

Supplementary Table 1. Key variable definition

Variable	Variable type
Household level variables	
If any member in household over 60 years old	Binary <ul style="list-style-type: none"> • No member above 60 years • At least 1 member above 60 years
If any member in household below 5 years old	Binary <ul style="list-style-type: none"> • No member below 5 years • At least 1 member below 5 years
If any member in household has a chronic disease	Binary <ul style="list-style-type: none"> • No household member has a chronic disease • At least 1 household member has a chronic disease
If any member in household used inpatient service recently	Binary <ul style="list-style-type: none"> • No member in household used inpatient service recently • At least 1 household member has a chronic disease
Total Household income	Continuous
Income quintile of per capita household income	Categorical <ul style="list-style-type: none"> • 1st quintile • 2nd quintile • 3rd quintile • 4th quintile • 5th quintile
Total Household medical expenditure	Continuous
Household catastrophic expenditure	Binary <ul style="list-style-type: none"> • Yes (household medical expenditure greater than 40% of household income) • No (household medical expenditure less than 40% of household income)
Individual level variables	
Have outpatient visit in the past two weeks	Binary <ul style="list-style-type: none"> • Yes • No
Admission rate within the past year	Binary <ul style="list-style-type: none"> • Yes • No
Admissions in lower level health facilities	Binary <ul style="list-style-type: none"> • Yes • No

Did not get admitted when considered necessary by physicians	Binary <ul style="list-style-type: none"> • Yes • No
Forgone necessary admissions due to financial difficulties	Binary <ul style="list-style-type: none"> • Yes • No
Early discharge due to financial difficulties	Binary <ul style="list-style-type: none"> • Yes • No

Supplementary Table 2. Factors associated with households having out-of-pocket medical expenditure exceeding 40% of household income

	Alternative Model1 Odds Ratio (95% CI)	Alternative Model2 Odds Ratio (95% CI)
Survey year (2003 as base level)		
2008	1.07 (0.73 1.57)	0.84 (0.61 1.16)
2013	1.37 (0.91 2.06)	0.87 (0.63 1.21)
Area (west is base level)		
East	1.12 (0.77 1.63)	1.22 (0.85 1.75)
Central	1.02 (0.78 1.34)	1.08 (0.81 1.44)
Income group (1 th quintile is base level)		
2st quintile		0.35 (0.30 0.40)
3rd quintile		0.22 (0.19 0.25)
4nd quintile		0.17 (0.15 0.20)
5th quintile		0.09 (0.07 0.11)
Household size (1-2person as base level)		
3-4 persons		0.49 (0.45 0.53)
Over 5 persons		0.27 (0.23 0.33)
If any member in household is below 5 years old (No is base level)		
Yes		1.06 (0.96 1.19)
If any member in household is over 60 years old (No is base level)		
Yes		1.17 (1.07 1.28)
If any member in household has a chronic disease (No is base level)		
Yes		3.44 (3.09 3.84)