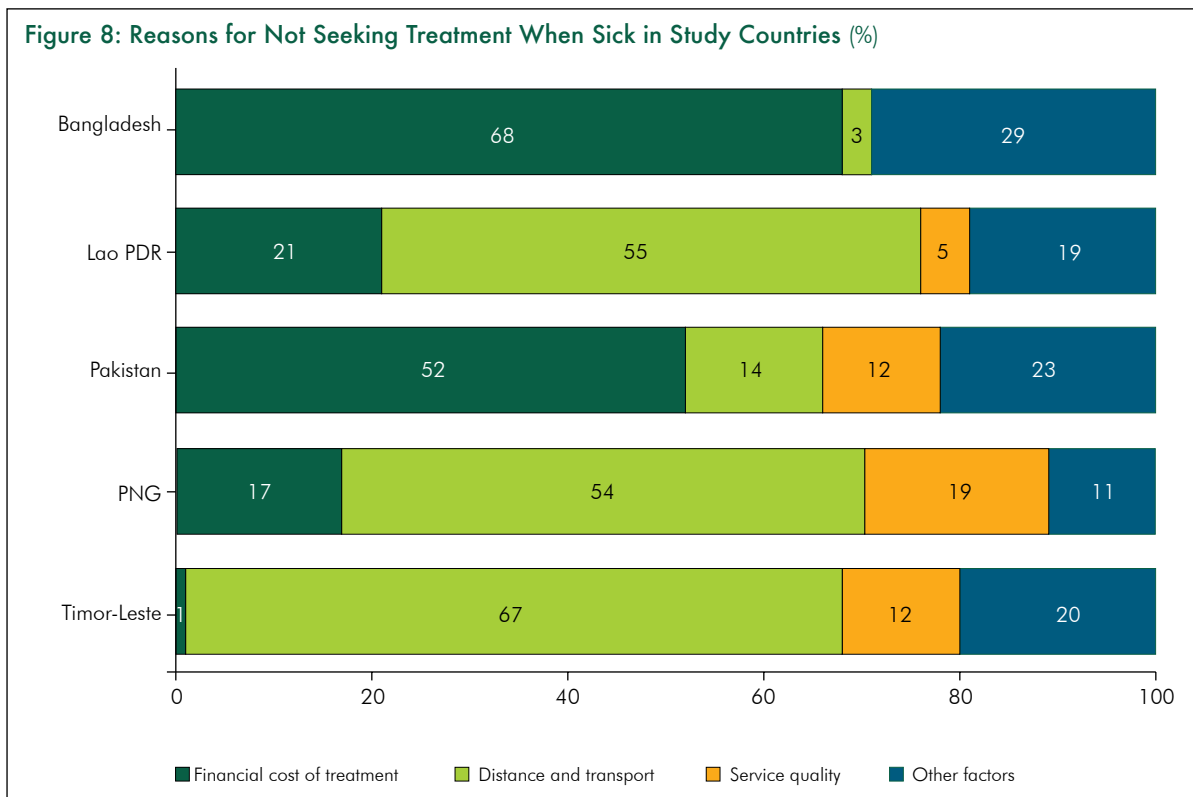
Q = quintile.

Source: Authors' analysis of Bangladesh Household Income and Expenditure Survey 2000, 2005, and 2010, and Timor-Leste Survey of Living Standards 2001 and 2007.

### Reasons for Not Seeking Care

The existence of significant disparities by socioeconomic group in seeking care is indicative, but not definitive, that there are financial barriers to accessing care. These tend to affect the poor with more limited economic resources the most. Fortunately, in several DMCs, such as Bangladesh, the Lao PDR, Pakistan, Papua New Guinea, and Timor-Leste, the surveys also asked respondents the reasons why they did not seek care, if they had reported being sick. Although the various surveys did not word the possible response options in the same way, the responses can be grouped into comparable categories. Excluding reasons related to the illness not being thought serious enough to need treatment, the major response categories were the financial cost of treatment (i.e., treatment or provider too expensive), distance and transport (i.e., provider too far away, or transport not available or too costly), service quality (i.e., health workers not pleasant or competent, or health staff or medicines not available), and other factors.

The overall pattern of responses varies considerably across the five DMCs. In Bangladesh (68%) and Pakistan (52%), the financial cost of treatment was the leading reason, while in Timor-Leste (1%) it was reported as a factor by almost no respondents (Figure 8). In contrast, distance and transport was the leading reason in Timor-Leste (67%), the Lao PDR (55%), and Papua New Guinea (54%), and the second leading factor in Pakistan (14%). Service quality seemed much less important in the DMCs, cited as the factor by only 5%–19% of respondents in the Lao PDR, Papua New Guinea, Pakistan, and Timor-Leste. These patterns were similar also for children in each of the five DMCs.



Lao PDR = Lao People's Democratic Republic, PNG = Papua New Guinea.

Note: Reasons exclude "Illness not serious enough."

Source: Authors' analysis of Bangladesh HIES 2010, CSES 2007, LECS 2007–2008, Pakistan CWIQ 2007, Papua New Guinea HIES 2009–2010, and TLSLS 2007.

The importance of these factors also varies within the four DMCs by urban and rural residence and by socioeconomic status. Distance was a more important barrier in rural than urban areas in all. Access to healthcare facilities is presumably worse in rural areas, because the population is more dispersed or living further away from the road networks, especially in the Lao PDR, Timor-Leste, and Papua New Guinea, and because the healthcare delivery network is less developed in rural areas. Distance was also always more important a barrier for the poor than the nonpoor, with the disparities greatest in Bangladesh and Pakistan, because the poor are more likely to live further away from medical facilities and have less access to transport or be able to afford transport. In the case of Papua New Guinea, distance and transportation are major barriers in seeking treatment for all groups.

All of these results indicate that the financial cost of treatment was consistently more important for poorer families than nonpoor families in all of the DMCs, except Timor-Leste where it was not an important factor for any group. In all of the surveys, it was particularly unimportant for the richest quintile. In contrast, service quality was not a leading factor behind nonuse in most DMCs, and it was consistently more important for richer families than poor ones. A notable exception is Papua New Guinea where 22% of the poorest families also identified poor quality services as a major reason for not seeking treatment when sick, which implies that poor quality services also discourages use (Figure 9).





Lao PDR = Lao People's Democratic Republic, PNG = Papua New Guinea.

Q = quintile.

Note: Reasons exclude "Illness not serious enough."

Source: Authors' analysis of Bangladesh HIES 2010, CSES 2007, LECS 2007-2008, Pakistan CWIQ 2007, Papua New Guinea HIES 2009-2010, and TLSLS 2007.

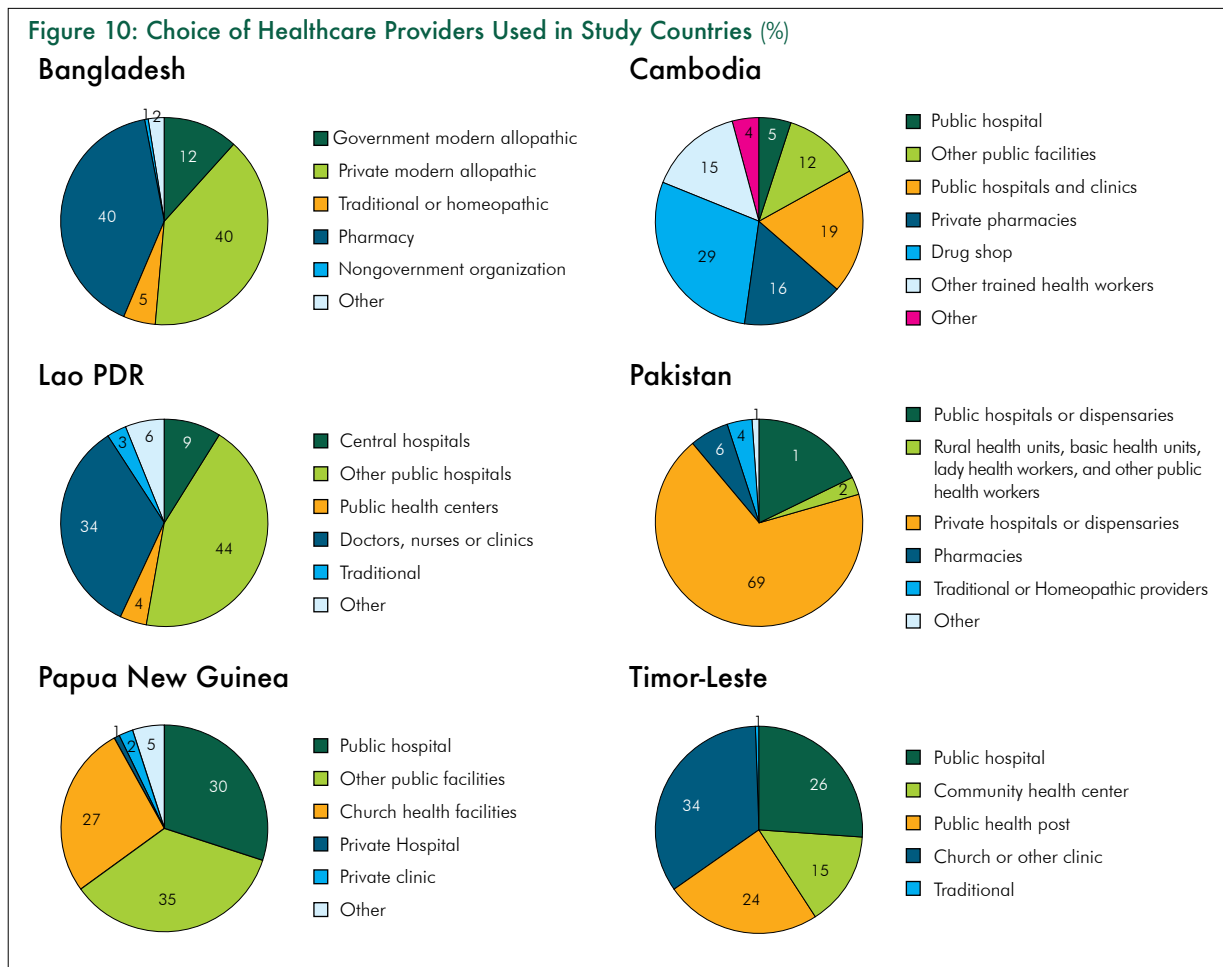
These results, in combination with the observed inequalities in taking sick children for treatment, indicate that many different factors prevent access to MNCH care, and that the relative importance of these factors is dependent on each country's situation. However, the physical distance and travel barriers to accessing healthcare emerge as the most common barrier reported by the poor, with financial barriers being important in some DMCs and not others. However, the lack of importance of financial costs as a barrier in Timor-Leste may be simply that no provider at all is accessible for many rural families, so cost is not a particular barrier.

### Choice of Healthcare Provider

All of the surveys asked respondents about the type of healthcare provider that was used when household members sought treatment for illness, or, in the case of Cambodia, what providers were used in the past month. In none of the surveys was it possible to identify current mothers, but it was possible to analyze the choice of healthcare provider for children. Only in the Timor-Leste surveys did the survey questions also distinguish between the choices of providers for inpatient and outpatient care. However, since outpatient

treatment visits are far more frequent than inpatient admissions, the reported pattern of visits in the other surveys can be regarded as approximating the distribution of outpatient visits in practice.

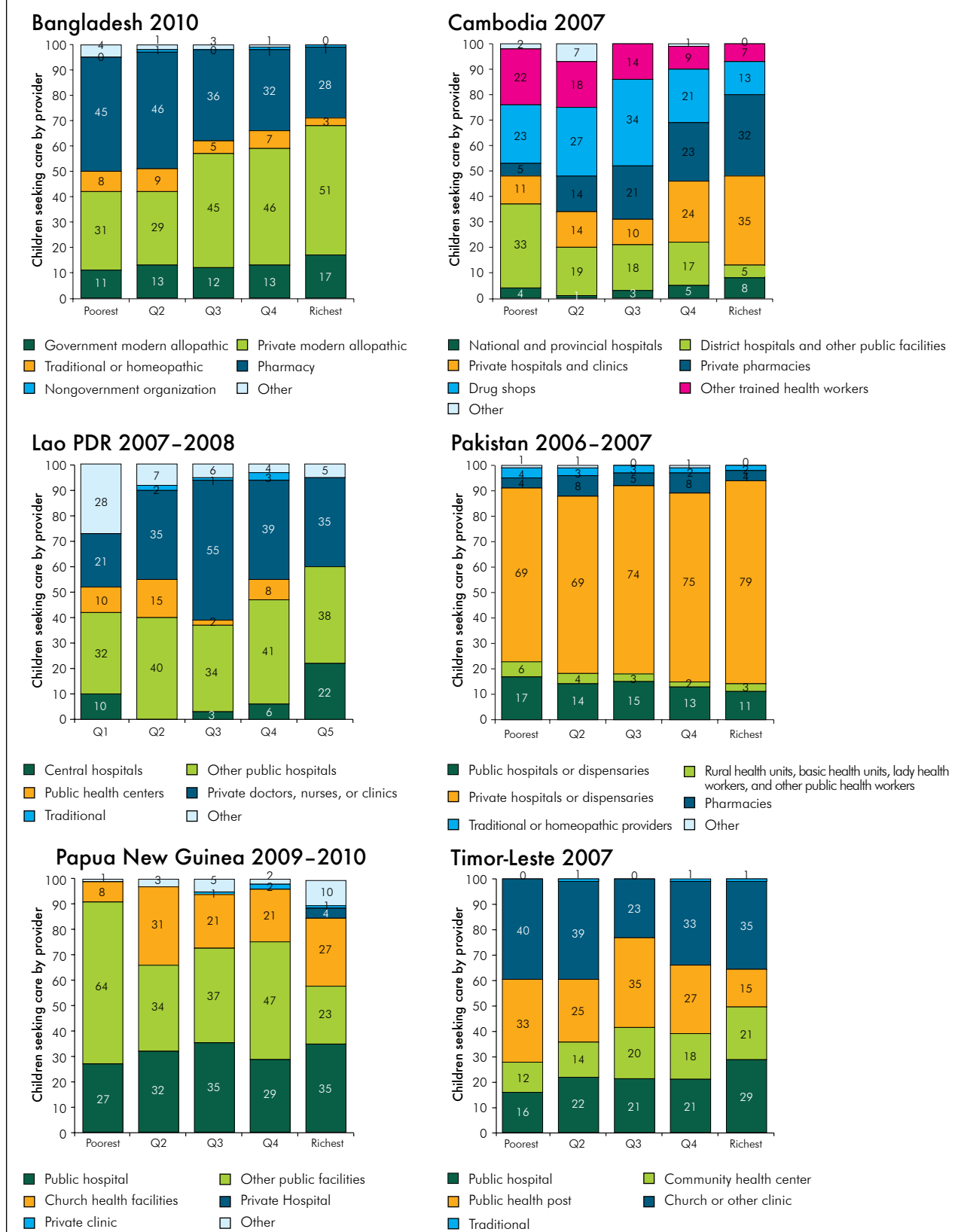
The overall choices of healthcare providers varies considerably between the DMCs (Figure 10). In Timor-Leste and Papua New Guinea, most healthcare was obtained from public providers, which is consistent with the dominant role of the public sector in the two countries. In the Lao PDR, healthcare was obtained from an almost equal mix of public and private sector providers, while in Bangladesh, Cambodia, and Pakistan, the bulk of all healthcare visits were at private providers. The patterns for healthcare use by children in each of the DMCs differ little.



Lao PDR = Lao People's Democratic Republic.  
 Note: Choice of providers is for all healthcare used in past month in all surveys, except in Timor-Leste, where they refer to outpatient use only.  
 Source: Authors' analysis of Bangladesh HIES 2010, CSES 2007, LECS 2007–2008, Pakistan CWIQ 2007, Papua New Guinea HIES 2009–2010, and TLSLS 2007.

In most of the study DMCs, there are distinct differences in the choice of healthcare providers used by poor and nonpoor households for treating sick children (Figure 11). In Timor-Leste, richer households made more use of public hospitals and less use of public health posts. In Bangladesh, the use of pharmacies decreases with income, so the nonpoor made greater use of public facilities and private hospitals and clinics. In contrast, in Pakistan, the use of public facilities decreases with income, while in Cambodia, the nonpoor made greater use of private pharmacies than the poor.

Figure 11: Healthcare Providers Used by Children in Study Countries, by Socioeconomic Status and by Sector of Residence (%)



Lao PDR = Lao People's Democratic Republic.

Q = quintile.

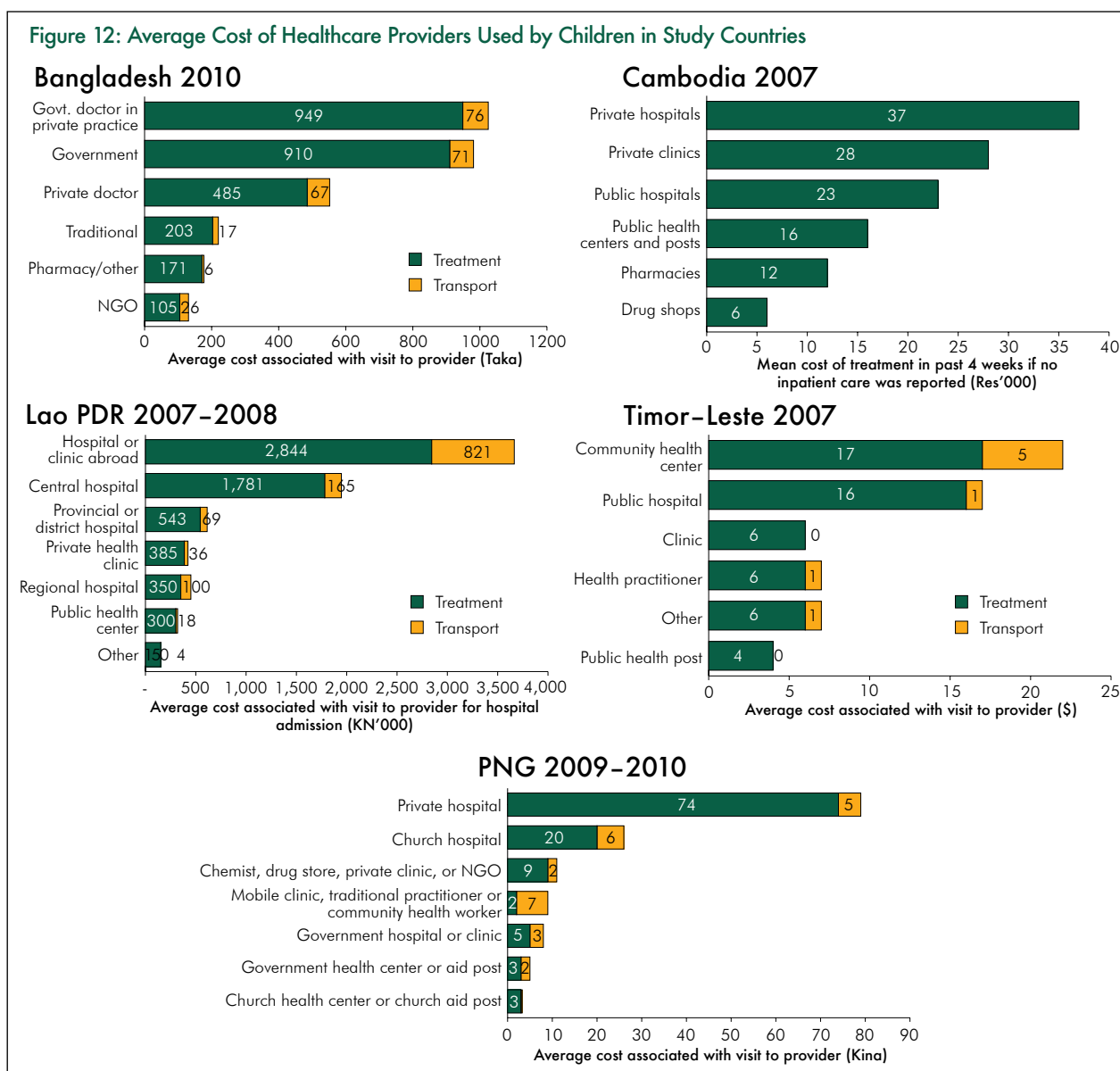
Note: Choice of providers is for all healthcare used in past month in all surveys, except in Timor-Leste, where they refer to outpatient use only.

Source: Authors' analysis of Bangladesh HIES 2010, CSES 2007, LECS 2007-2008, Pakistan CWIQ 2007, Papua New Guinea HIES 2009-2010, and TLSLS 2007.

These variations reflect the differences in the importance of financial and other barriers to accessing care in each DMC, and the differences in the availability of services. In Cambodia, the Lao PDR, and Timor-Leste, higher-level government facilities were used less by the poor, primarily because these are less physically accessible in rural areas. However, in Cambodia, financial barriers probably also restricted access to these higher-level facilities.

## IV. COSTS OF HEALTHCARE PROVIDERS

In Cambodia and the Lao PDR, government healthcare facilities rely on user charges, so most patients are expected to pay to access government services. In Bangladesh, Pakistan, and Timor-Leste, governments seek to provide free or nearly free medical care through health ministry facilities to improve access to needed medical services by reducing financial barriers. However, this is, in practice, only largely achieved in Timor-Leste. In Bangladesh, 95% of patients reported incurring out-of-pocket expenses in accessing care at government facilities, whereas 67% of patients incurred out-of-pocket expenses in public sector facilities in Papua New Guinea. In Timor-Leste, few outpatients at government facilities (i.e., 4%) reported any treatment costs. However, the percentage of public sector patients reporting treatment costs in Timor-Leste was much higher in the case of inpatients (i.e., 31%).



Lao PDR = Lao People's Democratic Republic, NGO = nongovernment organization, PNG = Papua New Guinea.

Note: Bangladesh estimates refer to average cost of all visits to a given provider type in the past month. Cambodia estimates refer to cost of visits incurred by individuals who reported only outpatient use in the past month. The Lao PDR estimates refer only to costs of inpatient admissions. Timor-Leste estimates refer to costs of outpatient visits only.

Source: Authors' analysis of Bangladesh HIES 2010, CSES 2007, LECS 2007-2008, Papua New Guinea HIES 2009-2010, and TLSLS 2007.

The financial costs of using different providers explain the choice of providers observed, especially in the case of poor patients. In Bangladesh and Cambodia, public providers, especially hospitals, are among the most expensive providers available to patients and usually are much more costly than private doctors or pharmacies (Figure 12). This helps explain the low level of use of public providers and also why the nonpoor seem to have better access to and make more use of public providers. In Bangladesh, Cambodia, and the Lao PDR, the cost of using public providers appears to be a major, if not the leading, barrier to access by the poor. In Bangladesh, this is despite government policy aiming to use public facilities as a means of providing low-cost healthcare to the poor. The major reason this does not happen in Bangladesh is the high cost of medicines for which patients at public sector facilities have to pay. These medicine costs accounted for more than two-thirds of the costs reported during such visits in each of the household income and expenditure surveys.

## Out-of-Pocket Health Expenditures and Its Impact on Households

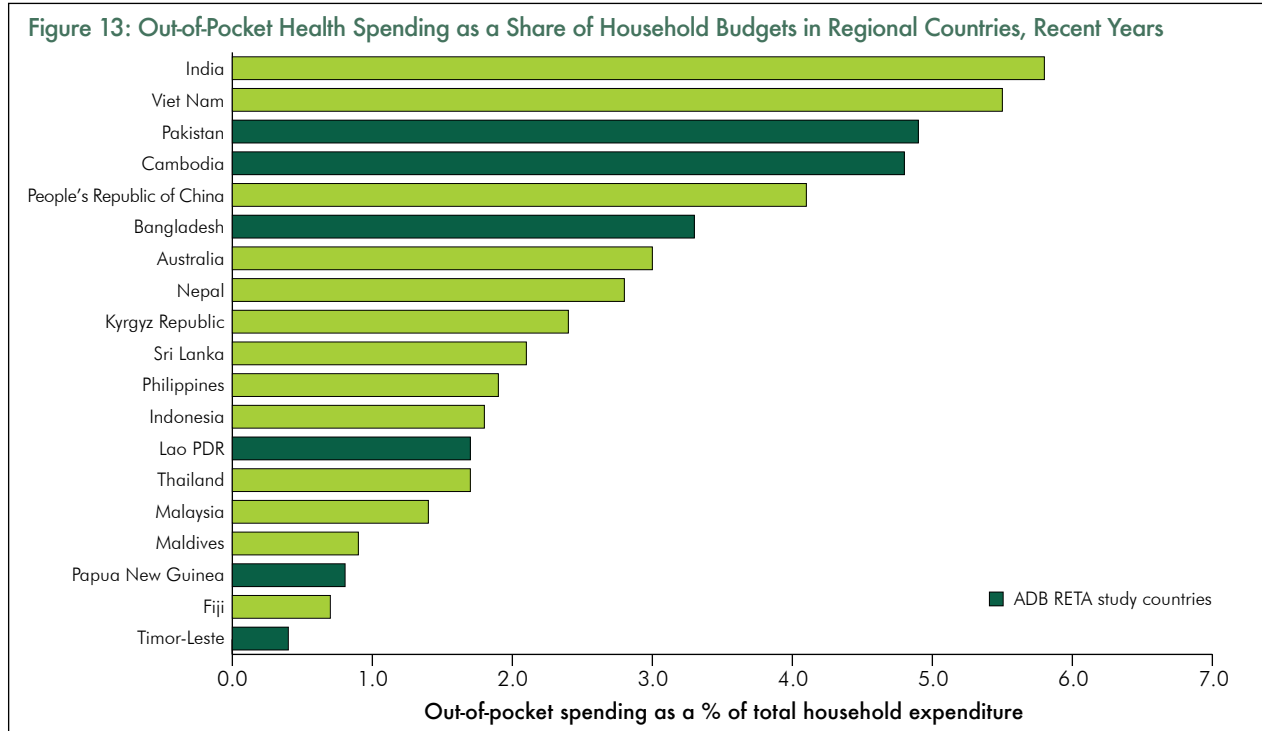
### Levels of Out-of-Pocket Spending on Healthcare

There is global consensus that reliance on out-of-pocket spending for healthcare financing should be minimized to improve equity in access to care and to strengthen financial risk protection. Of the study DMCs, out-of-pocket financing is the major source of healthcare financing in all, except Timor-Leste and Papua New Guinea.

All of the surveys asked households how much they spent out of pocket on healthcare in the past month. This was done through the general household consumption module, which allowed examination of household health spending in relation to overall spending. However, only some asked in detail about such expenditures in their health modules, where it can be linked to specific individuals. Only in Bangladesh, Cambodia, and Timor-Leste could spending be analyzed by age group or by type of patient.

There is a large variation in DMCs and in the study DMCs in the overall share of household budgets that were allocated to out-of-pocket spending on healthcare (Figure 13). In some, the spending share was less than 1.0%, including Papua New Guinea, Fiji, and Timor-Leste. The highest levels, in the range of 4.0%–7.0%, were in Bangladesh, Cambodia, the People’s Republic of China, India, Pakistan, and Viet Nam.

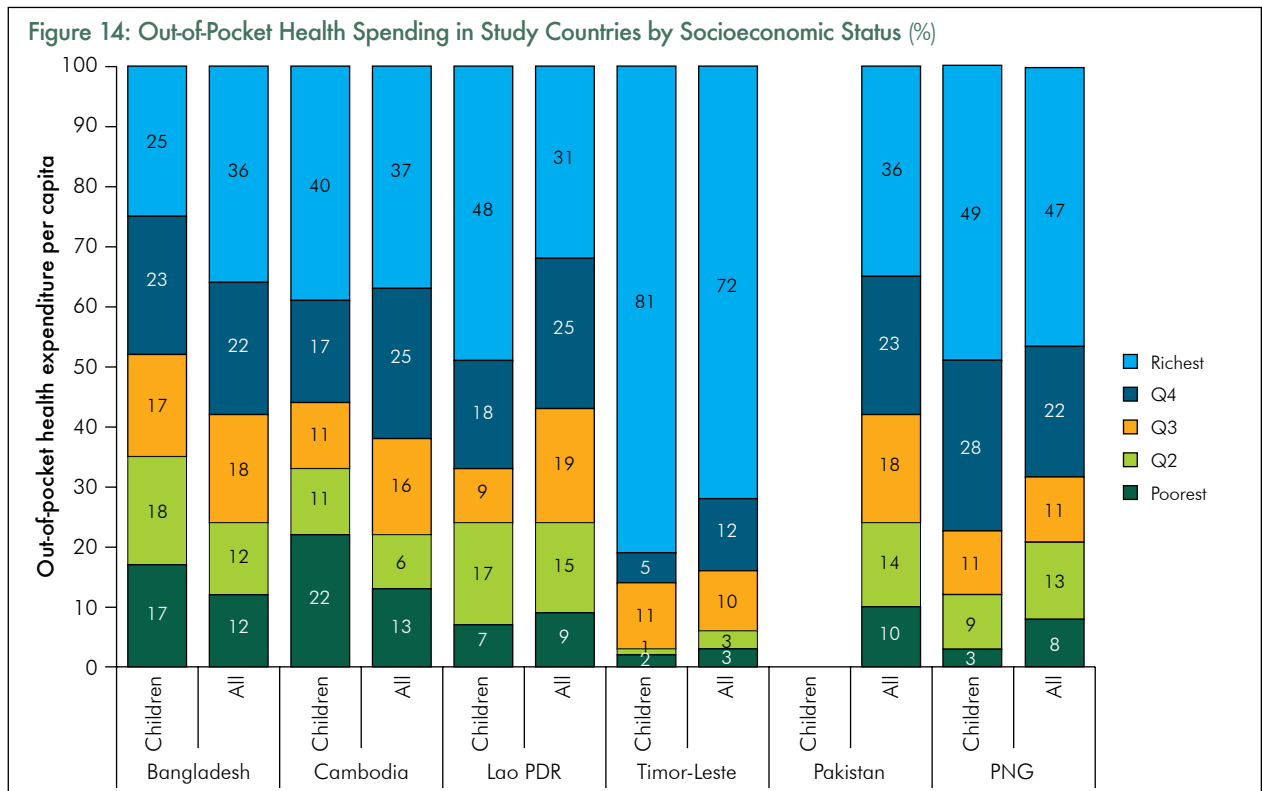
Although in most, out-of-pocket expenditure accounted for a large share of overall health sector financing, it benefitted mostly the nonpoor. In all of the study DMCs, both the per capita level and the share of all out-of-pocket health expenditure increased with the income level of households (Figure 14). Nonpoor households are able to allocate more of their spending to health than the poor; thus, the bulk of all such spending in each DMC is accounted for by the richest one or two quintiles. Overall health spending on children is the most concentrated in Timor-Leste, Papua New Guinea, and the Lao PDR (Figure 15), where the richest quintiles account for over two-thirds of all household out-of-pocket spending on children.



Lao PDR = Lao People's Democratic Republic.

RETA = regional technical assistance.

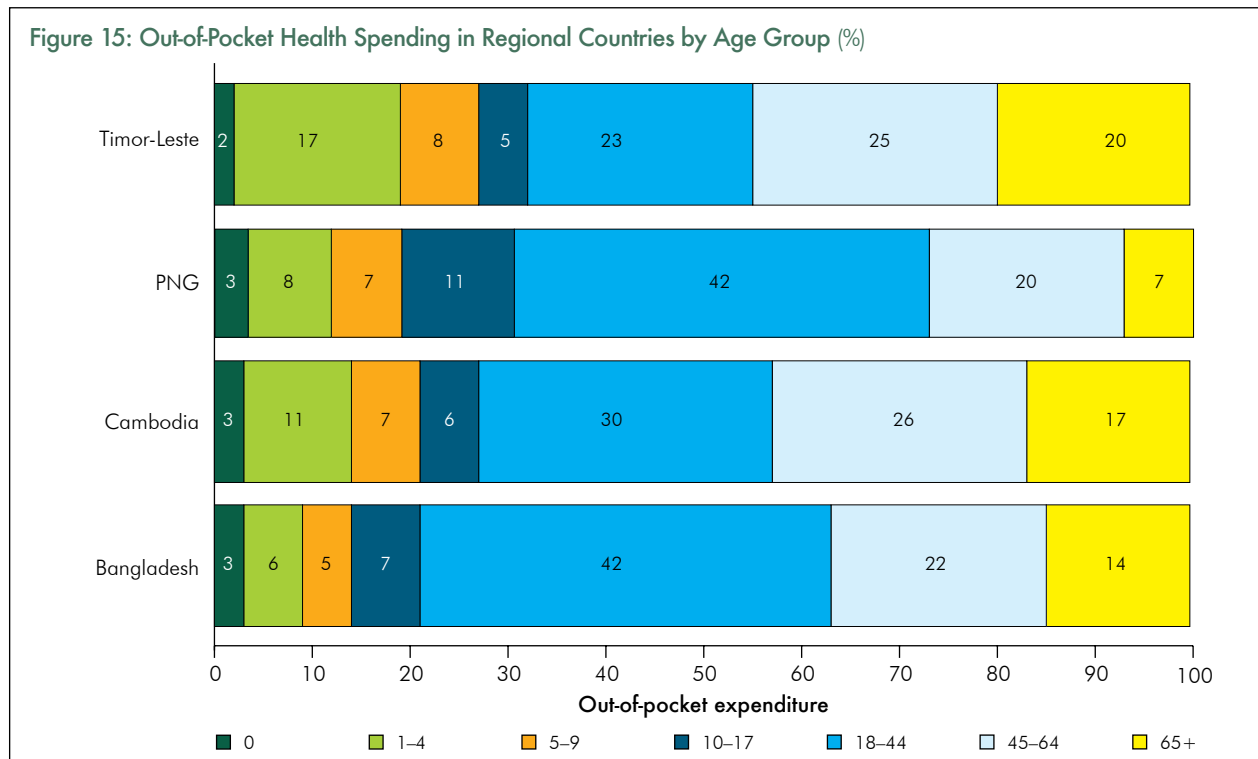
Source: Authors' analysis of Bangladesh HIES 2010, CSES 2007, LECS 2007–2008, PSLSMS 2005–2006, Papua New Guinea HIES 2009–2010, and TLSLS 2007, van Doorslaer et al. (2007), and analyses of national household survey data from other countries by the Equipat research network.



Lao PDR = Lao People's Democratic Republic, PNG = Papua New Guinea.

Note: Per capita out-of-pocket health expenditure could not be computed for children in Pakistan given that individual level expenditure was not captured in the Pakistan Social and Living Standards Measurement Survey 2005–2006.

Source: Authors' analysis of Bangladesh HIES 2010, CSES 2007, LECS 2006–2007, PSLSMS 2005–2006, Papua New Guinea HIES 1995–1996, and TLSLS 2007.



PNG = Papua New Guinea.

Source: Authors' analysis of Bangladesh HIES 2010, CSES 2007, Papua New Guinea HIES 2009–2010, and TLSLS 2007.

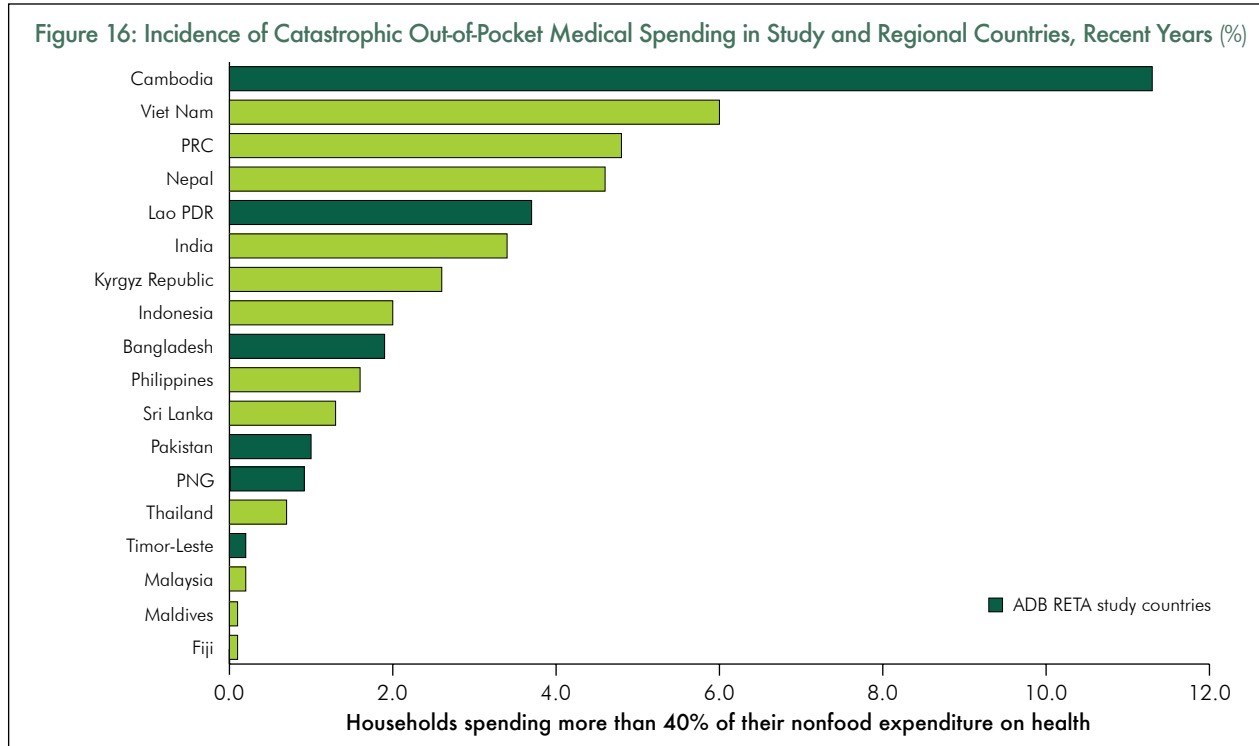
### Financial Impact of Out-of-Pocket Spending on Healthcare

Out-of-pocket financing of healthcare can cause considerable financial hardship to families. The financial impact on households can be assessed in two ways (O'Donnell et al. 2008): (i) by how many households are pushed below the poverty line by such spending (i.e., impoverishing impacts), and (ii) by how many households have to devote a large share of their resources for medical treatment expenses (i.e., catastrophic impacts). Previous studies in Asia have shown that heavy reliance on out-of-pocket spending in healthcare systems results in high levels of medical impoverishment and catastrophic expenditures (Bonu et al. 2009; van Doorslaer et al. 2006; van Doorslaer et al. 2007).

The household surveys in the study DMCs and in the region generally support analysis of these impacts in relation to overall healthcare spending. For these estimates, which hinge on accurately comparing the ratios of medical spending to total spending, analysis depends on using data from the general household consumption modules. Data on health spending obtained from the health modules could not be used, since such spending is usually reported with different biases to the spending reported in the general consumption modules. Since it is usually only these health modules that link spending to individual household members, it was not possible to use these surveys to estimate the catastrophic and impoverishing impacts of out-of-pocket spending on medical care for mothers and children.

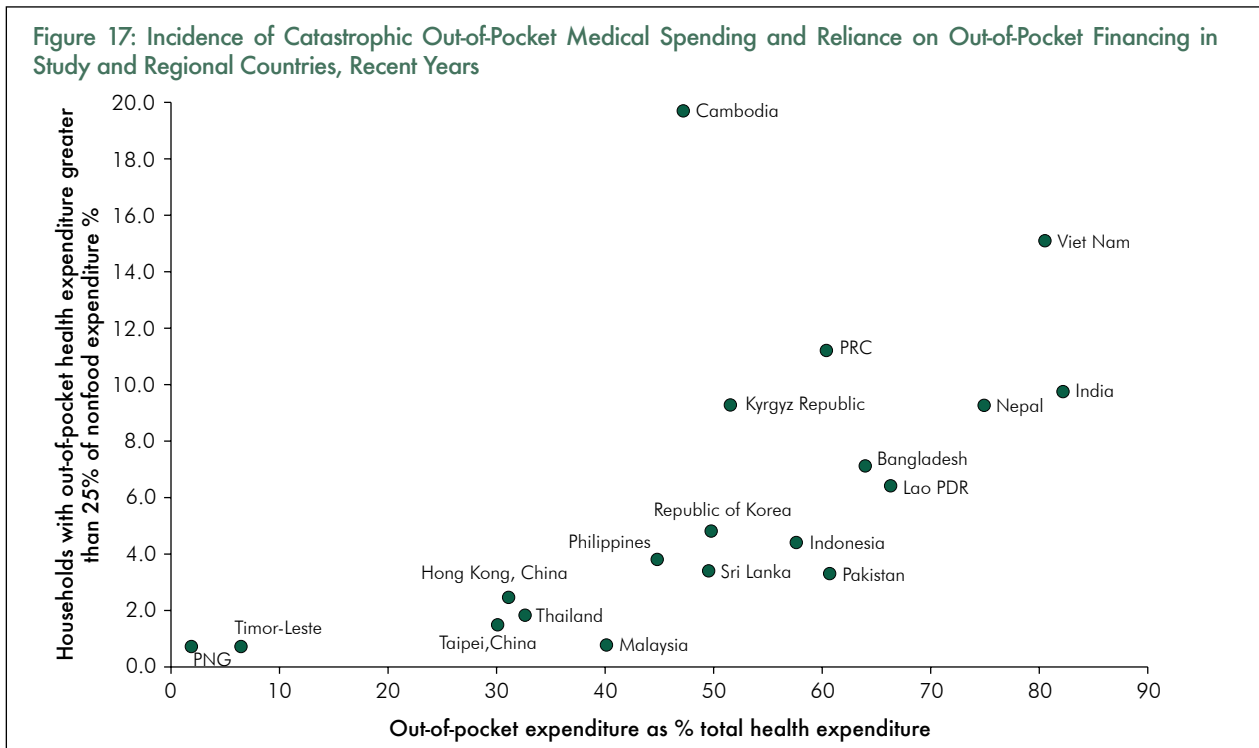
Figure 16 shows the percentage of households having to allocate more than 40% of their nonfood expenditures to medical expenses in the past month. This is one measure of catastrophic expenditures. The highest levels of catastrophic expenditures are seen in Bangladesh, Cambodia, and the Lao PDR. The incidence of both catastrophic and impoverishing expenditures in the study DMCs is closely related to the extent to which they rely on out-of-pocket expenditures to finance their healthcare systems, as demonstrated in Figure 17.





Lao PDR = Lao People’s Democratic Republic, PNG = Papua New Guinea, PRC = People’s Republic of China.  
 RETA = regional technical assistance.

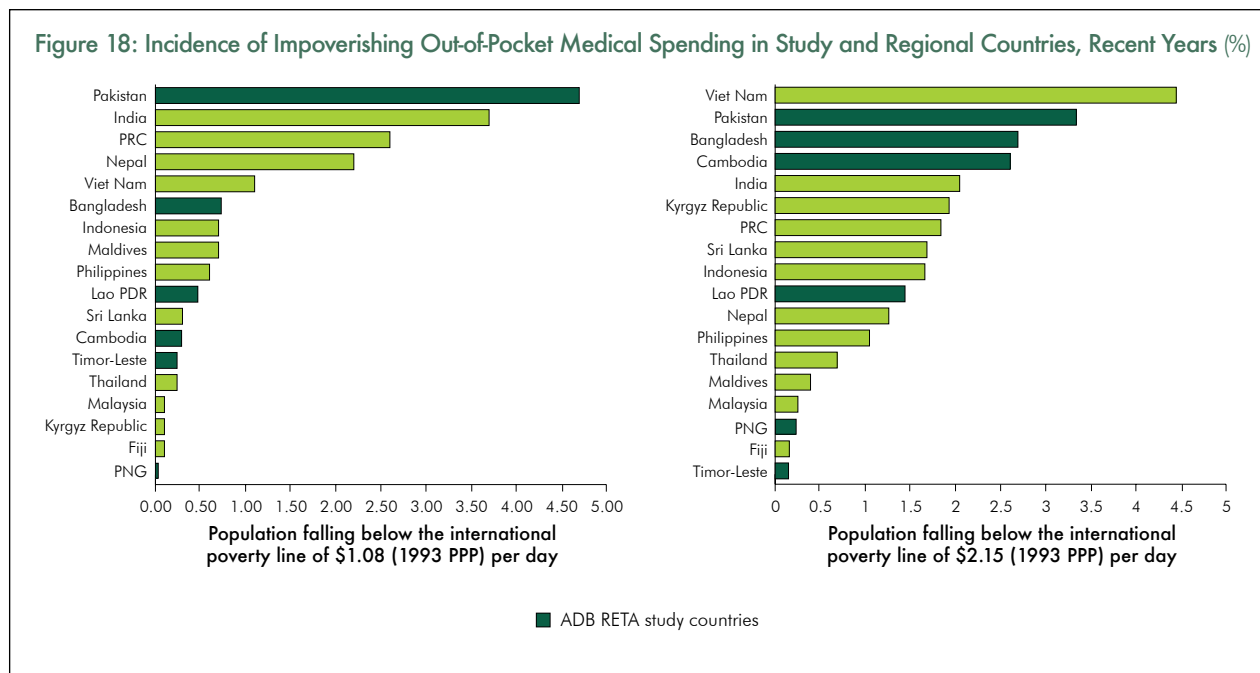
Source: Authors’ analysis of Bangladesh HIES 2010, CSES 2007, LECS 2007–2008, PSLSMS 2005–2006, Papua New Guinea HIES 2009–2010, and TLSLS 2007, van Doorslaer et al. (2007), and analyses of national household survey data from other countries by the Equitap research network.



Lao PDR = Lao People’s Democratic Republic, PNG = Papua New Guinea, PRC = People’s Republic of China.

Source: Authors’ analysis of Bangladesh HIES 2010, CSES 2007, LECS 2007–2008, PSLSMS 2005–2006, Papua New Guinea HIES 2009–2010, and TLSLS 2007, van Doorslaer et al. (2007), and analyses of national household survey data from other countries by the Equitap research network.

The incidence of impoverishing expenditures parallels these results to some extent. Figure 18 shows the percentage of households falling below the \$1- and \$2-per-day international poverty lines as a result of out-of-pocket medical spending in the past month. In any given month, medical spending by households pushed 4.1% of Cambodians below the \$1 international poverty line in 2007, but only 0.7% of Bangladeshis in 2010. These differences between DMCs, despite their common high levels of reliance on out-of-pocket financing, point to differences in the way out-of-pocket expenses are distributed and forced on households. In Bangladesh, out-of-pocket spending is more concentrated in the rich households, due to the voluntary choice of private care, than in Cambodia, resulting in less-impoverishing expenditures.



Lao PDR = Lao People’s Democratic Republic, PNG = Papua New Guinea, PRC = People’s Republic of China.  
 RETA = regional technical assistance.

Source: Authors’ analysis of Bangladesh HIES 2010, CSES 2007, LECS 2007–2008, PSLSMS 2005–2006, Papua New Guinea HIES 2009–2010 and TLSLS 2007, van Doorslaer et al. (2007), and analyses of national household survey data from other countries by the Equitap research network.

## V. CONCLUSIONS

### Inequalities in Healthcare Use and Barriers to Access

Families face significant barriers when accessing needed MNCH care in many DMCs. They can also incur large out-of-pocket expenses in accessing such care, frequently resulting in impoverishment and financial hardship. Various national household living standards and budget surveys, available in almost all DMCs, provide a rich source of data that can shed light on these barriers and outcomes.

Although many surveys asked whether respondents and their families have been ill, the rates of reported illness are not reliable measures of differences in ill health between poor and nonpoor families. With the exception of Pakistan, in all of the surveys analyzed, the poor reported less illness in their children and overall than the nonpoor did, despite the fact that other data, such as demographic and health surveys, consistently show the poor to be sicker and suffer higher rates of maternal and child mortality. The poor and less educated are known to be less likely to recognize symptoms of illness and think them worth acting on. However, the data from Bangladesh and Timor-Leste, where multiple survey rounds were analyzed, indicate that these disparities can lessen over time, as overall health awareness improves.

Of those who report illness, the poor were consistently less likely to obtain care for their sick children and overall. Rural households were also less likely to make use of healthcare than urban households. Combined with the disparities in the likelihood of reporting any illness, this contributes to significant overall inequalities in the use of healthcare for children and other family members in all of the DMCs. Of the DMCs studied, these inequalities are greatest in Papua New Guinea, Cambodia, the Lao PDR, and Timor-Leste.

These disparities in the use of healthcare by sick children, and presumably mothers, were caused by a range of factors, which include the cost of medical treatment, distance and transport costs in traveling to healthcare facilities, perceptions about the competency and capability of healthcare providers, and the behavior of providers to patients. Although all of these factors appear to play some role in the DMCs where respondents were asked about the reasons for not seeking medical treatment (i.e., Bangladesh, the Lao PDR, Pakistan, Papua New Guinea, and Timor-Leste), their relative importance varies considerably.

The financial costs of treatment were the dominant barrier to obtaining medical care in Bangladesh and Pakistan, and presumably also in Cambodia, where the question was not asked, but where all providers were reported as being costly and where significant income-related inequalities in healthcare use exist. In contrast, financial costs were a negligible factor in Papua New Guinea and Timor-Leste, where distance and transport difficulties were reported as the predominant factor discouraging care. In both Papua New Guinea and Timor-Leste, most visits to public providers were also reported as resulting in no out-of-pocket costs, in contrast to the majority of such visits in Bangladesh, and in Cambodia and the Lao PDR, where public facilities charge substantial user fees.

These results indicate that in some DMCs, such as Papua New Guinea and Timor-Leste, the major barrier to care was the physical difficulty in accessing healthcare providers and not the financial costs. Thus, in these countries the main focus for improving access to MNCH care should be increasing the availability and density of government healthcare facilities, especially in rural areas. The financial costs of medical treatment should not be the major concern, since the public sector is clearly effective in preventing patients from facing either informal or official costs when obtaining treatment, except for the need of some inpatients to purchase medicines.

In Bangladesh and Pakistan, where financial costs were reported as the leading barrier, the results indicate that government efforts to make free or near-free services available through public facilities are ineffective, because government facilities, in practice, remain costly to access. In Bangladesh, the survey data show that the main cost barrier at government facilities is the need to purchase medicines, which presumably are not available or in stock. This suggests that Bangladesh and other DMCs with similar policies of providing free government services need to focus on reducing the actual costs faced by patients at these facilities. In Bangladesh, this clearly must involve addressing the out-of-pocket costs imposed on patients by the lack of medicines; this may also be a problem in other DMCs.

In the Lao PDR, a mix of financial costs and travel barriers emerge as the main barriers discouraging care. This finding indicates that improving access to MNCH care services in the Lao PDR, where overall utilization of healthcare services is very low by regional and global standards, will need to focus both on increasing the availability of healthcare facilities in rural areas as well as on reducing the financial costs faced by patients at public facilities.

In most of the DMCs where the question was asked, quality-related factors were not significant factors discouraging access overall or for children. With the exception of Papua New Guinea, they were consistently negligible for the poor, and only important for the richest quintile of patients. Although improving quality of care in all its aspects is an important aspect of improving healthcare coverage, the survey evidence shows that it was not as important a barrier as cost and travel and should not be the priority for efforts aiming to improve access by the poor.

### Out-of-Pocket Expenditures and the Financial Impact on Households

All of the surveys in the DMCs studied permitted analysis of the level and distribution of out-of-pocket payments for healthcare, since this can be done using the general modules on overall household expenditures and consumption. Only in a few surveys, where the health module also asked detailed questions about medical expenses associated with specific illness episodes and specific visits to healthcare providers, was it also possible to analyze healthcare spending by type of patient or illness. However, where this could be analyzed, the overall share of out-of-pocket spending accounted for by treatment for children was generally modest, since average expenditures per child tend to be less than for the average adult.

High levels of out-of-pocket expenses for medical care are not found in all DMCs. There is a large variation in DMCs and, in the study DMCs, in the overall share of household budgets that are allocated to out-of-pocket spending on healthcare. The spending share varies from negligible (i.e., less than 1.0%) in Fiji, Timor-Leste, and Papua New Guinea, to substantial (i.e., 4.0%–7.0%) in countries such as Bangladesh, Cambodia, the People's Republic of China, India, Pakistan, and Viet Nam.

Richer households spent more of out of pocket than poorer households in all of the surveys analyzed, with both the per capita level and the share of household budgets allocated to health increasing with the income level of households. Consequently, the bulk of all such spending in each DMC is accounted for by the richest one or two quintiles. Overall health spending on children is the most concentrated in Timor-Leste, Papua New Guinea, and the Lao PDR, where the richest quintiles account for over two-thirds of all household out-of-pocket spending on children. However, the burden of out-of-pocket expenses on the poor is usually greater, since it typically accounts for a larger share of their discretionary nonfood expenditures. One implication of this, in DMCs such as Bangladesh, is that targeted efforts to reduce out-of-pocket expenses of the poor may be much more affordable than trying to eliminate the bulk of all out-of-pocket spending yet still effective in substantially improving access and reducing hardship in the poor.

In many DMCs, out-of-pocket financing of healthcare causes considerable financial hardship to families. In many cases, this will be because of the need to obtain treatment for children or for mothers, especially for childbirth. Assessment of these financial impacts in the study DMCs was possible only using the general household expenditure modules of the surveys, so no specific analysis of the financial impacts of out-of-pocket expenses for children or mothers was feasible. Where the survey health modules did ask about health expenses, it was not possible to relate these to overall household expenditures for methodological reasons.

Using standard measures, the incidence of catastrophic medical expenditures is highest in Bangladesh, Cambodia, and the Lao PDR, and very low in Timor-Leste and Papua New Guinea. The incidence of impoverishing expenditures parallels these results to some extent. In any given month, medical spending by households pushed 4.1% of Cambodians below the \$1 international poverty line in 2007, but only 0.7% of Bangladeshis in 2010. The incidence is negligible in Timor-Leste.

The incidence of both catastrophic and impoverishing expenditures in the study DMCs is closely related to the extent to which the countries rely on out-of-pocket expenditures to finance their healthcare systems. However, the differences between DMCs, such as Bangladesh and Cambodia that share high levels of reliance on out-of-pocket financing, point to differences in the way out-of-pocket expenses are distributed and forced on households. In Bangladesh, out-of-pocket spending is more concentrated in the rich households, due to the voluntary choice of private care, than is the case in Cambodia, and so results in less-impoverishing expenditures.

### Value of Evidence from National Household Expenditure Surveys

This study shows that the national household expenditure surveys available in most DMCs are a significant source of evidence and data on the barriers facing households in accessing healthcare and the financial impacts of out-of-pocket expenditures. This resource provides a means to assess these problems in most DMCs, without having to commission expensive new surveys. The findings of this study provide important new information on the problems of access in several DMCs, which not only has implications for ongoing policy debates in these countries but also answers previously unresolved policy questions. Much more could be done to make use of these routine data to understand the barriers faced by families in accessing healthcare. This will need not only more concerted efforts to exploit the data that exist, but also support for efforts, such as by the regional Equitap network, to build national capacities to examine equity questions using household survey data. The Equitap experience has been that when equity assessments are produced by local institutions and researchers, country ownership of the findings is stronger, and policy engagement and action is far more likely.

At the same time, there are significant limitations to the evidence that these surveys can provide. Only some surveys in the region incorporate detailed health modules that ask a battery of questions about illness, reasons for not seeking healthcare when sick, and types and costs of healthcare provision utilized. Improving the design of health modules in national surveys to incorporate these features and standardizing the question design based on regional best practices would significantly increase the value of this routine data resource for understanding and tracking the barriers to and costs of healthcare.

Nevertheless, such improvements in survey question design will not permit these surveys to answer all inquiries on barriers to healthcare. As healthcare use by mothers is an infrequent lifetime event, most surveys will continue to lack the sample sizes adequate to allow separate analysis of maternal out-of-pocket expenditures. To address this, either much larger samples are needed, or separate specialized surveys must be undertaken from time to time.

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### **For More Information**

This AusAID financed ADB RETA 6515 project, with support from the Health Economics Unit of the MOHFW, conducted several studies on out-of-pocket (OOP) expenditures on maternal, newborn, and child health (MNCH) in Bangladesh including an analysis of household OOP expenditures, public sector facility costs, an exit survey of OOP expenses, and overall MNCH expenditures.

Publications on these findings are available from:  
[www.adb.org/publications/](http://www.adb.org/publications/)

Other publications from this project on the impact of out-of-pocket expenditures on MNCH in Asia and the Pacific are available at [www.adb.org/publications/](http://www.adb.org/publications/)

## **Impact of Out-of-Pocket Expenditures on Families and Barriers to Use of Maternal and Child Health Services in Asia and the Pacific**

Evidence from National Household Surveys of Healthcare Use and Expenditures

The burden of poor maternal, neonatal and child health (MNCH) remains unacceptably high in many developing member countries (DMCs).

To understand the barriers facing households in accessing MNCH care, the ADB technical assistance project RETA-6515 analyzed data from routine national household expenditure surveys in six DMCs: Bangladesh, Cambodia, the Lao People's Democratic Republic (Lao PDR), Pakistan, Papua New Guinea, and Timor-Leste.

The findings reveal not only the rich evidence base available in these surveys, but also show how healthcare costs, quality, and physical barriers play differing roles in different countries in preventing access, and how families are often impoverished by accessing needed care.

### **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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