

Medical spending and health outcome in Nepal: problems with technology or its distribution?

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Notwithstanding the great improvements in medical technology, such as oral rehydration therapy, diarrhoea is still one of the leading causes of childhood morbidity and mortality in Nepal. Although easy-to-implement medical technologies help to reduce the health burden of many diseases, the experience in Nepal indicates that how a health system works in terms of fair distribution of such technologies and financing perhaps matters most. Childhood mortality in many developing countries remains higher among poorer people and the gap between rich and poor has grown, which indicates not only the uneven distribution of the benefits of improved medical technologies but also the extent of the economic consequences for households in the event of childhood illness. We argue that unless a national health system addresses distributional problems, the benefits of medical technologies can never be realized fully. To justify our argument, we present a small part of the results obtained from our analysis of the 1996 data of the Nepal Living Standard Survey. The design and implementation of the survey are described elsewhere (1).

We estimate annual out-of-pocket spending on medical care for children aged ≤ 15 years in Nepal at 0.8% of gross domestic product, which accounts for about 16% of the country's total expenditure on health. Health outcomes could have been different if this substantial amount of funds was organized in a more appropriate way, such as through insurance. For example, the care of ill infants and children aged ≤ 5 years costs households, on an average, twice as much as the care of older children (aged 6–15 years), but the former consumes nearly eight times more of household's annual budget than the latter. Although our study underestimated the real economic burden because the analysis took into account only direct treatment and travel costs, households with younger children face a substantial hurdle to financing the medical care of their children. Large out-of-pocket expenditure simply means less use of medical care given other needs, which in turn implies less than optimal health outcomes. Importantly, our analysis showed that diarrhoea was the second most frequent condition among children for which medical care was sought (the first being unspecified fever). Although oral rehydration therapy does not influence the occurrence of diarrhoea, it does influence the course, duration, and outcome of diarrhoea by preventing dehydration — the most common cause of death associated with diarrhoea. In the absence of the fair distribution of oral rehydration therapy, however, because households have to spend large out-of-pocket amounts of money at the point of service delivery, health outcomes are severely compromised. Young children's healthcare needs are greater than older children's needs, and households with younger children face large opportunity costs in terms of the time needed to take care of children, which otherwise would be used for economic activities. The developed world has

addressed this disparity through the use of subsidies and insurance policies that target distributional aspects of the health system. The German healthcare system, for example, offers all necessary preventive and curative child care at no cost to households through its social health insurance programme. Although poorer countries such as Nepal may not have enough funds to offer such free care, they are nevertheless able to provide subsidies for children's health care that would allow families to buy insurance to insure their children at substantially reduced rates. This will soon be the case in Burkina Faso, a West African country with a national income similar to that of Nepal. In order to instate a similar system, Nepal might have to look for some external funds. Would donor assistance be better focussed on funds for distributional endeavours (stimulating need-based demand) than funding projects from the supply side?

Although our study showed no statistically significant difference between whether or not a treatment was given to a child with diarrhoea by income quartile and rural or urban status, the treatment given (oral rehydration therapy or other allopathic or traditional solutions) was significantly different between these groups ($P < 0.05$). Surprisingly, a smaller proportion of urban households than rural households gave oral rehydration salts that could prevent the lethal consequence of diarrhoea. Instead, children in urban areas were given other allopathic or traditional medicines. Income was one of the significant characteristics that affected such a decision. The fact that urban households have better access to drugs other than oral rehydration salts, coupled with higher average incomes, might explain this behaviour. The place at which the oral rehydration salts were bought did not differ significantly, however, between these groups: in most cases oral rehydration salts were bought at public facilities. This may imply that providers other than the public might have offered drugs and not oral rehydration salts as the treatment for diarrhoea: even in the absence of information on severity of illness, we cannot readily assume that children from urban and better off families tend to have more severe episodes of diarrhoea and thus needed drugs other than oral rehydration salts. We therefore offer four possible explanations:

- the distribution of oral rehydration therapy has been confined to public facilities, as pushed largely by donor agencies;
- the knowledge that oral rehydration therapy is perhaps the best treatment for diarrhoea has not been distributed fairly among all types of providers;
- the financial incentives of prescribing drugs instead of oral rehydration salts are so large that private-for-profit providers, including pharmacies, tend to ignore the benefits of oral rehydration salts; and
- the costs of oral rehydration salts themselves are so high that households take alternative measures.

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The affordability of oral rehydration salts in poor countries, including Nepal, has been questioned seriously, and quality control in drug prescription has long been an open debate. In any case, the distribution of access to medical technology for whatever reason seems to play a more pronounced role than the effectiveness of the technology itself in determining health outcomes. In short, health systems should address the distributional aspects of any medical technology to provide better health outcomes rather

than boasting that they have the most appropriate technology to fight diseases. ■

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Reference

1. Prennushi G and Central Bureau of Statistics. *Nepal living standards survey I (1995/96). Survey design and implementation*. Washington (DC): World Bank; 1996. Available from: URL: <http://www.worldbank.org/lsms/country/nepal/nep96bidr.pdf>