



## Cushioning the Effects of Health Shocks on Households

For China, health shocks—with the exception of unemployment—are the ones most likely to impoverish. Of the most commonly reported shocks, crop failure is first, illness of a working member of a household is second, and loss of livestock is third. And while death of a household worker is the second least common shock or life event, it has long-lasting effects (see figure).

### Health shocks affect household well-being through out-of-pocket medical spending

The incidence of especially large or “catastrophic” out-of-pocket spending varies from one country to the next. In Asia, two countries stand out—Bangladesh and Vietnam. For example, a long hospitalization in Vietnam has been estimated to increase annual out-of-pocket medical spending by 130%.<sup>1</sup> Both have nearly 15% of their populations recording out-of-pocket spending in excess of 25% of nonfood consumption.<sup>2</sup> China and India are not far behind at 11% and 10%, respectively.

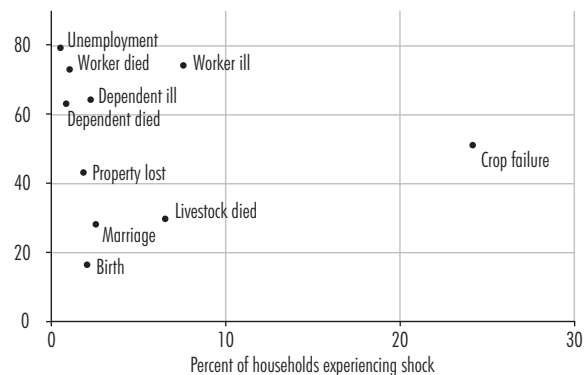
Another way of defining “large” out-of-pocket spending is if it pushes a household below the poverty line. In other words, if a poor household had used the resources tied up in medical care costs to buy food and other nonmedical items of household consumption, it would have been above the poverty line.<sup>3</sup> The implied increase in the poverty headcount associated with out-of-pocket spending varies across countries, with China and Vietnam recording large percentage increases.<sup>4</sup> In China, for example, the headcount would have been 2.6 percentage points lower or nearly 15% lower (13.7% compared to 16.2%) in the absence of out-of-pocket spending.

### One obvious way to reduce the incidence of large out-of-pocket spending is health insurance

Getting evidence on whether insurance does indeed work in this way needs to be done in a way that allows for the possibility that people anticipating especially large out-of-pocket spending may be precisely those who join an insurance scheme—the problem of adverse selection. Evidence from Vietnam suggests that its social health insurance program probably has reduced the incidence of catastrophic health spending.<sup>5</sup> But evidence from China suggests that the various health insurance programs there—especially the urban scheme—may not,<sup>6</sup> which reflects the perverse supply-side incentives in China’s health care system.

### Frequency of occurrence and poverty impact of “shocks” in China

Percent of households pushed into poverty by shock



Note: Calculations by author from social protection household survey conducted by China’s ministry of civil affairs and the World Bank.

Providers everywhere have better information than the patient about health matters. In China, they have a strong incentive to capitalize on this, because they are paid fee-for-service. The price schedule they face gives them a higher profit margin on high-tech care and drugs than on basic care, and they seek to shift demand among insured patients to these high-margin services. These services, of course, necessitate larger copayments from patients—hence the failure of insurance to reduce the risk of high out-of-pocket spending.

### If not insurance, what?

Measures that discourage providers from overproviding care may stand a better chance in places like China of containing the costs of health shocks. This is borne out by a recent impact evaluation of a World Bank project in rural China.<sup>7</sup> The project operated on both the demand side—strengthening rural health insurance—and the supply side—introducing treatment protocols, drug lists and training programs to reduce “demand inducement” by providers, and improving the infrastructure of facilities and adding to their stock of medical equipment. In the event—in the province and time period covered—the insurance-strengthening intervention had not begun, the supply-side interventions, by contrast, had. Despite this, the project is estimated to have reduced catastrophic health spending (including spending for drugs) for the whole population, especially those in the poorest half.

## Health shocks have an income component too

Out-of-pocket spending is just one of the ways health shocks impact household living standards. The other way is through their impact on household income. Some studies suggest, in fact, that the income effect may be quantitatively larger than the health spending effect.<sup>1,8,9</sup> While potentially large, the income consequences of health shocks are not fixed. Households could cushion the impacts of a health event affecting a breadwinner by increasing the labor supply of other household members. Or in countries without extensive social protection programs, other households could come to the assistance of the household, giving it cash or in-kind gifts, perhaps in anticipation of a reciprocal gesture in they event that at a future date the same fate befell them.

Recent evidence for Vietnam suggests that households do see increases in their unearned income following some health shocks, and that this occurs in both urban areas (where social protection programs may be part of the story) and rural areas (where inter-household gifts are likely to be the reason).<sup>1</sup> Furthermore, the same study suggests that the impacts on earned income are larger in urban than rural areas. This could be because rural households can substitute a well member for a sick member in their family's agricultural activities when one falls sick, while urban households—being more likely to be in a formal labor market—cannot.

## Health shocks and consumption smoothing

Just because households spend on medical care and lose income when they experience health shocks does not necessarily mean that their consumption falls. Couldn't they sell assets and use other formal and informal risk-sharing mechanisms to prevent cutbacks in consumption when health events occur? Evidence from Indonesia suggests they cannot.<sup>9</sup> This is largely borne out by a study of Vietnam, which distinguishes between food and nonfood consumption.<sup>1</sup> It finds that households cannot smooth their food consumption in the face of health shocks. Whether they can smooth their nonfood (and nonmedical) consumption is less clear-cut.

This seems to be because health shocks may actually increase some household consumption items, namely electricity and housing, and perhaps—and less reassuringly—tobacco too. Increased expenditure on electricity and housing may be due to the sick household member requiring a more comfortable and better-equipped home upon discharge from hospital. In China, one-quarter of patients discharge themselves from hospital

against their doctor's advice because their family can no longer afford to keep them there.

These findings reinforce the need to better understand the cushioning effects of different policies and programs on the impacts of health shocks. Health insurance is for sure one important tool. But supply-side incentives need to be factored into the equation, and improving them may even be a more effective strategy in some settings than expanding insurance. In addition to policies directed at health spending, policies are needed to cushion households against the income losses associated with health shocks. Here the developing world has a long way to go. And yet the benefits of such policies could be considerable.

Adam Wagstaff, Lead Economist  
awagstaff@worldbank.org

## Notes

- <sup>1</sup> Adam Wagstaff. 2007. "The economic consequences of health shocks: Evidence from Vietnam." *Journal of Health Economics* 26: 82–100.
- <sup>2</sup> Eddy Van Doorslaer and others. 2005. "Paying out-of-pocket for health care in Asia: Catastrophic and poverty impact." In *EQUITAP Working Paper #2*, Erasmus University, Rotterdam and IPS, Colombo.
- <sup>3</sup> Adam Wagstaff and Eddy van Doorslaer. 2003. "Catastrophe and impoverishment in paying for health care: with applications to Vietnam 1993–1998." *Health Econ* 12(11): 921–34.
- <sup>4</sup> Eddy van Doorslaer and others. 2006. "Effect of payments for health care on poverty estimates in 11 countries in Asia: an analysis of household survey data." *The Lancet* 368(9544): 1357–64.
- <sup>5</sup> Adam Wagstaff and Menno Pradhan. 2005. "Health insurance impacts on health and nonmedical consumption in a developing country." World Bank Policy Research Working Paper 3563.
- <sup>6</sup> Adam Wagstaff and Magnus Lindelow. 2005. "Can insurance increase financial risk? The curious case of health insurance in China." World Bank Policy Research Working Paper 3741.
- <sup>7</sup> Adam Wagstaff, and S. Yu. 2007. "Do health sector reforms have their intended impacts? The World Bank's Health VIII Project in Gansu Province, China." *Journal of Health Economics* 26(3): 505–35.
- <sup>8</sup> Magnus Lindelow and Adam Wagstaff. 2005. "Health shocks in China: Are the poor and uninsured less protected?" World Bank Policy Research Working Paper 3740.
- <sup>9</sup> Paul Gertler and J. Gruber. 2002. "Insuring consumption against illness." *American Economic Review* 92(1): 51–76.