

Assessing social inequalities: Inpatient care of the elderly in India and Brazil

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A recent study finds a pro-rich bias in the receipt of inpatient care in India.

The rapidly increasing older adult population in low- and middle-income countries provides a challenge for the provision of sufficient healthcare to this group. Elderly populations have a higher prevalence of chronic diseases, spend a larger amount on medicines and demand a greater range of hospital services. Furthermore, in many countries treatment in hospital is the main focus of healthcare for the elderly, with a heavy reliance on more expensive acute care services rather than primary or secondary prevention. Reforming health systems in order to place prevention at the forefront of healthcare for the elderly has been acknowledged to be a major factor in reducing morbidity and expense.



In this context, the aim of this study is to analyse socio-economic inequalities in inpatient care utilisation of older adults, contrasting two countries with different models of health service delivery, Brazil and India. Both countries have similar publicly sponsored social security measures for the elderly aside from those related to the healthcare system, with the mainly publicly funded services in Brazil contrasting with a large proportion of services paid by [out-of-pocket payments](#) in India.

The main institutional reform in Brazil's Unified Health System relates to primary and preventive care, including the Family Health Program, which guarantees access to preventive care, especially for low-income groups. This programme has reduced avoidable hospitalisation. In Brazil about 70 per cent of inpatient services are financed by the public system, representing around 50 per cent of the total public health budget. The Indian health system is largely reliant on household expenditure with private spending accounting for 78.1 per cent of total health expenditure in 2009. Individuals are increasingly using private sector provision due to the higher quality of services available. The cost of private treatment varies widely due to the large range of services available, and the private sector is a major provider of inpatient care.

The contrasting health system organisation in the two countries and the ongoing health reforms provide a context within which inequalities can be assessed for both inpatient care and length of stay in hospital. The probability of

receiving inpatient care depends on both individual and providers' characteristics. Individuals who are less educated, living far from healthcare establishments and who have a low expectancy of receiving healthcare have a lower probability of seeking health services. The second stage of receiving inpatient care is related to the decision about how long the patient should stay in hospital. This decision depends on the severity of the disease, the patients' characteristics and again on the incentives for the providers.

Using the Brazilian National Household Survey from 2003 and the Indian National Sample Survey Organisation survey from 2004, inequalities by wealth (measured by income in Brazil and consumption in India) were assessed using concentration curves and indices. Inequalities were also examined through the use of zero-truncated negative binomial models, studying differences in receipt of care and length of stay by region, health insurance, education and reported health status.

The results indicated clear differences in economic inequality between Brazil and India with respect to the receipt of inpatient care. In Brazil there was no evidence observed for economic inequality, while in India those who were classified as rich were more likely to be admitted to hospital. Inequality was seen in both countries by sex, region, education and health insurance, with those who have insurance more likely to have received care.

This similarity between the countries on other dimensions of inequality further highlights the difference between them with respect to inequalities by wealth. In Brazil, once self-reported health status was controlled for, a richer individual was more likely to have received care than a poorer individual, indicating that receipt of care may be linked to health—wealthier individuals obtain care for less serious illnesses or for preventative care, although it is not possible to verify this using these datasets.

There was no income or consumption inequality in either country in regard to the length of stay in hospital: irrespective of the wealth of the older adult the reported stay was, on average, the same. This indicates that once care is obtained there is no discrimination in the amount of care received by wealth. Yet there is a relationship with education in Brazil, with those with less education having a shorter time in hospital. Evidence does indicate that educational level is related to wealth in Brazil, so this inequality may simply be reflecting wealth differentials.

The absence of inequality by wealth in Brazil is consistent with other studies in higher income countries, indicating the progress made by the health system in the country in ensuring equitable access. There has been a move to a preventative system of healthcare using primary health services, which has reduced avoidable hospitalisation and could be hypothesised as being the driver for reducing inequalities in obtaining inpatient care. However, the richest individuals with insurance are seen to be more likely to obtain inpatient care, indicating that they can attend both the public and private sectors, while the poorest rely on the public sector only.

The lack of inequality in Brazil highlights a potential pathway for the Indian health system reforms. A reduction in the private sector and a strengthening of public provision are an aim of the Indian reforms, similar to the process followed by Brazil. The higher inequity observed in India can be partly attributed to the financial burden of care. Inpatient care provision in the private sector is increasing throughout the country, where the majority of the financial burden falls on individuals and households. For older adults, who rely on family, friends and other social structures for support may not have the funds required for care.

This study is particularly relevant in the light of the Indian government's aims to strengthen public provision within the country. The success of Brazil's health reforms in reducing inequalities in elderly inpatient care indicates a potential pathway that could be followed, especially as high levels of inequality in India highlight the difficulties faced by the elderly poor under the current system in obtaining the care that they require.

*For more information on this topic, including methodology, descriptive results and study limitations, see A.A. Channon, M.V. Andrade, K. Noronha, T. Leone and T.R. Dilip, "Inpatient care of the elderly in Brazil and India: Assessing social inequalities", *Social Science and Medicine* (2012), 75 (12): 2394-2402.*

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