

# The Impact of Out-of-Pocket Expenditures on Families and Barriers to Use of Health Services in Pakistan

Evidence from the Pakistan Social and Living Standards Measurement Surveys 2005–2007

COUNTRY BRIEF



## Summary

- Pakistan is lagging on progress toward Millennium Development Goals 4 and 5. Health services coverage is poor, and overall use of medical services in Pakistan is low compared to other countries in the region. The low rates of utilization are driven by a low sensitivity and recognition of illness symptoms.
- Overall healthcare use is not unequal, but poor Pakistanis are certainly sicker, so there is considerable inequity in access to and use of services.
- When healthcare is obtained, private providers are the dominant source of treatment, with government healthcare services only accounting for one-fifth of utilization.
- The main reasons for not using government facilities, at all income levels, are lack of access and distance to government facilities, followed by lack or inadequate supply of medicines.
- Use of government services is pro-poor, although still at a low level, owing to greater use of private services by the nonpoor.
- Households spend 4.9% of all of their expenditures on medical care, more than in almost all other Asian countries. This places heavy financial burdens on families. The incidence of catastrophic and impoverishing medical expenditures in Pakistan is much higher than in other countries in the region, and the burden of out-of-pocket spending is greater for the poor than the nonpoor.
- To increase access to services, Pakistan needs to increase public financing and risk pooling in an effective manner to reduce the financial burdens faced by households.
- The sources of these analyses were the Pakistan Social and Living Standards Measurement Surveys. Compared to other Asian countries, their scope is quite limited, and more comprehensive measures of healthcare use should be adopted in future surveys.

## Background

Pakistan's maternal and child health indicators are among the worst in the Asia-Pacific region and in the world. An estimated 260 women die for every 100,000 live births (WHO et al. 2010). Nearly one in 10 children die before their fifth birthday (UNICEF 2012), and the Pakistan Demographic and Health Survey 2007 showed little change in mortality over time (National Institute of Population Studies, 2008). More than 65% of women in Pakistan deliver their babies at home, and less than 2 in 5 women deliver with a skilled birth attendant.

This poor performance is linked with low levels of government investment in health. According to National Health Accounts estimates (Sekhar et al. 2009), overall health spending in Pakistan is low in comparison with regional countries: 2.6% of gross domestic product in fiscal year 2006, compared with 4.1% in India, 3.4% in Bangladesh, and 4.3% in Sri Lanka. Of this, the largest share, 65%, is contributed by private financing, most of which (99%) is household out-of-pocket spending.

Private providers thus play a major role in providing care. In addition to government hospitals and health centers, there is a diverse range of private hospitals, private clinics, and other private providers from which Pakistanis obtain medical treatment. Government facilities charge user fees for many medical services, and informal payments to access care are widely prevalent in the public sector, so the poor can face

significant financial barriers in accessing needed maternal and child healthcare services. Nonetheless, the Government of Pakistan is committed to reaching the Millennium Development Goals and to improving the access of its people to adequate healthcare services. There is recognition of the negative impact of financial barriers on access to care, reflected in a number of analytical activities supported by the Asian Development Bank and other development partners.

## Data Sources

This policy brief presents findings from the Pakistan Social and Living Standards Measurement Survey (PSLSMS) 2005–06, and the Core Welfare Indicators Questionnaire (CWIQ) Survey 2006–07 (Federal Bureau of Statistics 2006 and 2007). The PSLSMS 2005–06 is a nationally representative household survey of 15,453 households, while the CWIQ 2006–07 survey sample include 73,953 households.

The CWIQ collects basic data on healthcare use but lacks a detailed household expenditure module. For analysis of healthcare use inequalities for this brief, the survey population in the CWIQ was grouped into equal quintiles of relative living standards, using a wealth index, estimated using well-established methods (Deon and Pritchett 2001). The CWIQ does not collect information on health expenditures, so the PSLSMS 2005–06 was also used, which had a detailed household expenditure module, for analysis of out-of-pocket

spending. The PLSMS was conducted in a subsample of the CWIQ sample, but is also nationally representative.

The PLSMS questionnaire is not as extensive as those found in most Asia-Pacific countries, which limits the analysis that can be done of healthcare inequalities. A more detailed and comprehensive health module was piloted in the PLSMS 2009, but data from this were not available for analysis. Routinizing the use of this more detailed health module would permit more systematic and detailed analysis of healthcare inequalities in Pakistan.

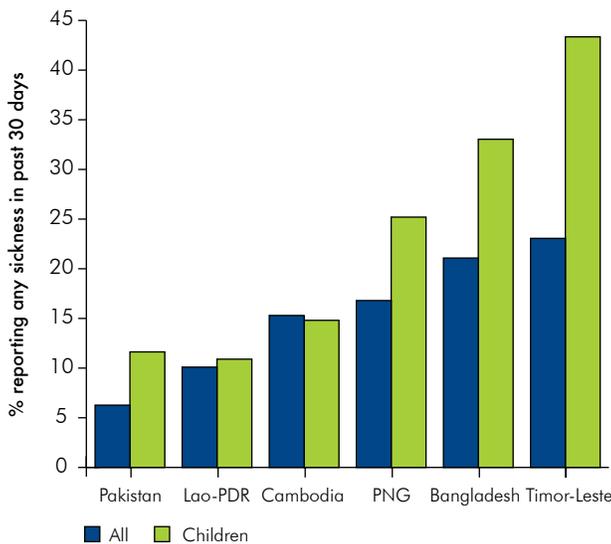
## Perception of Illness and Treatment Seeking

A key driver of whether ill individuals seek healthcare is whether they recognize themselves as being sick. The CWIQ 2006–07 asked whether individuals were ill in the 30 days preceding the survey. In total, 6.3% of all individuals, and 11.6% of children aged less than 5 years, were reported to have been ill.

However, the self-reporting of sickness in a survey is an unreliable indicator of the real level or distribution of illness within the population, as it is critically dependent on the ability of individuals to recognize illness symptoms as sickness. This is apparent when the levels of reported sickness in the past 30 days in similar surveys from other Asian countries are compared with similar levels of health status to Pakistan. Overall, the levels of reported sickness in both children and adults in Pakistan are much lower than in most other countries in the region, indicating that Pakistani families are less likely to recognize or respond to signs of illness than in other countries.

Rates of reported illness are relatively equal by income level, and by urban or rural location (Figure 2). Other data, such as the

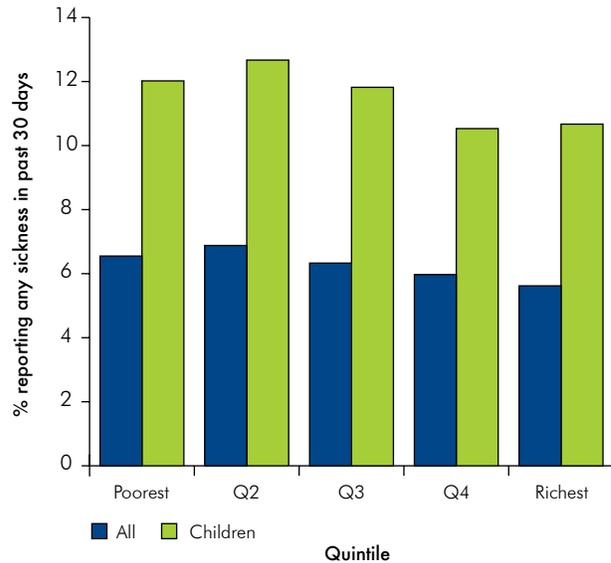
**Figure 1: Illness Reporting in Pakistan and Other Asian Countries, Recent Years**



Lao PDR = Lao People’s Democratic Republic, PNG = Papua New Guinea  
Sources: Authors’ analysis of PLSMS 2006 and CWIQ 2007 data sets, and analyses of Asian Development Bank technical assistance project.

Pakistan Demographic and Health Survey 2006–07 (National Institute of Population Studies 2008), show that maternal and child health are much worse in the poor and in rural areas. This suggests that one driver of worse health outcomes in the poor is inadequate use of healthcare by poorer families, owing to a reduced ability to recognize illness when sick.

**Figure 2: Illness Reporting in Pakistan, by Socioeconomic Status, 2006–2007**



Q = quintile  
Source: Authors’ analysis of CWIQ 2007 data set.

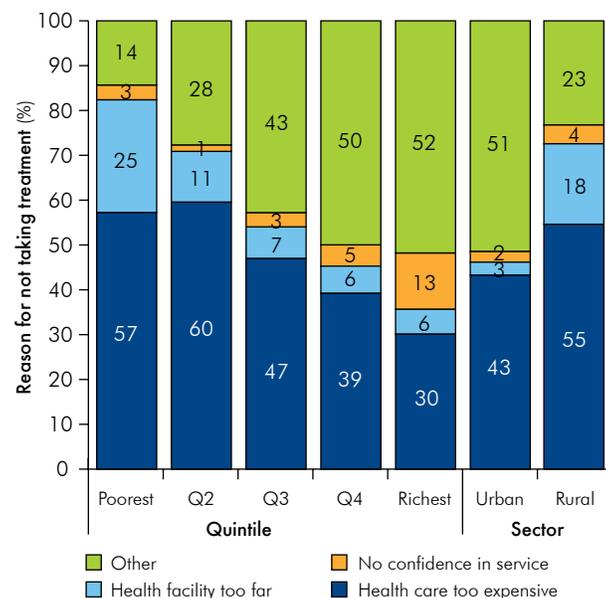
The situation in Pakistan can be contrasted with patterns in other countries, such as those shown in Figure 1, where rates of reported sickness are generally higher in the nonpoor than the poor, and in urban populations. This pattern is probably because in most countries, health awareness initially increases in the better-off and more educated households, and then spreads to the poorer and less-educated households. This trend is not so apparent in Pakistan, but can be seen to a limited extent, since the rates of reported sickness were lowest in the least developed province of Balochistan (4.9% in adults and 9.7% in children). The problem of greater underreporting in Balochistan is also mentioned in the Demographic and Health Survey 2006–07, which notes that the mortality estimates for that province may be correspondingly underestimated.

Being sick does not automatically lead to seeking medical care; in many countries, the poor who are sick are much less likely to obtain treatment than the rich. In Pakistan, such a steep gradient is not seen, but poor Pakistanis and their children are slightly less likely to be taken for treatment when sick than those in higher income groups (95% of sick children in the poorest quintile versus 97% in the richest quintile). Slightly lower rates are also seen in rural areas (94% of all sick individuals and 96% of sick children) compared with urban areas (96% of all sick individuals and 98% of sick children). The overall rates of treatment seeking when reported sick are actually high compared to other countries, suggesting that

Pakistanis tend to identify themselves as sick only when illness is so serious that they cannot avoid seeking treatment.

Excluding cases where illness was not considered serious enough to require treatment, the two leading reasons why sick persons did not seek treatment are that medical treatment would be too expensive (52% overall and 56% for children), followed by health facilities being too distant (14% overall and 15% for children). Other reasons related to service quality or lack of staff or medicines are quite small. The high cost of treatment and distance to facilities are significantly more important for the poor and those living in rural areas, while quality-related factors are only important for the richest 40% of households (Figure 3).<sup>1</sup> Distance is also much more important in Balochistan (38%) than in other provinces.

**Figure 3: Barriers to Treatment of Illness in Pakistan, 2006–2007**



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

These results indicate that financial barriers and lack of physical access are major factors behind inadequate and unequal use of healthcare for sick children in Pakistan. However, underlying this is a low responsiveness to illness.

## Utilization of Healthcare Providers

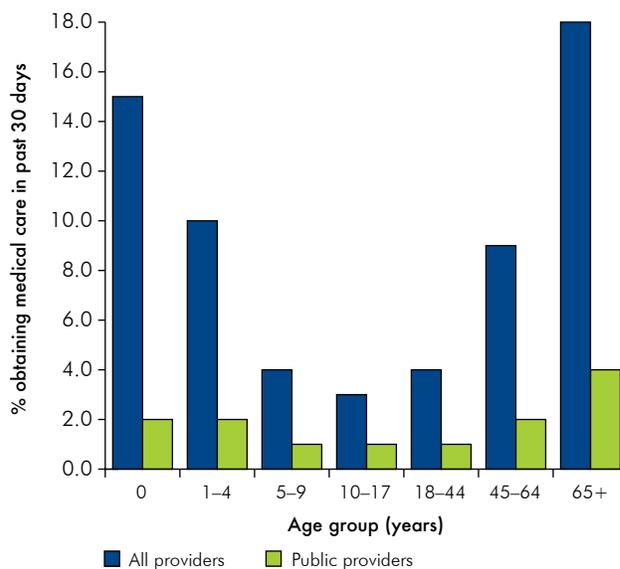
Overall healthcare utilization varies by age, with a higher level for infants and young children than for young adults, and then increasing for older adults (Figure 4). In 2006–2007, infants accounted for 5.3% of all healthcare visits, and children (i.e., less than 5 years of age) 18.6%. Infants accounted for 16.3% and children 18.7% of all visits to public providers (e.g., public hospitals, dispensaries, rural health centers, basic health units, and lady health workers).

<sup>1</sup> Other reasons given included no confidence in service, no doctor or female staff members available, staff members not helpful, lack of cleanliness, and lack of medicines.

Pakistanis obtain most of their medical care from private providers (Figure 5), with similar patterns in children (Figure 6). Public providers accounted for only 20.9% of total healthcare use, and 18.2% of healthcare use for children. Most medical care is obtained from private hospitals and dispensaries (72.4%). Use of traditional or homeopathic providers is not significant (3.3%), but is greater among the poor than the nonpoor (6% of all healthcare use in the poorest quintile versus 3% in the richest quintile), and less in children than adults.

Private providers are preferred largely because they are closer than public facilities. The PLSMS 2005–06 asked why children with diarrhea were not taken to the nearest public provider as well as the reasons for selecting a private provider. Lack of a nearby government facility was the reason for not using a government provider in 46% of cases, followed by lack of medicines or poor medicine quality in 21% (Figure 7). Similar reasons were reported for selecting a private provider.

**Figure 4: Use of Medical Treatment in Pakistan, by Age Group, 2006–2007**



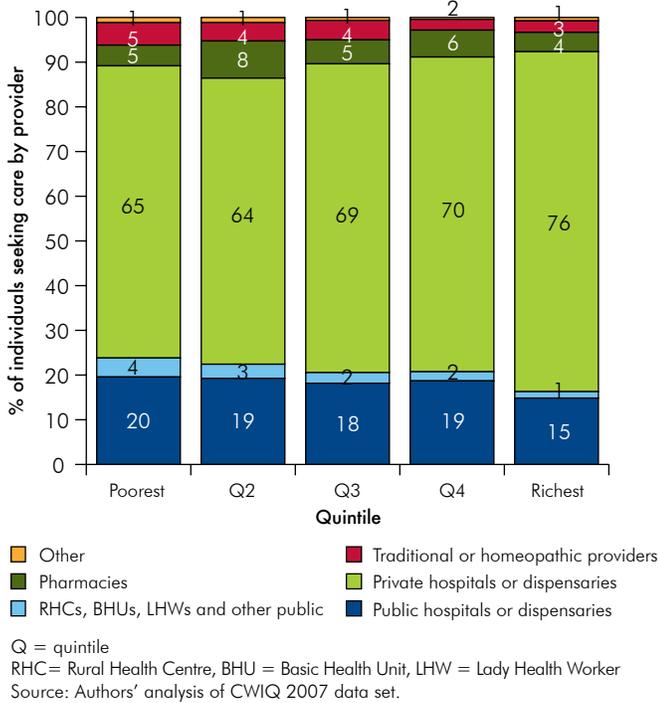
Source: Authors' analysis of CWIQ 2007 data set.

However, in contrast to most developing countries in Asia, the poor make more use of public facilities than the nonpoor. The distribution of utilization of public services both overall (Figure 8) and by children (Figure 9) is actually pro-poor, with the poorest 40% of the population accounting for 47% of all public sector visits. However, the overall distribution of government healthcare expenditures cannot be assessed from this, since the survey data do not permit analysis of whether more expensive, higher-level government facilities are disproportionately used by the nonpoor.

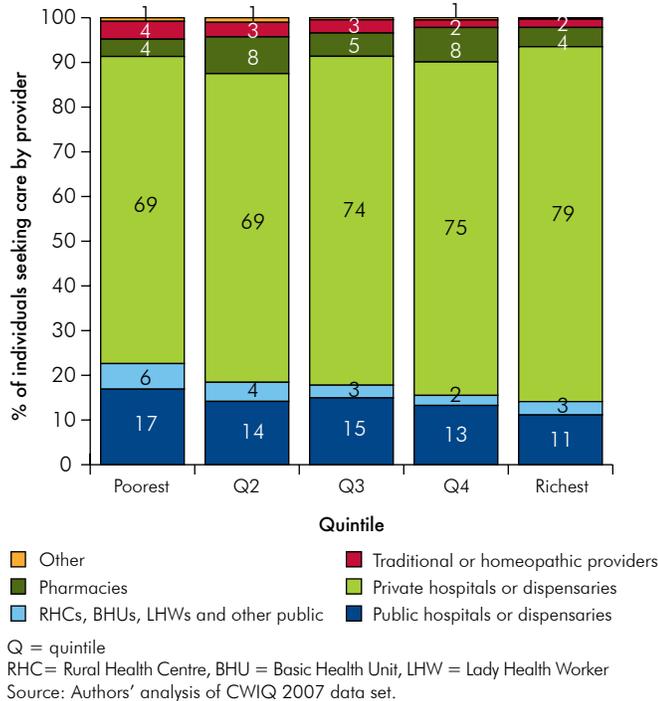
## Out-of-Pocket Spending on Healthcare

Out-of-pocket payments not only deter households from seeking care, they can also cause considerable hardship

**Figure 5: Overall Healthcare Use in Pakistan, by Socioeconomic Status, 2006–2007**



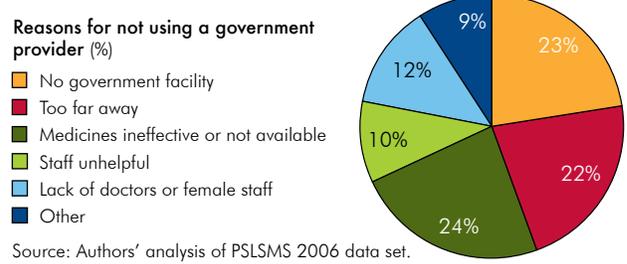
**Figure 6: Children's Use of Healthcare Facilities in Pakistan, by Socioeconomic Status, 2006–2007**



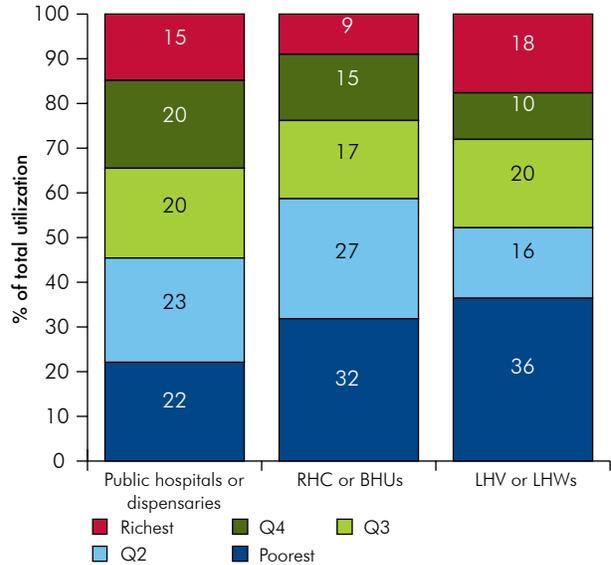
and financial impoverishment, especially among the poor. Pakistan's healthcare system relies predominantly on out-of-pocket financing.

The PSLSMS 2005–06 allows further examination of the patterns and distribution of out-of-pocket household healthcare spending. However, as it does not ask for spending

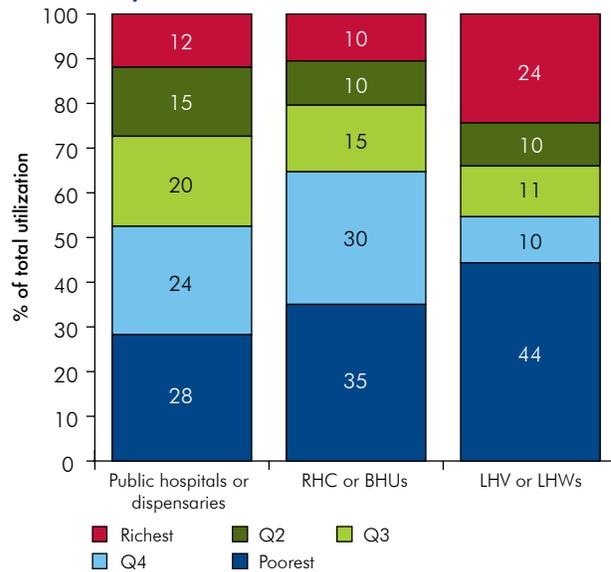
**Figure 7: Reasons for Not Using Public Providers When Children in Pakistan Are Ill with Diarrhea, 2005–2006**



**Figure 8: Use of Public Healthcare Services in Pakistan, by Socioeconomic Status, 2006–2007**



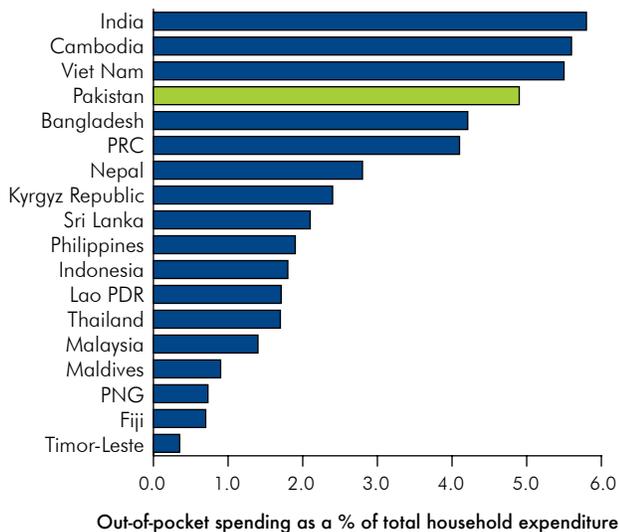
**Figure 9: Children's Use of Public Healthcare Services in Pakistan, by Socioeconomic Status, 2006–2007**



in relation to individuals in the household, it is not possible to analyze expenditures by gender or by specific age group. Moreover, spending is only categorized into two categories of medicines/supplies and other costs, so detailed analysis of the components of spending is also not possible.

According to the PSLSMS 2005–06, annual out-of-pocket spending on medical care amounted to PRs5,486 (\$91) per capita, equivalent to 4.9% of total household expenditures. This is one of the highest shares of household spending in the region (Figure 10), and should be expected to result in significant financial burdens for many households. Spending on medicines and supplies accounted for 37% of this. Limitations in the questionnaire prevent estimation of shares of spending related to maternal or child healthcare.

**Figure 10: Share of Out-of-Pocket Medical Expenditure in Household Budgets in Regional Countries, Recent Years**

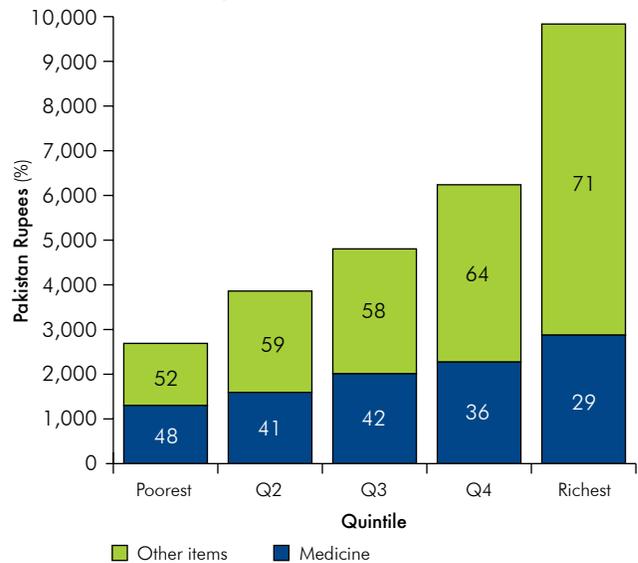


Lao PDR = Lao People’s Democratic Republic, PNG = Papua New Guinea, PRC = People’s Republic of China  
 Sources: Authors’ analysis of PSLSMS 2006 data set and analyses of Asian Development Bank technical assistance project.

There are large disparities in out-of-pocket spending by income level (Figure 11). Individuals in the richest quintile spend 4 times more overall than those in the poorest quintile and account for almost four-tenths of all out-of-pocket spending. The higher spending among the nonpoor is accounted mostly by much higher spending on doctors and hospital fees, with spending on medicines not skewed. Spending is also higher in Punjab and the Northwest Frontier Province, but urban–rural disparities are small (Figure 12).

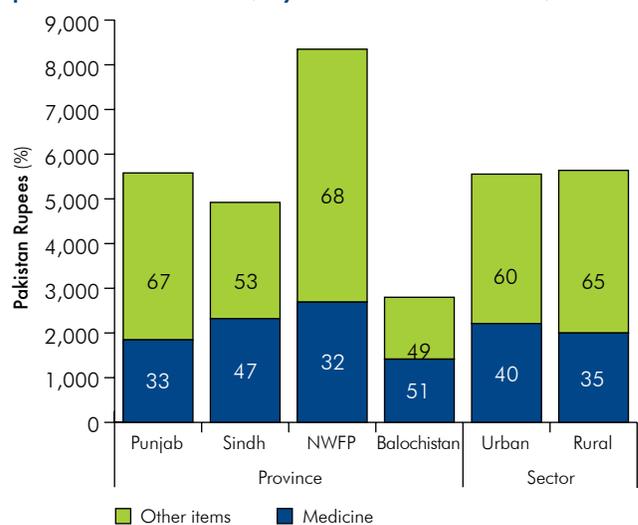
Most of the out-of-pocket spending is by the richest two quintiles. The poorest quintile of Pakistanis only accounts for 10% of total out-of-pocket medical expenditure, presumably reflecting their lower incomes and ability to pay (Figure 13).

**Figure 11: Out-of-Pocket Medical Expenditure per Capital per Year in Pakistan, by Socioeconomic Status, 2005–2006**



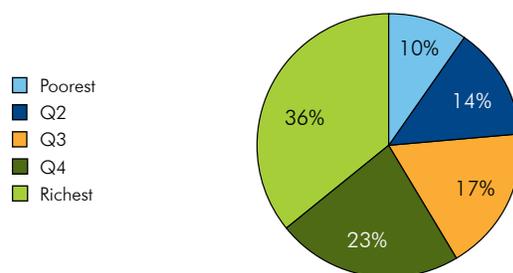
Q = quintile  
 Note: Figures indicate share of medicines and supplies in total healthcare out-of-pocket spending.  
 Source: Authors’ analysis of PSLSMS 2006 data set.

**Figure 12: Out-of-Pocket Medical Expenditure per Capital per Year in Pakistan, by Province and Sector, 2005–2006**



NWFP = Northwest Frontier Province.  
 Source: Authors’ analysis of PSLSMS 2006 data set.

**Figure 13: Out-of-Pocket Health Expenditure in Pakistan, by Socioeconomic Status, 2005–2006**



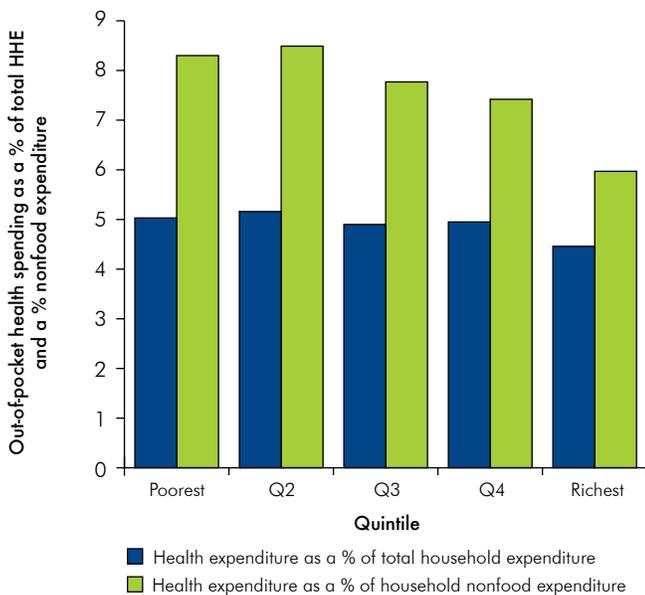
Q = quintile  
 Source: Authors’ analysis of PSLSMS 2006 data set.

## Financial Impacts of Out-of-Pocket Expenditures

Although richer households spend far more on medical treatment than poor ones, the burden of out-of-pocket expenditure is much greater for poor households than rich ones. Healthcare spending as a share of household consumption is higher in poorer households, and as a share of nonfood consumption is even greater. For example, the poorest quintile devotes 8.3% of their nonfood expenditures to medical treatment, versus 5.9% in the richest quintile (Figure 14).

There are two broad measures that can be used to assess the financial impact on households of out-of-pocket expenditure. One is to measure how many households are pushed below the poverty line by such spending (i.e., impoverishing impacts), and the second is 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 health systems results in high levels of medical impoverishment and catastrophic expenditures (van Doorslaer et al. 2006, van Doorslaer et al. 2007). The PSLSMS 2005–06 reveals high levels of both impoverishing and catastrophic impacts from out-of-pocket expenditures on health in Pakistan.

**Figure 14: Share of Out-of-Pocket Medical Spending in Household Budgets and Nonfood Expenditure by Socioeconomic Status in Pakistan, 2005–2006**

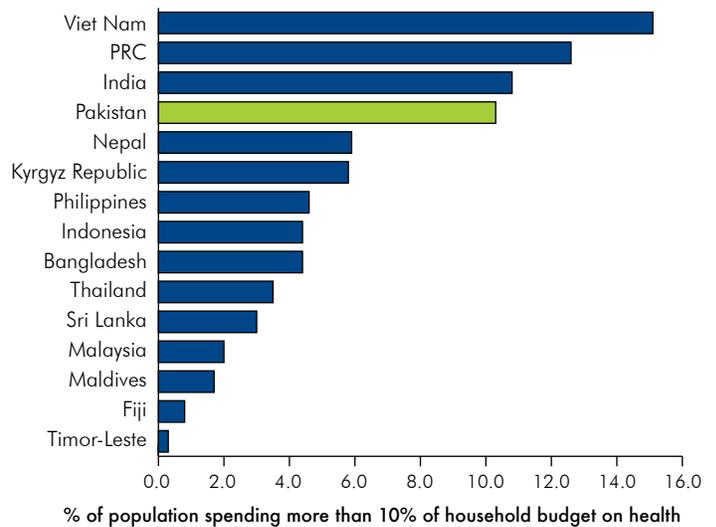


HHE = household expenditure, Q = quintile  
Source: Authors' analysis of PSLSMS 2006 data set.

Overall, in any given month in 2005–2006, 4.7% of the population, or 7.5 million Pakistanis, were pushed below the \$1 international poverty line<sup>2</sup> as a result of their household's medical spending. This is a high level of medical impoverishment by regional standards, comparable with 3.7% in India, 3.1% in Bangladesh, and 0.2% in Timor-Leste.

<sup>2</sup> The international \$1 poverty line is equivalent to a consumption level of 1.08 international (1993 purchase power parity) dollars per day. In 2005, this would have been equal to PRs27 per day.

**Figure 15: Incidence of Catastrophic Out-of-Pocket Medical Spending in Regional Countries, Recent Years**



Lao PDR = Lao People's Democratic Republic, PNG = Papua New Guinea, PRC = People's Republic of China  
Source: Authors' analysis of PSLSMS 2006 data set, van Doorslaer et al. 2007, and forthcoming estimates by Equitap research network.

Correspondingly, the frequency of catastrophic health expenditures is also high whatever definition is used. In 2005–2006, in any given month, 10.3% of Pakistani families had to allocate more than 10% of their total household budget, and 1% had to allocate more than 40% of their monthly nonfood expenditures to medical treatment costs. These rates of catastrophic expenditures are among the highest in the region (Figure 15).

## Conclusions

The PSLSMS 2005–06 and CWIQ 2006–07 suggest that overall healthcare use in Pakistan is low due to a low responsiveness to illness symptoms. Increasing health awareness and changing health behaviors would be a key part of improving overall health outcomes. Further, the overall inequality in healthcare use is not great between rich and poor, but because poor Pakistanis are in worse health, there exists considerable inequity in access and use of services.

When healthcare is obtained, private providers are the dominant source of treatment, with government healthcare services only accounting for one-fifth of overall use. The main reasons for not using government facilities, including for the poor, are lack of access and distance to government facilities, followed by lack or inadequate supply of medicines. However, overall use of government services appears to be pro-poor, although still at a low level. Given this pattern of use, if government provision is to improve coverage of essential maternal and child health services, priorities might be to expand the facility network in rural areas and to improve the supply of medicines within the government system.

Households spend 4.9% of their budgets on medical care, which is a higher level than in almost all other Asian countries. The reliance on out-of-pocket financing imposes heavy burdens on families. The incidence of catastrophic and impoverishing medical expenditures in Pakistan is high compared to other regional countries, although comparable to India, and the burden of out-of-pocket spending is greater for the poor than the nonpoor. It is likely that use of maternal and child health services in Pakistan frequently impoverishes families and acts as a disincentive to greater use of medical services, as it does in India (Sekhar et al. 2009). Consequently, both lack of physical access to nearby healthcare facilities and the financial costs of treatment need to be addressed to improve utilization of maternal and child health services.

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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

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