

Health Care Utilization and Expenditure Inequities in India: Benefit Incidence Analysis

(An Analysis of the National representative survey)

Abstract

Equity in health care services utilization, access and affordability of healthcare to all is an important goal for any health care systems. Health care seeking behaviour often differs between the poor and rich and such differences create an inequality from both demand and supply side for health care services. Literature shows that inequities exist in service utilization and financing for health care. In this study we, examine the inequality in health status, utilization of health care services, financial risk protection and also observe that who gets benefits of public subsidies across economic status and epidemiological transition level (ETL) states of India using latest countrywideNSSO, 75th round data. We perform the Benefit Incidence Analysis using concentration indices, concentration curve and poor-rich equity ratio to access the inequities in health status for horizontal equity, financial risk protection for vertical equity and utilization of public health care services to know that who gets benefits of public subsidies giving an indicator of Redistribution across economics status and ETL states of India. As a result of high cost of hospitalization in India especially in private sector for treatment of various diseases, there has been a low utilization of health care services especially in marginalized communities. The burden of disease will severely affect the patients or their family members especially among the lower income groups mainly in two ways, on the one hand it exhausts all their savings for the treatment and on the other hand, as a result of the bed ridden situation, they lose their daily income. The present analysis indicates that the unmet need for treatment was higher in poor, and the possible reasons reported were no medical facility available in the neighbourhood, facility too expensive, cannot afford to wait long time due to domestic/economic engagement or any other reason. Government should strengthen the public healthcare system which should have accessibility and quality of care and further operations research should be conducted to identify the unmet need of the marginalized communities residing among different geographical locations/ regions.

Keywords: Inequality, Out-of-Pocket expenditure, concentration index, Benefit Incidence Analysis (BIA)

Study indicators for equity

Our study employed the indicators for equity was namely inequities in health status, utilization of health facilities and Impact of Out-of-pocket expenditure on households which describes bellow.

Level of analysis	Dimension of equity	Concept	Indicator used
Health status	Horizontal	Treating equals equally	Self-reported morbidity
Utilizations of health care service	Horizontal	Treating equals equally	Hospitalization rate
			Unmet need for medical consultation for public health facility
			Unmet need for treatment seeking
			Average share of annual income loss due to morbidity as a percentage of health care expenditure on the total household's consumption expenditure for hospitalization and OPD
Impact of Out-of-pocket expenditure on households	Vertical	Treating unequals unequally	Catastrophic expenditure when average out of pocket expenditure is greater than per capita household consumption expenditure (PHCE)which is new approach of measuring the Catastrophic expenditure
			Households faced the hardship financing due to OOPE for hospitalization

Public subsidy targeting	Redistribution	Who gets benefits of public subsidies?	Hospitalization in public health facilities
			Hospitalization in free ward in public health facilities
			OPD consultation in public health facilities
Box 1. Dimensions of equity and indicators used for analysis			

Self-reported morbidity, hospitalizations and unmet need for health-care by income quintile in ETL state groups in India, NSSO Social Consumption: Health Survey, 2017-18

Characteristics	Low ETL state group	Lower-middle ETL state group	Higher-middle ETL state group	High ETL state group	India
Self-reported morbidity OPD					
Poorest wealth quintile	2299(4.8)	148(4.3)	1114(10.2)	532(14.0)	4093(6.0)
Poorer wealth quintile	2142(4.9)	193(3.3)	1837(9.2)	906(13.9)	5078(6.5)
Middle wealth quintile	2268(5.6)	388(4)	2925(9.5)	1570(13.7)	7151(7.6)
Richer wealth quintile	2278(6.1)	642(6.3)	4191(9.4)	2865(13.4)	9976(8.7)
Richest wealth quintile	2780(8.0)	1321(7.6)	7311(10.7)	5401(12.3)	16813(10.2)
Total	11767(5.6)	2692(5.9)	17378(9.9)	11274(13.0)	43111(7.9)
Equity ratio (Q1:Q5)	0.60	0.57	0.95	1.14	0.59
Concentration index (95% CI)	0.107	0.148	0.027	-0.028	0.110
Percentage of Hospitalization per episode					
Poorest wealth quintile	4984(1.71)	657(2.51)	1822(3.96)	627(7.24)	8090(2.27)
Poorer wealth quintile	4146(1.54)	914(1.9)	2607(3.01)	1019(5.14)	8686(2.14)
Middle wealth quintile	4293(1.89)	1468(2.37)	3945(3.15)	1609(5.29)	11315(2.62)
Richer wealth quintile	3822(2.23)	2038(2.18)	5269(3.05)	2707(4.07)	13836(2.85)
Richest wealth quintile	4520(3.09)	3271(2.68)	8726(3.12)	5340(4.49)	21857(3.38)
Total	21765(1.93)	8348(2.38)	22369(3.17)	11302(4.67)	63784(2.7)
Equity ratio (Q1:Q5)	0.55	0.94	1.27	1.61	0.67
Concentration index (95% CI)	0.133	0.042	-0.015	-0.043	0.094
Unmet need for medical consultation (OPD) for public health facility (%)					
Poorest wealth quintile	50.4	73.7	59.0	30.9	51.7
Poorer wealth quintile	59.3	33.8	56.8	44.9	56.1
Middle wealth quintile	65.1	49.3	64.4	47.0	61.6
Richer wealth quintile	66.0	56.2	63.6	47.6	59.8
Richest wealth quintile	66.6	77.9	75.2	62.0	70.3
Total	60.6	64.9	66.4	52.5	61.7
Equity ratio (Q1:Q5)	0.76	0.95	0.78	0.50	0.73
Concentration index (95% CI)	0.051	0.099	0.054	0.087	0.055
Unmet need for treatment seeking (%) OPD					
Poorest wealth quintile	4.5	1.5	3.0	0.7	3.7
Poorer wealth quintile	5.7	13.0	4.0	1.0	4.6
Middle wealth quintile	3.3	2.3	3.7	0.5	3.0
Richer wealth quintile	2.8	0.6	1.6	1.3	1.8
Richest wealth quintile	1.7	0.9	2.1	0.8	1.6
Total	3.8	1.8	2.6	0.9	2.6
Equity ratio (Q1:Q5)	2.61	1.76	1.41	0.90	2.35
Concentration index (95% CI)	-0.183	-0.488	-0.126	-0.004	-0.201
Source: Authors c computation based on NSSO 75 th round data					

Out-of-pocket expenditure by health facility in ETL state groups in India, NSSO Social Consumption: Health Survey, 2017-18

Characteristics	Low ETL state group	Lower-middle ETL state group	Higher-middle ETL state group	High ETL state group	India
Monthly mean out of pocket expenditure due hospitalization (INR)					
Public health facility	677	404	469	538	553
Private health facility	3039	2450	2966	3083	2988
Total	2003	1520	1928	1947	1936
Average share of monthly income loss due to hospitalization on Households (%)					

Public health facility	6.8	3.2	4.2	4.2	5.0
Private health facility	23.8	13.0	19.8	19.1	20.4
Total	17.4	9.5	14.4	13.3	14.7
Percentage of households experiencing the CHE due to hospitalization (PHCE, approach)					
Public health facility	6.4	2.2	2.9	2.8	4.1
Private health facility	39.9	18.9	27.0	24.0	30.5
Total	25.7	11.4	17.5	14.9	19.6
Percentage of households faced the hardship financing due to hospitalization care expenditure					
Public health facility	8.9	3.1	5.2	11.4	7.7
Private health facility	15.7	6.0	16.1	15.0	15.3
Total	12.8	4.7	11.6	13.4	12.0
Monthly mean out of pocket expenditure due to outpatient's care (INR)					
Public health facility	1637	861	806	682	996
Private health facility	2326	1668	1798	2048	2007
Total	2145	1452	1536	1440	1702
Average share of monthly income loss due to OPD care on Households (%)					
Public health facility	17.0	6.8	6.9	5.3	8.6
Private health facility	20.5	9.0	12.3	12.6	14.3
Total	19.7	8.5	11.1	9.8	12.8
Percentage of households experiencing the CHE due to outpatient's care (PHCE, approach)					
Public health facility	25.9	9.9	8.7	5.9	13.4
Private health facility	35.5	9.7	17.0	14.4	22.7
Total	33.0	9.7	14.8	10.9	20.0
<i>OOPE=out of pocket expenditure, PHCE=Per capita household's consumption expenditure, CHE=Catastrophic Health expenditure,</i>					
Source: Authors c computation based on NSSO 75 th round data					

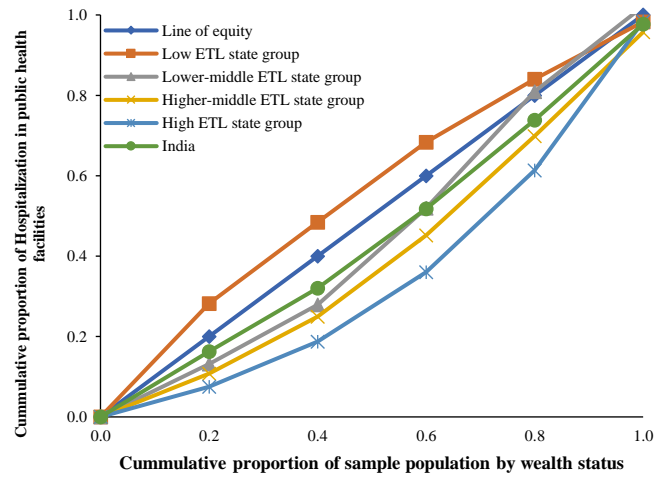
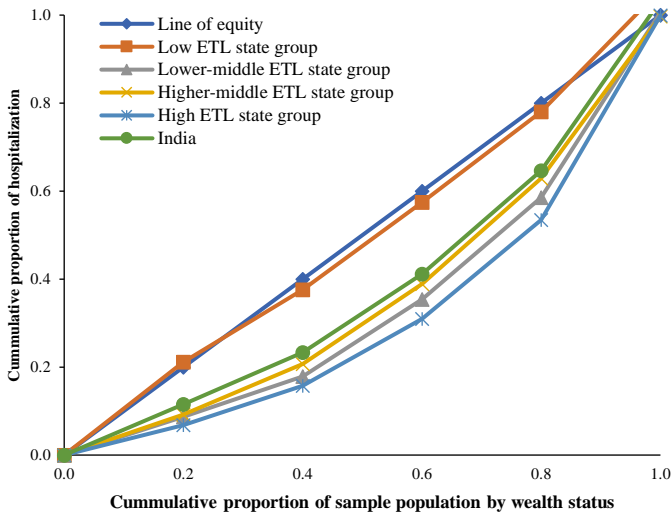


Figure 1. Concentration curves for hospitalization rate and utilization of public service for hospitalization in ETL state groups in India

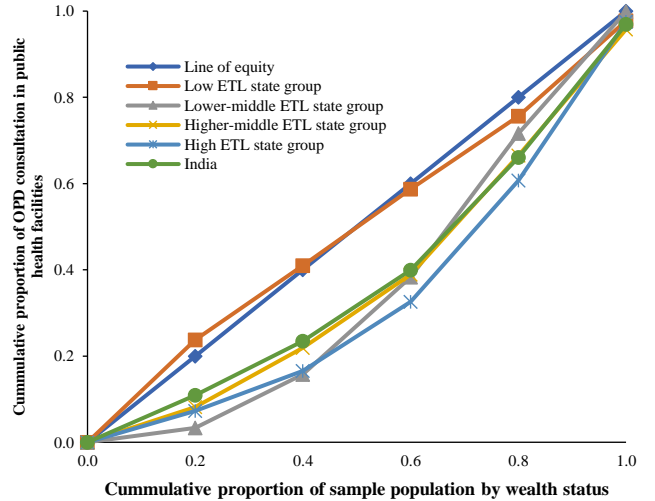
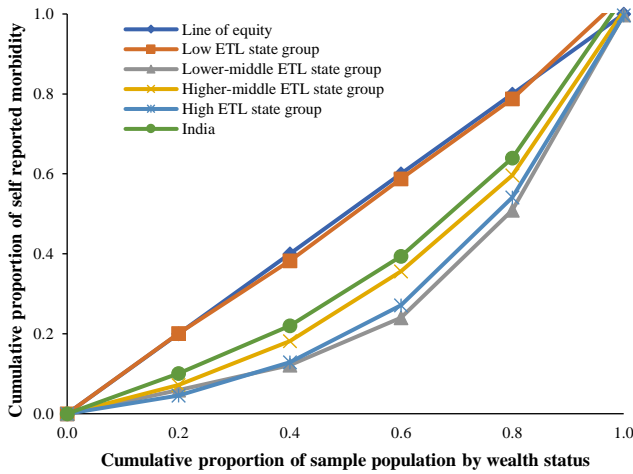


Figure 2. Concentration curves for self reported ailments in last 15 days and and utilization of public service for OPD in ETL state groups in India

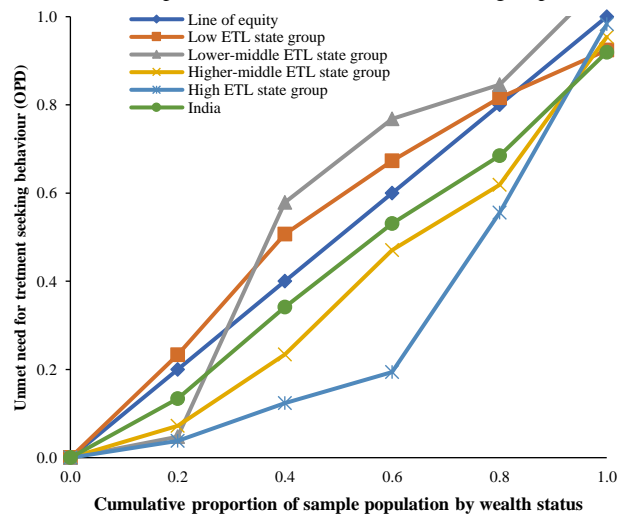
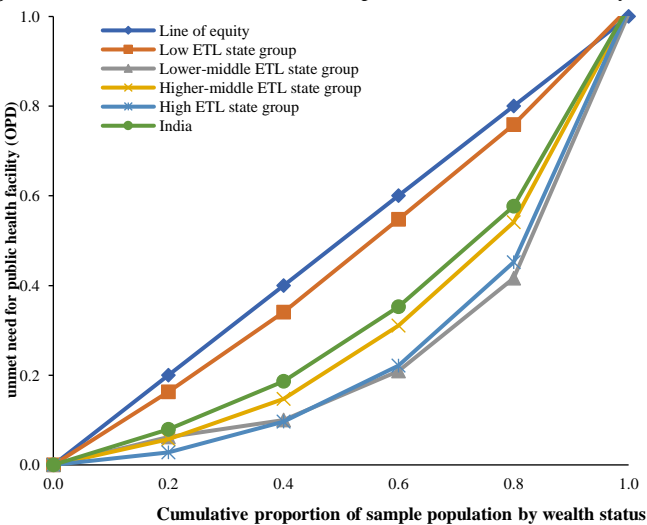


Figure 3. Concentration curves for unmet need of public health facility and unmet need for tretment seeking for OPD carein ETL state groups in India