



**Disease Burden, Health Service Coverage & Out of Pocket Expenditure:  
A study of major Non Communicable Diseases in India**

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## Introduction

Noncommunicable diseases (NCDs), or chronic diseases, are diseases that are not passed from person to person. They are of long duration and generally slow progression. For a long time they were taken to be the diseases of the 'affluent'. Countries all over the globe are now witnessing a shift in the disease burden, where the incidence of NCDs is rising rapidly even among the poor.

## NCDs and Global Policies

### 1. Global action plan by WHO

In 2011, WHO steered a Global action plan for the prevention and control of NCDs 2013-2020. The target for this plan is to reduce the number of premature deaths from NCDs by 25% by 2025.

The UN General Assembly is scheduled to convene a third high-level meeting on NCDs in 2018 to take stock of national progress by countries in attaining the voluntary global targets by 2025.

### 2. SDGs and non communicable diseases

Target 3.4 of Goal 3 of SDG which seeks ensure healthy lives for all seeks " by 2030, is to reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being".

## Burden of NCDs and their risk factors in India

According to Global Status Report on NCDs -2014, WHO Country Office, India, every year, roughly 5.8 million Indians die from heart and lung diseases, stroke, cancer and diabetes; and this accounts 60 % of all deaths in India.

Further, 1 in 4 Indians risks dying from an NCD before they reach the age of 70.

The largest contribution to morbidity and mortality is on account of four types of NCDs— cardiovascular diseases, cancer, chronic respiratory diseases and diabetes.

It is noteworthy that most of these premature NCD deaths are preventable. And the high rates of deaths and disease is a reflection of inadequate investment in cost effective NCD interventions.

## Plan of the Paper

This paper takes a look at the status of major NCDs in India with reference to three aspects

- I. Barriers to universal coverage
- II. Burden of disease
- III Financial burden of disease

The five major NCDs that have been analysed in this paper are:

1. Cancers of all types
2. Diabetes
3. Hypertension
4. Heart disease: Chest pain, breathlessness (Heart stroke)
5. Bronchial asthma/ recurrent episode of wheezing and breathlessness or known asthma (Respiratory disease)

Data Source

The disease classification and data used for this purpose has been drawn from the NSS 71st round survey on Social Consumption: Health.

## Barriers to universal coverage<sup>1</sup>

The objective of most global and national policy documents are focussed on providing universal coverage for health and protection against financial hardships due to health care.

Tanahashi Framework (1978) provides a framework to study the barriers to universal coverage in a systematic manner. According to this framework, the universal coverage to health care can be obstructed by five types of barriers to health care access. These have been identified as:

1. Availability coverage: Whether sufficient health care services are available or not.
2. Accessibility coverage: Even if the service is available, it must be located within reasonable reach of the people who should benefit from it. This accessibility has two dimensions: physical access and affordability. From the physical dimension, the resources might be available but inconveniently located, therefore hindering access. Another factor is transport is time. The travel time to a health facility and the waiting time to see a health professional are associated with the patients' perception of accessibility of services. Affordability is the dimension of financial barrier to access. Out-of-pocket health expenditure as a percentage of total health expenditure and the percentage of the population suffering from catastrophic health expenditures can be used as indicators to measure the financial barriers to accessibility.
3. Acceptability coverage: According to Tanahashi, *acceptability coverage* is defined as the capacity of the health services to be appealing and sought by the people. Acceptability includes non-financial factors such as culture, beliefs, religion, gender, age-appropriate services, confidentiality aspects of health services.
4. Contact coverage: Contact coverage is the actual contact between the service provider and the user. The number of people who have contacted the service is a measurement of service output.
5. Effective coverage: The number of people who have received satisfactory service is called effective coverage. For health interventions that require a one-time action, contact coverage may be virtually equivalent to effective coverage. For other interventions, such as chronic diseases treatment, effectiveness requires several contacts with a health service provider. There is also a need to consider 'continuity' of access and include some indicators on adherence.

The findings of the desk review with respect to barriers to coverage for the major NCDs are delineated in the ensuing section.

### ***Cardiovascular Diseases and Hypertension (CVDs)***

It was found that there is unavailability of specialized care and infrastructure, including shortage of trained manpower across the public healthcare system. This creates a major barrier in providing treatment for CVDs. Availability of drugs too needs to be strengthened in the public sector. Available infrastructure is found to have an urban bias, increasing inequity in service availability.

There is a lack of effective knowledge building. This restricts the choices of primary prevention and treatment as cultural beliefs prevents acceptability of appropriate treatment. Poor knowledge is also an important reason in causing delays in treatment seeking intensified by lack of interventions to improve awareness to seek timely treatment.

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<sup>1</sup> This section draws on a Draft Report, Sponsored by World Health Organization, India Country Office, March 2013, Titled "Barriers to Universal Coverage for Select Chronic Diseases in India", Authors- Garg Charu, Goyanka Roopali et al

Distance from hospitals is vital for emergency needs such as stroke. This is a problem and it is more intense in rural and remote areas. Physicians' inability to communicate appropriately, and inadequate physician-patient interaction and lack of patient compliance also aggravate poor outcomes.

Affordability issues also exist, especially for poor and rural areas, This leads to inequity in effective coverage due to affordability of treatment among patients.

Inadequate treatment coverage, with gender, regional and socioeconomic bias leading to higher mortality is also observed. Rehabilitative services are often inadequate, leading to poor quality of life for CVD patients.

### ***Cancers***

In India, cancer prevalence is found to be higher among females, but males have higher mortality. People at lower levels of income and lower levels of socio economic status have been found to be at a greater risk of malignancy. The following major barriers to health services for cancers in India emerged from the review:

Lack of proper surveillance, especially in rural areas. Inadequate and regional imbalances in diagnostic facilities for early screening of cancer, cancer specialists and vaccines were found to exist.

High costs of treatment for cancer has been found to prevent timely treatment. Additionally, absence of public education on self examination and risk factors also led to delays in seeking treatment. Considerable myths and social perceptions about cancer exist. Sociocultural factors and gender concerns regarding gynaecological cancers also affect care-seeking, together with fear of cancer screening results. Perception about the quality of service discourages people from regular examinations, while faith in traditional systems of medicine was found to be a barrier to early screening.

Distribution of health care infrastructure for cancer screening and treatment favours urban areas, non poor and has a gender bias, and suffers from non-recognition of special health needs of women.

Physicians often lack 'clinical eye' and training to recognize cancer symptoms. Inadequate Training of Health Care Professionals and Gaps in Provider Practices leads to diagnostic and treatment inaccuracies. Non referral by General Practitioners to Speciality Centres, was also found to be contributing to late stage of presentation leading to poor survival rates.

Poor knowledge imparted to patients about the disease led to low patient adherence. Physicians were also found falling short of the need to better handle emotional well-being of patients. Lack of awareness and knowledge about the disease and its risk factors affect patient adherence and therapeutic effectiveness.

In terms of effective coverage, financial and geographical inaccessibility was found to be a deterrent to follow up and complete treatment. Palliative Care, essential for improved quality of life for cancer patients is found to be in acute short supply .

### ***DIABETES***

In terms of the major barriers to health services for diabetes in India, the following major points emerged from the review:

Patients access to proper medicines and consultation is largely restricted by infrastructure unavailability in government health-centres.

Lack of effective prevention and screening models in India leads to large increase in the disease burden, while absence of nationwide data on epidemiology of diabetes deters evidence-based planning and decision-making.

Cost of treatment is often an important barrier for seeking diabetes care. Better quality of treatment for diabetes comes from private sector, located in urban India but at a higher cost.

Low level of awareness and low acceptability of diabetic status among the population hinder processes for effective prevention. Community awareness programs can play a crucial role for early detection of the disease, and a key intervention point.

Absence of crucial laboratory and clinical examination may lead to higher proportion of undiagnosed complications. Evidence on gender inequity in service contact suggests possible undiagnosed burden among women. Patients' compliance to diabetes treatment becomes severely hampered by increasing costs. Rehabilitation services for diabetic patients remain largely uncovered.

### **Burden of disease: Evidence from Health Survey(HS), NSS 71st round**

The Health Survey can be used for studying the morbidity burden of NCDs in two dimensions:

1. Proportion of people ailing from the diseases in the last 15 days .
2. Percentage of people hospitalised in the last one year due to these ailments.

### **Proportion of people ailing in last 15 days**

The following table gives the number of ailing persons per 100,000 population, for the major NCDs in the Rural and Urban areas separately.

ALL INDIA RURAL(number ailing per 1,00,000 persons)					
NCD	Cancer	Diabetes	Hypertension	Heart Stroke	Respiratory disease
number of ailing persons	31.27	513.01	614.32	222.31	371.00
ALL INDIA URBAN (number ailing per 1,00,000 persons)					
NCD	Cancer	Diabetes	Hypertension	Heart Stroke	Respiratory disease
number of ailing persons	54.87	1649.15	1420.61	413.48	403.32

Table 1: Incidence of NCDs in the last 15 days

### **Preponderant NCDs**

It can be observed that for both rural and urban areas, diabetes and hypertension are afflicting the people in a serious manner.

### **Incidence of NCDs by MPCE quintiles**

In India, the monthly per capita consumption expenditure(MPCE) is taken as measure of monthly per capita income of a household. The following table gives the incidence of major NCDs by MPCE quintiles. The number of ailing persons per 100,000 persons is found to be increasing with MPCE quintiles. The commonly accepted reason for this is said to be a reporting bias in ailments across the affluent and poor sections.

It must also be borne in mind that NSS data generally over samples the lower income groups and so even the top quintile does not have a very high MPCE.

All India Rural (number ailing per 1,00,000 persons)					
	quintile1	quintile2	quintile3	quintile4	quintile5
Cancer	13.8	11.3	3.7	64.6	61.4
Diabetes	65.4	262.6	332.5	545.4	1479.8
Hypertension	255.7	378.8	521.1	641.6	1375.6
Heart Stroke	159.4	134.0	205.4	190.6	451.4
Respiratory disease	266.9	292.5	354.4	462.4	492.5
All India Urban(number ailing per 1,00,000 persons)					
	quintile1	quintile2	quintile3	quintile4	quintile5
Cancer	61.0	26.3	45.1	60.0	82.5
Diabetes	526.5	1072.8	1543.7	1990.1	3131.8
Hypertension	603.0	892.0	1312.1	1690.0	2622.2
Heart Stroke	236.9	435.5	358.5	460.9	576.2
Respiratory disease	370.3	546.8	337.6	308.9	450.2

Table 2: Incidence of NCDs in the last 15 days by MPCE quintiles

### STATEWISE INCIDENCE of 15 DAY AILMENTS FOR EACH NCD

Table A1 in the Appendix gives data on statewise incidence separately for rural and urban areas. Some brief observations are presented below.

For Cancer for the rural areas , Madhya Pradesh, Punjab, Kerala, Andhra Pradesh & Tamil Nadu have a high incidence of the ailment. For the urban areas the states with high incidence are Haryana, UP, West Bengal, Rajasthan, Kerala, Maharashtra, Orissa.

For Hypertension, in the rural sector, the states with high and above average incidence are Kerala, Andhra Pradesh, Punjab, Tamil Nadu, Karnataka, Gujarat. While for the urban sector they are Kerala, Andhra Pradesh, Punjab, Tamil Nadu, Karnataka, West Bengal.

For Heart Stroke, the states with high and above rural average incidence are Kerala, Punjab, Karnataka, Gujarat, Jammu & Kashmir, West Bengal. In the urban sector , the states with high incidence are Kerala, Himachal Pradesh, West Bengal, Andhra Pradesh.

### Proportion of persons hospitalised per 100,000 persons in the last one year

ALL INDIA RURAL(number hospitalised per 1,00,000 persons)					
NCD	Cancer	Diabetes	Hypertension	Heart Stroke	Respiratory disease
number of ailing persons	57.63	42.90	75.27	150.80	85.7
ALL INDIA URBAN (number hospitalised per 1,00,000 persons)					
NCD	Cancer	Diabetes	Hypertension	Heart Stroke	Respiratory disease

number of ailing persons	72.10	92.08	134.87	283.45	112.3
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Table 3: Incidence of Hospitalisation for NCDs in the last 1 year

Both in the rural and urban sectors, the highest cases of hospitalisation has occurred for cases of heart stroke. This is to be expected given the nature of the disease. The urban sector has greater cases of hospitalisation for all categories of NCDs compared to the rural sector.

While comparing the incidence of hospitalization with the incidence of non hospitalised incidence of ailment, one must bear in mind that the incidence of hospitalisation has been reported for the last one year while the incidence of non hospitalised cases has been reported only for the last 15 days.

#### STATEWISE INCIDENCE of HOSPITALISATION FOR EACH NCD

Table A2 in the Appendix gives data on statewise incidence separately for rural and urban areas. Some brief observations are presented below.

#### **Cancer**

Some of the states that have the highest rate of hospitalisation in the rural areas are Kerala, Tamil Nadu, Himachal Pradesh, Andhra Pradesh, Mizoram. In the urban areas states with high incidence are West Bengal, Kerala, Uttaranchal, Orissa.

#### **Diabetes**

The states with high rate of hospitalisation in the rural areas are Kerala, Tamil Nadu, Punjab, Maharashtra. In the urban area, these states are Karnataka, Gujarat, Mizoram, Tamil Nadu, Kerala.

While the states with low rate are Meghalaya, UP, Tripura and Bihar in the rural areas and Meghalaya, Himachal Pradesh, Tripura and Bihar in the urban areas.

#### **COPD**

Kerala has the highest incidence of hospitalisation in both rural and urban areas.

States with high and above rural average incidence: Andhra Pradesh, West Bengal, Madhya Pradesh, Karnataka, Tamil Nadu, Maharashtra, Haryana, Punjab.

States with high and above urban average incidence: Kerala and West Bengal have the highest hospitalisation while Nagaland and Meghalaya have one of the lowest incidence.

#### **UTILISATION OF PROVIDER FACILITY FOR NCDs**

This section gives the percentage of ailing persons who used different types of provider facilities for the NCDs under question. The provider facilities have been classified into broad groups of public and private providers.

The public providers have been taken to include Primary and Community health centres (PHC & CHC), mobile medical units, government dispensaries, and public hospitals. The private providers include private hospitals and private clinics.

For non hospitalised treatment, private providers also include chemist shops, traditional sources of treatment and any other source of over the counter treatment that may have been taken.

% of Ailing Persons using a facility in last 15 days					
RURAL					
Type of Facility	Cancer	Diabetes	Hypertension	Heart stroke	Respiratory disease
Private	58.47	70.9	70.24	75.41	66.27
Public	38.34	28.94	29.23	20.87	30.49
No treatment	3.19	0.16	0.53	3.72	3.24
URBAN					
Private	65.17	78.6	79.34	79.6	78.68
Public	29.79	19.14	19.61	19.8	20.41
No treatment	5.04	2.26	1.05	0.59	0.91

Table 4: Utilisation of provider facilities for Non hospitalised ailments

% of Ailing Persons using a facility in last 1 year					
RURAL					
Type of Facility	Cancer	Diabetes	Hypertension	Heart stroke	Respiratory disease
Private	60.00	64.21	57.56	61.57	50.92
Public	40.00	35.79	42.44	38.43	49.08
URBAN					
Private	60.35	72.36	68.51	67.19	58.74
Public	39.65	27.64	31.49	32.81	41.26

Table 5: Utilisation of provider facilities for Hospitalised ailments

Tables 4&5 underscore the reliance of most ailing people on private providers for treatment. A segment of population is also found to forego treatment completely, when ailing with some of these diseases.

The reasons for not seeking medical treatment at all and not seeking treatment at a public facility have been non availability of a service, long waiting times, long distance to the facility, unsatisfactory quality of service or financial constraint. Quite often, the reason for not seeking treatment has also been that the ailment was not considered serious.

All these factors highlight the need to analyse the barriers to universal coverage in detail to design a more informed policy on universal coverage.

### **FINANCIAL BURDEN OF HEALTH CARE**

The financial burden of health care for NCDs can be studied in the following dimensions:

- (i) Out of pocket expenditure (OOP) incurred treatment
- (ii) Percentage of expenditure on drugs in OOP
- (iii) Percentage of expenditure on diagnostics in OOP



### FINACIAL BURDEN For NON HOSPITALISED TREATMENT

	OOP		Expenditure as % of OOP on	
	Per ailing person	Per capita	Drugs	Diagnostics
All India Rural				
Cancer	1325.70	0.42	62.41	13.89
Diabetes	539.97	2.77	66.08	9.81
Hypertension	329.59	2.03	72.85	5.2
Heart stroke	854.63	1.90	78.28	5.73
Respiratory disease	874.52	3.25	76.11	10.85
All India Urban				
Cancer	3589.35	1.98	83.47	5.31
Diabetes	562.11	9.26	70.57	9.36
Hypertension	397.79	5.65	75.32	6.23
Heart stroke	1186.53	4.92	60.75	12.4
Respiratory disease	848.05	3.42	77.01	5.30

**Table 6: Expenditure on Non Hospitalised Ailments for the last 15 days**

It can be observed that OOP per ailing person on cancer is much higher than any other NCD. Heart strokes have the second most expensive treatment.

Expenditure on drugs constitutes an exorbitantly high proportion of the total OOP for any NCD, for any area, rural or urban. Proportion of expenditure on diagnostics is relatively much higher for cancer and heart strokes.

Statewise OOP per ailing person for rural and urban areas is given in Table A3.

### FINACIAL BURDEN For HOSPITALISED TREATMENT

	OOP		Expenditure % of OOP	
	Per ailing person	Per capita	Drugs	Diagnostics
All India Rural				
Cancer	70153.33	40.43	22.30	9.14
Diabetes	16050.29	6.89	26.01	12.14
Hypertension	16315.31	12.28	23.3	10.3
Heart stroke	36471.94	55.00	24.08	9.78
Respiratory disease	14537.89	12.46	26.95	9.47
All India Urban				
Cancer	84160.10	60.68	32.66	12.65
Diabetes	19755.09	18.19	33.46	9.52
Hypertension	15079.46	20.34	22.13	11.49
Heart stroke	59154.71	167.68	16.01	9.34
Respiratory disease	16929.99	19.01	28.00	12.10

**Table 7: Expenditure on Hospitalised Ailments for the last 1 year**

While comparing the OOP for hospitalised and non hospitalised treatment, the difference in the reference period must be kept in mind.

As in the case of non hospitalised treatment, the OOP for cancer is the highest even in the case of hospitalised treatment. The share of expenditure on drugs is about 25-30% of OOP for most NCDs.

Statewise OOP per ailing person for rural and urban areas is given in Table A4.

### **Way Forward**

The burden of NCDs on the Indian population cannot be denied. The loss in productivity & well being and the financial hardships associated with any disease burden is well known.

What should be the policy prescription? The policy design should be based on prevention, diagnosis, care, treatment and rehabilitation of NCDs. This requires a multi pronged approach which goes beyond curing an ailment to identifying more cost effective primary interventions.

#### **1. Generation of Evidence**

There is a need to identify the disease burden by carrying out nation wide disease specific studies. This will enable monitoring of NCDs and their risk factors.

Currently the repository of data in this regard is quite scant. Whatever information exists, it is piecemeal at best.

#### **2. Identifying the pathways**

It is well recognised that the onset of many NCDs can be linked to behavioural and lifestyle factors. Greater and more broadbased investigation into the causal factors need to be carried out.

#### **3. Role of knowledge & Lifestyle choices**

Dissemination of knowledge and generation of awareness among the population is needed to prevent and control the incidence of these diseases. This will also help in busting many myths and superstitions, that prevail among many segments of the society, that create a barrier to health care. It will also facilitate a greater use of primary prevention. It is also expected to promote healthy lifestyle choices among people.

#### **4. Screening & Surveillance**

Health workers at primary level need to be trained to have an eye for these diseases. Proper surveillance and screening of these diseases may be a much lower cost intervention in controlling these diseases rather than their cure.

#### **5. Training of Manpower**

Timely surveillance and proper screening of these diseases is intricately linked to a proper training of the health system workers. Inadequate training of health workers leads to diagnostic and treatment inaccuracies. It also leads to an overload on Speciality Centres.

#### **6. Strengthen Primary Care**

The incidence of many of these diseases can be kept in abeyance if the primary care is strengthened.

#### **7. Accessible and Affordable Health Care**

Health care services must be accessible, acceptable and affordable to all sections of the society.



### **Conclusion**

There is a need to wean away the burden of NCDs from referral level or tertiary care. Their prognosis, diagnosis, prevention and treatment should be built on greater dissemination of knowledge among health workers and the society alike. This will facilitate a greater availability and accessibility of health care for NCDs services are available to all population.

TABLE A1: Number of persons per 100,000 ailing in last 15 days

States	Cancer		Diabetes		Hypertension		Heart stroke		Respiratory disease	
	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN
J & K	7.9	8.1	102.2	176.7	954.6	829.5	349.7	240.3	69.8	330.7
H.P.	25.8	47.4	650.5	626.5	821.4	464.2	129.3	906.8	374.3	20.0
Punjab	43.1	3.3	1731.5	1294.5	1896.9	2023.4	669.6	688.9	298.0	434.2
Chandigarh	0.0	39.7	2571.5	642.4	324.2	504.8	179.4	302.5	47.2	0.0
Uttranchal	0.0	97.0	24.5	1261.9	23.9	517.8	4.0	314.2	306.5	221.9
Haryana	6.9	134.3	236.9	1011.2	302.2	187.4	163.0	218.4	412.5	115.2
Delhi	0.0	35.5	371.7	244.7	0.0	148.1	0.0	39.4	0.0	89.2
Rajasthan	28.6	102.4	168.6	854.2	81.5	243.4	40.1	172.2	591.1	407.2
U.P.	18.3	119.1	107.2	755.4	125.0	475.2	149.4	322.8	318.5	330.5
Bihar	1.6	25.1	56.2	283.2	183.8	144.2	70.7	602.2	263.1	446.3
Sikkim	7.8	105.4	81.0	142.4	215.2	1559.7	26.6	22.8	4.3	94.6
Arun. Pradesh	0.0	0.0	0.0	88.6	36.2	0.0	176.4	0.0	452.1	10.7
Nagaland	0.0	12.1	0.0	0.0	0.0	0.0	1.4	6.3	0.0	0.0
Manipur	0.0	0.0	144.1	11.2	0.0	7.1	158.2	36.2	193.1	14.1
Mizoram	26.5	29.7	184.6	926.1	15.4	41.7	2.0	26.9	19.6	62.6
Tripura	0.9	0.0	6.2	16.2	13.9	168.4	309.7	31.4	21.4	11.7
Meghalaya	0.0	0.0	0.0	8.3	1.9	13.6	0.0	0.0	41.5	0.0
Assam	0.4	4.6	19.8	518.9	3.0	3.3	25.2	117.9	124.1	9.1
W.B.	7.7	106.6	352.5	1642.2	687.4	2232.1	319.2	729.9	790.9	1061.0
Jharkhand	0.0	25.0	607.6	867.5	12.4	100.7	7.3	538.0	8.3	275.2
Orissa	26.1	60.3	233.3	1320.0	729.5	393.8	135.4	289.6	119.4	82.8
Chattisgarh	18.1	6.4	4.0	99.2	216.1	904.4	213.6	23.6	47.7	8.2
M.P.	34.8	44.0	39.4	567.1	112.4	220.1	238.3	235.9	78.7	575.5
Gujarat	16.7	9.7	320.8	1862.3	883.7	1734.0	357.1	248.6	296.1	106.4
Daman & Diu	0.0	0.0	451.2	5421.3	479.7	6476.1	245.6	0.0	0.0	356.8
Dadra & Nagar	0.0	0.0	1504.1	1803.8	0.0	1905.9	0.0	0.0	0.0	0.0
Maharastra	12.3	63.8	376.2	646.7	405.0	654.6	239.3	303.4	301.0	239.4
Andh.Pradesh	122.4	26.6	1388.8	4151.6	2309.2	3722.9	237.3	692.7	554.6	635.7
Karnataka	21.6	24.6	570.8	1611.4	1095.2	1854.6	333.3	312.6	588.3	129.2
Goa	72.7	0.0	5470.6	4220.2	0.0	4679.6	0.0	653.2	0.0	52.5
Lakshadweep	0.0	0.0	3273.0	1308.3	579.7	4231.5	1935.3	806.5	240.8	509.7
Kerala	86.4	69.8	3413.7	3817.5	4080.3	4132.3	1664.9	1574.3	2080.7	1491.8
Tamilnadu	229.1	12.4	3167.6	4876.5	1548.6	2377.2	285.8	468.7	388.2	410.1
Pondicherry	0.0	0.0	3325.2	4486.4	315.5	4426.0	0.0	554.0	0.0	1024.5
A&N Island	0.0	180.6	282.5	857.5	3048.3	1624.8	183.8	1182.1	240.8	0.0
Telangana	23.3	8.5	717.5	773.3	1243.0	3748.4	72.6	58.2	46.9	73.8

TABLE A2: Number of persons hospitalised per 100,000 ailing in last 1 year

States	Cancer		Diabetes		Hypertension		Heart stroke		Respiratory disease	
	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN
J & K	14.9	62.0	34.2	101.3	150.6	77.0	204.1	222.3	77.9	37.8
H.P.	170.6	62.0	44.2	12.6	98.4	38.4	233.6	172.5	144.0	53.0
Punjab	58.6	18.6	84.3	69.3	128.9	69.2	211.9	338.1	177.5	77.9
Chandigarh	18.9	34.3	0.0	50.2	85.0	54.6	173.1	117.8	0.0	0.0
Uttranchal	12.3	150.3	0.0	49.3	27.0	76.8	62.1	298.2	177.8	176.2
Haryana	48.3	68.4	24.8	45.3	70.9	62.7	223.4	156.2	140.7	67.8
Delhi	0.0	64.2	0.0	35.1	0.0	42.2	71.4	225.8	0.0	117.7
Rajasthan	58.1	30.3	26.3	62.6	93.4	153.1	58.6	221.5	80.6	88.9
U.P.	43.3	64.6	7.4	53.4	17.3	42.9	70.5	195.9	48.2	82.5
Bihar	12.3	56.7	12.8	21.7	118.2	24.8	56.9	183.6	35.2	35.1
Sikkim	33.0	121.7	32.2	128.3	57.4	37.0	51.8	51.1	29.5	91.3
Arun. Pradesh	14.8	14.9	52.8	0.0	62.2	0.0	29.3	14.9	56.7	10.7
Nagaland	5.1	45.9	41.7	54.6	8.6	23.3	11.6	55.4	2.1	3.9
Manipur	1.6	7.2	40.5	61.8	11.2	47.4	53.9	65.6	15.9	31.6
Mizoram	181.4	80.8	17.6	119.2	58.7	40.3	51.1	99.3	10.6	165.5
Tripura	69.6	98.2	8.1	25.6	69.8	182.3	193.2	526.7	69.2	96.5
Meghalaya	14.0	379.5	5.4	17.4	1.9	83.7	18.6	471.9	12.6	4.8
Assam	15.7	44.0	21.7	25.8	25.7	52.8	51.3	224.1	55.6	35.8
W.B.	66.2	126.3	34.3	23.3	29.7	108.0	188.1	329.2	102.5	250.4
Jharkhand	33.3	5.5	2.3	79.5	14.5	118.4	33.1	87.0	10.8	19.4
Orissa	75.3	99.3	24.2	70.4	69.2	90.2	68.5	189.2	30.4	125.6
Chattisgarh	24.2	15.1	14.4	70.9	8.6	26.7	83.1	123.1	20.7	11.1
M.P.	32.2	86.3	35.8	79.4	15.2	136.4	116.5	165.9	107.5	63.5
Gujarat	34.1	72.8	29.6	112.9	75.8	95.6	304.4	315.7	63.6	40.0
Daman & Diu	0.0	0.0	14.3	0.0	128.5	0.0	71.4	128.0	0.0	52.4
Dadra & Nagar	91.6	0.0	49.6	251.6	0.0	0.0	0.0	0.0	58.3	0.0
Maharastra	37.8	58.2	83.4	87.0	100.6	103.5	169.4	194.6	127.9	69.8
Andh.Pradesh	213.6	86.0	51.8	97.0	128.8	101.5	367.5	484.9	98.9	119.1
Karnataka	67.6	77.4	68.7	106.0	77.3	136.5	201.5	270.4	108.3	121.1
Goa	72.7	0.0	395.3	143.7	43.1	225.9	377.0	72.6	96.4	93.0
Lakshadweep	71.3	132.8	98.1	316.3	0.0	1150.1	0.0	160.1	240.8	441.3
Kerala	245.1	202.7	381.8	257.7	414.2	340.9	837.8	774.0	542.4	401.5
Tamilnadu	102.1	62.6	129.0	212.9	176.5	159.0	283.7	435.6	117.6	160.3
Pondicherry	0.0	17.7	326.9	125.8	0.0	191.5	569.6	267.1	0.0	98.3
A&N Island	0.0	89.6	129.0	578.6	392.1	486.8	9.9	43.3	213.9	0.0
Telangana	61.0	22.0	23.6	46.0	82.4	832.2	110.6	237.0	19.1	45.6

TABLE A3 OOP (Rs.)per ailing person for Non hospitalised treatment in the last 15 days

States	Cancer		Diabetes		Hypertension		Heart stroke		Respiratory disease	
	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN
J & K	383	10764	1110	683	835	224	1094	2155	1081	663
H.P.	823	82	207	618	540	45	1466	399	951	301
Punjab	3508	799	563	730	342	417	760	2268	593	495
Chandigarh		5006	817	474	241	447	335	2248	3658	
Uttranchal		1631	1021	379	1977	1185	1501	3413	210	927
Haryana	815	2044	1717	585	393	664	1179	841	437	671
Delhi		44	671	328		896		4437	#DIV/0!	270
Rajasthan	573	1029	207	1629	698	427	1051	6369	571	443
U.P.	5129	6672	3127	519	570	1176	821	1766	545	3053
Bihar	49	607	365	407	712	566	272	1136	4802	417
Sikkim	1111	2120	1783	1465	229	492	1132	1402	488	405
Arun. Pradesh				3284	2058		0		462	0
Nagaland							988	471		
Manipur			1450	1225		681	2053	2408	1710	3206
Mizoram	498	1972	708	324	0	579	255	1585	150	1317
Tripura			3911	3901	250	448	1826	453	766	242
Meghalaya				3175	1104	511			445	
Assam			460	464	240	323	2823	2533	271	1001
W.B.	810	890	663	518	371	396	490	720	785	814
Jharkhand		581	274	521	383	386	1914	195	245	1367
Orissa	1540	8076	588	715	525	421	742	2684	469	403
Chattisgarh	1668	40054	960	1083	86	324	10317	2967	1545	1105
M.P.	1321	1061	1639	746	375	661	557	1717	1143	708
Gujarat	1632	2859	255	594	227	166	271	604	701	196
Daman & Diu			464	379	21	233	201			266
Dadra & Nagar			1019	52		319				
Maharastra	2801	3665	894	789	404	590	477	823	891	619
Andh.Pradesh	371	2648	199	444	150	171	824	1388	215	754
Karnataka	1734	2001	363	384	328	553	504	1717	476	587
Goa	999		838	776		333		649		100
Lkshdweep			0	0	3	19	0	851	993	901
Kerala	1483	3699	286	253	155	179	452	459	307	181
Tamilnadu	299	141	353	570	318	286	536	812	221	640
Pondicherr			135	395	96	180		126		162
A&N Island		141384	7	5	6	6	182	28	55	
Telangana	1509	0	1118	1160	563	739	2310	844	516	2459

Note: Blank Cells indicate no data.

TABLE A4 OOP (Rs.)per ailing person for Hospitalised treatment in the last 1 year

States	Cancer		Diabetes		Hypertension		Heart stroke		Respiratory disease	
	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN
J & K	43414	96072	7217	4789	2922	3361	6993	24284	4422	7245
H.P.	55449	76395	5936	7001	12314	3717	38048	28052	15718	14755
Punjab	354924	30854	27142	23325	42896	17526	60510	66483	18414	31553
Chandigarh	29982	93487		3852	3886	5502	69504	26451		
Uttranchal	25639	61443		4496	7229	25590	25763	46491	8250	11369
Haryana	41362	80621	61901	15891	62862	29760	52138	103629	16898	20900
Delhi		93594		11531		126706	5959	81875	#DIV/0!	41525
Rajasthan	87259	70305	6785	29773	14988	16588	45925	55503	9198	12222
U.P.	62268	81929	37000	32201	36538	18782	50934	83270	19879	21741
Bihar	95497	59547	32660	18998	4997	34877	34104	40701	10791	12875
Sikkim	15420	52422	13228	16286	10262	9482	14781	4660	17010	11955
Arun. Pradesh	15083	21694	4899		6993		8986	69025	11630	3791
Nagaland	5098	105487	3887	4969	2405	5799	4748	5191	3296	2283
Manipur	34187	63799	7693	6587	6445	10131	14291	36399	29740	28284
Mizoram	29003	13226	1054	4276	1235	4651	12197	2770	1100	6815
Tripura	18493	122692	14652	20360	6765	2523	3029	18041	4020	6781
Meghalaya	21969	1167	811	74692	6772	10057	5580	36216	6392	10193
Assam	81871	134968	9355	21946	7086	11255	12228	64945	2151	20084
W.B.	40971	92221	6254	42358	6268	7509	22525	29269	6534	13631
Jharkhand	19830	148242	9193	14231	7689	5043	30744	49976	14549	3745
Orissa	46185	163424	3915	7089	7695	9275	35216	57985	3897	19546
Chattisgarh	37053	586073	9358	10568	5905	10268	24603	62028	12598	10130
M.P.	51884	113498	14457	26469	19215	25684	22152	30548	7551	17724
Gujarat	60336	23539	31735	11683	22421	13285	29010	35029	7970	66016
Daman & Diu			329		341		62786	50054		8333
Dadra & Nagar	7329		250	2368					160	
Maharastra	163701	93835	21070	23425	13913	20834	68244	43579	17370	11416
Andh.Pradesh	21667	69554	12516	24613	51239	7303	28456	189694	9524	12472
Karnataka	65621	92359	17066	9373	13551	13139	19479	48052	14790	14417
Goa	3296		23107	33392	17010	7553	62512	87133	11186	15331
Lakshadweep	32701	17066	0	6796		46		44640	99	127
Kerala	35835	38006	14519	21606	4710	5291	45937	31142	29654	17235
Tamilnadu	41066	125002	8187	16982	14661	28019	32624	52139	7519	8337
Pondicherry		498	17933	577		6885	547	7547		1012
A&N Island		699	140	1168	414	898	40157	99	105	
Telangana	459534	140271	3100	15137	6175	5993	14285	47481	7799	33925

Note: Blank Cells indicate no data.