

CATASTROPHIC HOUSEHOLD EXPENDITURE ON HEALTH CARE IN URBAN SLUMS OF CUTTACK: FOCUS ON HEALTH SECTOR REFORM IN ODISHA

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ABSTRACT

One of the main challenges in the implementation of health care reform in developing countries of India has been the development of catastrophic household expenditure on health care. This paper aims at contributing to the examination of the content, measurement and policy implications of health care reform tackling catastrophic risks in one of the oldest city of Odisha that is Cuttack. We undertake a theoretical and empirical analysis on the magnitude of catastrophic expenditures drawing upon data from Cuttack and we used descriptive statistics and regression analysis along with SPSS for analysis. Our empirical analysis indicates that how much are households currently spending on health care and the role of socio-economic status of households on health care expenditure and their percentage of their income is spent on it whether it is catastrophic or not? Materials and Methods: Three slums with a total a population of 6000 were selected for this study. Households where there is history of illness in last one month were included in the study. Results: There were a total of 218 episodes of illness in the households. The household's belonging to socio-economic class A and B had higher spending on individual's illness per episode as compared to households of socio-economic class C, D, and E. Socioeconomic status was the key determinant of health care expenditure. Conclusion: In this study, it has been found that almost all the households suffered from catastrophic health expenditure.

Keywords: Catastrophic, Household expenditure, Health sector reform.

INTRODUCTION:

In many developing countries government are facing lots of pressure to improve the health services delivery systems. The case of Odisha provides excellent examples where approximately half of the states' people live below the poverty line. The rate of urban poverty is 42.83% and rural poverty is 48.01% (SRS 2009). The states' per capita income is a better indicator of economic standard of living of the people Odisha's per capita income is Rs.10,208 and all India level is Rs. 18,912(2002-03). The root cause of poverty in Odisha is poor health, social deprivation, lower level of literacy, lack of proper infrastructure for health ,control of communicable diseases. To boost the health care delivery system the state government have formulated health reforms and implemented the same to give better autonomy to the health institutions. State government has stated that proper health insurance coverage along with quality health care reforms is needed to overcome the catastrophic household health expenditure. Delimiting basic health care is a central issue in health policy reform debate in these developing countries. Indeed, while containing health expenditures is at the top of the discussion in the developed world, developing countries are much more concerned with improving the accessibility to basic health care given the very limited health insurance coverage that exists in most countries (Murray et al, 1994). A way to define the extent of basic health coverage in developing countries is to relate the extent that health expenditure becomes a disproportionate financial burden for a given household. This holds because a large part of the health expenditures are borne either by individuals themselves or by the private health insurer. Furthermore, the share of the private sector seems to increase with the extent of underdevelopment. The, National Health Accounts (2001) estimated that out of pocket expenditure stands as a significant contribution to health expenditure in low-income states and in developed states and recommended that this should not finance the basic package but that should be channelled instead through health insurance for basic health care services. Among other types of health care, drugs represent the major out-of-pocket expenditure on health in developed states. A survey from Odisha found that 80% of household expenditure on health was devoted to modern drugs, 13% to traditional medicine, 5% to provider fees, and 2% resulted from transportation costs ,drugs represented 48.5% of direct private expenditures on health although figures ranged from slightly under 15% in Uruguay to 47% in El Salvador (PAHO, 1994)

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In some of the developing states of Odisha like Naupada, Cuttack, Sambhalpur etc. It is common feature that when a health care need arise, even when it refers to highly prevalent illnesses, some families might find themselves having a hard time coping with the economic sacrifices to finance basic health care. In that case, an illness might lead to a significant reduction of household income, wealth and standards of living. The treatment for many non-communicable diseases entails a lifelong commitment, and the cost of medicines can drive households into poverty it is precisely at this high end that expenditures may become catastrophic from an individuals perspective albeit the definition of catastrophic expenditure is debatable both at the individual and collective level.

REVIEW OF LITERATURE:

Health systems can deliver health services, preventive and curative, that can make a difference to peoples' health. However, accessing these services can lead to individuals having to pay catastrophic proportions of their available income and push many households into poverty. The potential impact of how health systems are financed on the wellbeing of households, particularly poor households, has affected the design of health systems and insurance mechanisms in countries as diverse as the USA, Australia, India, and Indonesia.1–6 .The protecting of people from catastrophic

payments is widely accepted as a desirable objective of health policy.^{7–13} Catastrophic health expenditure is not always synonymous with high health-care costs.¹⁴ A large bill for surgery, for example, might not be catastrophic if a household does not bear the full cost because the service is provided free or at a subsidized price, or is covered by third-party insurance. On the other hand, even small costs for common illnesses can be financially disastrous for poor households with no insurance cover. Little, however, is known about which health-system characteristics protect households from catastrophic payments, or the factors that lead some households to face such payments while others are protected. Most of the limited evidence comes from case studies. For example, in two US studies, 15, 16 households headed by older people, people with disabilities, the unemployed or poor people, and those with reduced access to health insurance were more likely to be affected than other households. In Georgia, the results of a survey undertaken after the transition to a decentralized, market-driven system showed that 19% of households seeking care had to borrow money or sell personal items to pay, and that 16% were unable to afford the medications prescribed.¹⁷ The characteristics of the households were not reported. In Thailand, the poor have been reported as more likely to have to pay for health services from their own household income than richer people, which, when combined with lower incomes, places these people at higher risk of catastrophic health payments.^{18,19} In designing their health systems, policy makers need to understand whether any characteristics make people more vulnerable to catastrophic payments. Knowledge is also necessary of which households are more vulnerable for any set of system characteristics. We aimed to quantify the extent of catastrophic payments and explore the conditions under which they are most likely to occur, taking advantage of the increasing number of available household income and expenditure surveys.

No matter whatever might be the country's economic development, the design of health care packages is one of the main objectives of health care reform. However, whilst in developed countries, the coverage of catastrophic risks stands as a design issue of certain insurance funds, in developing countries; catastrophic risks are mainly covered in publicly funded health care packages. However, the fact that these are funded exclusively unveils an implicit prioritization of financial security over other health care objectives, such as cost-effectiveness, and in general efficiency (Soderlund, 1998). On the other hand, health system reform could potentially benefit from prioritizing coverage for those expenditures in designing health care packages. Yet, little evidence has been encountered on the suitability of these policy options.

Most of the evidence on the coverage of catastrophic risks comes in developed countries focus on health insurance coverage of long-term care, especially in those systems where insurance is not universally provided. Some examples refer to health insurance reform in the Netherlands to cover long-term care (van Barneveld et al, 1997) and catastrophic risks insurance for either poor families in the US (Philip and Biordi, 1990) or referred to certain specific illnesses (Songer, 1997). However, the economic policy debate in developing countries focuses on providing basic coverage to the population rather than extending the existing one to certain contingencies.

Pradhan and Prescott, (2002) explore a database from Indonesia for the magnitude of catastrophic risks and using simulation analysis, tests the extent to which subsidizing prices for health care reduces family exposure to health related catastrophic risks. Other Another study by Ranson, (2002) aims at evaluating a female self-employed health insurance system in Gujarat, India and a more recent study explores extensively the estimation methods and undertakes an empirical application for Vietnam (Wagstaff & van Doorslaer, 2003). Empirical evidence using data from household surveys in 59 countries (Xu, 2003) has demonstrated that a combination of factors, such as health services requiring payment, low capacity to pay and a lack of prepayment or health insurance often lead to individual health spending which exceeds 30%-40% of household income. However,

further research is needed in order to clarify the impact of the design of specific catastrophic health care insurance in Latin American countries. Furthermore, in dealing with catastrophic risks no study has previously examined the issue of catastrophic drug expenditures. Finally, measurement of catastrophic expenditures is shown to be problematic and often is not clear-cut how to transfer the results of those studies into policy making. To prevent the public from incurring catastrophic expenses, NHI has established co-payment ceilings. The co-payment ceiling for expenses incurred within 30 days in an acute ward or within 180 days in a chronic ward was calculated as 6% of the average national income, which came to NT\$23,000 per admission in 2001. To further reduce financial burden of patients, the cap on cumulative costs for the calendar year was also set and calculated as 10% of the average national income, which came to NT\$39,000 in 2001(Tu bin su, 2001).

OBJECTIVES:

1. This paper aims at examining the meaning of measuring catastrophic household expenditures of the slums of Cuttack city in Odisha. In particular, it explores the distinct nature of 'catastrophic household expenditures' of the slums. It undertakes empirical analysis using data from Cuttack. Its main contributions are the following:
2. The paper examines the amount the households are currently spending on individual health care those who are living in urban slums of Cuttack.
3. The role of socio-economic status of households on expenditure on health care and about what percentage of their income is spent on it.

The paper begins by characterizing catastrophic health care expenditure section two deals with measurement issues; section three provides an empirical illustration and the paper concludes with a discussion section.

CHARACTERIZING AND DEFINING CATASTROPHIC HEALTH CARE EXPENDITURES:

A definition of catastrophic risks is necessarily somewhat arbitrary. One issue is to classify each intervention as catastrophic or not. Indeed, one could define them in terms of those expenditures which normally lead to large expenses, which at the individual level would be expected to impoverish individuals significantly. However, due to technology innovation, certain treatments might become cheaper over time, thus if catastrophic risks are defined on the basis of an illness catalogue, the list might have to be systematically updated. Of health care needs could potentially complicate the specification of which health care expenditure is catastrophic, or alternatively, could have been avoided by consuming cheaper drugs or treatments. Thus, for an expenditure to be catastrophic one might argue that it should be the cheapest health care option, although, even if individuals fail to choose the cheapest health care options, e.g., people receiving CT scans for headaches--remarkably common in developing countries with unscrupulous health care practitioners. Catastrophic risks are traditionally very expensive (Soderlund, 1997).

A specific characteristic of catastrophic risks is that they might lead to impoverishment not only limited to an occasional reduction of wealth but would have a permanent nature. Alternatively, catastrophic risks might be identified according to the individual's payment capacity, or, to specific

health care risks catastrophic for some individuals and not for others. Wyszewianski (1987) establishes an expenditure threshold for catastrophic risks at \$10,000 annually (\$14,550 in 1999). Chollet and Betley (1987) distinguish catastrophic risks as those that overcome a certain frontier of non-insurable risks, or those that overcome a certain share of individual's income, e.g., 10%. However, defining the numerical share that defined a payment as catastrophic is unavoidably arbitrary and might vary from country to country. According to Stiglith (1987) catastrophic illness implies a reduction in a family's wealth affecting both current and the near future standard of living.

One way of defining catastrophic events is to detail with precision and clarity, based on a list of specific high-cost illnesses that occur rarely, those that are very expensive and are, in general, not covered sufficiently by insurance plans. As Table 1 reveals, while catastrophic risks mainly refer to chronic illnesses, non-catastrophic risks would primarily refer to acute illnesses. While catastrophic risks would tend to be low probability and costly events, non-insurable at the individual level and difficult to predict, non--catastrophic risks normally would be highly predictable so that people could easily find insurance and even self-insure.

METHODOLOGY AND MATERIAL:

According to BPL survey 2004 the total identified slums are 258 in the Cuttack district. Most of the slums are located on private land. There is a sharp rise in encroachments on public/ municipal land from 2001 to 2004. . About 35000 households are residing on the private land. About 10 slums are included in the survey. Three slums with total population of 6000 were selected from Cuttack of oldest urban city of Odisha. Only those households where there is history of illness/sickness were visited in last one month were included in the study to minimize the recall bias. The head of households were interviewed by using pretested and prestructured questionnaire. Questions were asked on the type of illness the person was suffering, place where treatment was sought, and information on expenditure incurred. Descriptive statistical analysis and regression analysis was done to analyse the socio- economic classification of household's. The data so collected was analyzed using SPSS (Statistical Packages for Social Sciences) software.

RESULTS:

Data from 190 households were collected and analyzed, where at least one person was ill in the past one month period. There were total 218 episodes of illness in the households. The mean duration of each episode was 4 days. 148 episodes were treated at private hospitals, 34 episodes at public hospitals whereas for 8 episodes no treatment was sought. Out of 190 households, only 14 households were having some form of health insurance. Thirty households (16%) had some plan for health insurance.

Table 1 provides the results of spending on person's illness. The household's belonging to socio- economic class A and B had higher spending on person's illness per episode as compared to households of socio- economic class C, D, and E. This difference in the level of spending according to different socio- economic class of household's was found to be significant in all sub groups of expenditure.

This difference may be due to the fact that socio- economic class A and B availed services from private practitioners where the hospital fees and drug prescription amounts were considerably higher.

Table 1: Household Expenditure on individual's illness per episode according to socio-economic class of households

Socio-economic class	Hospital fees in INR median (95% CI)	Spending on drugs in INR median (95% CI)	Spending on travel in INR median (95% CI)	Total median spending in INR (95% CI)
A	75(20-150)	150(65-450)	20(10-40)	327(145-1730)
B	40(15-100)	100(50-200)	20(0-40)	140(110-400)
C	25(15-50)	70(50-100)	20(0-30)	120(80-160)
D	20(5-40)	52(30-82)	20(0-20)	100(71-145)
E	20(0-40)	55(20-90)	20(10-35)	105(72-150)
P VALUE	P<0.01	P<0.001	P<0.01	P<0.01

Table 2: Percentage of total household expenditure on health care on individual's illness out of total income of households

Socio-economic class of households	Number of households studied	Total income of households (A) (mean \pm SD)	Total household expenditure on child health care (B) (mean \pm SD)	Percentage of B out of A (%)
A	12	187500 (15625 \pm 10394)	33680 (2086 \pm 5333)	17.9
B	31	203050 (6550 \pm 3200)	19065 (615 \pm 1509)	9.3
C	55	237000 (4309 \pm 1749)	13275 (241 \pm 462)	5.6
D	76	197850 (2603 \pm 1154)	9817 (129 \pm 142)	4.96
E	16	19725 (1232 \pm 426)	1975 (125 \pm 81)	10.0

DISCUSSION:

Our results showed that socio-economic status was the key determinant of health care expenditure. These findings are similar to that reported in multi country analysis of catastrophic household healthcare expenditure. The poorest, that is, socio-economic class E households spent a total of Rs 105 (95%CI 72-150) per episode of an individual illness. Even if an individual visit a hospital whether it is private or public hospitals. There are some hidden costs involved. These are mainly on travel expenses and expenses on drugs and medicines if the patient is admitted and if the

drugs that are bought from market. Health expenditure has been defined as catastrophic if 5–20% of total household income is spent on health care. In our study, it has been found that almost all the households suffered from catastrophic health expenditure [Table 2]. Protection of interest of the poorest class households who suffered catastrophic expenditure should be addressed in policy formulations to ensure better access to health services and higher degree of financial protection against the economic impacts of illness on the family.

CONCLUSION:

Through the study I concluded that poorest members of community incurred catastrophic health expenses. It is necessary to discuss the health sector reform in Odisha.

HEALTH SECTOR REFORM IN ODISHA:

1. One of the first efforts towards reform was to mobilize local resources through introduction of user charges in tertiary and secondary hospitals with a built-in exemption plan for the poor. User charges would help the hospitals secure working capital for day-to-day miscellaneous needs, and provided more autonomy to hospitals for financial decision-making (fixing rates, collection and spending).
2. Efforts at decentralization started side by side. The district health societies or *Zilla Swasthya Samitees* (ZSS) were revamped, with merger of parallel societies at district level to improve efficiency and coordination. Performance of different districts varied considerably, but further inputs were planned to make the ZSS an enabling health management structure at the district level, while retaining the role of the state for overall health planning, guidance and supervision.
3. There were efforts towards partnerships and outsourcing. On a pilot basis the Government transferred the management responsibility of selected PHCs (Primary Health Centres) to private-not-for profit agencies (NGOs). This was later evaluated and found not very successful. The terms of reference and modalities of the transfer were insufficient and very few organizations had the capacity to run or sustain the comprehensive services provided through PHCs. The findings however helped in capturing important lessons that feed into the Government's proposed policy of transfer of management to peripheral levels. Another effort at outsourcing was the handing over cleaning services to private agencies in major hospitals. Aimed at improving efficiency of ancillary services in hospitals, this initiative was found to have a notable effect on hospital cleanliness, and has resulted in better user satisfaction.
4. Multi-skilling of pharmacists through training as laboratory technicians for TB and Malaria programmes.
 - Short training course for general doctors in anaesthesia administration.
 - Change in internship training programme towards greater community health orientation.
 - Rural service incentives to doctors (cash allowance in remote districts, weight age for postgraduate course entrance).
 - Mandatory pre-postgraduate service in remote districts. This helped in filling a large number of vacancies of doctors in remote primary health centres

5. Odisha Medical Service rules were amended to make the first posting to rural areas mandatory. Drug shortages were widespread in all health institutions and drug budgets did not increase with increasing need. Realizing that this was the most tangible aspect of user satisfaction and a poverty reduction measure from the health service delivery point of view, the Government introduced reform in the form of a new policy for drug procurement and distribution. The result was encouraging. The hospitals got more autonomy in indenting required drugs within the prescribed essential drug list using generic names. Rational reallocation of funds, bulk procurement and stringent quality checks resulted in better quality medicines in larger quantities for the same budget. An external evaluation of the scheme gave a very positive report.
6. Another reform introduced was to ensure total risk protection against five selected diseases that used to drain large amounts of family income all over Odisha. Treatment for these diseases was made absolutely free for all through government health institutions, and any private expenditure incurred was made reimbursable from the Zilla Swasthya Samitees (ZSS) or hospital societies.
7. Campaign approach for vitamin A coverage among children was introduced in the state on the lines of polio campaign for comprehensive protection of children against vitamin A deficiency. This is changed after the recent Government of India guideline.
8. Building and other asset maintenance suffered from serious lack of funds and inadequate systems for cost-effective maintenance management. The Government adopted a policy for the maintenance system to become more effective and responsive to needs within available resources. As a first step, petty and contingency maintenance was made the responsibility of the medical managers of CHCs (Community Health Centres) by providing them a particular amount every year with flexible guidelines for easy operations. This was evaluated, and corrective measures for better policy implementation were undertaken. The Government also decided to attempt cost effective building technologies wherever possible, that would further reduce the maintenance costs. A maintenance management information system is slowly being built up. A built asset database to rationally assess the maintenance needs and budget, to negotiate an increased maintenance budget is also being developed.
9. As a policy, the Government decided that fund flow for various activities would be facilitated and simplified through State and District health societies. The Government encouraged channelling of funds from the GOI (Government of India) and other donors through the state society and the Zilla Swasthya Samitee to the spending centres. Substantial reduction in communicable disease burden. Effective control of non-communicable diseases. Risk protection against major communicable diseases, injuries, all ailments of women and children, with particular reference to conditions associated with pregnancy and childbirth. This will be achieved through a mix of service and financing options.

REFERENCE:

- [1] Hjortsberg Catherine, (1999) "Determinants of Household Health Expenditure: Case of Zambia." *Department of Economics, Lund University*. Berki SE. A look at catastrophic medical expenses and the poor. *Health Affairs 1986 Winter*;5(4):138-45
- [2] Bovbjerg, R.R (2001). Covering Catastrophic Health Care and Containing Costs: Preliminary Lessons for Policy from the U.S. Experience. *Human Development Department LCSHD Paper Series No. 66*.
- [3] Deborah Chollet and Charles Betley, 1987. "Catastrophic Health Care Cost: who is at risk?". In: *Where Coverage Ends: Catastrophic Illness and Long- Term Health Care Costs*, 1987. *Employee Benefit Research Institute*.
- [4] Diarra K, Coulibaly S. Financing of recurrent health costs in Mali. *Health Policy. 1990*; 5(2): 126-138.
- [5] Friedland, R.B (1987). "Assessing the Need for Catastrophic Health Care Cost Insurance". In *Where Coverage Ends: Catastrophic Illness and Long- Term Health Care Costs*, 1987. *Employee Benefit Research Institute*.
- [6] Gertler, P y Gruber, J (2002). Insuring consumption against illness. *American Economic Review*, 51-70.
- [7] Gross DJ, Alecxih L, Gibson MJ, Corea J, Caplan C, Brangan N (1999) Out-of-pocket health spending by poor and near-poor elderly Medicare beneficiaries. *Health Serv Res. 1999 Apr*;34(1 Pt 2):241-54
- [8] Kawabata, K; Xu, K and Carrin, G (2002). Preventing impoverishment through protection against catastrophic health expenditure. *Bull World Health Organ* .80(8):612.
- [9] Lord BM (1984) A distributional assessment of Rhode Island's Catastrophic Health Insurance Plan (CHIP). *Health Care Financing Review 1984 Fall*;6(1):51-9
- [10] Murray CJL Center for Jewish Life CJL Center for Jewish Living at Cornell (Ithaca, New York) , Govindaraj R, Musgrove P. National health expenditures: a global analysis. In *Global comparative assessments in the health sector: Disease burden, expenditures and intervention packages*. Murray C,
- [11] Lopez A. Geneva, canton and city, Switzerland Geneva (jənē`və), Fr. Genève, canton (1990 pop. 373,019), 109 sq mi (282 sq km), SW Switzerland, surrounding the southwest tip of the Lake of Geneva. : *World Health Organization; 1994*.
- [12] PAHO. Health conditions in the Americas. 1994 edition. Volume 1. Washington, D C: World Health Organization/Pan American Health Organization; 1994. *Scientific publication No 549*.
- [13] Philipp TA, Biordi DL (1990). Financial ruin or financing catastrophic health coverage: who pays? *J Prof Nurse 1990 March April* ;6(2):94-102
- [14] Pradhan, S and Prescott, N (2002). Social risk management options for medical care in Indonesia. *Health Economics 11*: 431-446.
- [15] Ranson, MK (2002). Reduction of catastrophic health care expenditures by a community-based health insurance scheme in Gujarat, India: current experiences and challenges *Bulletin World Health Organisation* 80(8):613-21
- [16] Rogowsky, J Lilliard, L y Kington, R (1997). The financial burden of prescription drugs use among elderly persons. *Geronologist*, 37: 475-82.
- [17] Soderlund N (1998). Possible objectives and resulting entitlements of essential health care packages. *Health Policy* 45(3):195-208
- [18] Songer TJ, LaPorte R, Lave JR, Dorman JS, Becker DJ (1997). Health insurance and the financial impact of IDDMabbr. insulin-dependent diabetes mellitus
- [19] Parker, Susan W., and Rebecca Wong. (1997). "Household Income and Health Expenditures in

- Mexico". *Health Policy*. 40: 237-55.
- [20] Bhabesh Sen. & Himanshu, Sekhar Rout, (2007), "Determinants of Household Health Expenditure: Case of Urban Orissa ", *MPRA Paper 6492, University Library of Munich, Germany*
- [21] Berman Peter and Khan M.E.,(1993), "Paying for India's Health", *Sage Publications* ,New Delhi
- [22] Dug gal. R. (2007),"Health Care in India: Changing Financial Strategy" *Journal Compilation, Blackwell Publishing Ltd, UK*
- [23] Directorate of Economics and Statistics, Government of Orissa, 2005-2006 to 2008-2009. *Economic survey, Planning and Coordination Department, Government of Orissa.*
- [24] Health and Family Welfare Department, 2009, Orissa State Integrated Health Policy- 2002, Government of Orissa.
- [25] Orissa vision -2010 –A Health Strategy, Government of Orissa
- [26] Ministry of Health and Family Welfare (MOHFW), 2009, National Health Accounts, India-2004-05 with provisional estimates from 2008-2009, New Delhi: MOHFW, Government of India.
- [27] Office of the Registrar General India, 2009, SRS Bulletin: Sample Registration System: New Delhi.RGI.
- [28] Cuttack Municipal Corporation, Cuttack, Government of Orissa
