Key Indicators of Morbidity, Utilization and Health Expenditure Tamil Nadu

Based on National Sample Survey (NSS), 71st Round (January-June, 2014)

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Abbreviations

AIDS	:	Acquired Immunodeficiency Syndrome
ANM	:	Auxiliary Nurse Midwife
ASHA	:	Accredited Social Health Activist
AWW	:	Aanganwadi Worker
AYUSH	:	Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy
CHC	:	Community Health Centre
ECG	:	Electrocardiography
EEG	:	Electroencephalography
HIV	:	Human Immunodeficiency Virus
HSC	:	Health Sub-Centre
LOS	:	Length of Stay
MPCE	:	Monthly Per Capita Expenditure
NE	:	North East
NSSO	:	National Sample Survey Organisation
OBC	:	Other Backward Classes
OOPE	:	Out-of-Pocket Expenditure
PAP	:	Proportion of Ailing Persons
PHC	:	Primary Health Centre
SC	:	Scheduled Caste
ST	:	Scheduled Tribe
STD	:	Sexually Transmitted Disease
TB	:	Tuberculosis
UT	:	Union Territory

Summary

- The age pyramid for Tamil Nadu shows that those in the elderly age group (60-69 years) account for 14.3% of the population in the state as against the all India percentage of 10.1%. This is accompanied by a narrowing of the base of the pyramid since the proportion of population in Tamil Nadu in the under 30 age group (46.8%) is significantly lower than the all India figure of 57%.
- The overall Proportion of Ailing Persons (PAP) in Tamil Nadu is 165 per 1,000 persons; this proportion is higher in the urban areas (184) as compared to the rural (146) areas. The gender-break up shows that a higher proportion of females than males reported suffering from any ailment both in rural and urban areas.
- Out of the total population, 103 per 1,000 persons reported chronic conditions, and 67 per 1,000 persons reported ailments of short duration. The proportion of population reporting chronic conditions is significantly higher in the urban areas (119 per 1,000) as compared to the rural areas (86 per 1,000).
- The reporting of PAP in Tamil Nadu is higher than the all India average (98) and other major states, in both rural and urban areas. Among the major states, Kerala reports a significantly higher PAP of 308, while states such as Andhra Pradesh (170), West Bengal (167) and Punjab (166) have comparable proportion of ailing persons.
- Between 2004 and 2014, the PAP in Tamil Nadu increased at a rate higher than all India from 95 in 2004 to 165 per 1,000 persons in 2014..
- Tamil Nadu has a much higher reporting of chronic ailments as compared to the all India figures. The comparative PAP of Tamil Nadu for chronic ailments in urban (119) and rural (86) areas are nearly double the corresponding all India urban and rural PAP for chronic ailments, at 67 and 40 respectively.
- Overall morbidity (as well as morbidity due to ailments of short duration) is high in the under 4 age group and then falls gradually upto the 15-29 age group, increasing thereafter to reach the highest value in the 60-69 age group. However, morbidity due to chronic ailments as well as the share of chronic ailments in the total morbidity, shows a different trend, increasing with age, especially after the age of 45 years. Among the elderly in the age groups of 60–69 years and 70 years and above, more than one third of the population reported suffering from chronic ailments.
- More than 25% of all ailing population in Tamil Nadu (and more than 30% among ailing male) reported suffering from diabetes placing it clearly as the top morbidity burden for the state. This was followed by those who reported fever as a symptom (18% of those ailing) and cardio-vascular disease (17%). Among other conditions, musculo-skeletal and respiratory diseases each were reported by approximately 10-11% of all ailing persons.
- Approximately 15% of the total population utilized outpatient services(15 days recall) and 5.7% utilized hospital services as inpatient. Utilization of outpatient services is higher in the urban areas (16.8%) as compared to the rural (13.1%) areas. The hospitalization rate for 365 days recall is almost similar among the rural (5.6%) and the urban (5.8%) population.
- The percentage of population utilizing outpatient services is substantially higher in Tamil Nadu compared to the all India average. Also the utilization of hospitalization services in the state at 5.7% is nearly a third higher than the all India figure.

- 90.7% of all spells of ailment received some form of formal treatment (including AYUSH) in the state. The proportion of ailing episodes receiving informal care is almost equal (6.6%) in the rural and the urban areas. The percentage of episodes not receiving any care is slightly higher in the rural (3.5%) than in the urban (2.0%) areas of the state.
- The less advantaged groups such as the Scheduled Tribes show a higher percentage (6.68) of no care and the Scheduled Castes show a higher dependence on informal care (10.47) compared to their better-off counterparts.
- More than 65% of all outpatient episodes were treated in the private sector. Private hospitals contribute about 41% of all treated outpatient episodes, with a slightly higher share in the urban as compared to the rural areas (43% versus 38% respectively).
- The share of public institutions in all rural outpatient episodes at 42.4% is significantly higher than the share of public institutions in urban areas which is 28.6%. The share of all public facilities in total outpatient episodes at 34.6% is significantly higher in Tamil Nadu compared to the all India average of 25.1%. Over the last decade, the public sector significantly increased its share in treatment of outpatient episodes in Tamil Nadu. The increasing trend is more marked in the rural areas compared to the urban areas
- Within the public sector, diabetes (27%) followed by cardio-vascular diseases (22%) and musculoskeletal ailments (13%) are the major ailment conditions treated as outpatient. In the private sector, diabetes (28%) has the highest share of ailments treated as outpatient followed by general fever (22%), while the treatment of cardio-vascular diseases (15%) ranks third in the order.
- The inpatient utilization rate in Tamil Nadu has increased faster than at the all India level, increasing significantly from just 2% in 1995-96 to 3.6% in 2004 to 5.7% in 2014. The inpatient utilization rates are higher among females (6.8%) than among males (4.6%). Overall, the percentage of population utilizing health care as inpatient is lowest among the 5-14 age group and highest among the elderly (70 & above) males and females, both in the rural and urban areas.
- Nearly 65% of all inpatient episodes in the state were treated in the private sector, with the proportion of hospitalized treatment in the private sector in the urban areas (71%) being higher than the corresponding proportion in rural areas(60%).
- Overall, the percentage of utilization of public sector for hospitalized treatment in Tamil Nadu at 34.6% is 4% lower than the all India level of 38.4%, with the difference being narrowed in the rural areas (40.4% as against 41.8%).
- The share of the public sector in utilization of hospitalization services by the two poorest quintiles is more than three times than that in the topmost quintile. Patients from SC/ST population availed treatment from the public sector for more than 50% of all inpatient episodes.
- In the public sector hospitals in Tamil Nadu, almost all the episodes (99.4%) were admitted free of any ward charge as against the all India average of 85%. In the private sector, free wards are used by 10% episodes as against the all India average of 7%. Taking public and private sector hospitals together, 41% of all inpatient episodes in Tamil Nadu were admitted to free wards, with nearly half the inpatient episodes in the rural areas utilizing free wards as opposed to approximately one third in the urban areas.
- Of all the inpatient episodes (treated in private and public together) in the state, 38% received medicine either free or partly free; 23% received X-ray/ECG/EEG/ Scan services either free or partly free and and about 35% received other diagnostic services either free or partly free. Where 98% of all episodes hospitalized in public facilities received free or partly free medicines,and about 63% received free diagnostic services (including X-ray/ECG/EEG/Scan). These figures are far higher than those for all India public facilities.
- The total expenditure for outpatient care per ailing person (considering the first ailment episode alone) is lower both in rural and urban areas in the state (Rs. 461) compared to the all India average (Rs. 637). The lower expenses for outpatient treatment is mainly driven by difference in the direct medical expenses (Rs. 384 in Tamil Nadu and Rs. 556 for all India).

- While the amount spent by people in Tamil Nadu for outpatient care in private facilities is slightly lower than the all India average, the difference in the amounts spent for outpatient care in public facilities in Tamil Nadu is significantly lower than that of the all India level. At the all India level, people spent an average of Rs. 350 per episode on outpatient care in public facilities, which was almost nine times more than the Tamil Nadu average of Rs. 39. Availability of free medicines in public facilities is one of the reasons for the very low expenditure on outpatient care in the public sector in the state. 94% of outpatient care episodes in Tamil Nadu has received free medicines in the public sector.
- The average expenditure (in private and public facilities together) per hospitalization episode is Rs. 20,240 (Rs. 18,006 as direct medical and Rs. 2,234 as other related expenses). Average expenditure (in private and public facilities) for the urban inpatient episodes (Rs. 26,092) was significantly higher than the rural episodes (Rs 13968). Males incurred approximately 50% higher expenditure (Rs. 24,509) per hospitalization episode than females (Rs. 15,925) and this difference was more marked in the urban areas.
- The average expenditure incurred on inpatient episodes in the private sector is almost similar to the all India average but the average expenditure for public sector hospitalization in Tamil Nadu is almost a third of public sector hospitalization at the all India level.
- The mean monthly per person OOPE on outpatient care was Rs. 114 in the rural areas and Rs.190 in the urban areas. Rural inpatient OOPE at Rs. 63 was lower than urban OOPE of Rs. 128. In total, the average person in Tamil Nadu spent Rs. 247 per month consisting of Rs 152 for outpatient and Rs 95 for inpatient care services. This was higher in urban areas (Rs. 318) in comparison to rural areas (Rs. 177). Monthly OOPE per person in Tamil Nadu is significantly lower when one accesses only public sector facilities. Per person monthly OOPE for those seeking care in public sector comes to Rs. 16 (Rs. 4 as inpatient and Rs. 12 as outpatient). With 67% of the total medical expenditure, drugs constitute the largest single proportion (65%) of the total OOPE.
- The total OOPE in Tamil Nadu (Rs. 247 per person monthly) is lower compared to that in Kerala (Rs. 444), Punjab (Rs. 304), Andhra Pradesh (Rs. 255). However, the same is higher compared to the all India average (Rs. 183).
- Total OOPE (outpatient and inpatient taken together), constitutes up to 11-12% of the total monthly per capita consumption expenditure, both in Tamil Nadu and at the all India level (with a variation of about 1% across rural and urban areas). Of this, outpatient OOPE accounts for about 7% and inpatient about 4% of the total monthly per capita consumption expenditure.
- The poorest in rural Tamil Nadu spend a lower proportion of their monthly consumption expenditure on OOPE on healthcare compared to the richest quintile, but the position is reversed in urban areas, with the poorest quintile bearing a higher burden due to OOPE, both in comparison with the richer quintiles and with the respective all India figures.
- More than 78% of the population in the state reported that they are not covered under any of the financial support schemes including insurance. In spite of the fact that most government-funded health insurance schemes are being targeted at the poorer sections of society, only 11% of the poorest quintile has reported being covered under any of the insurance or financial support schemes.
- Overall, the incidence of pregnancy in Tamil Nadu is 6%, with a higher incidence in the rural areas (6.2%) as compared to the urban areas (5.8%). More than 99% of all pregnant women reported receiving all forms of prenatal care though this proportion drops to less than 89% for postnatal care. Compared to the national averages, the incidence of pregnancy is lower in Tamil Nadu.
- The share of public facilities in provision of total prenatal care and post natal care in the state is about 56%, with the proportion in the rural areas being higher than in the urban areas.

- The average expenditure (in private and public facilities together) on pre and post natal care per utilizing woman is Rs. 4,536 and Rs. 982 respectively. Both these expenditures are more than 4 times higher in private facilities as compared to public ones.
- The proportion of institutional deliveries is very high, being 95.4% in the entire state. The proportion of public sector in institutional deliveries is 56.3%, with the share being higher (63.5%) in rural areas when compared to urban (47.8%). Within the public sector, public hospitals dominate in the provision of childbirth services constituting nearly 50%, while the share of HSC/PHC etc. in all deliveries is much lower at around 7%.
- The average expenditure per case of childbirth in Tamil Nadu is Rs. 14,758. The difference in expenses for childbirth in the public and private sector is very pronounced with the average expenditure in private hospitals (Rs 32,182) being more than 15 times than that in the public hospitals (Rs 2454) and in HSC/PHCs (Rs. 1701). Compared to the all India averages, expenditure on childbirth is lower in Tamil Nadu in public facilities but higher in private facilities.
- Tamil Nadu, over the past decade, has witnessed a significant increase in the proportion of ailing persons. While we must keep in mind that self-reported morbidity may not truly reflect the actual changes in morbidity, such a trend reflects certain underlying factors, such as increasing health awareness, access to better health and screening services and changing social and cultural contexts . However, taken in context of increasing proportion of elderly population as well as the high proportion of chronic ailments, it is clear that the state has to strengthen the health system to meet the increasing demand for health care services.
- The public health system has played an important role in the provision of inpatient and outpatient care over the past one-decade, particularly in the rural areas. Its share in the provision of maternal and child healthcare services is even higher. While the average expenditure incurred on outpatient and inpatient episodes in the private sector in the state is comparable to the all India average, the average expenditure on outpatient and inpatient episodes in public sector is significantly less. This is largely due to fact that a large proportion of episodes treated in the public sector get medicines and diagnostic services free or partly free. In view of the lower financial burden on those seeking care from public facilities, there is a clear case for the state to ramp up public spending to ensure that the public system in strengthened. Attention must be paid to ensure that the public health insurance scheme supplements (but does not substitute) the inpatient services already provided by the public facilities.

1. Sample Description

The survey period of the National Sample Survey Organisation (NSSO) 71st round was from January to June, 2014. A detailed description of the methodology and conceptual framework is given in the report of the 71st Round- Health in India Report. http://mospi.nic.in/Mospi_New/upload/nss_rep574.pdf

This section presents a broad contour of the sample size within Tamil Nadu.

Table 1.1: Number of households and persons surveyed in the four NSSO regions, rural and urban in Tamil Nadu – 2014

NSS-Region	Number of surveyed					
	Households			Persons		
	Rural	Urban	Rural + Urban	Rural	Urban	Rural + Urban
Coastal Northern	560	592	1,152	2,312	2,443	4,755
Coastal	456	282	738	2,004	1,200	3,204
Southern	464	560	1,024	1,927	2,167	4,094
Inland	480	523	1,003	1,994	2,043	4,037
All Tamil Nadu	**1,960**	**1,957**	**3,917**	**8,237**	**7,853**	**16,090**

Note: *Coastal Northern Region includes districts of Thiruvallur, Kancheepuram, Vellore, Tiruvannamalai, Viluppuram, Cuddalore; Coastal Region includes districts of Karur, Tiruchirappalli, Perambalur, Ariyalur, Nagapattinam, Thiruvarur, Thanjavur, Pudukkottai; Southern Region includes districts of Sivaganga, Madurai, Theni, Virudhunagar, Ramanathapuram, Thoothukkudi, Tirunelveli, Kanniyakumari; Inland Region includes districts of Salem, Namakkal, Erode, The Nilgiris, Dharmapuri, Krishnagiri, Coimbatore, Tiruppur.*

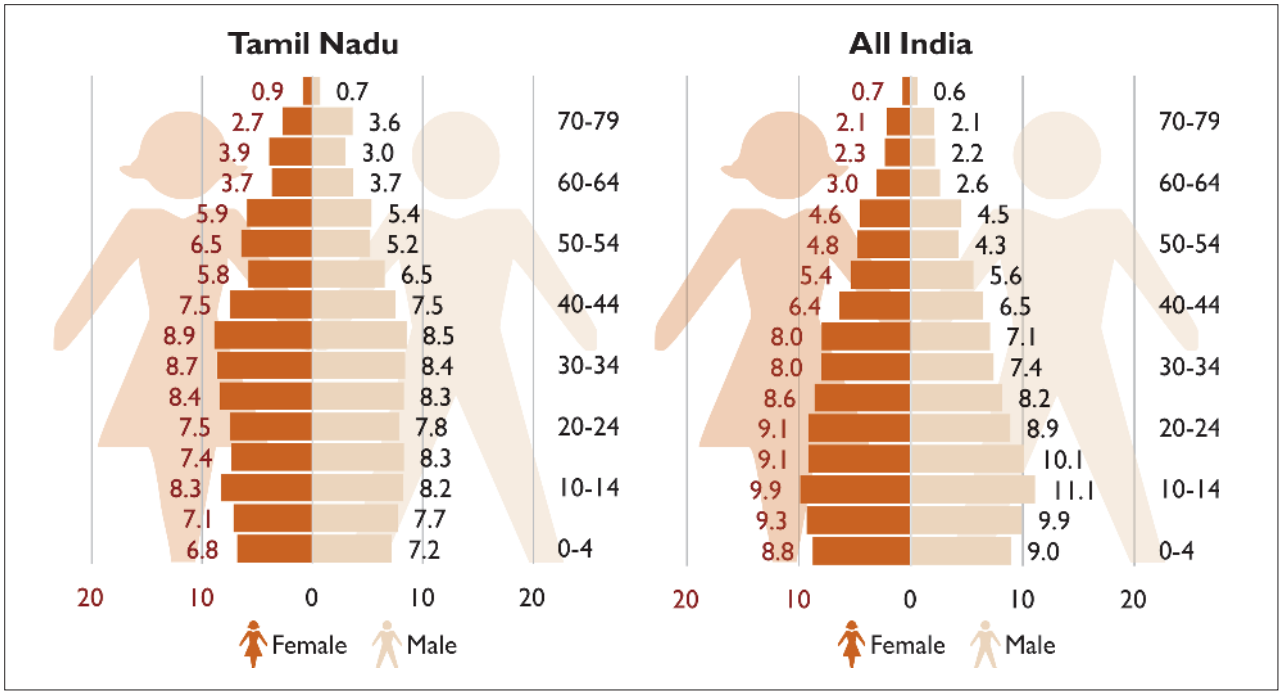
The survey covered 3,917 households (1,960 rural and 1,957 urban) in Tamil Nadu which forms a part of the total all India sample of 65,932 households (36,480 rural and 29,452 urban). The total number of persons surveyed in the state are 8,237 in the rural and 7,853 in the urban areas. The survey design divided the state into four regions, the Coastal Northern, Coastal, Southern, and Inland. Names of the districts covered by these regions are given in Table 1.1. The largest sample in the state is from the Coastal Northern region (1,152 households consisting of 4,755 individuals) and the smallest is from the Coastal region (738 households covering 3,204 individuals).

Table 1.2: Number of males and females surveyed in the four NSSO regions across rural and urban sectors in Tamil Nadu – 2014

NSS-Region	Number of surveyed					
	Male			Female		
	Rural	Urban	Rural + Urban	Rural	Urban	Rural + Urban
Coastal Northern	1,119	1,215	2,334	1,193	1,228	2,421
Coastal	947	589	1,536	1,057	611	1,668
Southern	898	1,023	1,921	1,029	1,144	2,173
Inland	993	1,011	2,004	1,001	1,032	2,033
All Tamil Nadu	**3,957**	**3,838**	**7,795**	**4,280**	**4,015**	**8,295**

The distribution of the Tamil Nadu sample by sector (urban/rural) and by gender is shown in Table 1.2. The number of females (8,295) in the Tamil Nadu sample is slightly higher than the number of males (7,795) both in the rural and the urban areas, and across all the four NSSO regions. The difference in the number of males and females in the sample is the lowest in the Inland region.

Figure 1.1: Estimated percentage distribution of males and females by age groups in Tamil Nadu and all India – 2014



Note: *Based on estimated population*

The gender and age distribution of the estimated population (weighted by sample weights) reflect significantly different structures across Tamil Nadu and the all India average (Figure 1.1). The proportion of population in Tamil Nadu in the under 15 age group (23%) is significantly lower than the all India figure of 30%. The same pattern continues in the age group of 15-29 years with the age group having only a 23.8% share in the population as against the all India share of 27%. Both these have resulted in a narrowing of the base of the age pyramid in Tamil Nadu. This is also accompanied by a bulge in the higher age groups, with the elderly age group of 60-69 years accounting for 14.3% of the population against the all India percentage of 10.1%.

2. Morbidity Burden

This section presents the extent of morbidity burden in the state, disaggregated by chronic and ailments of short duration, sector (rural or urban), gender, and age groups. The morbidity rate, hereafter referred to as the Proportion of Ailing Persons (PAP), is estimated as the number of persons per thousand of the population reporting suffering from any ailment during the reference period of the last 15 days from the date of the survey (for more details, refer to Chapters 2 and 3 of Health in India report, Report No 574, NSSO, GoI, 2016.). Since any one person in the survey might report both chronic and other ailments[1], the total number of persons reporting all ailments may be less than the sum total of persons reporting chronic and other ailments of short duration separately.

2.1. Overall morbidity burden

The overall morbidity rates for the rural and the urban areas disaggregated by chronic and ailments of short duration are presented in Table 2.1.

Table 2.1: Proportion of population* reporting chronic and ailments of short duration during the reference period of last 15 days in Tamil Nadu – 2014

Ailment type	Rural			Urban			Rural + Urban		
	M	F	T	M	F	T	M	F	T
Chronic	79	93	86	100	141	119	89	116	103
Ailments of short duration	57	69	63	53	90	71	55	79	67
All ailing	133	158	146	148	221	184	140	188	165

Note: *Number of persons reporting any ailments per 1,000 population.*

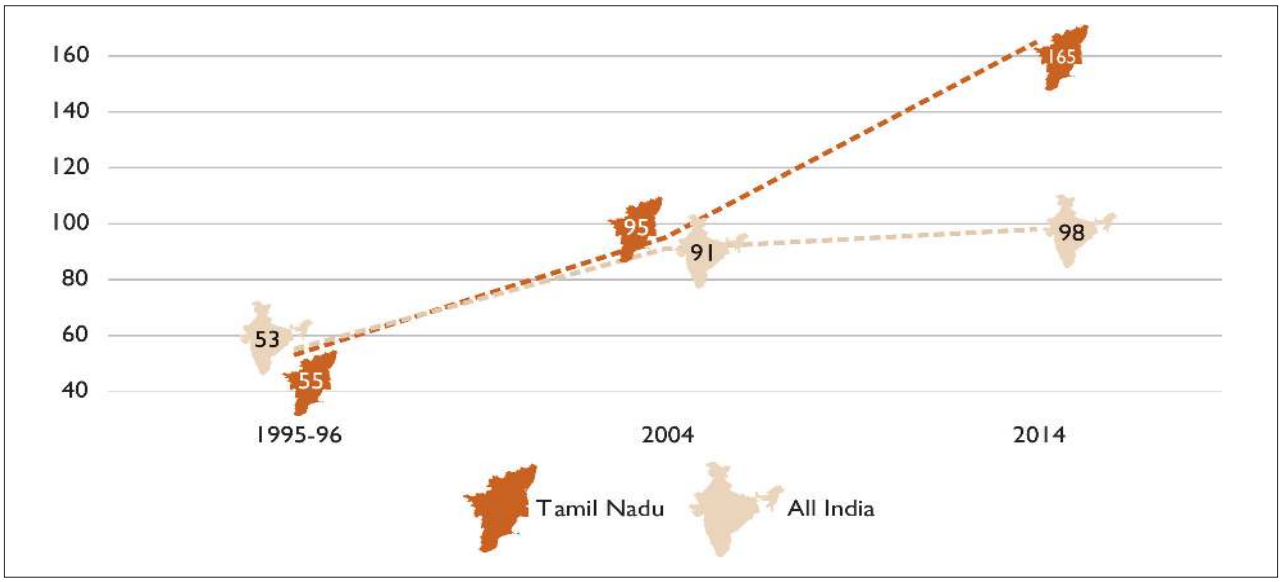
The overall Proportion of Ailing Persons (PAP) in Tamil Nadu is 165 per 1,000 persons; this proportion is higher in the urban areas (184) as compared to the rural (146) areas. Out of the total population, 103 per 1,000 persons reported chronic conditions, and 67 per 1,000 persons reported ailments of short duration. The proportion of population reporting chronic conditions is significantly higher in the urban areas (119 per 1,000) as compared to the rural areas (86 per 1,000). The gender break up shows that a higher proportion of females than males reported ailing both in rural and urban areas. The same pattern is observed both in chronic ailments as well as in ailments of short duration (Table 2.1).

The reporting of PAP in Tamil Nadu is higher than the all India average (98) and other major states, in both rural and urban areas (refer to Appendix Table A-1.1). Among the major states, Kerala reports a significantly higher PAP of 308, while states such as Andhra Pradesh (170), West Bengal (167) and Punjab (166) have comparable proportion of ailing persons. Reporting of any ailments has significantly increased both at the all India level and in most states during the last two decades. Comparative estimates of the reported morbidity rate for the state of Tamil Nadu and all India are presented in Figure 2.1.

[1] *Ailments, Chronic ailments and ailments of short duration are defined in Chapter 2, Health in India, Report No 574, GoI, 201 .*

In the last two NSSO surveys conducted in 1995-96 and 2004, the PAP in Tamil Nadu (53 and 95 respectively) was comparable with the all India averages (55 and 91 respectively. Between 2004 and 2014, the reported morbidity in Tamil Nadu increased far more than the all India average- from 95 in 2004 to 165 per 1,000 persons in 2014 (Figure 2.1).

Figure 2.1: Trend in proportion per 1,000 population reporting any ailments during reference period of last 15 days, 1995-96, 2004 and 2014 – Tamil Nadu and all India



Source: *NSSO 52nd (1995-96), 60th (2004) and 71st (2014) rounds*

2.2. Age and gender distribution

Disaggregated information on morbidity burden, by age groups both for chronic and ailments of short duration is presented in Table 2.2.

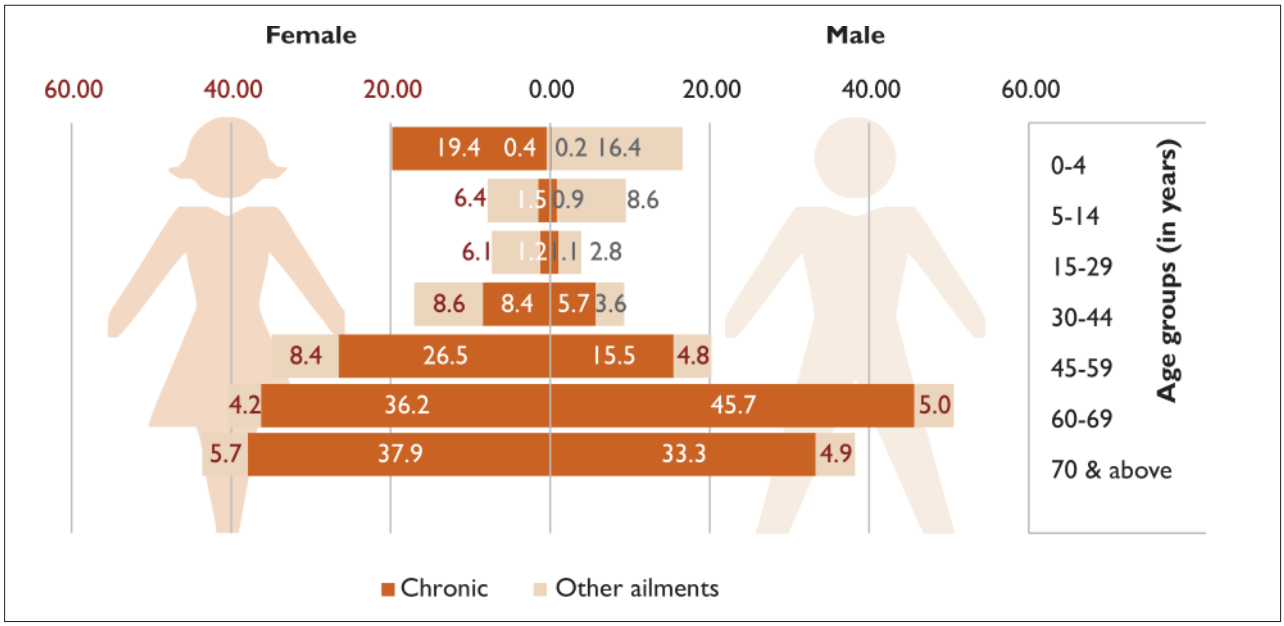
Table 2.2: Proportion of ailing population* reporting chronic, ailments of short duration and all ailments during the reference period of last 15 days by age group in Tamil Nadu – 2014

Sector		Age groups in years							
		0-4	5-14	15-29	30-44	45-59	60-69	70 & above	Total
Rural	Chronic	1	14	8	57	189	301	289	86
	Short duration ailments	191	77	41	59	54	42	13	63
	All	**192**	**91**	**48**	**111**	**234**	**335**	**298**	**146**
Urban	Chronic	5	9	15	85	239	512	434	120
	Short duration ailments	166	72	48	65	80	48	101	71
	All	**171**	**80**	**62**	**140**	**306**	**551**	**487**	**184**
Total	Chronic	3	12	12	71	212	406	354	103
	Short duration ailments	179	75	44	62	66	45	53	67
	All	**182**	**86**	**55**	**126**	**268**	**443**	**383**	**165**

Note: *Number of persons reporting any ailments per 1,000 population.*

Overall morbidity (as well as morbidity due to ailments of short duration) is high in the under 4 age group and then falls gradually upto the 15-29 age group, increasing thereafter to reach the highest value (443) in the 60-69 age group. The same pattern is seen both in urban and in rural areas. However, morbidity due to chronic ailments as well as the share of chronic ailments in the total morbidity, show a different trend, increasing with age, especially after the age of 45 years. Among the elderly in the age groups of 60–69 years and 70 years and above-, more than one third of the population(406 and 354 per 1,000 persons respectively), reported suffering from chronic ailments. A higher proportion of females as compared to males reported suffering from all ailments including chronic ailments in both rural and urban areas. In the younger age groups , it is seen that females largely suffer from short term ailments, whereas the proportion of those ailing with chronic ailments increases after the 30-44 age group. These numbers are presented graphically in Figure 2.2.

Figure 2.2: Percentage (%) of males and females reporting chronic and other ailments during the reference period of last 15 days, in different age groups in Tamil Nadu – 2014



2.3. Distribution by ailment categories

The morbidity burden of an area can also be understood in terms of disease profile of the area. The survey collected information on ailment conditions reported by the ailing population during the reference period). Identification of these ailments are based either on symptoms or by confirmed diagnosis by medical personnel for certain diseases and conditions, as reported by the respondents. For the purpose of reporting, these symptoms and conditions have been categorized into broader ailment categories. The entire methodology is discussed in detail in pp. 12-24, Chapter 2, Health in India, Report No 547, NSSO, GoI, 2016. The percentage distribution of the broad ailment categories among those reporting ailment across gender for Tamil Nadu, compared to the all India figures are given in Table 2.3.

Table 2.3: Percentage distribution of ailment categories among those reporting ailment (15 days recall) by gender in Tamil Nadu and All India–2014

Nature of Ailment	Tamil Nadu			All India		
	Male	Female	Person	Male	Female	Person
Diabetes	30.1	21.8	25.2	11.3	8.7	9.9
Fever	19.7	17.2	18.2	25.0	20.9	22.7
Cardio-vascular	16.7	16.7	16.7	12.7	13.3	13.0
Musculo-skeletal	6.6	13.5	10.7	8.4	13.3	11.1

Nature of Ailment	Tamil Nadu			All India		
	Male	Female	Person	Male	Female	Person
Respiratory	12.2	8.9	10.3	15.2	13.4	14.2
Mental/Neuro	2.3	6.0	4.5	4.0	6.1	5.2
Gastrointestinal	4.1	4.0	4.0	6.3	6.6	6.5
Skin	1.3	2.3	1.9	2.6	2.2	2.4
Genito-urinary	0.6	2.4	1.7	1.6	2.1	1.8
Eye/Ear	0.9	1.9	1.5	2.1	2.1	2.1
Injuries	1.7	0.7	1.1	2.2	1.2	1.7
Vector-borne	0.6	1.1	0.9	3.3	2.4	2.8
Other Metabolic	0.2	1.2	0.8	0.6	2.7	1.7
Cancers	0.9	0.5	0.7	0.4	0.4	0.4
TB/Filer/Tetanus	0.8	0.2	0.4	1.2	0.7	0.9
Blood disease	0.1	0.5	0.3	0.7	1.0	0.9
Obstetric	0.0	0.2	0.1	0.1	0.5	0.3
STD/HIV/AIDS	0.0	0.0	0.0	0.2	0.1	0.1
Others	1.14	1.07	1.1	2.38	2.46	2.42
Total	**100**	**100**	**100**	**100**	**100**	**100**

Note: *1. Ailment categories are arranged in the descending order of total morbidity burden in Tamil Nadu (except for other ailments).*

2. Other ailments include symptoms not fitting into any of the other categories or where the respondent could not state the main symptom.

More than 25% of all ailing population in Tamil Nadu (more than 30% among ailing male) reported suffering from diabetes placing it clearly as the top morbidity burden for the state .The second most reported group was those who reported fever as a symptom, including both cases which had been medically diagnosed as well as fever of unknown origin, together accounting for 18% of all those ailing. Cardio-vascular diseases reported by approximately 17% of all population, placing it third in the list of disease conditions in order of the state's morbidity burden. Among other conditions, musculo-skeletal and respiratory diseases each were reported by approximately 10-11% of all ailing persons. Gastro-intestinal and mental ailments were both reported by approximately 4% of all ailing persons.

Gender differentials are observed in the reporting of some ailments. Males report significantly higher share of diabetes (30.1% versus 21.8%) and respiratory diseases (12.2% versus 8.9%)when compared to females. Conversely, females report significantly higher proportion of musculo-skeletal ailments (13.5% in female versus 6.6% in male) mental health problems (6% in female versus 2.3% in male) and genitourinary ailments (2.4% in female versus 0.6% in male).

Tamil Nadu has a much higher reporting of chronic ailments conditions (refer to Appendix Table A II-1) as compared to the all India figures. The comparative PAPs of Tamil Nadu for chronic ailments in urban (119) and rural (86) areas are nearly double the corresponding all India urban and rural PAP for chronic ailments, at 67 and 40 respectively.

While the top five disease conditions contributing to the morbidity burden are the same in Tamil Nadu as well as all India, the order is not the same, with diabetes slipping to fifth place due to the significantly lower percentage reporting at the all India level (9.9%)when compared to the state (25.2%).On the contrary, fever, respiratory ailments and cardio-vascular diseases move up one place each in the all India list, due to the higher reporting of these conditions at the national level.

3. Utilization of Healthcare

3.1. Overall utilization rates

This section presents details on utilization of healthcare services as outpatient and inpatient (hospitalized population) by the ailing population. Table 3.1 presents the percentage of the total population reporting utilizing outpatient (15 days recall) and hospitalization (15 days and 365 days recall) services in the state (also known as 'utilization rate').

Table 3.1: Percentage of population utilizing healthcare as outpatient and inpatient in rural and urban areas in Tamil Nadu – 2014

Sector	Outpatient (15 days recall)	Hospitalization (15 days recall)*	Hospitalization (365 days recall)**
Rural	13.1	1.1	5.6
Urban	16.8	1.3	5.8
Total	**14.9**	**1.2**	**5.7**

Note: *Includes all hospitalization episodes (including childbirth).*

** Outpatient and hospitalization (15days recall) are not mutually exclusive.*

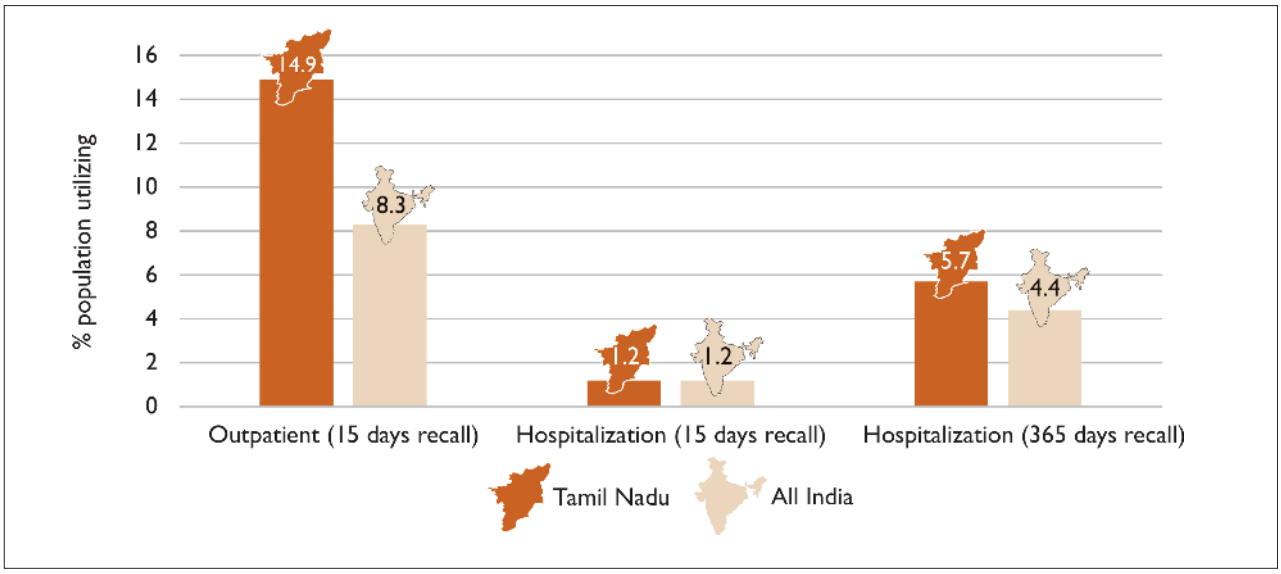
***includes hospitalization with 15 days recall.*

Approximately 15% of the total population utilized outpatient (15 days recall) and 5.7% utilized hospital services as inpatient. Utilization of outpatient services is higher in the urban areas (16.8%) as compared to the rural (13.1%) areas. During the recall period of 15 days prior to the survey, 1.2% reported hospitalization in addition to using some form of outpatient services. The hospitalization rate for 365 days recall is almost similar among the rural (5.6%) and the urban (5.8%) population.

Utilization of outpatient and hospitalization services in Tamil Nadu and at the all India level is presented in Figure 3.1 (also refer to Appendix Table A-III.1). While the percentage of utilization of outpatient services is substantially higher in Tamil Nadu compared to the all India average, the utilization of hospitalization services at 5.7% is also nearly a third higher in the state than the all India figure.

Among the major states, the outpatient as well as the hospitalization rate is the highest in Kerala with the rates being nearly double that of Tamil Nadu. States which had similar proportion of ailing persons (PAPs) such as Andhra Pradesh, Punjab and West Bengal also have similar percentage of population utilizing outpatient services. Tamil Nadu is second in the utilization of hospitalization services, with Andhra Pradesh (5.6%) and Himachal Pradesh (5.3%) having similar rates.

Figure 3.1: Percentage of population utilizing healthcare as outpatient and inpatient in all India and Tamil Nadu – 2014



Note: *Outpatient and hospitalization (15days recall) are not mutually exclusive; 2. Hospitalization with 365 days recall includes hospitalization with 15 days recall.*

3.2. Outpatient care

The utilization of outpatient services varies significantly across gender and age. Table 3.2 presents outpatient utilization rates disaggregated by age group and gender.

Table 3.2: Percentage of population by age group and gender utilizing healthcare as outpatient in rural and urban areas in Tamil Nadu–2014

Age groups (in years)	Rural			Urban			Rural + Urban		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
0-4	17.2	19.4	18.2	13.2	18.4	15.9	15.3	18.9	17.1
5-14	10.4	5.4	7.8	6.9	6.7	6.8	8.7	5.9	7.4
15-29	2.2	4.8	3.5	2.7	7.4	4.9	2.4	6.1	4.2
30-44	5.9	12.2	9.2	8.3	14.7	11.5	7.1	13.5	10.4
45-59	14.9	27.0	21.3	21.5	37.6	29.7	18.1	31.9	25.3
60-69	39.5	26.1	32.4	57.3	50.0	53.3	48.2	38.2	42.8
70&above	29.0	29.8	29.4	43.0	52.4	47.0	35.8	39.1	37.3
All ages	**11.6**	**14.4**	**13.1**	**13.7**	**20.1**	**16.8**	**12.7**	**17.1**	**14.9**

The outpatient utilization rate in Tamil Nadu follows the same pattern as the proportion of ailing persons, being higher among females (17.1%) than among males (12.7%).the difference in female and male outpatient utilization rate is more pronounced in the urban areas (20.1% in females and 13.7% in males) as compared to the rural areas (14.4% in females and 11.6% in males). Age differentials in gender-wise outpatient utilization reflect the same pattern as the proportion of ailing persons age wise, showing overall higher utilization by females in all age groups except the age groups of ,5-14 and 60-69 years, both in rural and urban areas.

A spell of ailment is a continuous period of sickness due to a specific ailment. Those ailing may have either one or more spells of ailment during the reference period of the last 15 days from the survey. 90.7% of all spells of ailment in Tamil Nadu received some form of formal treatment (including AYUSH). The proportion of ailing episodes

receiving informal care is almost similar in the rural and the urban areas (6.6%). The percentage of episodes not receiving any care is slightly higher in the rural (3.5%) than in the urban (2.0%) areas of the state.

Table 3.3 presents the extent of treated and untreated ailing episodes (in the reference period of the last 15 days).

Table 3.3: Percentage distribution of all ailing episodes (15days recall) by types of treatment sought in Tamil Nadu – 2014

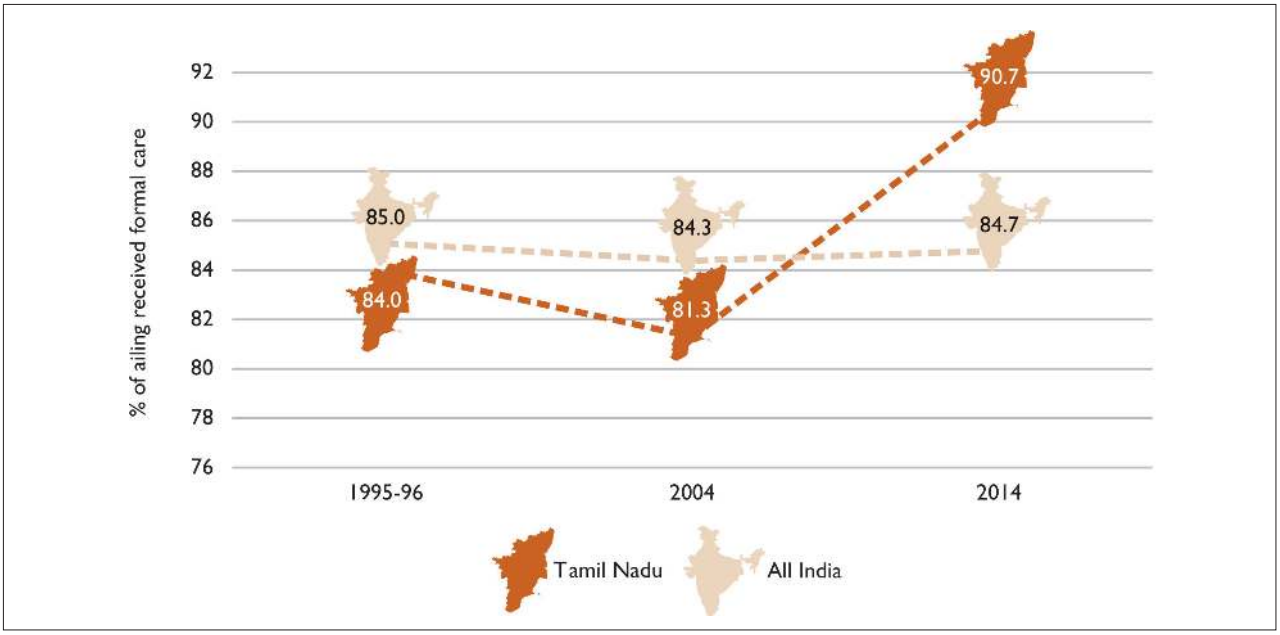
Nature of Treatment	Tamil Nadu			All India		
	Rural	Urban	Rural + Urban	Rural	Urban	Rural + Urban
Formal care*	89.8	91.4	90.7	82.1	89.1	84.7
a. Allopathy	88.5	87.1	87.7	78.1	83.6	80.1
b. AYUSH	1.3	4.3	2.9	4.1	5.6	4.6
Informal care (self-care)	6.7	6.6	6.6	13.7	8.1	11.6
a. Allopathy	6.2	6.2	6.2	11.5	7.2	9.9
b. AYUSH	0.5	0.4	0.5	2.2	0.9	1.8
No care	3.5	2.0	2.7	4.0	2.6	3.5
Others	0	0	0	0.1	0.1	0.1
All no formal care	10.2	8.6	9.3	17.9	10.9	15.3
All ailing episodes	100	100	100	100	100	100

Note: ** Including Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy (AYUSH); excludes outpatient utilization for childbirth.*

When compared to all India figures, it is seen that only 84.7% of all ailment spells receive formal care at the national level which is significantly lower than the Tamil Nadu coverage of 90.7%, with both the rural areas(82.1%) and urban areas (89.8%) faring distinctly worse than the corresponding figures for the rural and urban areas of the state. The percentage of ailing episodes with no care at all is also higher at the country level when compared to Tamil Nadu, both in rural and urban areas.

While the share of formal care providers over the last twenty years has remained in the range of 84-85% in the country, Tamil Nadu has witnessed a fluctuation in the share of formal care during the same time period, decreasing from 84.0% in 1995-96 to 81.3% in 2004, and then rising distinctly to 90.7% in 2014 (refer to Figure 3.2).

Figure 3.2: Percentage of episodes (15days recall) treated in formal care in Tamil Nadu and All India in 1995-96, 2004 and 2014

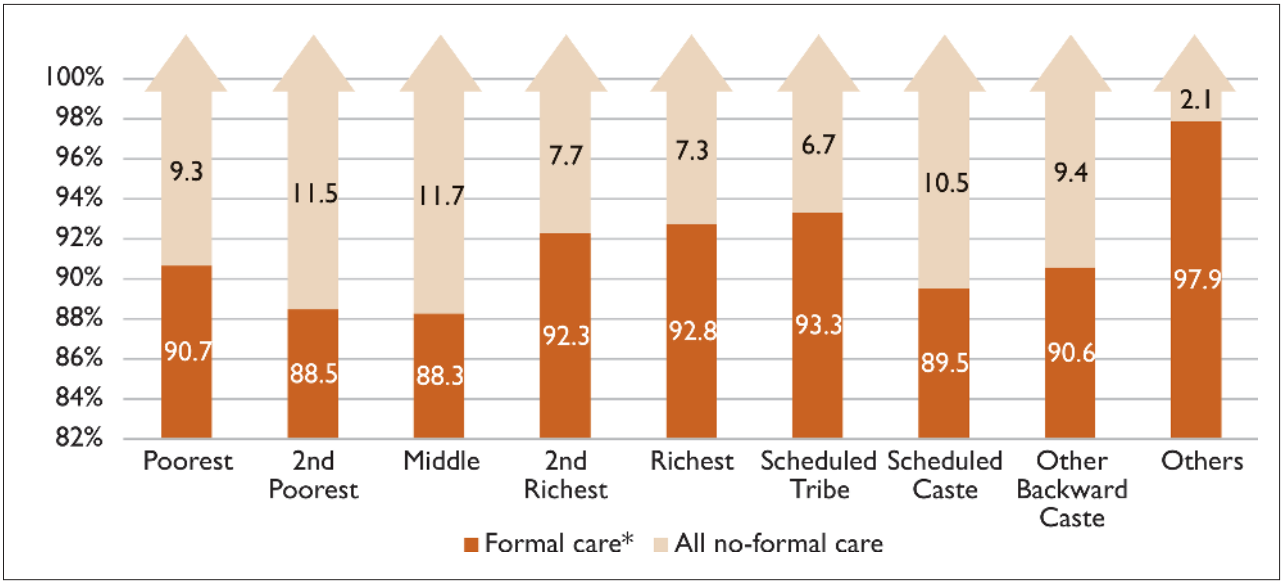


Note: *excludes outpatient utilization for childbirth.*

Source: *Information is from the NSSO 52nd (1995-96), 60th (2004) and 71st (2014) rounds.*

The percentage of all ailing episodes (15days recall) by treatment sought across quintile, caste, education and employment groups in Tamil Nadu which are presented in Appendix Table A-III.2 shows varied socio-economic gradients. The less advantaged groups such as the Scheduled Tribes show a very high percentage (6.68) of no care while the Scheduled Castes show a higher percentage of informal care (10.47) compared to their better-off counterparts. While the two richest quintiles show marginally higher percentage of formal care when compared with the value for the entire state, there is no worsening of level of formal care observed for the poorest quintile. Population with lower levels of education such as below primary and primary level (excepting the illiterates) report higher use of informal care (including no-care) compared to better educated population. Similarly, members of households drawing main income from self-employment in non-agriculture and casual labour reported using higher use of informal care compared to other employment groups, Figure 3.3 shows the percentage distribution of utilization of formal and all non-formal/informal care, by economic quintile and social group.

Figure 3.3: Share of formal and no-formal providers in treatment of ailment episodes by socio-economic groups in Tamil Nadu – 2014



Note: *Quintile groups are based on monthly per person Household Consumption Expenditure. ST is Scheduled Tribes, SC is Scheduled Castes, and OBC is Other Backward Classes. Excludes hospitalization due to childbirth. *Formal care includes AYUSH.*

Share of health care providers by level of care and source of treatment

All outpatient episodes are treated either by public or private providers of health care. Public providers of health care include government hospitals, clinics, dispensaries, Health Sub-Centres (HSC), Primary Health Centres (PHCs), Community Health Centres (CHCs), Mobile Medical Units (MMU) and the state and Central government assisted ESI hospitals and dispensaries etc. In addition, Auxiliary Nurse Midwives (ANM), Accredited Social Health Activists (ASHA), Aanganwadi Workers (AWW) also directly deliver services which are part of the public sector provision. Private providers where outpatient episodes are treated include private doctors, nursing homes, private hospitals, charitable institutions, etc. The percentage distribution of all outpatient episodes treated at different types and levels of care is presented in Table 3.4.

Table 3.4: Percentage distribution of outpatient episodes treated by level of care across sector in Tamil Nadu– 2014

Level of care	Rural	Urban	Total
HSC/ANM/ASHA/AWW	1.5	0.3	0.8
PHC/dispensary/CHC/ mobile medical unit	10.3	3.4	6.4
Public hospital	30.6	24.9	27.4
Private doctor/clinic	19.9	27.8	24.4
Private hospital	37.8	43.4	41.0
All treated episodes	**100**	**100**	**100**

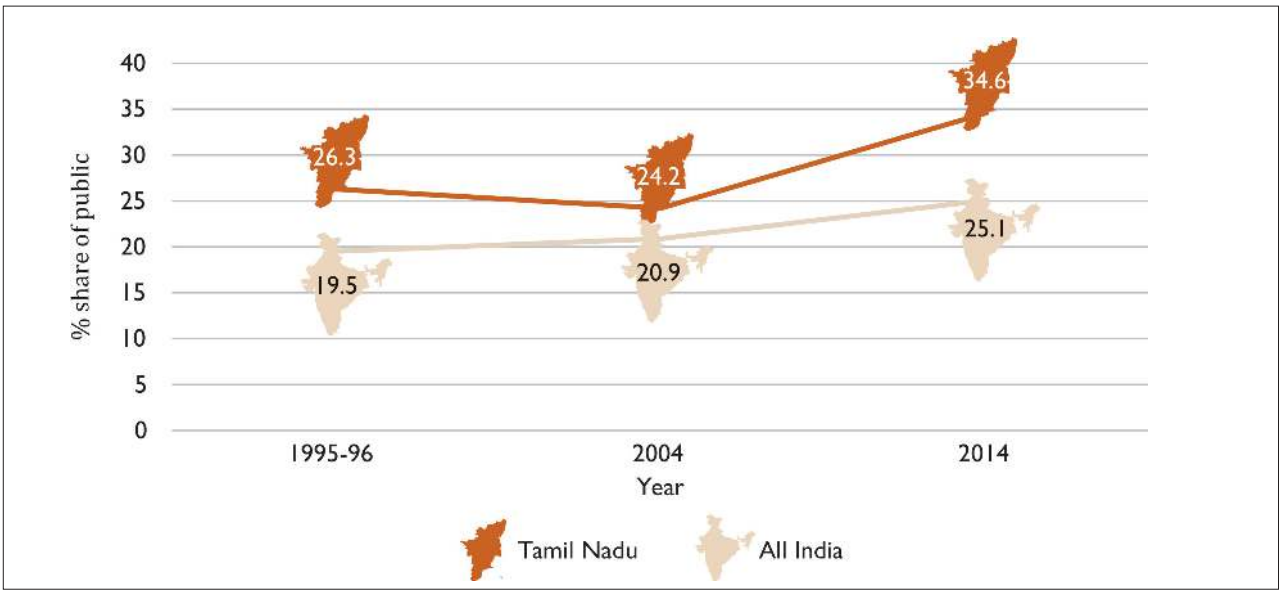
Note: *Including Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy (AYUSH); excludes outpatient utilization for childbirth and post hospitalization outpatient visits.*

More than 65% of all outpatient episodes were treated in the private sector (24% by private doctors/clinics and 41% in private hospitals). Private hospitals constitute the single largest share of all treated outpatient episodes, with a slightly higher share in the urban as compared to the rural areas (43% versus 38% respectively). The share of public institutions in all rural outpatient episodes at 42.4% is significantly higher than the share of public institutions in urban areas which is 28.6%. The share of the HSC and PHC type institutions in treatment of all outpatient treatment episodes is low, being slightly more than 7%, with the percentage being higher at approximately 12% in the rural areas.

The share of all public facilities in total outpatient episodes at 34.6% is significantly higher in Tamil Nadu compared to the all India average of 25.1%. It is also higher than many other states but lower than in the states of Assam, Himachal Pradesh, Jammu and Kashmir, Odisha, Rajasthan and Uttarakhand. The share of HSC/PHC type institutions in Tamil Nadu is however marginally lower than the all India average of 8.7%. (refer to Appendix Table A-III.3).

The share of the public sector in the providing care for outpatient episodes is shown in Figure 3.4. Over the years, particularly in 2014, the public sector significantly increased its share in the total outpatient care in Tamil Nadu, which was earlier on the decline (Figure 3.4). Nationally, the share of the public sector has increased from 19.5% of all outpatient episodes in 1995-96 to 25.1% in 2014.

Figure 3.4: Share of public sector in total outpatient episodes in Tamil Nadu and all India during 1995-96, 2004 and 2014

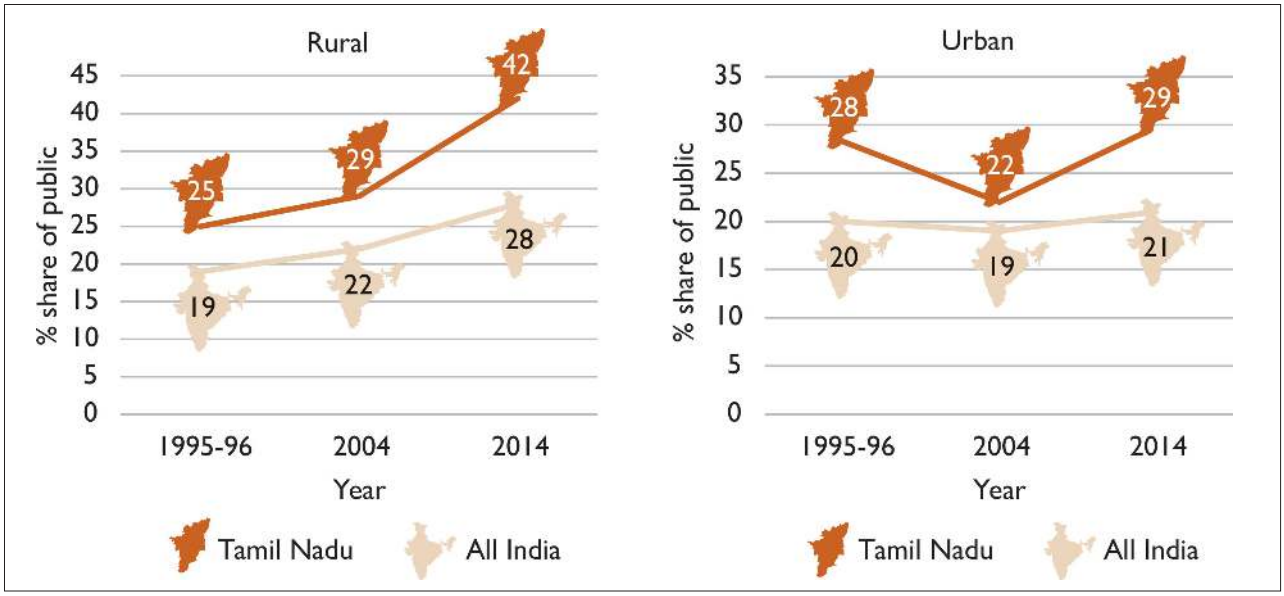


Note: *Excludes outpatient utilization for childbirth and post hospitalization outpatient visits.*

Source: *NSSO 52nd (1995–96), 60th (2004), and 71st (2014) rounds.*

The changes in the public sector provision of outpatient care by rural and urban areas in Tamil Nadu and for all India in the last twenty years is presented in Figure 3.5. For both the rural and the urban areas, the share of the public sector in outpatient care has grown at a far greater rate in Tamil Nadu than the rest of the country. However, the urban areas first registered a decline in the public sector provision from 28% in 1995-96 to 22% in 2004, before rising to 29% in 2014. In the rural areas, the share of public provision for outpatient care grew consistently from 25% in 1995-96 to 42% in 2014.

Figure 3.5: Share of public sector in total outpatient care in rural and urban Tamil Nadu and All India during 1995-96, 2004 and 2014



Note: *Excludes outpatient utilization for childbirth and post-hospitalization outpatient visits*

Source: *NSSO 52nd (1995–96), 60th (2004), and 71st (2014) rounds.*

Table 3.5 presents types of health conditions disaggregated by major ailment categories treated as outpatient in public and private sectors, and the share of public sector in treating each of these ailment categories. Within the public sector, diabetes (27%) followed by cardio-vascular diseases (22%) and musculo-skeletal ailments (13%) are the major health conditions treated as outpatient. In the private sector, diabetes (28%) is followed by general fever (22%), while the treatment of cardio-vascular diseases (15%) ranks third in the order. Respiratory conditions are also among th ailments that are frequently treated as outpatient across both public and private sector (8% each). The share of public sector provision of outpatient care is higher for the treatment of injuries, cancers, mental and neurological, musculo-skeletal, and gastro-intestinal ailments. Overall, the four major ailment categories — diabetes, cardio-vascular, musculo-skeletal and respiratory diseases —constitute more than 64%of all the conditions for which outpatient care is provided. These are also the conditions for which the share of the public sector in total treatment is more than one third. The share of diabetes and cardio-vascular diseases treated in the public sector in the rural areas is significantly higher than the corresponding public sector share of those diseasses treated in the urban areas (refer to Appendix Table A-III.5). The share of public sector in treating injuries, mental and neurological ailments, diabetes and cardio-vascular diseases outpatient care is also significantly higher in the rural areas than in the urban areas (refer to Appendix Table A-III.5).

Table 3.5: Share of major ailment categories treated in public and private sector as outpatient and share of public sector in the treatment of major ailment categories in Tamil Nadu – 2014

Ailment categories	% share of ailment categories			% share of Public sector
	Public	Private	All	
Diabetes	27.1	28.4	28.0	33.5
Fever*	12.7	22.5	19.1	23.0
Cardio-vascular	22.0	15.4	17.7	42.9
Musculo-skeletal	12.8	9.0	10.3	42.8
Respiratory	8.4	8.1	8.2	35.6
Gastrointestinal	4.9	3.6	4.1	41.7
Mental/Neuro	4.5	3.0	3.5	44.2
Skin	1.6	2.3	2.0	26.9
Eye/Ear	1.0	1.6	1.4	25.6
Genito-urinary	1.3	1.4	1.4	32.8
Injuries	1.3	0.6	0.8	52.6
Other Metabolic	0.5	0.9	0.8	20.6
Vector-borne	0.2	0.9	0.7	11.2
Cancers	0.8	0.5	0.6	44.5
Blood disease	0.0	0.3	0.2	5.2
Obstetric	0.1	0.1	0.1	25.5
TB/Filer/Tetanus	0.1	0.1	0.1	26.9
STD/HIV/AIDS	0.1	0.0	0.0	100.0
Others	0.74	1.26	1.08	23.69
Total	**100**	**100**	**100**	**34.57**

Note: *** Includes Malaria, Typhoid and fevers of unknown origin; excludes outpatient utilization for childbirth and post hospitalization outpatient visits.*

1. Ailment categories are arranged in the descending order of % share of disease categories for all providers (except for other ailments).

2. Other ailments include symptoms not fitting into any of the other categories or where the respondent could not state the main symptom.

3.3. Inpatient care

Medical treatment of an ailing person in any medical institution with the provision for treating the sick as inpatients is considered as hospitalized treatment. Table 3.6 presents percentage of population utilizing inpatient care (inpatient utilization rates) disaggregated by age group and gender.

Table 3.6: Percentage distribution of population availing inpatient care by sector, gender and age groups, Tamil Nadu – 2014

Age groups (in years)	Rural			Urban			Rural + Urban		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
0-4	3.9	2.9	3.4	6.0	3.0	4.5	4.9	3.0	3.9
5-14	2.1	1.5	1.8	1.7	2.1	1.9	1.9	1.8	1.9
15-29	2.2	11.6	7.1	1.9	10.1	5.8	2.0	10.9	6.4
30-44	3.6	5.4	4.5	4.1	5.7	4.9	3.9	5.6	4.7
45-59	7.7	6.0	6.8	6.2	8.1	7.2	7.0	7.0	7.0
60-69	8.7	11.3	10.1	10.9	7.7	9.2	9.8	9.5	9.6
70&above	12.2	6.0	9.2	17.5	15.7	16.7	14.8	10.0	12.6
All ages	**4.5**	**6.6**	**5.6**	**4.6**	**7.0**	**5.8**	**4.6**	**6.8**	**5.7**

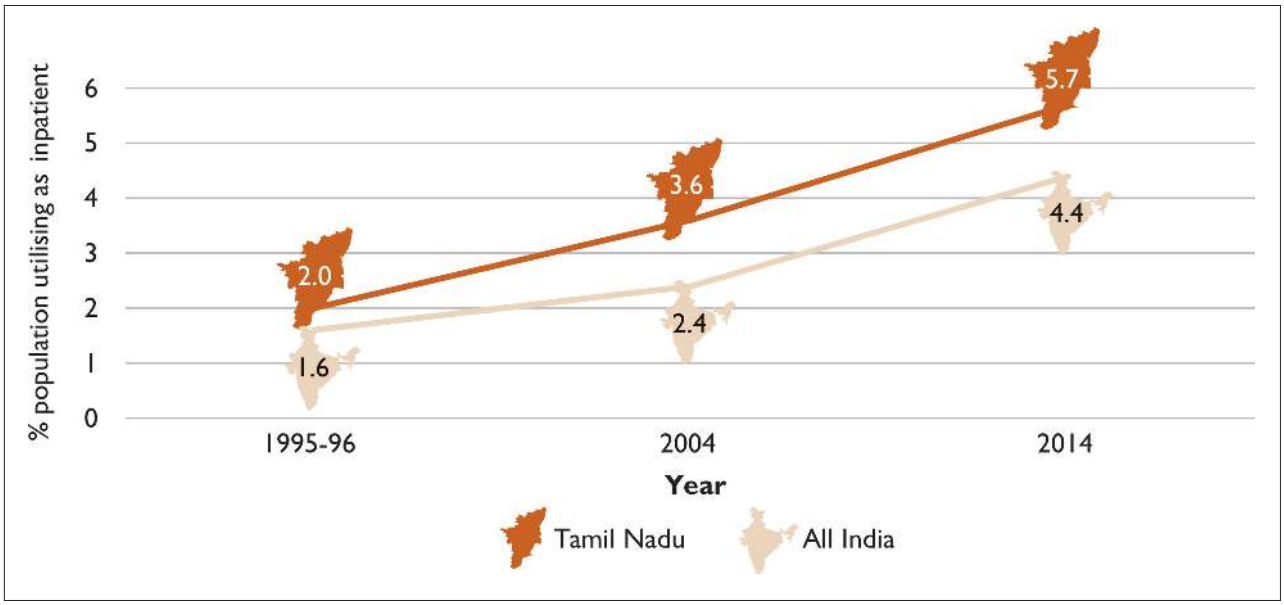
Note: *Includes all hospitalization episodes (including childbirth).*

Overall, the percentage of population utilizing health care as inpatient is the lowest among the 5-14 age group and highest among the elderly (70 & above)males and females, both in the rural and urban areas. The inpatient utilization rates are higher among females (6.8%)than among males (4.6%). The hospitalization rate at 7.0%is highest among females in the urban areas. The lowest hospitalization rate at 4.5% is found in males in the rural areas.

The male inpatient utilization rate declines with increase in age up to the age of 45 and then rises consistently with age reaching the highest value in the age group of 70 and above. Female inpatient utilization shows a similar trend in the youngest age group and in the older years, but shows a distinct bulge in the 15-29 age group, which form the major childbearing years. As a result, males show a higher rate of utilization in the age groups upto 14 years and above the age of 60. The difference in the male and female utilization rates is the largest in the age groups of 15–29 years followed by 30–44 years.

The increase in hospital utilization rate in Tamil Nadu has been faster than at the all India level (Figure 3.6). The hospital utilization rate increased significantly in Tamil Nadu from just 2% in 1995-96 to 3.6% in 2004 to 5.7% in 2014.

Figure 3.6: Percentage of population utilizing hospital services as inpatient in Tamil Nadu and for all India during 1995-96, 2004 and 2014



Source: *NSSO 52nd (1995-96), 60th (2004) and 71st (2014) rounds.*

Compared to other states in the country, the utilization rate for inpatient care in Tamil Nadu is the second highest among all states, next only to Kerala for both rural and urban areas (refer to Appendix Table A-III.5).

Yet another indicator of the level of utilization of hospital services is Length of Stay (LOS) in hospital during the treatment. The average LOS for males and females hospitalized in Tamil Nadu is presented in Table 3.7.

Table 3.7: Average (mean and median) LOS for males and females hospitalized in rural and urban Tamil Nadu –2014

Sector	Male	Female	Person
Rural	8.4 (5)	6.4 (4)	7.4 (5)
Urban	8.4 (5)	7.1 (5)	7.7 (5)
Rural + Urban	**8.4 (5)**	**6.8 (4)**	**7.6 (5)**

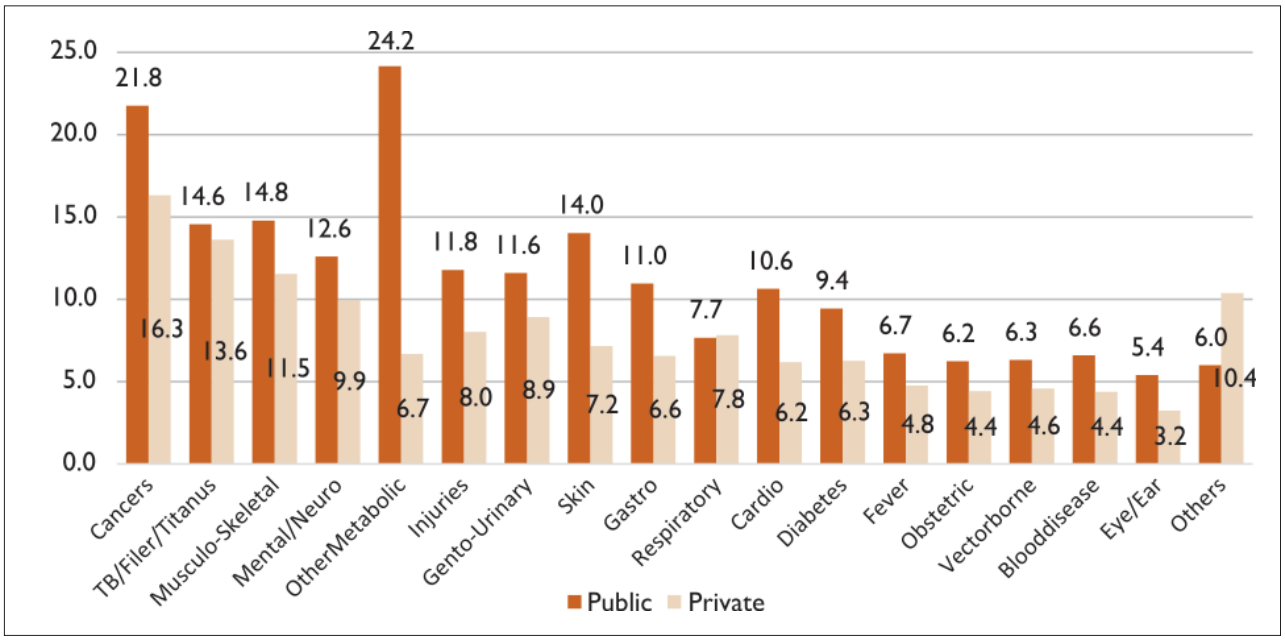
Note: *Figures in parentheses are median; excludes hospitalization due to childbirth.*

LOS: Length of Stay.

The mean LOS in hospitals is approximately 7.6 days with higher values for males (8.4 days) compared to the females (6.8 days). The median days of stay is lower (5 days) than the mean LOS, implying that the majority of patients stay for less than the mean LOS of 7.1 days. The LOS is higher for the urban patients than for the rural patients for both males and females.

The distribution of Length of Stay by disease conditions and provider type in Tamil Nadu is presented in Figure 3.7. Overall, all but two conditions (respiratory and others) had longer LOS in the public facilities as compared to the private ones. The longest LOS was for other metabolic diseases (24.2 days), followed by cancers (21.8 days), both in public facilities.

Figure 3.7: Distribution of Length of Stay across public and private providers by ailment conditions in Tamil Nadu – 2014

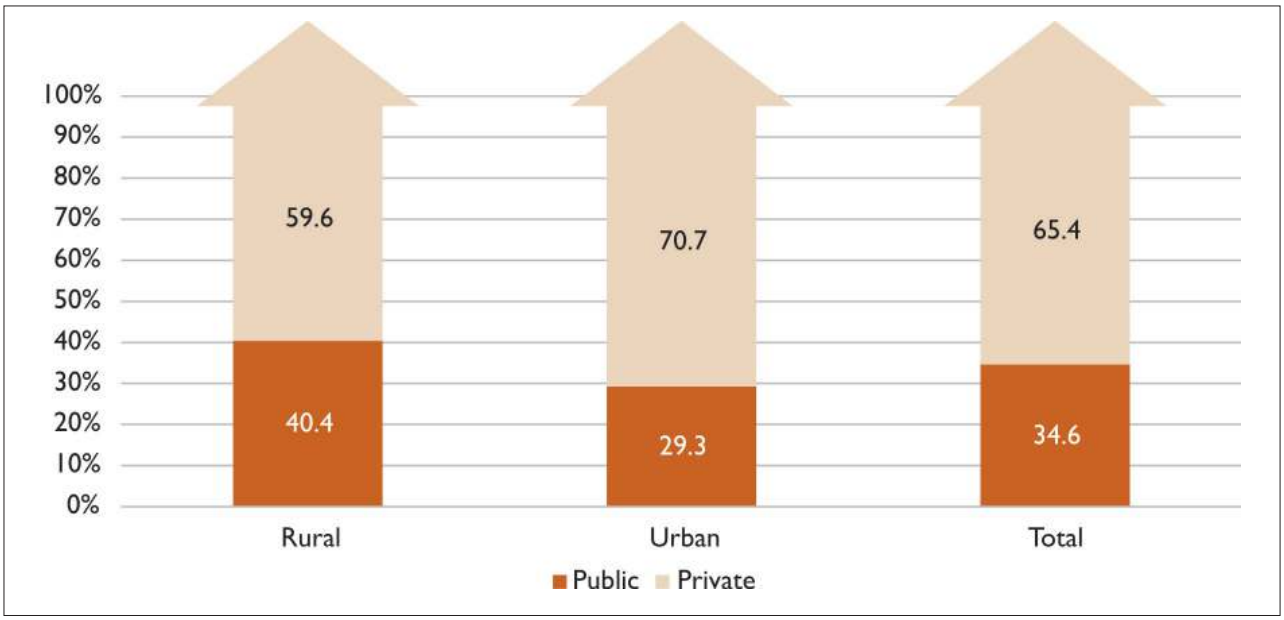


Note: *Excludes hospitalization due to childbirth.*

Level of inpatient care

Both public and private sector provide hospitalization facilities. The percentage distribution of inpatient episodes across public and private hospitals is presented in Figure 3.8. Nearly 65% of all inpatient episodes in Tamil Nadu were treated in the private sector, with the proportion of hospitalized treatment in the private sector in the urban areas (71%) being higher than the corresponding proportion in rural areas (60%).

Figure 3.8: Percentage distribution of inpatient episodes across public and private providers in urban and rural areas in Tamil Nadu – 2014



Note: *Excludes hospitalization due to childbirth.*

Table 3.8 compares the percentage distribution of inpatient treatment provided by different levels of institutions in Tamil Nadu and at the all India level.

Table 3.8: Percentage distribution of all inpatient episodes by levels of care for urban and rural areas in Tamil Nadu and All India – 2014

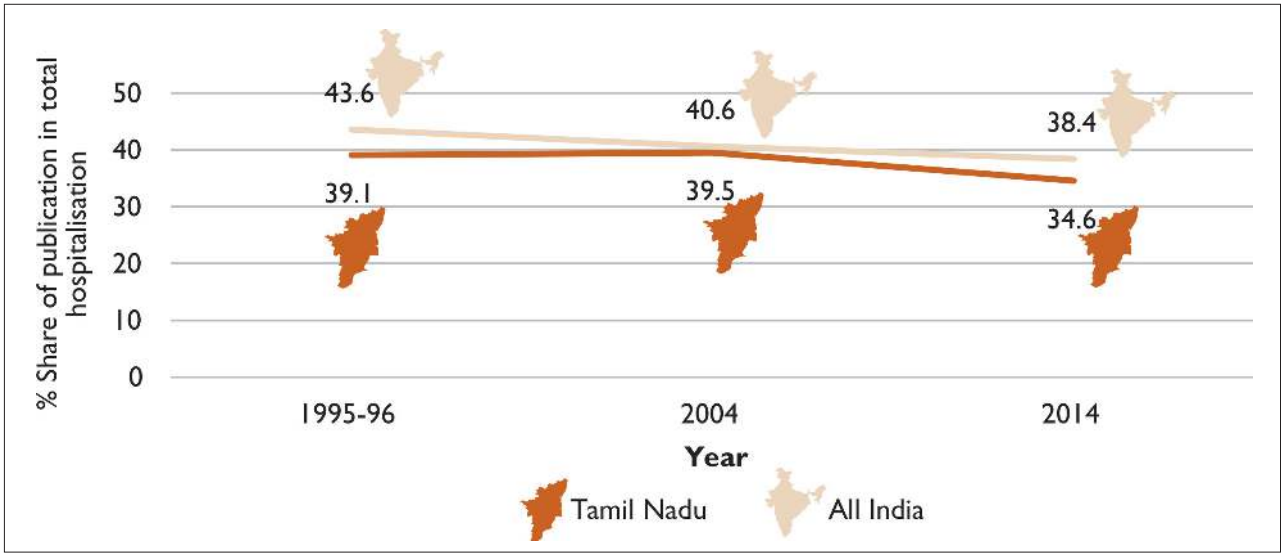
Level of care	Tamil Nadu			All India		
	Rural	Urban	Total	Rural	Urban	Total
PHC/dispensary/CHC etc.	1.65	0.54	1.08	4.9	1.21	3.61
Public hospital	38.74	28.72	33.55	36.98	30.82	34.82
Private hospital	59.61	70.74	65.37	58.12	67.97	61.57
Total	**100**	**100**	**100**	**100**	**100**	**100**

Note: *Excludes hospitalization due to childbirth*

The share of public hospitals in all inpatient episodes is approximately similar for Tamil Nadu, when compared with the all India figures. However, the proportion is marginally higher in rural Tamil Nadu (39%) compared to the corresponding rural all India share of 37%, (refer to Appendix Table A-III.6). Approximately 1% of all hospitalization episodes in Tamil Nadu are treated at the PHC/CHC level, which is lower than the all India level for the rural as well as urban areas. Overall, the percentage of utilization of public sector for hospitalized treatment in Tamil Nadu at 34.6% is 4% lower than the all India level of 38.4%.

The overall share of the public sector in the total inpatient episodes in Tamil Nadu was lower than the all India average in 1995-96 and rose to nearly the same level in 2004. Between 2004 and 2014, the share of the public sector in the inpatient episodes in the state fell by 6%, to fall below the all India figure. (Figure 3.9).

Figure 3.9: Share of public sector in total hospitalization in Tamil Nadu and all India over the years, 1995-96, 2004 and 2014



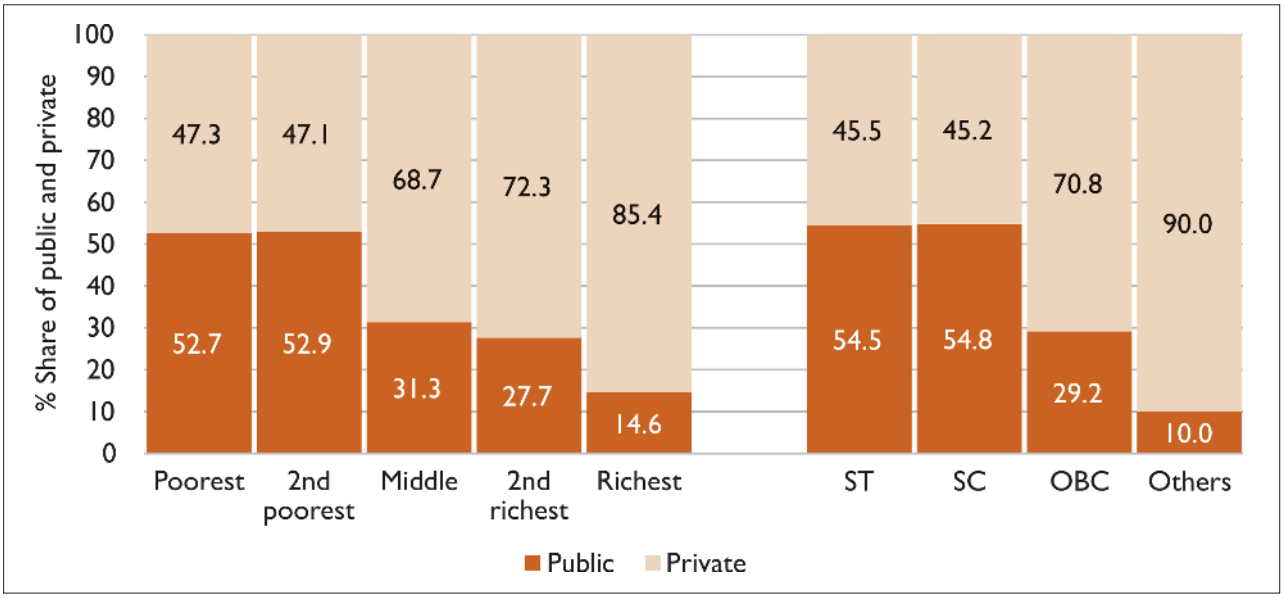
Note: *Excludes hospitalization due to childbirth.*

Source: *NSSO 52nd (1995-96), 60th (2004) and 71st (2014) rounds.*

A comparison with other Indian states shows that the percentage of inpatient episodes treated by public sector hospitals, varied from 19 (Maharashtra) to 89 (Assam). Major states like Orissa and West Bengal reported relatively high proportions of inpatient episodes treated by public institutions when compared to Tamil Nadu. On the contrary, Andhra Pradesh, Gujarat, Karnataka, Telangana, Punjab and Uttar Pradesh show a higher utilization of inpatient episodes in private sector hospitals.

The utilization of hospitalization services also has a very strong socio-economic patterning. In general, the share of the public sector in utilization of hospitalization services by the two poorest quintiles is more than three times than those in the topmost quintile (14.6%). Similarly, the proportion of inpatient episodes for which public sector was utilized by the less advantaged social groups (Scheduled Castes and Scheduled Tribes) is more than 50% as against a much lower level of 10% by their better off counterparts. (Figure 3.10).

Figure 3.10: Share of public and private sectors in total inpatient episodes by socio-economic groups in Tamil Nadu – 2014



Note: *1. Quintile groups are based on monthly per person Household Consumption Expenditure. 2. ST is Scheduled Tribes and SC Scheduled Castes. OBC is Other Backward Classes. 3. Excludes hospitalization due to childbirth.*

The percentage distribution of treated as inpatient episodes by nature of ailment, type of provider and share of the public sector in treating the disease condition is presented in Table 3.9.

Table 3.9: Share of various ailments treated as inpatients in public and private hospitals and share of public hospitals in the treatment of various ailment categories in Tamil Nadu – 2014

Ailment conditions	% share of various ailments treated			% share of public in each ailment
	Public	Private	Public + Private	
Fever	23.5	17.8	19.8	41.1
Injuries	13.6	9.8	11.1	42.5
Cardio-vascular	11.0	11.1	11.1	34.5
Gastrointestinal	8.3	8.4	8.4	34.3
Genito-urinary	5.8	9.5	8.2	24.5
Eye/Ear	4.1	10.4	8.2	17.1
Mental/Neuro	7.4	3.8	5.1	50.5
Vector-borne	4.9	5.0	5.0	34.1
Musculo-skeletal	2.7	6.0	4.9	19.1
Respiratory	4.2	4.8	4.6	31.8
Diabetes	2.6	4.1	3.6	25.4
Cancers	2.3	1.9	2.1	38.9
Obstetric	2.9	1.4	1.9	52.9
Blood disease	1.2	1.6	1.5	29.0
Skin	1.1	1.3	1.2	29.3
TB/Filer/Tetanus	1.6	0.6	1.0	59.9
Other Metabolic	0.3	0.7	0.6	18.3
STD/HIV/AIDS	0.1	0.0	0.0	100.0
Others	2.4	1.7	2.0	43.1
All	**100**	**100**	**100**	**34.63**

Note: ** Includes malaria, typhoid and fevers of unknown origin*

1. Ailment categories are arranged in the descending order of % share of disease categories for all providers (except for other ailments).

2. Other ailments include symptoms not fitting into any of the other categories or where the respondent could not state the main symptom.

3. Excludes hospitalization due to childbirth.

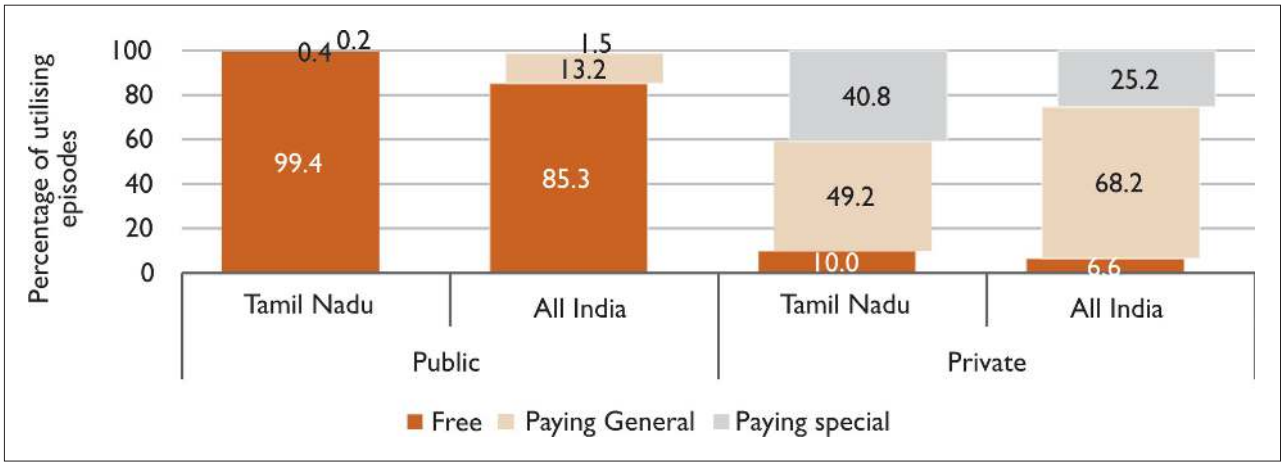
After fever (19.8%), injuries and cardio-vascular diseases (almost 11% each) are the major conditions most frequently treated as inpatient episodes in public and private hospitals. The next three ailment conditions in order requiring inpatient episodes are gastro- intestinal, genito urinary and eye/ear ailments constituting nearly 8% of the overall hospitalization episodes each.

The proportion of inpatient episodes due to eye and ear diseases, genito-urinary, and musculo-skeletal treatments are significantly higher in private hospitals compared to public hospitals. Conversely, public hospitals treat more than 40% of inpatient episodes due to fevers and injuries which are two among the three topmost conditions requiring hospitalization. Public hospitals also treat a greater share of inpatient episodes due to mental and neuro conditions, cancers and obstetric diseases than private hospitals.

Persons using inpatient care get admitted to different types of wards with differential payment structure. A large proportion of inpatients get admitted to free wards, mostly in the public sector but also in the private sector

hospitals; whereas,some public sector hospitals also charge for special wards. The distribution of all inpatient episodes by types of wards in the urban and rural areas of Tamil Nadu is presented in Figure 3.11.

Figure 3.11: Percentage distribution of all inpatient episodes in public and private hospitals by types of wards in Tamil Nadu and for all India – 2014

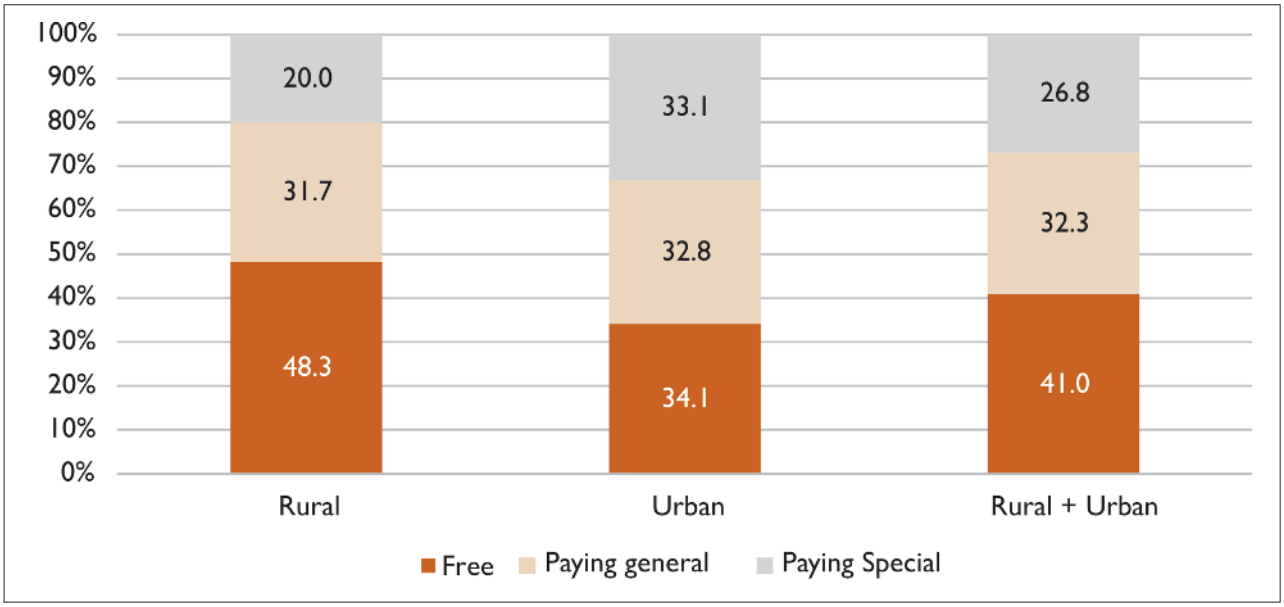


Note: *Excludes hospitalization due to childbirth.*

In the public sector hospitals in Tamil Nadu, almost all the episodes (99.4%) were admitted free of any ward charge as against the all India average of 85%. In the private sector, free wards are used by 10% episodes as against the all India average of 7%. 41% of all inpatient episodes in the private sector in Tamil Nadu were admitted in wards with special charges,, a proportion which is significantly higher as compared to the all India average of 25%.

In total, taking public and private sector hospitals together, 41% of all inpatient episodes in Tamil Nadu were admitted to free wards, while 27% paid special charges (Figure 3.12). The proportion of inpatient episodes utilizing wards with special charges is higher in the urban areas (33%) as opposed to the rural (20%) areas. Conversely, nearly half the inpatient episodes in the rural areas utilize free wards as opposed to approximately one third in the urban areas.

Figure 3.12: Percentage distribution of all inpatient episodes by types of wards in urban and rural sectors in Tamil Nadu – 2014



Note: *Excludes hospitalization due to childbirth.*

In addition to the differential payments for wards, hospitalized persons also received many free or partly free services as well as medicines. The percentage distribution of all hospitalized episodes receiving free or partly free services and medicines in Tamil Nadu, disaggregated by public and private hospitals, is presented in Table 3.10.

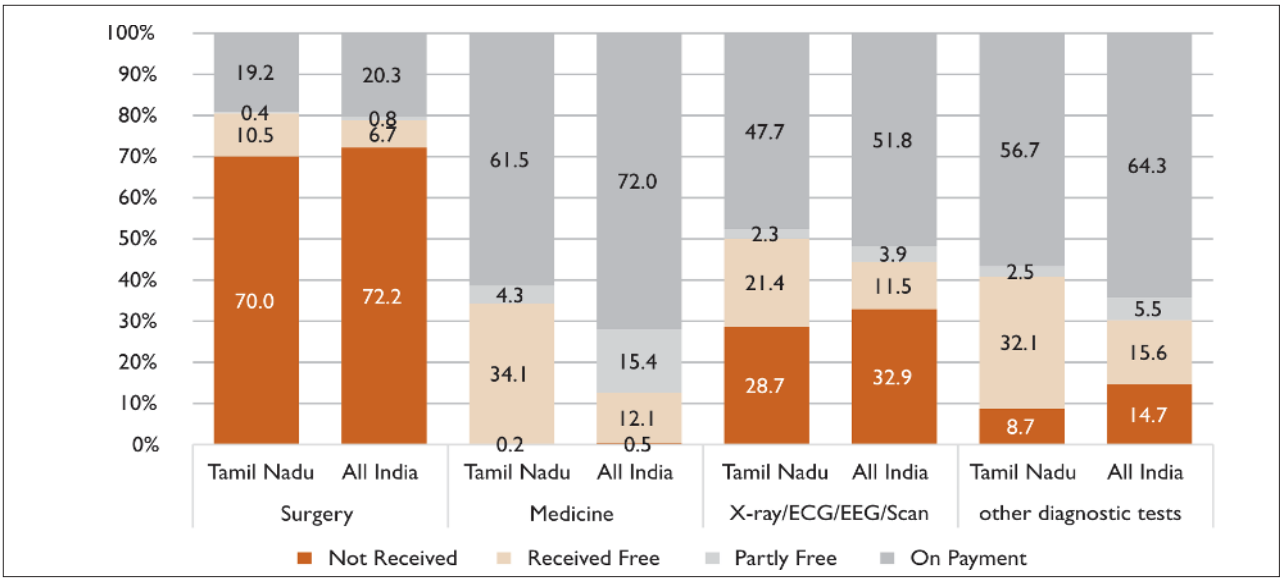
Table 3.10: Percentage distribution of all inpatient episodes in public and private facilities by types of services received in Tamil Nadu – 2014

Types of facilities and services	Not received	Received free	Partly free	On payment	Total
Public					
Surgery	81.0	19.0	0.0	0.1	100
Medicine	0.4	89.0	9.0	1.7	100
X-ray/ECG/EEG/Scan	29.8	57.9	4.9	7.5	100
Other diagnostic tests	9.3	82.2	5.5	3.0	100
Private					
Surgery	64.3	5.9	0.6	29.3	100
Medicine	0.1	5.0	1.8	93.1	100
X-ray/ECG/EEG/Scan	28.1	2.1	0.9	69.0	100
Other diagnostic tests	8.4	5.6	0.9	85.1	100
Public + Private					
Surgery	70.0	10.5	0.4	19.2	100
Medicine	0.2	34.1	4.3	61.5	100
X-ray/ECG/EEG/Scan	28.7	21.4	2.3	47.7	100
Other diagnostic tests	8.7	32.1	2.5	56.7	100

Note: *Excludes hospitalization due to childbirth.*

In Tamil Nadu, of all the hospitalized episodes, approximately 30% (19% in public and 36% in private) underwent surgery. About 71% (70% in public and 72% in private) received X-ray/ECG/EEG/ Scan services. Almost all those who underwent surgery in public sector received free services, while only 5.9% received surgery services free in the private sector.

Figure 3.13: Percentage distribution of all hospitalized episodes by types of services received in Tamil Nadu and for all India – 2014



Note: *Excludes hospitalization due to childbirth.*

Of all the inpatient episodes, medicine, was received free or partly free by 38%, X-ray/ECG/EEG/Scan services by 23.7% and other diagnostic services by 34.6%. While only 6.8% of the hospitalization episodes in private sector received free medicine, the private sector provided the X-ray/ECG/EEG/Scan and other diagnostic services free for 3% and 6.5% respectively. It is significant to note that 98% of all episodes hospitalized in public facilities received free or partly free medicines while diagnostic services (including X-ray/ECG/EEG/Scan) were provided similarly to nearly 63% .

The percentage of all hospitalized episodes receiving free or partly free medicines in Tamil Nadu (38%) is significantly higher than that of the all India average (27%). Similarly, compared to the all India average, the percentage of episodes receiving free or partly free diagnostic tests is significantly higher in Tamil Nadu (Figure 3.13).

4. Cost of Treatment

Expenditure incurred on Outpatient and Inpatient Care

Data on expenses incurred for medical treatment was collected separately for outpatient (15 days recall) and inpatient (365 days recall). For inpatient, each episode of hospitalization was considered an independent case for recording expenses, but in the case of non-hospitalized treatment, expenditure for the ailing person irrespective of the number of spells and type of ailment was recorded. Along with the medical expenses, the 'non medical expenses' also were recorded separately. 'Medical expenses 'includes expenditure on items like cost of medicines, bed charges for hospitalized treatment, charges for diagnostic tests, and fees for doctor/surgeon. The 'non medical expenses' includes all transport charges paid by the household members in connection with the treatment, food and lodging charges of the escort(s) during the reference period. The estimates of 'total expenditure' were arrived at as the sum of 'medical expenditure' and 'non medical expenditure'. This section presents average expenditure of treatment with different levels of disaggregation for outpatient and inpatient.

First, the overall expenses on treatment per ailing person (for outpatient) and per episode (for inpatient) in Tamil Nadu and the all India average are presented in Table 4.1.

Table 4.1: Average cost of treatment* (Rs.) for outpatient (per utilizing person) and inpatient (per episode) in Tamil Nadu and all India –2014

	Tamil Nadu			All India		
	Rural	Urban	Rural + Urban	Rural	Urban	Rural + Urban
Outpatient (15 days recall)						
Medical expenses	308	445	384	509	639	556
Non medical expenses	81	72	76	82	79	81
Total expenses	**390**	**518**	**461**	**591**	**719**	**637**
Inpatient (365 days recall)						
Medical expenses	11,842	23,757	18,006	14,935	24,436	18,268
Non medical expenses	2,126	2,336	2,234	2,021	2,019	2,021
Total expenses	**13,968**	**26,092**	**20,240**	**16,956**	**26,455**	**20,288**

Note: *1. Only first outpatient episode of each ailing individual has been considered.*

2. Excluding childbirth episodes for both outpatient and inpatient episodes.

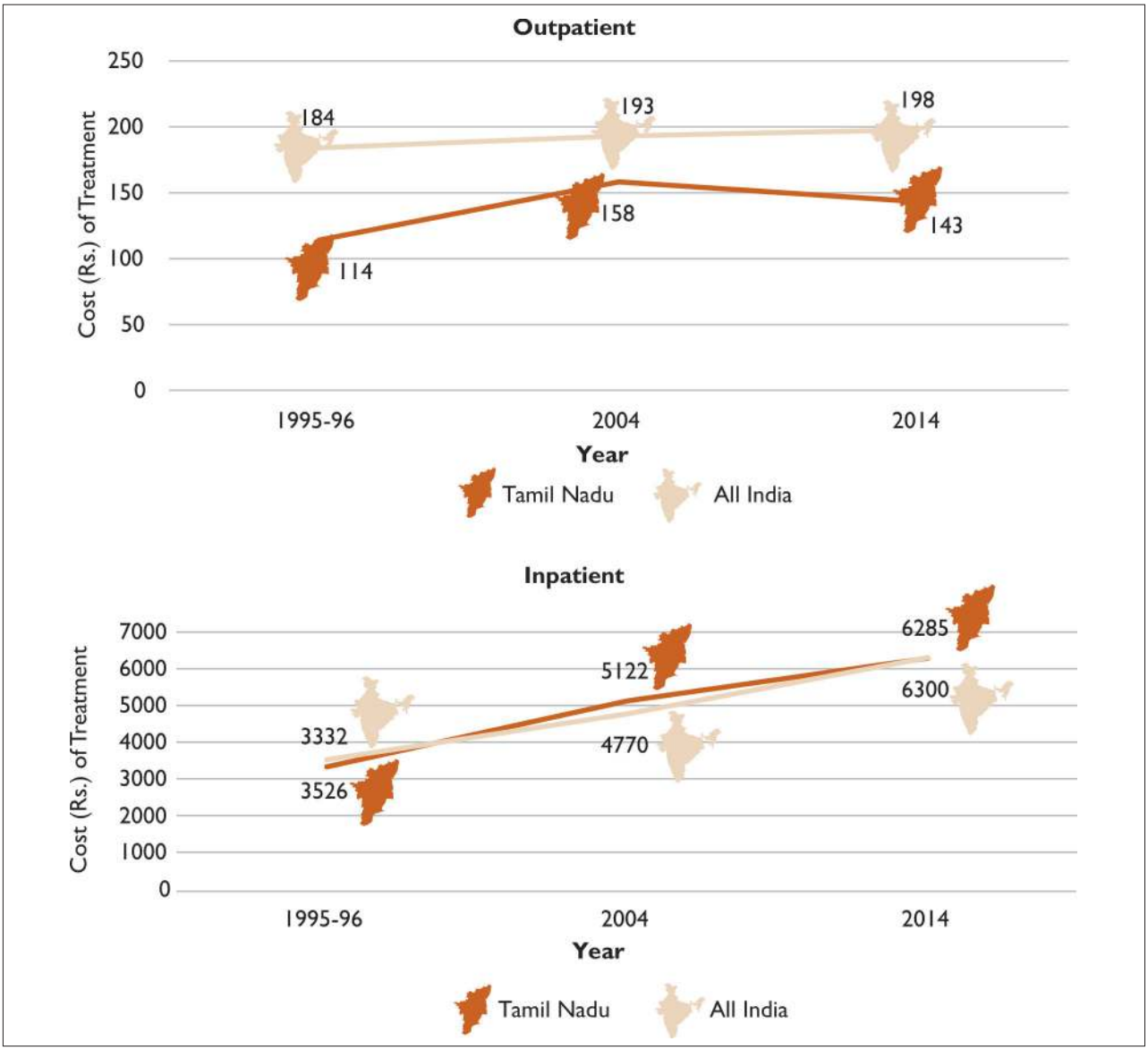
3. Outpatient expenditure do not include pre- and post-hospitalization related outpatient care.

The total expenses as well as the medical expenses for both inpatient and outpatient in Tamil Nadu is higher in urban than in rural areas, though the other expenses are comparable. The total expenditure of treatment as outpatient is lower, both in rural and urban areas in the state (Rs. 461) as compared to the all India average (Rs. 637). The lower expenses for outpatient treatment is mainly driven by difference in the direct medical expenses (Rs. 384 in Tamil Nadu and Rs. 556 for all India). The expenditure for inpatient treatment for Tamil Nadu and the all India average are more or less the same, at approximately Rs. 20,200, but the same is slightly lower for the rural episodes in Tamil Nadu.

Between 1995-96 and 2014, the expenditure on outpatient treatment per utilizing person at constant 1995-96 prices[2], reflects a gradual increase in the all India average from Rs 184 to Rs 198. The Tamil Nadu figures show a steeper increase from Rs 114 to Rs 158 between 1995-96 and 2004, but then falling to Rs. 143 in 2014 (Figure 4.1).

Both the Tamil Nadu and all India figures of expenditure on inpatient treatment at constant 1995-96 prices increased by nearly 90% between 1995–96 and 2014 (Figure 4.1). However, the average hospitalization expenditure which was marginally higher in Tamil Nadu (Rs. 5,122) compared to the all India average (Rs. 4,770) in 2004, rose to Rs.6,285, just below the all India average of Rs. 6,300 in 2014.

Figure 4.1: Average expenditure of treatment for outpatient (per utilizing persons) and inpatient (per episodes) during 1999–96, 2004 and 2014 in Tamil Nadu and all India at constant 1995-96 prices



[2]*State specific consumer price indices for rural labour (CPI-RL, 1986-97 base) and consumer price index for industrial workers (CPI-IW, 1982 base) were used to deflate the costs of treatment in rural and urban areas respectively. The data on CPI-RL and CPI-IW were collected from Labur Bureau, Government of India. These data were downloaded for the three reference years using the (web link: http://labourbureau.nic.in/CPIW05%20CONTENTS.htm).*

4.1. Outpatient Care

Expenditure on outpatient care separated by medical and non-medical expenditure treated separately in public and private sectors, in rural and urban areas of Tamil Nadu is presented in Table 4.2.

Table 4.2: Average expenditure per episode (Rs.) on outpatient treatment (15 days recall) in public and private sector in Tamil Nadu, 2014

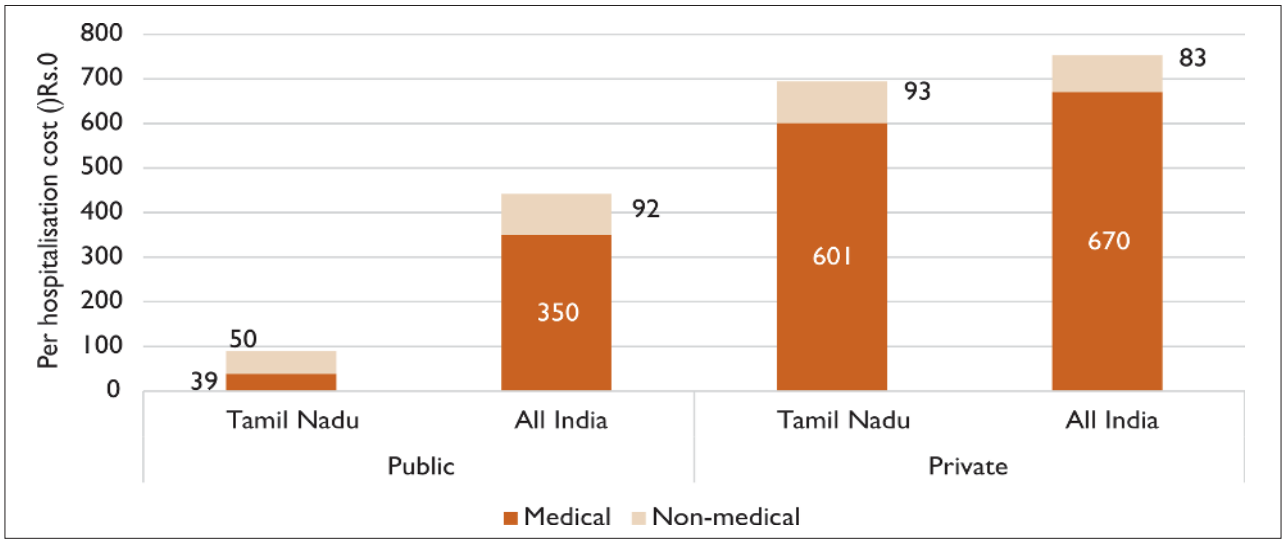
	Rural	Urban	Total
Public			
Medical	21	59	39
Non-medical	50	50	50
Total expenditure	**71**	**110**	**89**
Private			
Medical	539	640	601
Non-medical	100	89	93
Totalexpenditure	**639**	**729**	**694**
Public + Private			
Medical	321	472	406
Non-medical	79	78	78
Total expenditure	**400**	**550**	**484**[3]

Note: *1. Only first outpatient episode of each ailing individual has been considered.*

2. Excluding childbirth episodes. 3. Outpatient expenditures do not include pre and post- hospitalization related outpatient care.

The per episode expenditure on outpatient care in Tamil Nadu is Rs. 484, consisting of Rs. 406 as direct medical expenditure and Rs. 78 as other related expenditure (for example transport and food for the patient). Expenditure on outpatient care is significantly lower in the public sector facilities (Rs. 89) than in the private sector facilities (Rs. 694). Urban areas report higher expenditure per episode of treatment in both private and public sector. A comparison of the per episode medical and non-medical expenditures for outpatient care in Tamil Nadu and all India is presented in Figure 4.2. While Tamil Nadu has slightly lower outpatient medical expenditure in private facilities compared to the all India average, the difference between the expenditure for outpatient medical care in public facilities in Tamil Nadu and the rest of India is significant with the average expenditure for outpatient care at all India level (Rs. 350) being almost nine times than that of the corresponding Tamil Nadu average of Rs. 39.

Figure 4.2: Average medical and non-medical expenditure per episode of outpatient care in public and private facilities in Tamil Nadu and All India-2014



[3]*The average expenditure per episode by provider marginally differs from the average expenditure on outpatient mainly because in a public-private split, cases of self care gets dropped.*

The extent of expenditure borne for an episode also depends on the nature of the ailment. The disease group break-up of outpatient care episodes reflects that the episodes treated in the public sector report significantly lower expenditure than those treated in the private sector (Table 4.3).

Table 4.3: Average expenditure per episode of out-patient care in public and private facilities for different ailment conditions in Tamil Nadu-2014

Ailment	Public	Private	Public + Private
Fever	52	408	324
TB/Filaria/Tetanus	557	851	772
STD/HIV/AIDS	425	-----	425
Vector-borne	53	551	498
Cancers	130	245	193
Blood disease	-----	994	994
Diabetes	78	885	607
Other Metabolic	932	2893	2470
Mental/Neuro	134	497	313
Eye/Ear	71	870	792
Cardio-vascular	88	711	434
Respiratory	79	456	325
Gastrointestinal	178	1058	698
Skin	55	609	458
Musculo-skeletal	82	471	298
Genito-urinary	61	1856	1258
Obstetric	38	2118	1587
Injuries	161	1305	668
Others	42	913	708
Total	**89**	**694**	**484**

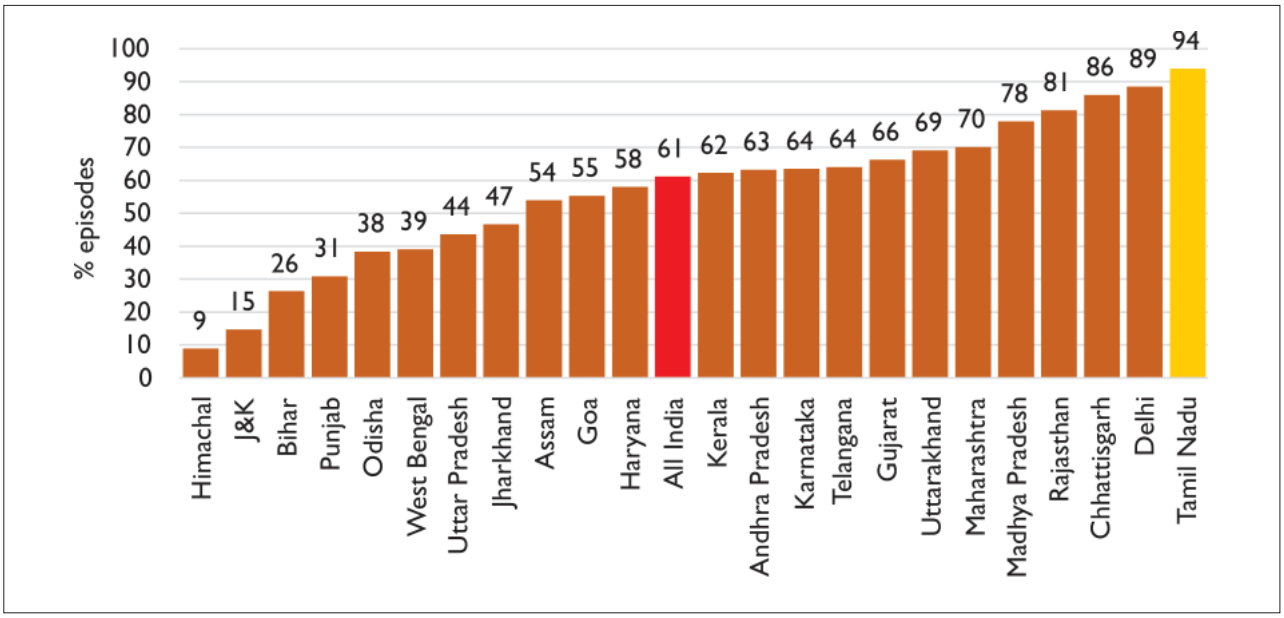
Note: *1. Only first outpatient episode of each ailing individual has been considered.*

2. Excluding childbirth episodes. 3. Outpatient expenditures do not include pre and post- hospitalization related outpatient care.

Overall, the average expenses incurred for outpatient treatment reflects that most ailments are treated in the public sector at negligible costs. It is further observed that for certain ailments, the expenditure incurred is 10 to 55 times more if treated in private sector than in public sector. The highest difference in the amount spent for treatment across public and private sectors is reported in cases of obstetric conditions, and the lowest in cases of TB/Filariasis/Tetanus etc.

Availability of free medicines in public facilities is one of the reasons for the very low expenditure on outpatient care in the public sector in the state. As seen from Figure 4.3, Tamil Nadu has the highest percentage of outpatient care episodes receiving free medicines and diagnostics (94%). Free diagnostics were received by approximately 23% of all outpatient episodes in the public sector.

Figure 4.3: Percentage of outpatient episodes receiving free medicines and diagnostic in public facilities across major states – 2014



Note: *Excluding hospitalization due to childbirth.*

4.2. Inpatient Care

Expenditure on inpatient care is usually much higher compared to outpatient care. The average per hospitalization expenditure on inpatient care for males and females, separated by medical and non-medical expenditure in rural and urban Tamil Nadu is presented in Table 4.4.

Table 4.4: Average medical and non-medical expenditure (Rs.) per hospitalization case across gender and sector in Tamil Nadu – 2014

	Rural	Urban	Rural + Urban
Male			
Medical	13920	29093	21944
Non-medical	2397	2714	2565
Total	**16317**	**31808**	**24509**
Female			
Medical	9839	18115	14025
Non-medical	1865	1935	1900
Total	**11704**	**20050**	**15925**
Person			
Non-medical	11842	23757	18006
Other	2126	2336	2234
Total	**13968**	**26092**	**20240**

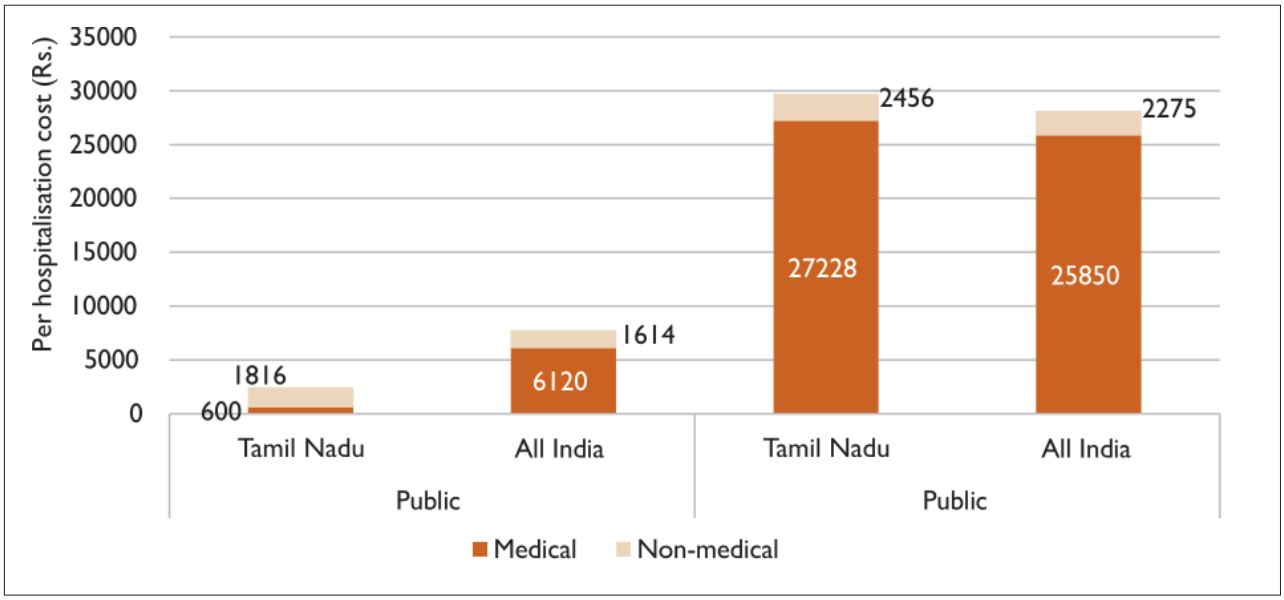
Note: *Excluding hospitalization due to childbirth.*

The average expenditure per hospitalization episode is Rs. 20,240 (Rs. 18,006 as direct medical and Rs. 2,234 as non-medical expenses). Average expenditure for the urban inpatient episodes (Rs. 26,092) was significantly higher than the rural episodes (Rs 13968). Males incurred approximately 50% higher expenditure (Rs. 24,509) per hospitalization episode than females (Rs. 15,925), and this difference was more marked in the urban areas (Rs. 31,808 for males and Rs. 20,050 for females).

Expenditure incurred on hospitalization episodes in Tamil Nadu are more or less similar to that of the all India average, but lower than in many states such as Punjab, Haryana, Maharashtra, Uttar Pradesh, and Andhra Pradesh (refer to Appendix Table A-IV.1). However, the average expenditure on inpatient episodes in Tamil Nadu is higher when compared to other southern states such as Kerala and Karnataka (see Appendix Table A-IV.1).

The average medical and non-medical expenditure (Rs.) per hospitalization episode for both public and private facilities in Tamil Nadu and all India is shown in Figure 4.4. In the public sector in Tamil Nadu, average medical expenses (Rs. 600) are significantly lower than average non-medical expenditures (Rs. 1,816),while the all India figures reflect the medical expenses (6,120) being approximately four times higher than the non-medical expenses (Rs. 1,614) in the public sector (Figure 4.4). In the private sector, both the average medical and non-medical expenditures per inpatient episode are higher in Tamil Nadu compared to those at the all India level (Figure 4.4).

Figure 4.4: Average medical and non-medical expenditure (Rs.) per hospitalization case for public and private facilities in Tamil Nadu and all India – 2014



Differences in expenditures per inpatient episode across public and private sector facilities in rural and urban areas of Tamil Nadu are presented in Table 4.5.

Table 4.5: Average medical and non-medical expenditure (Rs.) per hospitalization case in public and private facilities in rural and urban Tamil Nadu and All India – 2014

Level of care	Tamil Nadu			All India		
	Rural	Urban	Total	Rural	Urban	Total
Public						
Medical	459	780	600	5512	7592	6120
Non-medical	1986	1598	1816	1682	1451	1614
Total	**2445**	**2378**	**2416**	**7193**	**9043**	**7734**
Private						
Medical	19554	33261	27228	21726	32375	25850
Non-medical	2221	2641	2456	2266	2287	2275
Total	**21775**	**35902**	**29684**	**23992**	**34662**	**28124**
Public + Private						
Medical	11842	23757	18006	14935	24436	18268
Non-medical	2126	2336	2234	2021	2019	2021
Total	**13968**	**26092**	**20240**	**16956**	**26455**	**20288**

Note: *Excluding hospitalization due to childbirth.*

It is seen that on an average, in Tamil Nadu a much higher amount was spent for treatment per hospitalised case by people in the urban areas (Rs. 26,092) in comparison to those from rural areas (Rs. 13,968). It is further observed that, on an average, people have spent more than 12 times for treatment in the private sector (Rs. 29,684) than in the public sector (Rs. 2,416). The average non-medical expenditure for treatment in private facilities are also relatively higher than those in the public sector. Though, the average total expenditure incurred and amount spent in private sector per hospitalized case are almost similar to the all India average, the expenditure in public sector per hospitalised case in Tamil Nadu is almost a third of the amount spent in public sector hospitalization at the all India level.

The amount spent for treatment on major aliment groups also reflects significant differences across public and private facilities. The differences could be to the extent of 15-20 times higher in the private sector compared to that in the public sector facilities. Differences in hospitalization expenses incurred across public and private sector facilities for major ailment conditions in Tamil Nadu is presented in Table 4.6. The difference across public and private sectors is the highest for treatment of cancers, approximately Rs. 80000 per episode, followed by cardio-vascular (Rs. 50,584), genito-urinary (Rs. 43,047), injuries (Rs. 42,634), and conditions like mental-neuro and musculo-skeletal (in the range of Rs. 30,000 to 40,000). Even for the treatment of TB/filaria/tetanus and fever, the expenses incurred in the private sector are 12-15 times higher as compared to that in the public sector facilities.

Table 4.6: Average expenditure (Rs.) per hospitalization across public and private sector facilities for major ailment conditions in Tamil Nadu, 2014

Ailments	Public	Private	Public + Private
Fever	1150	12792	8010
TB/Filer/Tetanus	2144	31134	13769
STD/HIV/AIDS	5620		5620
Vector-borne	1917	11882	8484
Cancers	11406	90600	59768
Blood disease	1668	21091	15457
Diabetes	1674	17114	13188
Other Metabolic	4115	24394	20674
Mental/Neuro	2658	37745	20028
Eye/Ear	1233	11639	9856
Cardio-vascular	2052	52636	35176
Respiratory	1323	21205	14889
Gastrointestinal	2866	26202	18207
Skin	3892	13780	10880
Musculo-skeletal	2169	33202	27287
Genito-urinary	3152	46199	35651
Obstetric	1893	20317	10566
Injuries	3654	46288	28170
Others	2946	34345	20820
Total	**2416**	**29684**	**20240**

Note: *Excludes hospitalization due to childbirth.*

5. Out-of-pocket Burden, Financial Risk Protection and Households Financing Mechanisms

5.1. Out-of-Pocket burden

Out-of-pocket expenditure (OOPE) per capita (individuals/households) is defined as any direct payment made by individuals/households on account of utilizing healthcare[4]. This includes payments for facility-based healthcare services extended by different health care providers, purchase of drugs and any other physical consumables, and related non-medical expenses in order to access healthcare. The extent of burden of OOPE on households is greatly dependent on the availability of and access to different types of services and providers available to a population, including access to free or nominally-charged quality government provisioning through the health system.

The mean monthly OOPE per person on outpatient, inpatient and both outpatient and inpatient (total OOPE) services in urban and rural areas of Tamil Nadu is presented in Table 5.1. The mean monthly per person OOPE on outpatient care was Rs. 114 in the rural areas and Rs.190 in the urban areas. Rural inpatient OOPE at Rs. 63 was lower than urban OOPE of Rs. 128. In total, the average person in Tamil Nadu spent Rs. 247 per month consisting of Rs 152 for outpatient and Rs 95 for inpatient care services. This was higher in urban areas (Rs. 318) in comparison to rural areas (Rs. 177).

Table 5.1: Per person monthly out-of-pocket expenditure (Rs.) on outpatient, inpatient and total in Tamil Nadu – 2014

Sector	Outpatient	Inpatient	Total
Rural	114	63	177
Urban	190	128	318
Total	**152**	**95**	**247**

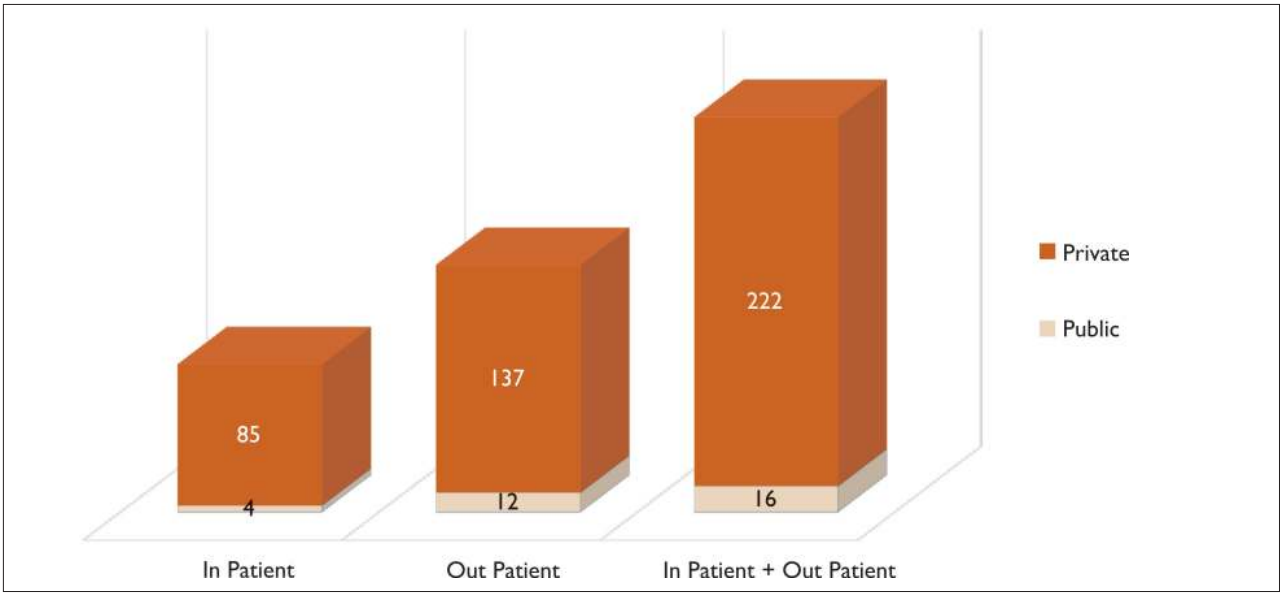
Note: *1. Excluding childbirth episodes.*

2. Out-of-pocket (OOPE) expenditure are estimated after deducting any cash insurance reimbursement. Any cashless reimbursement is not considered as part of the OOPE.

Since the amount spent for treatment in public sector is significantly lower compared to that in the private sector, monthly OOPE per person is obviously significantly lower when one accesses public sector facilities. Per person monthly OOPE in public sector comes to be Rs. 16 (Rs. 4 as inpatient and Rs. 12 as outpatient) as against Rs. 222 (Rs. 85 as inpatient and Rs. 137 as outpatient) in private sector (Figure 5.1)

[4]In the last chapter, we presented expenses incurred as inpatients and outpatients by those utilizing private and public institutions. In this chapter, we present per capita individual out of pocket monthly expenditure on healthcare based on aggregates of all such expenses incurred within households. We also analyze the household monthly out of pocket expenditure on health worked out above as a proportion of total monthly household consumption expenditure. It is important to understand this distinction, as otherwise one is likely to misread the figures and confuse it with average expenses incurred by ailing persons for IP and OP treatment in public or private facilities.

Figure 5.1: Per person monthly out-of-pocket expenditure as inpatient and outpatient in public and private sector in Tamil Nadu – 2014



Note: *Excluding expenditure on self-treatment and informal treatment and child birth cases*

The per person monthly OOPE disaggregated by different items of expenditure is presented in Table 5.2.

Table 5.2: Per person monthly Out-of-Pocket expenditure (Rs.) on outpatient and inpatient disaggregated by items of expenditure in rural and urban areas, Tamil Nadu – 2014

	Rural	Urban	Rural + Urban
Outpatient			
Consultancy	18	26	22
Medicine	55	116	85
Diagnostic	15	18	16
Other	2	4	3
Total medical expenditure	90	164	126
Transportation	15	16	15
Other non-medical expenses	9	11	10
Total outpatient	**114**	**190**	**152**
Insurance reimbursement	**0.00**	**0.05**	**0.03**
Inpatient			
Package charge	12	43	27
Consultancy	13	22	18
Medicine	13	21	17
Diagnostic	5	11	8
Bed charges	6	11	9
Other	4	9	6
Total medical expenditure	53	116	84
Transportation	3	3	3
Other non-medical expenses	6	9	8
Total inpatient	**63**	**128**	**95**
Insurance reimbursement	**1.81**	**10.38**	**6.05**

Note: *1. Excluding childbirth episodes.*

2. Total outpatient, inpatient and medical cost expenditure are estimated without deducting any cash insurance reimbursement. Any cashless reimbursement is not considered as part of the insurance reimbursement.

At approximately 56% of outpatient OOPE and 18% of inpatient OOPE, drugs constitute the largest single proportion of the total OOPE. The proportionate share of drugs is more than 67% of the total outpatient direct medical expenditure., with the proportion exceeding 70% in urban areas. There is hardly any insurance reimbursement after payment for outpatient care, while the per person monthly reimbursement for inpatient care is Rs 1.8 in the rural areas and Rs 10.38 in the urban areas. This does not include cashless treatments under various insurance schemes where no OOPE is incurred by the household. After accounting for reimbursement, the total OOPE in Tamil Nadu (Rs. 240 per person monthly) is significantly lower compared to that in Kerala (Rs. 444), Punjab (Rs. 304) and Andhra Pradesh (Rs. 255). However, the same is higher compared to the all India average (Rs. 183) and for other states (refer to Appendix Table A-V.1).

Poorer populations usually pay less than their richer counterparts on healthcare, signifying that OOPE is closely linked to the ability to pay for healthcare by households (WHO, 2010). Table 5.3 presents the magnitude of OOPE by consumption expenditure quintile groups of households. These OOPE are estimated after deducting any cash reimbursement from insurance schemes — government, private, or other schemes — that the household or individuals within the household received after making the OOPE.

Table 5.3: Per person monthly Out-of-Pocket expenditure on outpatient and inpatient by quintile groups in rural and urban areas, Tamil Nadu – 2014

	Rural	Urban	Rural + Urban
Outpatient			
Poorest	60	117	74
2nd poorest	85	109	93
Middle	165	135	149
2nd richest	151	192	179
Richest	414	316	332
Total	**114**	**190**	**152**
Inpatient			
Poorest	28	39	30
2nd poorest	33	57	42
Middle	68	85	77
2nd richest	136	118	124
Richest	258	216	223
Total	**61**	**117**	**89**

Note: *1. Excluding childbirth episodes.*

2. Out-of-pocket (OOPE) is estimated after deducting any cash insurance reimbursement. Any cashless reimbursement is not considered as part of the OOPE.

3. Quintile groups are based on monthly per person household consumption expenditure.

For both outpatient and inpatient services, the first three urban quintiles on an average, spend more than their rural counterparts. Outpatient OOPE among the richest quintile households is Rs. 332 as against Rs. 74 among the poorest. Similarly, households in the richest quintile spend Rs. 223 as inpatient OOPE as against the poorest who spend only Rs. 30.

Expenditure on health care constitutes a significant proportion of a households' resources. One way of understanding the extent of the burden of health expenditure in the total consumption basket of households is by way of estimating the share of OOPE on health (both inpatient and outpatient expenditure) in households' total consumption expenditure (Monthly Per Capita Expenditure, MPCE). The OOPE as share of households' total consumption expenditure in Tamil Nadu and for all India is presented in Table 5.4.

Table 5.4: Out-of-pocket expenditure as share (%) of total household consumption expenditure in Tamil Nadu and all India – 2014

	Tamil Nadu			All India		
	Rural	Urban	Total	Rural	Urban	Total
Outpatient						
Poorest	6.0	11.2	7.4	9.2	10.5	9.5
2nd poorest	5.8	7.6	6.4	9.1	6.9	8.6
Middle	9.1	7.2	8.1	7.5	6.9	7.3
2nd richest	6.3	7.5	7.2	7.7	8.0	7.8
Richest	10.3	7.0	7.5	7.4	6.2	6.5
Total	**7.1**	**7.4**	**7.3**	**8.2**	**7.0**	**7.6**
Inpatient						
Poorest	2.8	3.7	3.0	3.2	3.3	3.2
2nd poorest	2.3	4.0	2.9	3.2	3.6	3.3
Middle	3.8	4.5	4.1	3.0	3.2	3.1
2nd richest	5.7	4.7	5.0	3.5	3.8	3.6
Richest	6.4	4.8	5.0	6.1	3.7	4.3
Total	**3.8**	**4.6**	**4.3**	**3.7**	**3.6**	**3.6**
Outpatient + inpatient						
Poorest	8.8	14.9	10.4	12.4	13.8	12.7
2nd poorest	8.1	11.5	9.3	12.3	10.6	11.9
Middle	12.8	11.6	12.2	10.5	10.1	10.4
2nd richest	11.9	12.2	12.1	11.2	11.8	11.4
Richest	16.8	11.8	12.5	13.5	9.9	10.8
Total	**11.0**	**12.0**	**11.6**	**11.9**	**10.5**	**11.3**

Note: *Quintile groups are based on monthly per person Household Consumption Expenditure.*

Total OOPE (outpatient and inpatient taken together), constitutes up to 11-12% of the total monthly per person consumption expenditure, both in Tamil Nadu and at the all India level (with a variation of about 1% across rural and urban areas). Of this, outpatient OOPE accounts for about 7% and inpatient about 4% of the total monthly per person consumption expenditure. Across the consumption expenditure quintile groups, the poorest in rural Tamil Nadu spend a lower proportion of their monthly consumption expenditure as OOPE on healthcare compared to the richest quintile, but the position is reversed in urban areas, with the poorest quintile bearing a higher burden due to OOPE, both in comparison with the richer quintiles and with the respective all India figures ,

Comparative estimates from the Consumer Expenditure Survey

Estimation of OOPE as share of households' total consumption expenditure using data from health and morbidity round of the NSSO usually reflect a greater OOPE burden compared to the estimates arising from other NSSO surveys, such as quinquennial Consumer Expenditure Surveys (CES). This is because CESs, which collect comprehensively detailed data on households' consumption expenditure, provide larger estimates of households' total consumption expenditure compared to that estimated from Health and Morbidity surveys (Garg and Karan, 2009). In the past, researchers have estimated OOPE burden using the CES data (Garg and Karan, 2009; Berman et al, 2010). The share of OOPE on health in Tamil Nadu and at the all India level from the last available CES in 2011-12 is presented in Table 5.5.

Table 5.5: Household expenditure and out-of-pocket expenditure on outpatient and inpatient in rural and urban areas, Tamil Nadu and all India – 2011-12

	Tamil Nadu			All India		
	Rural	Urban	Rural + Urban	Rural	Urban	Rural + Urban
Per person monthly (Rs.)						
Household expenditure	1571	2534	2000	1287	2477	1627
Outpatient	87	106	95	65	99	74
Inpatient	39	54	46	31	52	37
Outpatient + Inpatient	126	160	141	95	151	111
Share (%) in household expenditure						
Outpatient	5.52	4.19	4.77	5.01	3.99	4.57
Inpatient	2.49	2.12	2.28	2.39	2.11	2.27
Outpatient + Inpatient	8.02	6.32	7.06	7.40	6.10	6.84

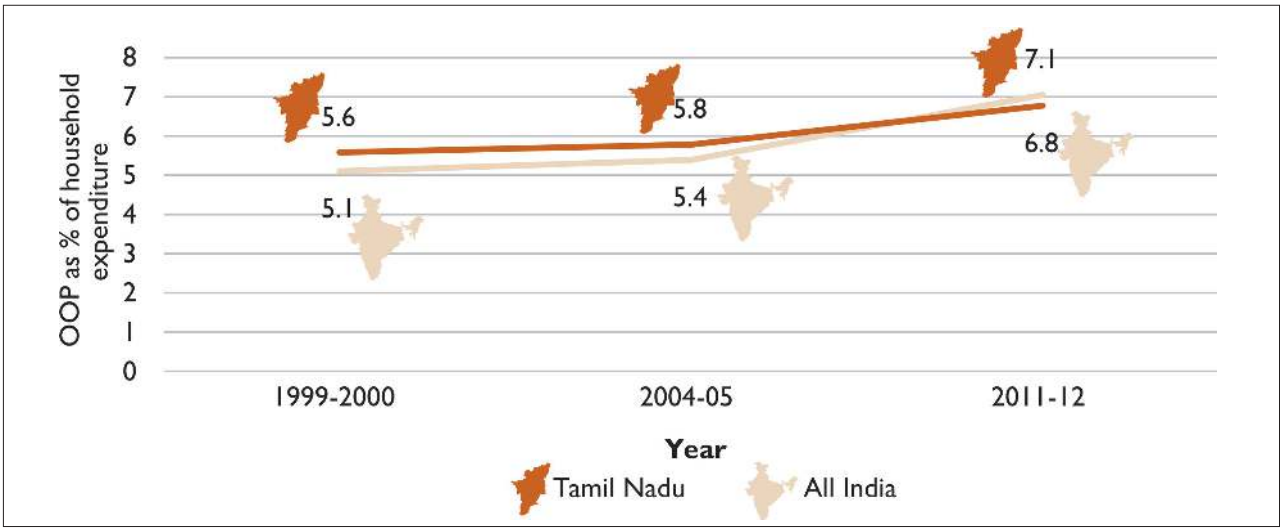
Source: *National Sample Survey Organisation Consumer Expenditure Survey, 2011-12*

Overall, the per person value of outpatient, inpatient and total OOPE estimated from CES in 2011-12 (refer to Table 5.5) is significantly lower to those estimated from the 71st round health and morbidity survey in 2014 (refer to Tables 5.1 – 5.3). However, the relative positions of estimates of OOPE indicators in Tamil Nadu and for the all India average is more or less same in the CES as in the 71st round Health and Morbidity survey.

The per person OOPE in Tamil Nadu from CES is Rs. 141 (outpatient Rs. 95 and inpatient Rs. 45) which is higher than the all India average of Rs. 111 (outpatient Rs. 74 and inpatient Rs. 37). Accordingly, the share (%) of OOPE in total household consumption expenditure is marginally higher in Tamil Nadu (7.1%) as against the all India average (6.8%). The outpatient share in household expenditure is 4.8% and inpatient share is 2.3% in Tamil Nadu, compared to the 4.6% outpatient share and 2.3% inpatient share for all India percentages. The difference between the shares in Tamil Nadu and the all India level is more prominent in the rural areas compared to those in the urban areas.

The change in share of OOPE on inpatient and outpatient services in the total household consumption expenditure in Tamil Nadu and All India, over a time period from 1999-00 to 2011-12 using the consumption expenditure surveys is presented in Figure 5.2. The share of total OOPE in households' consumption expenditure was lower in Tamil Nadu compared to the all India average in the years 1999-2000 and 2004-05, and overtook the all India average in the year 2011-12.

Figure 5.2: Trends in share (%) of OOPE in household consumption expenditure in Tamil Nadu and all India



Source: *NSSO Consumer Expenditure Surveys from the respective years*

5.2. Financial risk protection

Preventing high OOPE through different support mechanisms has been a constant endeavour of the state government, particularly in recent years. Different risk pooling mechanisms in the form of insurance and health schemes have been launched by the government. Both the state and central governments launched different schemes at different points of time in order to achieve the objective of reducing OOPE burden among the population. Table 5.6 presents the extent of coverage of health expenditure support, in the form of government-funded insurance schemes, employer-based insurance schemes, household arranged insurance, and other financial protection mechanisms for the present population in Tamil Nadu.

Table 5.6: Percentage population covered under different schemes for financial support to meet expenditure on treatment in Tamil Nadu – 2014

Sector	Types of scheme					
	Government funded insurance Scheme	Employer	Household arranged	Others	Not Covered	Total
Rural	18.4	0.4	0.5	0.01	80.7	100
Urban	17.1	3.5	3.6	0.3	75.6	100
Total	**17.8**	**1.9**	**2.0**	**0.1**	**78.2**	**100**

More than 78% of the population in the state reported that they are not covered under any of the financial support schemes. The extent of reported coverage of health expenditure support is marginally higher in urban in comparison to rural areas. Government-funded health insurance scheme coverage was reported by more than 18% of the population in the rural areas, as compared to 17% in the urban areas. The urban areas have a higher coverage of household-arranged health insurance in comparison to the rural areas.

Table 5.7 presents the quintile wise extent of population reporting coverage under various schemes for financial support to meet treatment expenditure.

Table 5.7: Percentage population covered under different schemes for financial support to meet expenditure on treatment by quintile groups in Tamil Nadu – 2014

Quintile groups	Types of scheme					
	Government funded insurance Scheme	Employer	Household arranged	Others	Not Covered	Total
Poorest	10.17	0.35	0.12	0.48	88.88	100
2nd poorest	20.14	0.48	0.03	0.03	79.32	100
Middle	21.51	1.66	0.21	0.01	76.6	100
2nd richest	20.75	2.87	0.41	0.01	75.97	100
Richest	17.61	5.77	12.54	0.09	64.0	100
Total	**17.76**	**1.93**	**2.02**	**0.14**	**78.15**	**100**

Note: *Quintile groups are based on monthly per person Household Consumption Expenditure.*

In spite of many government-funded health insurance schemes being targeted at the poorer sections of society, approximately 89% of the poorest 20% population has not reported being covered under any of the schemes. The highest reported coverage of government-funded insurance schemes is found in the middle quintile, at nearly 22%. The richest quintile has the highest reported coverage of employer (nearly 6%) and household arranged (nearly 13%) financial support schemes.

5.3. Households' financing mechanisms

Households use a range of coping mechanism to finance their health expenditure. These includes households' current income and past savings, borrowings, sale of physical assets, contributions from friends and relatives, and others. The contributions of different sources of financing, (irrespective of whether the population is covered by some financial support scheme), to meet the total expenditure on outpatient care and hospitalization in Tamil Nadu are presented in Table 5.8.

Table 5.8: Percentage share of different sources of health expenditure financing for outpatient and inpatient in Tamil Nadu – 2014

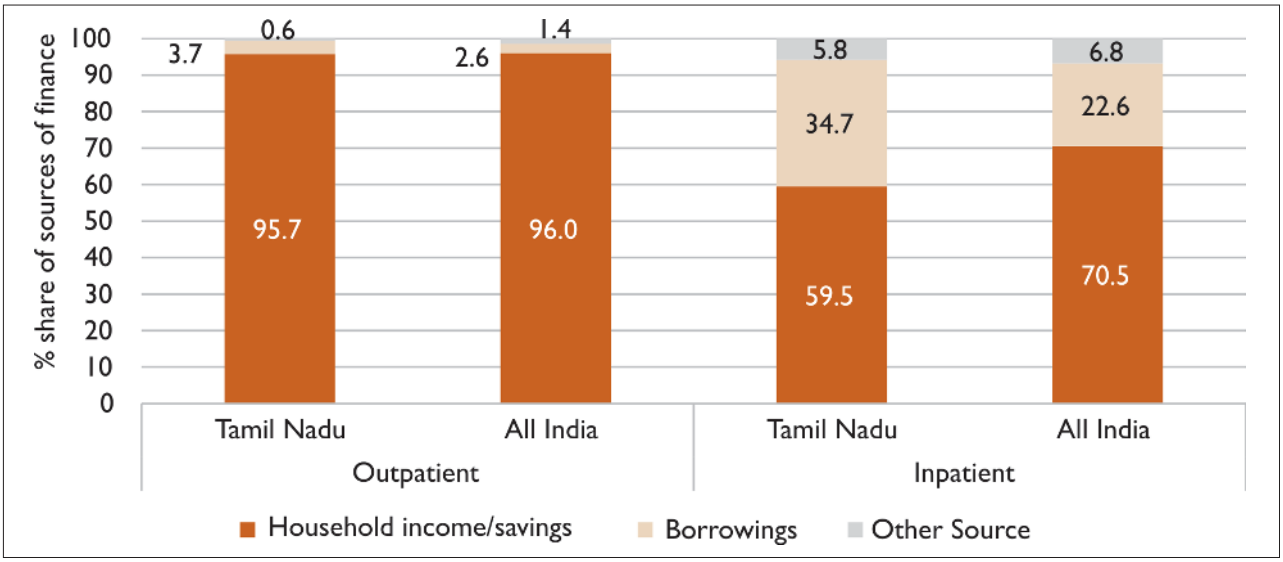
	Major source of finance*					
	Household income/ savings	Borrowing	Sale of physical assets	Contribution from friends and relatives	Other sources	Total
Outpatient						
Rural	94.0	5.5	0	0.4	0.1	100
Urban	97.0	2.3	0	0.7	0.01	100
Rural + Urban	**95.7**	**3.7**	**0**	**0.5**	**0.1**	**100**
Inpatient						
Rural	57.8	37.2	0.2	4.3	0.5	100
Urban	61.05	32.4	0.5	5.7	0.3	100
Rural + Urban	**59.5**	**34.7**	**0.3**	**5.0**	**0.4**	**100**

Note: *Only first source of finance has been considered.*

For outpatient treatment, 96% households financed the expenditure through their current income and savings, and only 4% resorted to borrowings and other means. For inpatient treatment, only 60% financed the expenditure from their current income and savings, and 35% resorted to borrowings. An additional 5% used contributions from friends and relatives to finance their hospitalization expenditure. The proportion of households borrowing for financing inpatient expenditure is more than 37% in the rural areas as against 32% in the urban areas.

For outpatient expenditure, the contribution of current income and savings for outpatient care in Tamil Nadu is more or less similar between Tamil Nadu and all India figures(approximately 96%, refer to Figure 5.3). The proportion of households using borrowings to finance inpatient expenditure is significantly higher in Tamil Nadu (35%) than the all India average (23%).

Figure 5.3: Percentage share of different sources of health expenditure financing for outpatient and inpatient in Tamil Nadu and all India – 2014



Note: *Only first source of finance has been considered*

The distribution of different coping mechanisms used to finance outpatient and inpatient care across economic quintiles of households is presented in Table 5.9. For outpatient care, all quintiles overwhelmingly relied on household income and/or savings to finance expenditure. An almost equal proportion of the households in the poorest quintile resorted to borrowing as compared to the richest quintile (37-38% each) to finance expenditure for inpatient care.

Table 5.9: Percentage share of different sources of health expenditure financing for outpatient and inpatient treatment in quintile groups, Tamil Nadu – 2014

Sources of finance*	Quintile group					
	Q1	Q2	Q3	Q4	Q5	Tamil Nadu
Outpatient						
Household income/savings	95.1	98.5	93.6	96.4	94.5	95.7
Borrowings	4.7	1.5	5.5	3.1	4.1	3.7
Sale of physical assets	0	0	0	0	0	0
Contribution from friends and relatives	0	0.01	0.7	0.5	1.4	0.5
Other sources	0.2	0.04	0.2	0	0	0.1
Total	**100**	**100**	**100**	**100**	**100**	**100**
Inpatient						
Household income/savings	57.8	67.1	58.9	60.4	54.0	59.5
Borrowings	37.4	30.5	36.5	31.7	37.9	34.7
Sale of physical assets	0.1	0.2	0.2	0.4	0.6	0.3
Contribution from friends and relatives	4.1	2.0	4.0	6.9	6.9	5.0
Other sources	0.6	0.2	0.3	0.5	0.5	0.4
Total	**100**	**100**	**100**	**100**	**100**	**100**

Note: ** Only first source of financing has been considered; quintile groups are based on monthly per person Household Consumption Expenditure.*

6. Maternity and Child Healthcare

From representative samples from all Indian states and union territories, the NSSO 71st Round survey also provides information on the utilization of prenatal, natal and postnatal services availed by women in the reproductive age group of 15-49 years. This section presents incidence of pregnancy, particulars of prenatal and postnatal care and incidence of childbirth, and expenditure incurred by households on availing these services from different health care providers. Information is drawn from the total sample of women in the reproductive age group of 15-49 years, with a recall period of the last 365 days prior to the date of the survey. Within the all India sample of 88,790 women between 15-49 years of age, the total sample in the state of Tamil Nadu is 4,491. The distribution of the total sample is more or less uniform across the four NSSO regions in the state of Tamil Nadu, with a slightly smaller sample in the urban areas of the Coastal region (Table 6.1).

Table 6.1: Distribution of sample across rural and urban areas of the four NSSO regions, Tamil Nadu – 2014

Region	Rural	Urban	Total
Coastal Northern	629	682	1,311
Coastal	572	330	902
Southern	548	612	1,160
Inland	539	579	1,118
Total	**2,288**	**2,203**	**4,491**

Note: *Coastal Northern Region includes districts of Thiruvallur, Kancheepuram, Vellore, Tiruvannamalai, Viluppuram, Cuddalore; Coastal Region includes districts of Karur, Tiruchirappalli, Perambalur, Ariyalur, Nagapattinam, Thiruvarur, Thanjavur, Pudukkottai; Southern Region includes districts of Sivaganga, Madurai, Theni, Virudhunagar, Ramanathapuram, Thoothukkudi, Tirunelveli, Kanniyakumari; Inland Region includes districts of Salem, Namakkal, Erode, The Nilgiris, Dharmapuri, Krishnagiri, Coimbatore, Tiruppur.*

6.1. Pregnancy, prenatal and postnatal care

The share of women (age 15-49 years) reporting pregnancy and receiving all prenatal and postnatal care during the last 365 days for Tamil Nadu, across rural and urban sectors is presented in Table 6.2. For the purpose of this analysis, receiving all prenatal care is defined as receiving tetanus toxoid vaccine during pregnancy, receiving iron folic acid supplements during pregnancy, and receiving any other prenatal care from different sources such as HSC/ANM/ASHA/AWW, PHC/dispensary/CHC/mobile medical unit, public hospital, private doctor/clinic, or private hospital. Postnatal care is defined as receiving any care after delivery from any of the same sources as in prenatal care.

Table 6.2: Incidence of pregnancy and percentage of pregnant women who received prenatal and postnatal care during last 365 days in rural and urban Tamil Nadu – 2014

Sector	% of pregnant women (15-49 years)	% of pregnant women received all prenatal care*	% of pregnant women received postnatal care
Rural	6.2	99.3	85.6
Urban	5.8	99.9	92.1
Rural + Urban	**6.0**	**99.6**	**88.6**

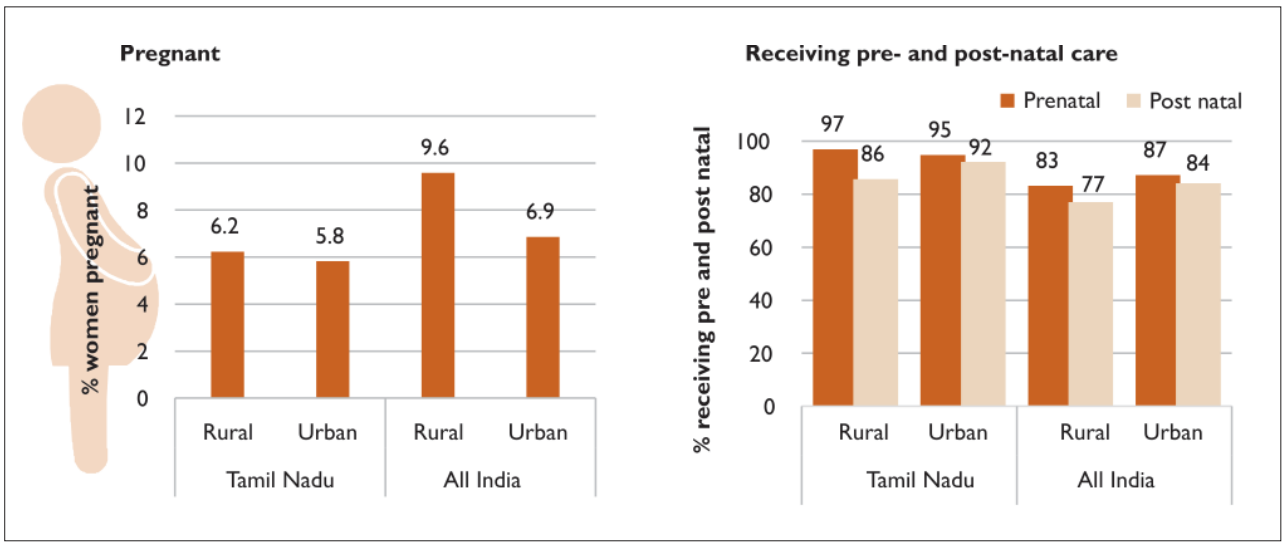
Note: **if tetanus, IFA and any other prenatal are all availed during the course of pregnancy.*

Overall, the incidence of pregnancy in Tamil Nadu is 6%, with a higher incidence in the rural areas (6.2%) as compared to the urban areas (5.8%). More than 99% of all pregnant women reported receiving all forms of prenatal care though this proportion drops to less than 89% for postnatal care.

Nationally, the incidence of pregnancy is 9.6% in the rural and 6.8% in the urban areas among women in the age group of 15-49 years. As seen earlier, the corresponding figures in Tamil Nadu at 6.2% and 5.8% respectively are substantially lower, and the urban rural differential is much less (Figure 6.1). Additionally, the proportion of women receiving any pre and postnatal care is considerably higher in both rural and urban areas in Tamil Nadu as compared to the all India average (Figure 6.1).

In comparison to other states, the incidence of pregnancy in Tamil Nadu is second only to Delhi (4.92%). Other states with such low rates of pregnancy incidence are Punjab (6.09%), Andhra Pradesh (6.42%), Telangana (6.45%) and Himachal Pradesh (6.61%). The state is among the top five major states when ranked by the proportion of pregnant women receiving prenatal care (refer to Appendix Table A-VI.1). Other states in the top five states for prenatal care include Goa (100%), Andhra Pradesh (96.8%), Gujarat (96.4%), and Jammu and Kashmir (95.9%). For postnatal care, Tamil Nadu ranks 7th in the country, after Jammu and Kashmir (89.7%) and just ahead of Odisha (87.3%) (refer to Appendix Table A-VI.1).

Figure 6.1: Incidence of pregnancy and percentage of pregnant women who received prenatal and postnatal care in rural and urban areas of Tamil Nadu and all India average – 2014



The share (%) of public and private sector in provision of pre and postnatal care in the rural and urban areas of the state is presented in Table 6.3. Compared to the share of public facilities in providing treatment for general ailment conditions, the share of public facilities in providing pre and postnatal care, which is part of maternal and child health care, is higher in the state. The share of public facilities in provision of total prenatal care in the state is 56%, with the proportion in the rural areas being higher at 66% as compared to 45% for the urban areas. The share of public facilities in provison of total postnatal care in the state is 56% which shows a similar pattern of higher public share in rural areas (64%) as compared to urban (46%) areas.

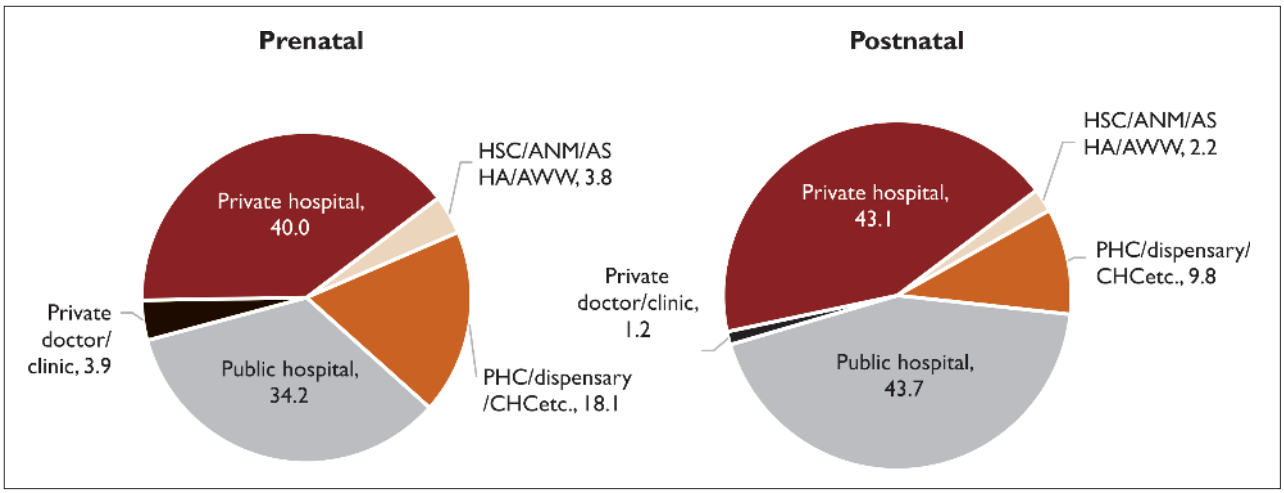
Table 6.3: Percentage share of public and private sector in total pre and postnatal care in Tamil Nadu – 2014

Sector	Prenatal*			Postnatal		
	Public	Private	All	Public	Private	All
Rural	66.2	33.8	100	64.6	35.4	100
Urban	45.1	54.9	100	46.1	53.9	100
Rural + Urban	**56.1**	**43.9**	**100**	**55.7**	**44.3**	**100**

***Note**: *if tetanus, IFA and any other prenatal all are availed during the course of pregnancy.*

The distribution of different levels of health providers in pre and postnatal care is presented in Figure 6.2. Within the public sector, while public hospitals have the largest share of provision of pre and post natal care in the state at 34.2% and 43.7% respectively, PHC/CHC/public dispensaries etc also contribute to a significant proportion (Figure 6.2) accounting for 18.1% of prenatal care and 9.8% of all postnatal care. Though much lower, HSC and other field functionaries contribute to 3.8% and 2.2% of prenatal and postnatal care respectively.

Figure 6.2: Percentage share of different health providers in all pre and postnatal care in Tamil Nadu – 2014



6.2. Childbirth

The incidence of childbirth, i.e live birth, still birth, abortion of pregnancy or continuation of pregnancy of all women of age 15-49 years in Tamil Nadu during the reference period of the last one year is presented in Table 6.4.

Table 6.4: Percentage distribution of all women (age 15-49 years) who reported pregnancy during last one year by outcome of pregnancy in Tamil Nadu – 2014

Sector	Live birth	Still birth	Abortion	Pregnancy continuing	Others	Total
Rural	73.5	0.5	10	15.9	0.00	100
Urban	72.1	1.5	4	21.8	0.3	100
Rural + Urban	**72.8**	**0.9**	**7.3**	**18.8**	**0.2**	**100**

Of all women in the reproductive age group who reported any pregnancy during the last 365 days, 73% reported live birth as the outcome of pregnancy, and this was similar in both urban and rural areas. Approximately 19% women (22% in rural areas) reported continuing pregnancy during the reference year. While, women in the urban areas reported 1.5% still birth, yet the incidence of abortion is higher in the rural areas (10%) as compared to the urban areas (4%).

When compared with the national averages, the incidence of abortion is the highest in Tamil Nadu (7.4%; refer to Table 6.4) as compared to the all India average of 2.1% of all pregnancy outcomes (refer to Appendix Table A-VI.2). The proportion of live birth as a pregnancy outcome is slightly lower in Tamil Nadu when compared to the all India number.

Institutional delivery

The proportion of all child births by place of delivery in the state is presented in Table 6.5.

Table 6.5: Percentage distribution of women aged 15-49 by place of childbirth during the last 365 days in Tamil Nadu and for all India – 2014

	Tamil Nadu			All India		
Place of delivery	Rural	Urban	Rural + Urban	Rural	Urban	Rural + Urban
HSC/PHCetc.	9.55	3.60	6.82	14.21	3.29	11.59
Public Hospital	54.03	44.28	49.55	41.60	38.44	40.84
Private Hospital or Clinic	30.69	49.02	39.11	24.19	47.61	29.82
Home	5.74	3.10	4.53	20.00	10.66	17.75
Total	**100**	**100**	**100**	**100**	**100**	**100**

The proportion of institutional deliveries is very high, being 95.4% in the entire state, with nearly 97%in the urban areas and 94% in the rural areas delivering in institutions.The proportion of public sector in institutional deliveries is 56.3%, with the share being higher (63.5%) in rural areas when compared to urban (47.8%).Within the public sector, public hospitals dominate in the provision of childbirth services constituting nearly 50% while the share of HSC/PHC etc. in all deliveries is much lower at around 7%.

The proportion of institutional delivery is higher in Tamil Nadu than the all India average of 82% .The state falls in the list of top five states in this regard along with Kerala, Karnataka, Maharashtra and, Telengana who all have proportions higher than 95%,(refer to Appendix Table A-VI.3). Tamil Nadu is unique in its higher share of public deliveries since most of the other states (Assam, Madhya Pradesh, Odisha, and Rajasthan) with corresponding high public share in institutional delivery are comparatively poorer and lower socio-economic status states.

6.3. Expenditure on institutional care and childbirth

Depending on the types of facilities accessed, the expenditure incurred by pregnant women on pre and post natal care, institutional care for childbirth varied over a wide range. The break-up of expenditure on pre and postnatal care, and childbirth received from different types of facilities in urban and rural areas in Tamil Nadu is presented in Table 6.6.

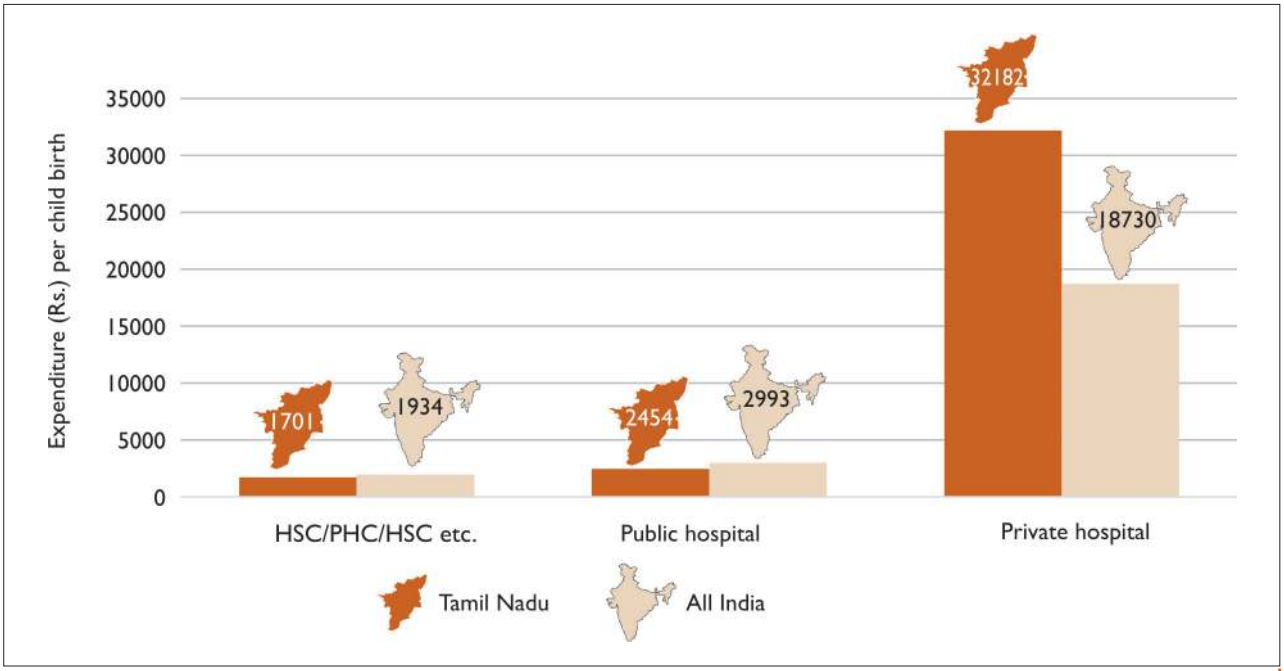
Table 6.6: Average total expenditure on pre and postnatal care received from and childbirth at different types of facilities in rural and urban Tamil Nadu – 2014

Sector	HSC/PHC/HSC etc.	Public hospital	Private hospital	All
Prenatal (per utilizing women)				
Rural	577	1,053	10,460	4,405
Urban	2,463	2,641	6,664	4,694
Rural + Urban	**1,030**	**1,710**	**8,275**	**4,536**
Postnatal (per utilizing women)				
Rural	376	395	1,762	862
Urban	398	455	1,666	1,115
Rural + Urban	**382**	**419**	**1,705**	**982**
Childbirth (per childbirth case)				
Rural	1,699	2,214	31,811	12,032
Urban	1,708	2,776	32,448	17,735
Rural + Urban	**1,701**	**2,454**	**32,182**	**14,758**

The average expenditure on pre and post natal care per utilizing woman is Rs. 4,536 and Rs. 982 respectively. Both these expenditures are more than 4 times higher in private facilities as compared to public ones. Expenditure due to prenatal care in private hospitals is as high as Rs. 8,275 as against Rs. 1,710 in public hospitals and approximately Rs. 1,030 in Health Centres/Sub-centres. The corresponding figures for post natal care are Rs 1705 in private hospitals as against Rs 419 in public hospitals and Rs 382 in Health centres/Sub centres respectively. The average expenditure per case of childbirth is Rs. 14,758 with the average expenditure in the urban areas (Rs. 17,735) being higher than in the rural areas (Rs. 12,032). The expenditure differential between the public and private providers is even more pronounced for childbirth than for pre and postnatal care, with the average private expenditure being more than 18 times than that in HSC/PHC/CHCs or other public facilities. The mean expenditure on childbirth is as high as Rs. 31,811 in the private facilities in the rural areas and Rs. 32,448 in urban areas as against Rs 2214 in rural and Rs 2776 in urban public hospitals.

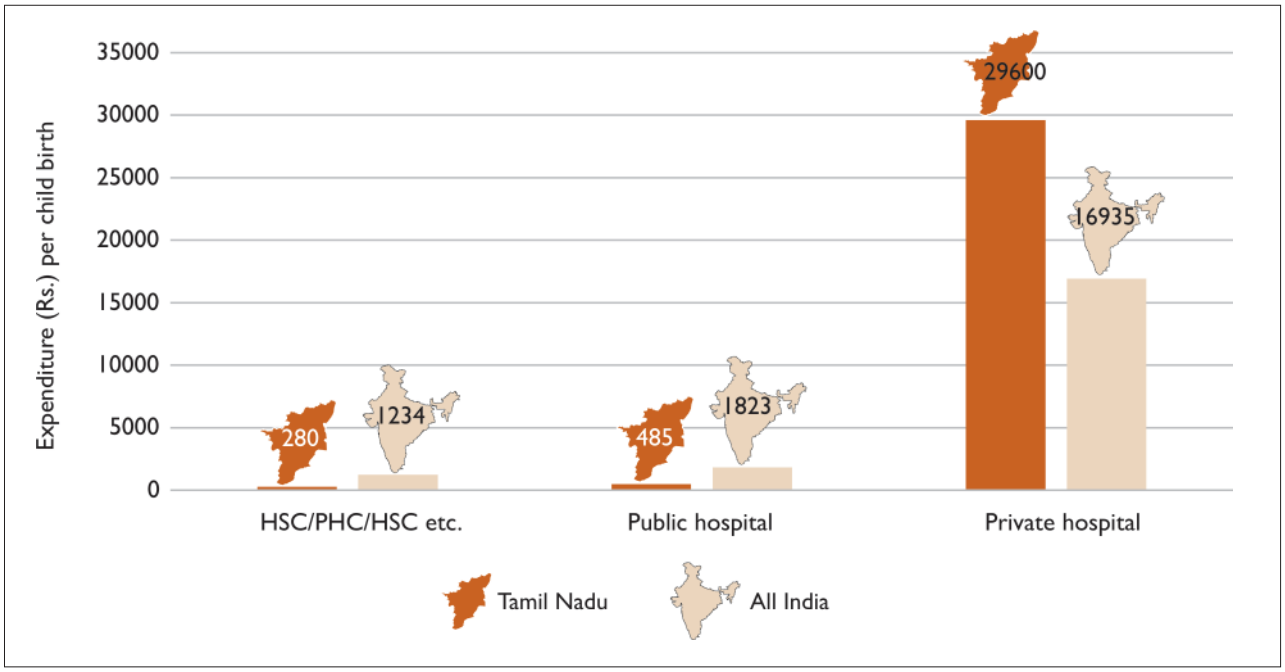
When compared to the all India averages, expenditure on childbirth is lower in Tamil Nadu in public facilities but higher in private facilities (Figure 6.3).

Figure 6.3: Average per childbirth total expenditure (Rs.) in health centres, public hospital and private hospital in Tamil Nadu and All India, 2014



Expenditure on childbirth includes expenses incurred on transportation of the mother and child, and other expenses, which constitute a significant proportion of the total expenditure. Only medical/surgical expenditure in Tamil Nadu and corresponding all India figures are presented in Figure 6.4. Expenditure in both types of public facilities in Tamil Nadu are lower than the all India average, where, the medical expenditure on childbirth in HSC/CHC and public hospitals in Tamil Nadu is less than Rs. 500 as against Rs. 1,234 and Rs. 1,823 respectively at the all India level. Conversely, private facilities in Tamil Nadu charge an average of Rs 29600 which is Rs 12,000 higher than the all India average of Rs 16935 per delivery episode.

Figure 6.4: Average per childbirth medical expenditure (Rs.) in health centres, public hospital and private hospital in Tamil Nadu and all India – 2014



7. Policy implications

From the foregoing analysis, a few but definitive policy suggestions emerge:

1. Tamil Nadu, over the past decade, has witnessed a significant increase in the proportion of ailing persons. While we must keep in mind that self-reported morbidity may not truly reflect the actual changes in morbidity, such a trend reflects certain underlying factors, such as increasing health awareness, access to better health and screening services and changing social and cultural contexts. However, taken in context of increasing proportion of elderly population as well as the high proportion of chronic ailments, it is clear that the state has to strengthen the health system to meet the increasing demand for health care services.
2. Tamil Nadu has nearly double the reporting of chronic ailment conditions as compared to the all India figures, both in rural and urban areas. Diabetes and cardiovascular disease (hypertension) account for more than 40% of the total morbidity burden of the state. The state primary healthcare system, which has so far been focused towards maternal and child care, has to reorient its priorities to face these new challenges. Preventive and promotive care should receive greater attention and a larger share of the resources should be channeled to tackle these emerging challenges more effectively in the future. The state has taken some positive steps in this direction under the Non Communicable Disease control programme, which should be strengthened and made universal.
3. It is important to note that formally trained providers (including those practicing AYUSH) account for more than 90% of all care provided in the state. Yet, the less advantaged sections such as the Scheduled Caste/ Scheduled Tribe populations show a higher dependence on informal care providers than their counterparts, particularly in rural areas of the state. The public healthcare system must pay special attention to such disadvantaged and under-served population and regions in the state.
4. The public health system has played an important role in the provision of outpatient and inpatient care over the past one-decade, particularly in the rural areas. Its share in the provision of maternal and child health services is even higher. While the average expenditure incurred on outpatient and inpatient episodes in the private sector in the state is comparable to the all India average, the average expenditure on outpatient and inpatient episodes in public sector is significantly less. This is largely due to fact that a large proportion of episodes treated in the public sector get medicines and diagnostic services free or partly free. In view of the lower financial burden on those seeking care from public facilities, there is a clear case for the state to ramp up public spending to ensure that the public system in strengthened. Attention must be paid to ensure that the public health insurance scheme supplements (but does not substitute) the inpatient services already provided by the public facilities.
5. Though the state implements a comprehensive insurance scheme for life saving ailments, a very small proportion (of those surveyed) have reported that they are covered. This percentage is even lower among the poorest quintile who are the targeted beneficiaries under the scheme. Clearly, there is a need to intensify a campaign to increase awareness regarding the insurance scheme among those covered so that the benefits of the scheme could fully reach those for whom it is intended.

6. Finally, while we have already pointed out the increasing financial burden on those seeking care from private sector, it is important to explore ways to contain the burden from drugs, which form the largest single item of expenditure for both outpatient and inpatient care. Considering the fact that diabetes and cardio-vascular diseases are on the rise, patients are likely to spend a substantial amount of money out of pocket for these drugs. The government must come up with a strategy to increase procurement of such drugs as well as make the distribution mechanisms more robust through the public system so that household expenditure on drugs can be reduced substantially.

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Appendix

Appendix Table A-II 1: Proportion of ailing persons (PAP) reporting chronic, other ailments of short duration, and all ailments (last 15 days), states and all India – 2014

Major state	Rural			Urban			Rural + Urban		
	Chronic	Other ailment	All ailing	Chronic	Other ailment	All ailing	Chronic	Other ailment	All ailing
Andhra Pradesh	108	50	155	159	51	204	123	51	170
Assam	6	25	32	22	25	47	8	25	33
Bihar	18	40	58	20	42	62	18	41	58
Chhattisgarh	8	33	40	22	22	44	10	31	41
Delhi	5	10	15	7	34	41	7	33	40
Goa	79	81	160	114	80	194	100	80	181
Gujarat	44	52	92	59	45	103	50	49	96
Haryana	22	34	56	28	48	75	24	39	63
Himachal Pradesh	44	39	82	39	13	51	44	36	79
Jammu and Kashmir	32	32	64	22	19	41	30	30	59
Jharkhand	16	36	52	50	47	96	24	39	62
Karnataka	46	49	94	58	48	104	51	49	98
Kerala	200	127	310	218	106	306	208	118	308
Madhya Pradesh	17	37	53	30	42	71	20	38	58
Maharashtra	33	48	81	29	42	70	31	45	76
Odisha	29	76	104	35	62	97	30	74	102
Punjab	83	85	163	72	100	171	79	90	166
Rajasthan	22	33	54	48	36	83	29	34	62
Tamil Nadu	86	63	146	120	71	184	103	67	165
Telangana	52	46	98	58	40	95	55	44	97
Uttar Pradesh	22	46	68	34	57	91	25	48	73
Uttarakhand	6	71	77	32	87	111	12	74	84
West Bengal	81	85	161	122	64	180	94	78	167
Other North East states	4	34	38	3	25	29	4	32	36
Union Territories	63	93	153	111	78	178	95	83	170
India	**40**	**51**	**89**	**67**	**54**	**118**	**48**	**52**	**98**

Appendix Table A-II 2: Percentage distribution of reported ailment among all ailing males, females and persons (15 days recall) for Rural, Urban and Rural + Urban for all India–2014

Nature of Ailment	Rural	Urban	Rural+Urban
Fever	25.38	18.3	22.74
TB/Filer/Tetanus	1.24	0.41	0.93
STD/HIV/AIDS	0.13	0.06	0.1
Vector-borne	3.58	1.46	2.79
Cancers	0.34	0.44	0.38
Blood disease	0.86	0.85	0.86
Diabetes	6.57	15.38	9.85
Other Metabolic	1.29	2.44	1.72
Mental/Neuro	5.32	4.89	5.16
Eye/Ear	2.17	1.89	2.07
Cardio-vascular	10.41	17.47	13.04
Respiratory	14.67	13.44	14.21
Gastrointestinal	7.21	5.21	6.46
Skin	2.56	2.06	2.38
Musculo-skeletal	12.3	9.03	11.08
Genito-urinary	1.89	1.74	1.84
Obstetric	0.35	0.22	0.31
Injuries	1.72	1.59	1.67
Others	2.01	3.12	2.42
Total	**100**	**100**	**100**

Appendix Table A-III 1: Percentage of population utilizing healthcare as outpatient and inpatient in rural and urban areas – states and all India – 2014

Major state	Rural			Urban			Rural + Urban		
	Outpatient (15 days recall)	Hospitalization (15 days recall)	Hospitalization (365 days recall)	Outpatient (15 days recall)	Hospitalization (15 days recall)	Hospitalization (365 days recall)	Outpatient (15 days recall)	Hospitalization (15 days recall)	Hospitalization (365 days recall)
Andhra Pradesh	13.21	2.32	5.75	18.57	1.82	5.18	14.84	2.17	5.58
Assam	2.33	0.79	2.67	3.10	1.64	3.50	2.42	0.89	2.77
Bihar	3.59	2.05	3.23	3.63	2.53	3.20	3.60	2.10	3.23
Chhattisgarh	2.80	1.15	2.81	3.68	0.73	4.10	2.96	1.07	3.05
Delhi	1.51	0.00	1.53	3.66	0.48	3.52	3.55	0.46	3.42
Goa	15.73	0.14	4.34	18.52	0.27	3.92	17.41	0.22	4.08
Gujarat	6.64	0.81	4.65	8.67	0.42	4.69	7.49	0.65	4.67
Haryana	5.14	0.38	4.17	7.20	0.15	4.94	5.86	0.30	4.44
Himachal Pradesh	7.46	0.48	5.49	5.02	0.05	3.09	7.22	0.44	5.26
Jammu and Kashmir	5.94	0.42	3.88	3.45	0.61	3.58	5.43	0.46	3.82
Jharkhand	2.71	1.90	3.03	7.92	1.37	3.44	3.91	1.78	3.13
Karnataka	8.85	0.50	5.03	9.36	0.70	4.76	9.04	0.58	4.93
Kerala	28.91	1.53	11.39	27.21	2.31	9.65	28.14	1.88	10.61
Madhya Pradesh	4.57	0.50	3.97	6.58	0.51	4.27	5.11	0.50	4.05
Maharashtra	7.11	0.52	5.14	6.54	0.37	4.64	6.87	0.46	4.92
Odisha	8.55	1.62	4.33	7.88	1.68	4.96	8.44	1.63	4.43
Punjab	15.36	0.80	4.03	14.68	2.37	3.88	15.10	1.39	3.97
Rajasthan	4.65	0.70	4.54	7.64	0.37	4.07	5.47	0.61	4.41
Tamil Nadu	13.09	1.05	5.59	16.82	1.32	5.77	14.93	1.18	5.68
Telangana	9.15	0.62	4.73	8.88	0.65	4.74	9.05	0.63	4.73
Uttar Pradesh	5.48	1.08	3.25	7.98	1.00	3.88	6.04	1.06	3.39
Uttarakhand	6.51	1.01	2.98	9.55	1.55	3.66	7.18	1.13	3.13
West Bengal	12.20	3.18	4.77	15.92	1.72	4.77	13.33	2.73	4.77
North East states	2.35	1.35	3.68	2.38	0.45	3.76	2.36	1.14	3.70
Total	**7.38**	**1.27**	**4.27**	**10.50**	**1.04**	**4.73**	**8.31**	**1.20**	**4.40**

Appendix Table A-III 2 a: Percentage of all ailing episodes (15days recall) by treatment sought across quintile, caste, education and employment groups in Tamil Nadu – 2014

	Formal care*	Informal care	No care	All no-formal care	All ailing episodes
Quintile groups					
Poorest	90.66	7.96	1.38	9.34	100
2nd poorest	88.48	8.14	3.38	11.52	100
Middle	88.28	7.42	4.3	11.72	100
2ndrichest	92.27	6.42	1.31	7.73	100
Richest	92.75	4.07	3.18	7.25	100
Social group					
Scheduled Tribe	93.32	0	6.68	6.68	100
Scheduled Caste	89.53	7.42	3.05	10.47	100
Other Backward Caste	90.56	6.82	2.62	9.44	100
Others	97.86	2.14	0	2.14	100
Education groups					
Illiterate	93.26	4.31	2.43	6.74	100
Literate but less than primary	89.86	7.35	2.78	10.13	100
Primary and above	87.65	9.22	3.13	12.35	100
Secondary and higher secondary	90.5	7.96	1.54	9.5	100
Graduate and above	92.41	3.59	4.0	7.59	100
Employment groups					
Self-employed in agriculture	92.97	6.4	0.63	7.03	100
Self-employed in non-agriculture	88.73	7.37	3.9	11.27	100
Regular/salaried employed	91.66	5.94	2.4	8.34	100
Casual labour	88.22	9.38	2.41	11.79	100
Others	95.27	2.41	2.32	4.73	100
Total	**90.69**	**6.66**	**2.66**	**9.32**	**100**

Note: **Formal care includes Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy (AYUSH); Quintile groups are based on monthly per person Household Consumption Expenditure.*

Appendix Table A-III 2b: Percentage of all ailing episodes (15days recall) by treatment sought in rural, urban and rural+ urban – in major states and all India –2014

Major state	Rural			Urban			Rural + Urban		
	Formal care*	Informal care	No care	Formal care*	Informal care	No care	Formal care*	Informal care	No care
Andhra Pradesh	81.84	14.81	3.35	91.19	8.03	0.77	85.38	12.25	2.37
Assam	73.68	25.05	1.26	65.2	34.8	0	72.28	26.67	1.05
Bihar	61.89	35.21	2.91	59.33	40.25	0.43	61.61	35.76	2.64
Chhattisgarh	69.5	27.76	2.74	83.72	16.19	0.09	72.23	25.54	2.23
Delhi	100	0	0	88.28	11.61	0.11	88.58	11.32	0.1
Goa	98.31	0.86	0.83	95.39	1.41	3.2	96.42	1.21	2.37
Gujarat	71.24	8.14	20.62	84.93	3.84	11.23	77.26	6.25	16.49
Haryana	92.02	6.54	1.44	96.01	1.93	2.06	93.75	4.54	1.71
Himachal Pradesh	91.35	5.6	3.04	98.39	0.88	0.74	91.83	5.28	2.89
Jammu and Kashmir	93.32	6.68	0	84.94	15.06	0	92.13	7.87	0
Jharkhand	51.54	37.85	10.61	81.91	15.04	3.05	62.3	29.77	7.93
Karnataka	93.67	5.27	1.07	90.33	6.77	2.9	92.31	5.88	1.81
Kerala	92.89	4.08	3.02	89.34	5.96	4.7	91.26	4.94	3.79
Madhya Pradesh	85.98	9.2	4.82	92.06	6.86	1.07	88	8.42	3.58
Maharashtra	88.43	6.37	5.2	93.95	5.12	0.93	90.65	5.86	3.48
Odisha	81.74	16.22	2.04	81.72	17.04	1.24	81.73	16.34	1.92
Punjab	95.05	4.83	0.12	83.92	13.73	2.36	90.77	8.25	0.98
Rajasthan	85.58	12.72	1.71	91.6	4.28	4.12	87.82	9.57	2.61
Tamil Nadu	89.78	6.71	3.51	91.39	6.61	2	90.69	6.66	2.66
Telangana	93.43	6.29	0.29	93.45	6.53	0.02	93.43	6.38	0.19
Uttar Pradesh	80.83	15.77	3.41	87.82	10.82	1.36	82.82	14.36	2.82
Uttarakhand	85.01	13.19	1.8	87	13	0	85.62	13.13	1.25
West Bengal	74.81	19.3	5.88	88.34	8.45	3.21	79.38	15.64	4.99
Other NE states& UTs	61.67	35.6	2.72	83.33	15.27	1.4	65.87	31.67	2.47
Total	**82.14**	**13.73**	**4.13**	**89.12**	**8.12**	**2.75**	**84.74**	**11.64**	**3.62**

Note: **Formal care includes Ayurveda,Yoga and Naturopathy, Unani, Siddha and Homeopathy (AYUSH); NE: North East; UTs: Union Territories.*

Appendix Table A-III 3: Percentage share of total outpatient episodes treated at different level of facilities

State	HSC/PHC etc.	Public hospital	Private doctor/clinic	Private hospital	Total
Delhi	9.23	8.88	76.68	5.2	100
Haryana	3.03	5.51	68.15	23.32	100
Himachal Pradesh	5.32	39.42	40.24	15.02	100
Jammu and Kashmir	4.96	39.37	54.8	0.88	100
Punjab	4.89	13.6	58.06	23.44	100
Rajasthan	13.86	23.42	49.33	13.39	100
Uttarakhand	9.16	39.05	35.71	16.09	100
Assam	49.92	28.92	19.69	1.47	100
North East states	42.85	26.8	26.06	4.3	100
Chhattisgarh	19.87	7.9	63.71	8.53	100
Madhya Pradesh	6.66	20.06	62.58	10.7	100
Uttar Pradesh	4.76	9.47	77.06	8.7	100
Bihar	5.76	7.58	78.31	8.35	100
Jharkhand	5.74	18.38	63.72	12.16	100
West Bengal	5.55	12.96	79.29	2.2	100
Odisha	46.71	25.84	26.32	1.13	100
Maharashtra	7.76	9.94	65.79	16.51	100
Goa	2.66	23.42	58.68	15.24	100
Gujarat	9.31	9.52	56.42	24.76	100
Andhra Pradesh	4.24	9.33	29.43	57	100
Karnataka	5.13	16.42	48.25	30.2	100
Kerala	11.1	22.73	37.31	28.84	100
Tamil Nadu	7.19	27.38	24.41	41.02	100
Telangana	5.53	9.28	38.79	46.4	100
All India	**8.77**	**16.31**	**52.61**	**22.31**	**100**

Appendix Table A-III 4: Percentage share of major ailment categories treated in public and private sectors as outpatient and share of public sector in each major ailment category

Ailment	Rural				Urban			
	% share of disease categories			% share of Public sector	% share of disease categories			% share of Public sector
	Public	Private	All		Public	Private	All	
Fever	10.1	32.64	23.09	18.51	15.63	16.27	16.09	27.91
TB/Filer/Tetanus	0.09	0.15	0.13	30.5	0	0.02	0.01	0
STD/HIV/AIDS	0.05	0	0.02	100	0.09	0	0.03	100
Vector-borne	0.36	1.47	1	15.27	0.07	0.61	0.46	4.58
Cancers	1.45	1.31	1.37	44.92	0	0.01	0.01	0
Blood disease	0	0.3	0.17	0	0.06	0.3	0.23	8.12
Diabetes	31.41	21.84	25.9	51.36	22.31	32.41	29.51	21.71
Other Metabolic	0.03	1.7	0.99	1.13	0.93	0.46	0.6	45.05
Mental/Neuro	3.31	1.39	2.2	63.61	5.81	3.98	4.5	37.04
Eye/Ear	0.22	2.19	1.35	6.78	1.96	1.25	1.46	38.66
Cardiovascular	24.47	9.77	15.99	64.78	19.2	18.89	18.98	29.05
Respiratory	9.48	7.25	8.19	48.97	7.28	8.55	8.18	25.57
Gastrointestinal	1.18	2.96	2.21	22.61	9.03	4.03	5.47	47.44
Skin	2.35	2.7	2.55	39.04	0.7	1.99	1.62	12.39
Musculoskeletal	13.02	11.75	12.29	44.85	12.58	7.38	8.87	40.71
Genito-urinary	1.05	1.41	1.26	35.46	1.54	1.38	1.43	30.98
Obstetric	0.03	0	0.01	100	0.13	0.2	0.18	21.05
Injuries	1.19	0.27	0.66	76.57	1.34	0.8	0.96	40.14
Others	0.21	0.91	0.61	14.43	1.33	1.47	1.43	26.68
Total	**100**	**100**	**100**	**42.34**	**100**	**100**	**100**	**28.72**

Appendix Table A-III 5: Percentage of population utilizing inpatient services, states and all India–2014

States	Rural			Urban			Rural + Urban		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
Andhra Pradesh	4.83	6.69	5.75	4.45	5.85	5.18	4.72	6.43	5.58
Assam	1.04	4.55	2.67	1.77	5.42	3.50	1.12	4.66	2.77
Bihar	1.58	5.03	3.23	1.65	4.96	3.20	1.59	5.03	3.23
Chhattisgarh	1.72	4.05	2.81	3.49	4.82	4.10	2.05	4.19	3.05
Delhi	1.08	2.11	1.53	2.69	4.54	3.52	2.61	4.43	3.42
Goa	3.64	5.01	4.34	3.96	3.87	3.92	3.84	4.33	4.08
Gujarat	3.14	6.24	4.65	3.27	6.37	4.69	3.20	6.29	4.67
Haryana	2.53	5.93	4.17	4.19	5.75	4.94	3.11	5.86	4.44
Himachal Pradesh	4.09	6.78	5.49	1.87	4.39	3.09	3.86	6.56	5.26
Jammu and Kashmir	2.22	5.70	3.88	1.86	5.36	3.58	2.15	5.63	3.82
Jharkhand	1.21	4.98	3.03	1.97	5.05	3.44	1.39	5.00	3.13
Karnataka	3.60	6.50	5.03	3.13	6.54	4.76	3.42	6.51	4.93
Kerala	10.70	12.02	11.39	7.49	11.67	9.65	9.24	11.87	10.61
Madhya Pradesh	2.15	5.95	3.97	2.58	6.14	4.27	2.27	6.00	4.05
Maharashtra	4.01	6.30	5.14	3.12	6.28	4.64	3.63	6.29	4.92
Odisha	2.66	6.16	4.33	3.90	6.12	4.96	2.85	6.15	4.43
Punjab	2.26	6.01	4.03	3.00	4.75	3.88	2.53	5.52	3.97
Rajasthan	2.40	6.69	4.54	2.37	5.92	4.07	2.39	6.49	4.41
Tamil Nadu	4.54	6.57	5.59	4.60	6.97	5.77	4.57	6.76	5.68
Telangana	3.88	5.52	4.73	2.73	7.05	4.74	3.43	6.06	4.73
Uttar Pradesh	1.60	5.01	3.25	2.40	5.51	3.88	1.78	5.12	3.39
Uttarakhand	2.01	4.05	2.98	2.06	5.42	3.66	2.02	4.35	3.13
West Bengal	3.26	6.39	4.77	3.59	6.02	4.77	3.36	6.28	4.77
Other North East states	2.61	5.08	3.81	2.81	5.77	4.24	2.68	5.30	3.95
Total	**2.73**	**5.88**	**4.27**	**3.30**	**6.26**	**4.73**	**2.90**	**6.00**	**4.40**

Appendix Table A-III 6: Percentage share of public sector in total hospitalized treatment for rural and urban hospitalization episodes, states and all India – 2014

State	Rural	Urban	Rural + Urban
Andhra Pradesh	22.48	21.82	22.29
Assam	89.2	51.49	81.82
Bihar	42.62	38.78	42.22
Chhattisgarh	49.43	29.44	44.99
Delhi	63.14	45.05	45.37
Goa	50.97	66.85	59.59
Gujarat	23.43	23.35	23.4
Haryana	33.25	18.32	27.0
Himachal Pradesh	75.77	71.75	75.53
Jammu and Kashmir	93.89	85.39	92.2
Jharkhand	39.58	26.36	35.24
Karnataka	26.84	18.28	23.61
Kerala	34.72	33.27	34.14
Madhya Pradesh	53.53	41.66	49.58
Maharashtra	19.2	20.04	19.54
Odisha	81.32	57.97	76.77
Punjab	29.26	30.24	29.61
Rajasthan	54.22	54.37	54.27
Tamil Nadu	40.39	29.26	34.63
Telangana	28.63	21.21	25.85
Uttar Pradesh	30.22	28.31	29.65
Uttarakhand	50.77	39.74	47.56
West Bengal	77.18	52.58	68.86
Other North East states& Union Territories	89.48	73.47	85.48
All India	**41.88**	**32.03**	**38.43**

Appendix Table A-IV 1: Average expenditure per inpatient episode(Rs.) for rural and urban episodes in major states and all India – 2014

State	Rural	Urban	Rural + Urban
Andhra Pradesh	15411	33671	20807
Assam	8520	52368	17098
Bihar	13626	28058	15150
Chhattisgarh	14043	24891	16448
Delhi	32211	37049	36964
Goa	32503	26401	29192
Gujarat	15660	21276	18205
Haryana	20945	35217	26920
Himachal Pradesh	22004	31160	22541
Jammu and Kashmir	10777	16174	11849
Jharkhand	12578	15011	13376
Karnataka	16118	24202	19169
Kerala	19385	17117	18482
Madhya Pradesh	15326	26374	18997
Maharashtra	22486	31028	25905
Odisha	12616	22713	14585
Punjab	29779	31978	30580
Rajasthan	15609	18346	16401
Tamil Nadu	13968	26092	20240
Telangana	21683	22584	22021
Uttar Pradesh	20594	33402	24396
Uttarakhand	10476	27883	15552
West Bengal	12841	27249	17715
Other North East states and Union Territories	7639	15521	9611
All India	**16956**	**26455**	**20288**

Appendix Table A-V 1: Average per person monthly OOPE (Rs.) for outpatient and inpatient care in major states and all India –2014

State	Outpatient			Inpatient			Outpatient + Inpatient		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
Andhra Pradesh	137.60	221.67	163.18	69.11	144.63	92.08	206.71	366.30	255.26
Assam	32.86	278.15	61.58	9.16	96.95	19.44	42.03	375.10	81.03
Bihar	97.11	85.70	95.94	23.80	48.97	26.39	120.92	134.66	122.33
Chhattisgarh	67.01	119.37	76.48	28.35	63.27	34.66	95.36	182.64	111.14
Delhi	27.68	71.15	69.08	27.48	74.25	72.03	55.16	145.40	141.11
Goa	159.73	326.59	260.30	92.88	68.95	78.46	252.61	395.54	338.76
Gujarat	64.62	91.23	75.70	47.36	64.67	54.57	111.98	155.90	130.27
Haryana	74.52	148.62	100.33	52.26	98.07	68.21	126.78	246.69	168.54
Himachal Pradesh	103.38	87.11	101.79	83.87	71.96	82.71	187.25	159.07	184.50
Jammu and Kashmir	129.06	86.01	120.20	23.92	33.79	25.96	152.99	119.80	146.15
Jharkhand	33.09	235.80	79.66	17.06	32.07	20.51	50.15	267.87	100.17
Karnataka	103.24	143.83	118.69	54.63	78.43	63.69	157.87	222.26	182.38
Kerala	251.12	271.86	260.45	215.99	143.51	183.38	467.11	415.38	443.83
Madhya Pradesh	85.40	122.78	95.42	28.20	78.78	41.75	113.60	201.56	137.17
Maharashtra	92.99	123.00	105.82	81.48	83.44	82.32	174.47	206.44	188.14
Odisha	144.52	145.56	144.68	35.20	78.42	41.97	179.72	223.98	186.66
Punjab	198.80	254.34	219.53	84.58	86.81	85.42	283.38	341.16	304.94
Rajasthan	55.99	172.13	87.73	40.35	45.38	41.72	96.33	217.52	129.45
Tamil Nadu	113.79	190.16	151.60	60.77	117.38	88.80	174.56	307.55	240.40
Telangana	173.14	177.06	174.61	70.78	69.74	70.39	243.92	246.80	245.00
Uttar Pradesh	101.36	197.53	122.94	40.32	93.63	52.28	141.68	291.16	175.22
Uttarakhand	94.12	310.92	142.14	17.04	64.81	27.62	111.16	375.73	169.76
West Bengal	167.82	197.92	176.92	41.59	94.80	57.69	209.41	292.72	234.61
Other North East states and Union Territories	58.47	134.26	76.46	15.79	25.00	17.97	74.25	159.26	94.43
All India	**105.37**	**167.69**	**124.05**	**47.30**	**86.87**	**59.17**	**152.67**	**254.56**	**183.22**

Appendix Table A-V 2: Monthly per person values (Rs.) of household expenditure and outpatient, inpatient and total OOPE, and share of outpatient, inpatient and total OOPE in household expenditure in major states and total – 2011-12

Major states	Monthly per person values (Rs.) Inpatient				Share (%) in household expenditure		
	Household expenditure	Outpatient	Inpatient	Total OOP	Outpatient	Inpatient	Total OOP
Andhra Pradesh	1890	103	37	139	5.88	1.81	7.69
Assam	1165	29	5	35	2.62	0.46	3.08
Bihar	1011	41	14	55	4.25	1.17	5.42
Chhattisgarh	1090	46	12	58	4.22	1.19	5.41
Delhi	3124	85	34	119	2.83	0.92	3.75
Goa	2703	104	29	134	4.03	0.96	4.98
Gujarat	1852	58	43	102	3.24	2.18	5.42
Haryana	2355	82	26	108	3.54	1.09	4.62
Himachal Pradesh	1949	80	37	117	3.93	1.78	5.71
Jammu and Kashmir	1763	64	22	86	3.72	1.29	5.01
Jharkhand	1121	37	15	51	3.14	1.06	4.20
Karnataka	1940	66	47	113	3.26	2.04	5.30
Kerala	2537	152	99	251	6.08	3.70	9.77
Madhya Pradesh	1233	57	17	73	4.62	1.23	5.85
Maharashtra	2128	87	73	160	4.02	3.20	7.23
Orissa	1045	53	17	70	5.12	1.63	6.75
Punjab	2356	131	62	193	5.44	2.44	7.88
Rajasthan	1626	68	28	95	4.13	1.59	5.72
Tamil Nadu	2000	95	46	141	4.87	2.17	7.05
Uttar Pradesh	1258	74	37	111	5.91	2.58	8.49
Uttarakhand	1779	52	20	73	2.94	1.21	4.15
West Bengal	1521	89	36	125	6.17	2.28	8.45
Other North East states and Union Territories	1514	34	8	42	2.35	0.53	2.88
Total	**1627**	**74**	**37**	**111**	**4.66**	**2.11**	**6.77**

Appendix Table A-VI 1: Incidence of pregnancy and percentage of pregnant women who received prenatal and postnatal care in major states and all India – 2014

States	% of pregnant women (15-49 years)			% of pregnant women received all prenatal care*			% of pregnant women received postnatal care		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
Andhra Pradesh	6.57	6.07	6.42	97.38	95.44	96.82	91.96	96.94	93.30
Assam	7.81	6.31	7.63	92.60	91.64	92.51	87.06	80.49	86.37
Bihar	12.33	10.02	12.08	78.94	81.78	79.19	77.96	84.60	78.53
Chhattisgarh	7.34	8.88	7.61	96.07	72.56	91.16	75.64	63.17	72.83
Delhi	3.09	5.01	4.92	88.15	81.12	81.31	11.31	71.74	69.79
Goa	3.57	9.57	7.19	100.00	100.00	100.00	100.00	93.74	96.26
Gujarat	8.72	7.57	8.24	95.71	97.47	96.39	82.42	87.20	84.10
Haryana	8.99	6.17	7.97	68.84	90.81	75.01	74.37	72.13	73.76
Himachal Pradesh	6.78	5.01	6.61	90.98	95.55	91.32	73.38	72.15	73.29
Jammu and Kashmir	9.11	7.60	8.79	95.47	97.60	95.86	91.84	80.75	89.69
Jharkhand	12.20	6.51	10.78	80.13	86.77	81.13	77.64	85.83	78.86
Karnataka	8.90	6.92	8.14	89.53	95.92	91.62	85.25	87.60	86.02
Kerala	8.53	6.69	7.70	94.47	91.46	93.28	94.72	97.26	95.79
Madhya Pradesh	11.55	7.60	10.46	81.42	83.42	81.82	77.41	80.12	78.00
Maharashtra	8.08	5.79	7.07	93.16	89.79	91.95	92.94	94.04	93.37
Odisha	8.13	8.54	8.20	89.05	81.13	87.68	86.78	90.95	87.34
Punjab	6.11	6.05	6.09	82.49	93.10	86.65	85.37	89.39	86.93
Rajasthan	12.67	9.30	11.77	79.79	82.37	80.34	62.75	72.58	64.79
Tamil Nadu	6.24	5.82	6.03	96.92	94.83	95.92	85.64	92.13	88.62
Telangana	6.62	6.18	6.45	96.72	90.77	94.56	93.12	90.02	91.96
Uttar Pradesh	11.41	8.15	10.62	69.56	70.57	69.75	65.97	75.22	67.64
Uttarakhand	7.30	6.46	7.08	90.31	76.13	86.96	73.78	84.63	75.94
West Bengal	8.89	5.88	7.97	88.89	93.54	89.93	75.40	79.97	76.47
NE states +Union Territories	9.44	7.00	8.84	82.34	93.12	84.45	71.98	78.86	73.31
All India	**9.58**	**6.86**	**8.74**	**83.16**	**87.25**	**84.16**	**77.05**	**84.15**	**78.76**

Note: *NE: North East; UTs: Union Territories*

Appendix Table A-VI 2: Percentage distribution of all women (age 15-49 years) who reported pregnancy during the last one year by outcome of pregnancy for major states and all India – 2014

State	Live birth	Still birth	Abortion	Pregnancy continuing	Others	Total
Andhra Pradesh	75.36	0.92	1.72	21.92	0.08	100
Assam	86.54	1.36	0.42	11.68	0	100
Bihar	83.17	0.87	0.94	15.02	0	100
Chhattisgarh	84.59	1.39	4.65	9.37	0	100
Delhi	77.71	6.53	0.07	15.69	0	100
Goa	43.01	0	1.67	55.32	0	100
Gujarat	78.01	0.92	2.4	18.67	0	100
Haryana	83.36	1.09	1.52	14.03	0	100
Himachal Pradesh	85.32	1.89	3.24	9.55	0	100
Jammu and Kashmir	66.06	0.22	1.01	32.71	0	100
Jharkhand	84.25	1.15	0.16	14.44	0	100
Karnataka	65.24	0.75	2.14	31.87	0	100
Kerala	68.26	0.87	6.99	23.82	0.07	100
Madhya Pradesh	68.28	4.55	1.18	25.99	0	100
Maharashtra	75.7	1.23	1.65	21.36	0.06	100
Odisha	75.43	0.22	0.5	23.85	0	100
Punjab	76.31	1.8	3.4	18.49	0	100
Rajasthan	72.87	0.95	1.11	25.06	0	100
Tamil Nadu	72.82	0.94	7.3	18.78	0.16	100
Telangana	68.07	0.27	0.57	31.09	0	100
Uttar Pradesh	81.15	2.82	2.75	13.28	0.01	100
Uttarakhand	93.26	1.22	0.62	4.89	0	100
West Bengal	74.96	4.38	1.59	19.06	0	100
Other North East states and Union Territories	74.25	0.33	2.04	23.31	0.07	100
All India	**76.65**	**1.84**	**2.1**	**19.4**	**0.02**	**100**

Appendix Table A-VI 3: Percentage distribution of women aged 15-49 years by place of childbirth during the last 365 days for major states and all India – 2014

State	HSC/PHC etc.	Public hospital	Private hospital	Home	All Institutional	Total
Andhra Pradesh	4.07	34.36	54.48	7.08	92.91	100
Assam	21.89	58.54	7.86	11.71	88.29	100
Bihar	11.22	40.88	18.49	29.41	70.59	100
Chhattisgarh	12.65	30.34	13.77	43.23	56.76	100
Delhi	0.71	51.06	33.45	14.78	85.22	100
Goa	0	33.11	66.89	0	100	100
Gujarat	9.68	20.61	63.36	6.35	93.65	100
Haryana	8.51	35.01	45.12	11.36	88.64	100
Himachal Pradesh	8.34	54.84	13.5	23.32	76.68	100
Jammu and Kashmir	1.3	80.63	9.3	8.77	91.23	100
Jharkhand	11.39	45.03	19.26	24.32	75.68	100
Karnataka	11.03	47.42	39.82	1.73	98.27	100
Kerala	2.17	29.08	65.52	3.23	96.77	100
Madhya Pradesh	8.22	61.67	13.03	17.09	82.92	100
Maharashtra	11.93	31.7	53.19	3.18	96.82	100
Odisha	35.84	43.59	11.37	9.2	90.8	100
Punjab	5.58	36.12	46.8	11.5	88.5	100
Rajasthan	11.63	55	18.53	14.83	85.16	100
Tamil Nadu	6.82	49.55	39.11	4.53	95.48	100
Telangana	4.5	26.8	66.7	2	98	100
Uttar Pradesh	16.75	27.38	26.5	29.37	70.63	100
Uttarakhand	0.44	58.86	15.61	25.09	74.91	100
West Bengal	2.67	56.12	19.97	21.23	78.76	100
Other North East states	18.7	45.07	8.23	28	72	100
All India	**11.59**	**40.84**	**29.82**	**17.75**	**82.25**	**100**

About the Project

The Strengthening Ecosystem for Sustainable and Inclusive Health Financing India (SESSIHFI) project is being supported by USAID India to generate robust evidence on financial flows and evaluation of innovative health financing models, which combined with strategic outreach is geared to lead to improved accountability and transparency in public health systems in India. The overall goal is to germinate and foster health care financing ecosystem that ensures equity and improves poor households' access to quality and comprehensive health care and protect them from financial loss and impoverishing impact of illness. The project is implemented by Public Health Foundation of India (PHFI) in partnership with Post Graduate Institute of Medical Education and Research (PGIMER), Chandigarh; Tata Institute of Social Sciences (TISS) Mumbai, Indian Institute of Technology (IIT), Chennai and Sree Chitra Tirunal Institute for Medical Sciences and Technology (SCTIMST), Thiruvananthapuram.

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