Evidence of disparities in health expenditures for the treatment of illness and for preventive purposes in Kerala, India

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Supported by the International Development Research Centre (IDRC) and Groupe de recherche interdisciplinaire en santé (GRIS)

CAHSPR, May 2009

UNITÉ DE SANTÉ INTERNATIONALE
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Objectives

- To analyze differences in health utilization and expenditure for the treatment of episodes of illness and for purposes of health maintenance/prevention.
- To determine if health care costs act as a barrier to health care access.

KERALA
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KARNATAKA
KASARAGOD
KANNUR
WAYANAD
KOZHIKODE
MALAPPURAM
PALAKKAD
TAMIL NADU
THRISSUR
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ARABIAN SEA
IDUKKI
KOTTAYAM
ALAPPUZHA
PATHANAMTHITTA
KOLLAM
THIRUVANANTHAPURAM
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WAYANAD DISTRICT
KANNUR
KARNATAKA
KOZHIKODE
TAMIL NADU
MALAPPURAM
212
Tholnattyvayal
Thirynelli
Thavinhal
Thrissileri
Tindummal
Chandanatodu
Kartikulam
Chegaul
Padichira
Periya
Mudummal
Mananthavadi
Pulpally
Mukki
Valatt
Edavaka
Nallurnad
Cherykattur
Irulam
Chedleth
Koroth
Tharuvana
Kanhirangad
Porunnannur
Kottathara
Thondernad
Vellamunda
Anchukunnu
Kuppadithara
Kaniyambetta
Krishnagiri
Wayanad Wildlife Sanctuary
Vennayot
Hatika
Purakkady
Padinharathara
Pathiripuzha
Kuppadi
Muthanga
Tariyod
Minangadi
Sultan's Bathery
Edacheri
Muttal
Nenmeni
Nulpuzha
Vengappally
KALPETTA
Pulikkad
Kanal
Ambalavayal
Cheeral
Thariode
Aramangalum
Thrikkaipetta
Kottappadi
Thomattuchal
Chundale
Natumula
Pozhuthana
Meppadi
Vayittiri
Muppainad
Kunnathidovaka
Vallarimala
National/State Highway
Other Roads
District Headquarter
Tourist Centre
Water Body
Map not to Scale
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Kottathara Panchayat, Wayanad

- Population: 3352 households, 16110 individuals in 2003
- Caste system (system of complex social stratification; hereditary and immutable)
  - **SC**, **« scheduled castes »** (the "untouchables")
  - **ST**, **« scheduled tribes »** (aboriginal/tribal groups)
  - **OBC**, **« other backward castes »**
  - **FC**, **« forward castes »**
- 31% of households belong to tribal groups; 3 out of 5 are Paniyas.
- Paniyas: historically enslaved, marginalized and socially excluded, precarious living conditions, landless, carry out most degrading and basest professions.

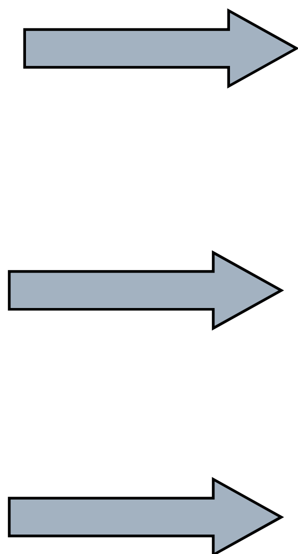
Methodology

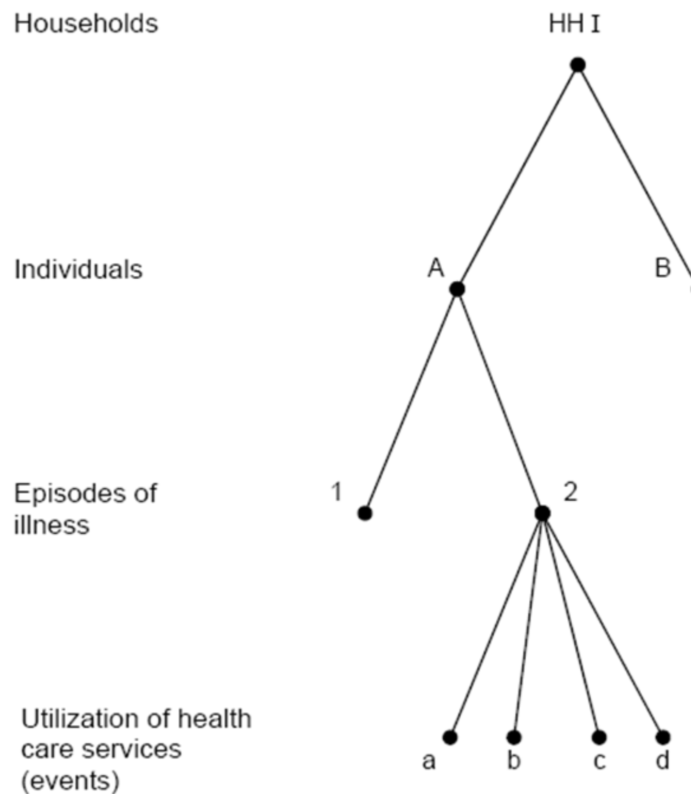
Data: « Access to Health Care and Basic Minimum Services in Kerala, India » Project

Survey	Data type	Sample size (households)	Observation
Baseline Survey (2003)	Cross sectional	3352	Populational data
Cohort Study (2003-2004)	Longitudinal	543	Baseline sample, with over-sampling of Paniya households
Health Survey (2006)	Cross sectional	543	Baseline sample, with over-sampling of Paniya households

Structure of the Cohort Study data

3 levels of analysis





Variables: Household level

- Annual household expenditures on health (per capita average)
  - Medical expenses: consultation fees, hospital fees, costs for lab tests, surgeries, etc.
  - Other expenses: transportation, lodging, etc.

- Health expenses are categorized according to whether they are incurred for:
  - Treatment of episode of illness (symptomatic, “acute illness”)
  - Health maintenance/preventive purposes (existing condition but no symptoms, annual check-ups, etc)

  These 2 types of utilization represent 2 distinct yet important needs: treatment of acute illness may be considered as a priority and more urgent than maintenance/preventive care, especially in a context where household resources are limited

- Households are categorized according to a measure of “health care need”:
  - High need HHs: at least 1 HH member aged 60 & + or suffering from chronic condition
  - Low need HHs: no member aged 60 & + and no member suffering from a chronic condition

- Two indicators for socioeconomic status:
  - BPL/APL: gvt based; eligibility for government assistance, including health. However, possibility of a gradient of poverty among the poor.
  - Caste

Variables: Episode level

- Expenses for health goods and services for an episode of illness or for preventive purposes
    - Medical expenses and other expenses

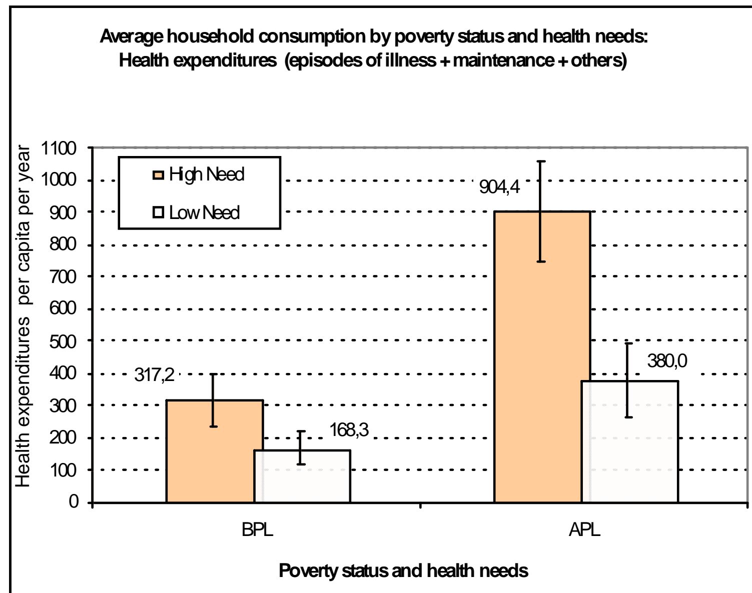
- Episodes of illness are categorized according to severity:
    - Severe episode of illness: symptoms lead to bed confinement of the individual for at least one day (affects activities of daily living)

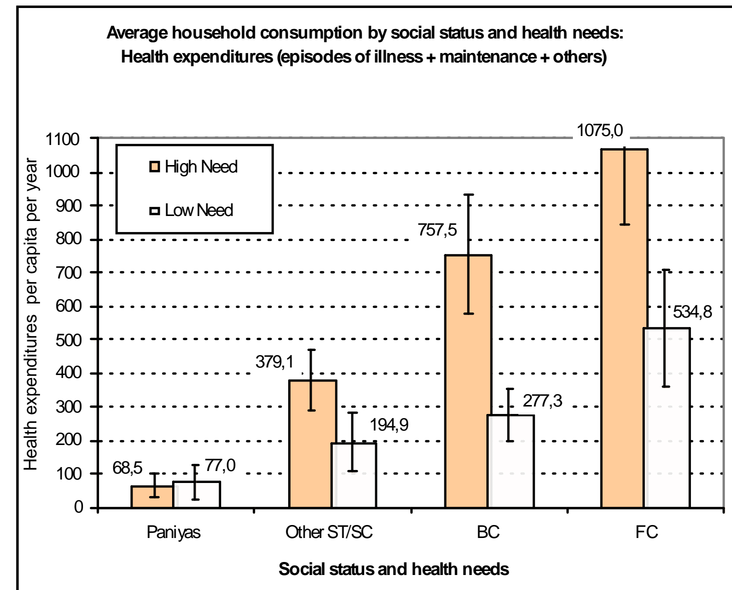
Results

Expenditures for episodes of illness

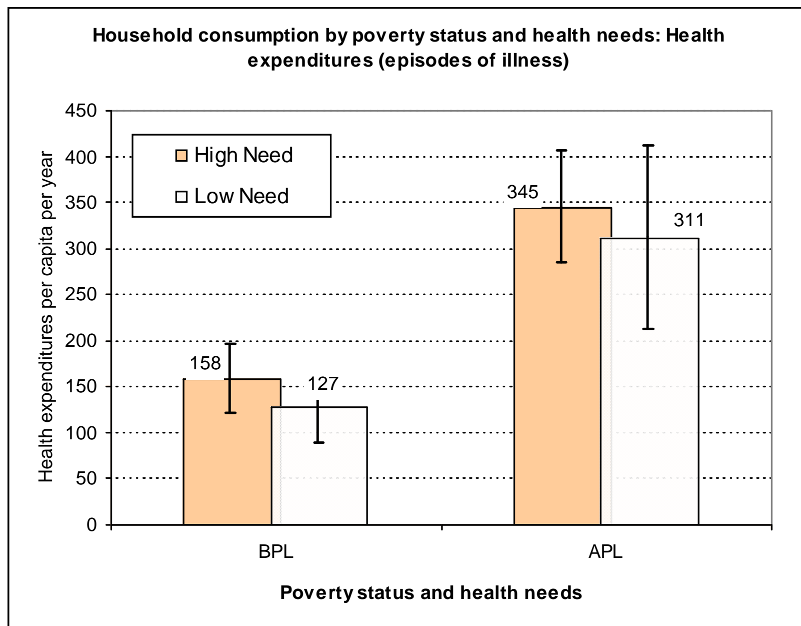
Distribution of health care utilization and expenditure per episode of illness, according to severity and caste								
	Severe episodes				Non severe episodes			
	Paniyas	Other ST/SC	OBC	FC	Paniyas	Other ST/SC	OBC	FC
% of episodes of illness that have resulted in no utilization of health care.	29.8%	11.1%	3.7%	5.3%	21.5%	18.0%	8.6%	10.5%
Among users of health services								
Average health expenditure per episode of illness (in rupees)	38	199	326	355	29	132	160	187
No health expenditure (0 Rps)	49.3%	1.6%	2.8%	3.2%	52.9%	8.7%	4.0%	6.7%
1-100 Rps	37.8%	43.8%	41.2%	29.1%	37.6%	50.2%	56.0%	41.1%
101-200 Rps	7.7%	28.9%	24.7%	22.7%	6.0%	25.0%	21.1%	24.4%
201-400 Rps	2.4%	14.8%	13.2%	22.5%	2.2%	9.2%	9.8%	16.0%
401-1000 Rps	1.7%	6.2%	8.8%	12.8%	1.0%	4.7%	5.2%	7.6%
>1000 Rps	0%	4.7%	9.3%	9.6%	0.0%	2.1%	3.9%	4.3%

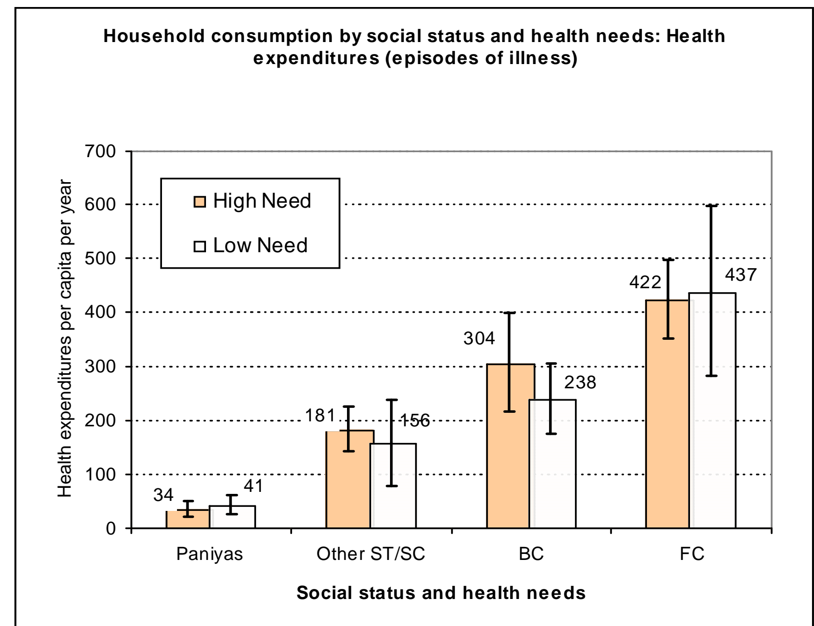
Average annual household health expenditure - overall (includes episodes of illness and health maintenance / preventive care)



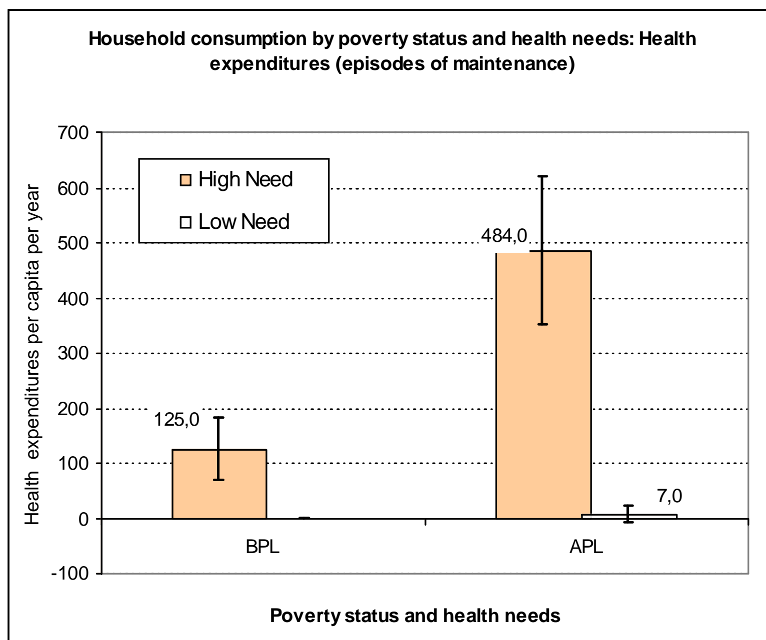


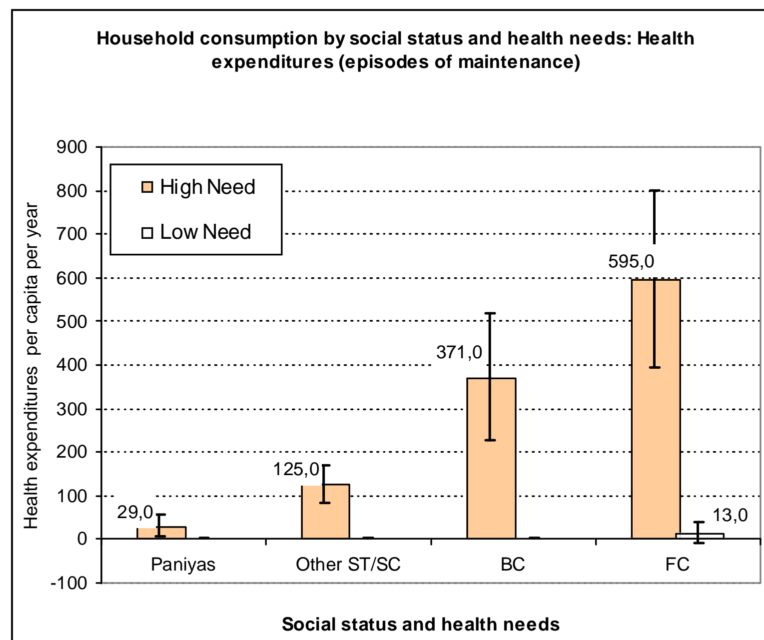
Average annual household health expenditure- episodes of illness





Average annual household health expenditure- episodes of health maintenance/preventive purposes





Conclusion

- Strong inequalities are present in health expenditures between groups.

  Disparities in expenditures are a reflection of disparities in utilization: Poorer households face strong financial constraints when seeking to access health care goods and services.

  Higher proportion of poorer households with no utilization of health goods and services when faced with episode of illness

  Severity of episode of illness does not affect utilization or expenditure for the poorest; in either case, the poorest households have equally low levels of expenditures and utilization

  Disparities in expenditures may reflect, in part, higher utilization of free public services by the poorest. Implication: poorest must resort to utilization of health services of lesser quality (overburdened city public hospitals, absent in villages, shortage of personnel and medicine in primary health centers)

  Paniyas simply cannot afford to spend more on health when its family members have greater health needs.

Conclusion

- Another important result: Policy implications

  Inequalities in access to care are not as well depicted when stratified by BPL/APL status as when they are by caste. This is relevant to the extent that eligibility for social policies is designed around this criterion. Our data indicate that large disparities exist even among the groups below the poverty line, with Paniyas showing a consistently higher level of deprivation and exclusion.

  Eligibility for social programs, as currently defined and applied, may not be effectively and efficiently reaching those with the greater need for those benefits.