

CHAPTER 3

MORBIDITY AND HOSPITALIZATION

3.1 General

The present enquiry on health was carried out as a part of the survey on social consumption in the 71st round of the NSSO. The present survey comprehensively studies the health care system in the state via the measurement of morbidity and hospitalization rates, the utilization of both public and private health care institutions. Also, for the first time, the data collected has enabled assessment of the role of alternative schools of medicine (AYUSH) in respect of prevalence of use, cost of treatment and type of ailments covered.

3.2 Morbidity Rates

3.2.1 Statement 3.1 gives the survey estimates on prevalence of morbidity, measured as the number of persons reporting ailment during the last 15 days per 1000 persons. A perceptible gender difference is seen to exist in both rural and urban areas, while the difference in urban areas is higher. The difference in PAP between the male and female population is 19 points in rural and 28 in urban areas. Overall, the gender difference seems to exist up to 22 points for both rural and urban sectors together. Also, the morbidity rate shows a difference of 13 points between the rural and urban areas.

Statement 3.1: Proportion (number per 1000) of Ailing Persons (PAP) during last 15 days by gender

Sector	PAP		
	Male	Female	All
Rural	42	61	51
Urban	50	78	64
All	44	66	55

3.2.2 The main morbidity rate that this report presents is termed the estimated *Proportion (number per 1000) of Ailing Persons (PAP)*, which is the proportion of persons reporting ailment at any time during 15-day reference period. It may be noted that these estimates are only based on self-reported morbidity data rather than on medical examination and hence the information on number of spells of different ailments during the reference period is likely to underestimate the illness-status of the patients.

3.2.3 **Level of Morbidity for different age groups:** Statement 3.2 gives the survey estimates on Proportion (number per 1000) of Ailing Persons (PAP) for different age groups based on gender for both rural and urban sectors. The morbidity rates were found to be highest in the age group 50-59 years for rural areas, followed by children of the smallest age group (0-4 years) whereas the same was highest in the age group 60-64 years for urban areas followed by the age group 70 years and more. The morbidity rates were generally found lowest in the youth group within the age bracket 15-29 years for both rural and urban sectors.

Statement 3.2: Proportion (per 1000) of Ailing Persons (PAP) during last 15 days for different age group separately for rural and urban sector

Age group	PAP (in 1000)								
	Rural			Urban			Rural + Urban		
	Male	Female	All	Male	Female	All	Male	Female	All
0-4	93	86	89	128	122	126	105	94	99
5-9	46	6	29	71	57	65	52	19	38
10-14	36	0	19	9	74	41	25	31	28
15-19	60	92	77	38	76	54	50	87	69
20-24	9	23	13	36	58	48	16	38	24
25-29	63	4	28	0	12	6	46	6	23
30-34	4	64	28	23	69	50	8	65	33
35-39	0	24	16	26	19	23	9	23	18
40-44	0	133	58	25	79	53	8	111	56
30-44	2	60	30	25	58	43	8	59	34
45-49	20	95	61	39	33	36	27	74	52
50-59	97	141	118	105	199	142	99	151	123
60-64	0	0	0	84	538	307	17	119	65
65-69	0	0	0	86	0	22	3	0	3
70+	38	0	25	132	534	251	64	122	83
60+	7	0	5	103	360	229	21	103	49
All	42	61	51	50	78	64	44	66	55

3.3 Spells of Ailments and Treatment of Ailments

3.3.1 **Proportion of spells of ailment over different age groups:** A spell of ailment is a continuous period of sickness due to a specific ailment. Statement 3.3 gives the proportion (per 1000) distribution of spells of ailment over different age groups.

3.3.2 The statement shows that the highest proportion of spells of ailment was faced by people falling in the age bracket 45-59 years in the rural areas, while the same in the urban areas fell in the age group of children of 0-14 years. The distribution of spells of ailment was found to be least in the age group 60-69 years for rural areas and those in the age of 70 years and more in the urban areas.

Statement 3.3: Proportion (per thousand) distribution of spells of ailment over age groups

Age group	Rural	Urban	All
0-14	265	337	290
15-29	222	210	218
30-44	131	144	136
45-59	378	232	328
60-69	0	52	18
70+	3	24	10
60+	3	76	28
All	1000	1000	1000

3.3.3 **Choice of Health-care Provider:** This survey results throw some light on the choice of health-care providers at the rural and urban areas i.e. from whom people took treatment and at which level.

3.3.4 Statement 3.4 describes the distribution of health-care providers by public and private sources in treatment of ailments (excluding childbirth) for hospitalized cases. The public providers for healthcare include government hospitals, clinics, dispensaries, Primary Health Centers (PHCs) and the Community Health Centers (CHCs), Mobile Medical Unit (MMU) and the state and central government assisted ESI hospitals and dispensaries. The lowest level of care viz. Health Sub Centre (HSC), ANM/ASHA/AWW were also included in this round. The 'private' sources include private doctors, nursing homes, private hospitals, charitable institutions, etc. Statement 3.4 shows how the share of different health-care providers in treatment of ailment varies with gender and sector.

Statement 3.4: Per thousand distribution of spells of ailment treated on medical advice over levels of care for each gender

Level of care	Rural			Urban		
	Male	Female	All	Male	Female	All
HSC/ANM/etc.	0	470	335	0	0	0
PHC/CHC/etc.	188	44	85	0	77	42
Public hospital	211	155	171	309	409	364
Private doctor	602	230	337	679	216	426
Private hospital	0	101	72	12	297	168
All	1000	1000	1000	1000	1000	1000

3.3.5 It is seen that private doctors have the greatest share of treating spells of ailment in the rural areas, followed by Health Sub Centres (HSC)/ANM/ASHA/AWW, etc. Together, they accounted for 67% of the treatments in rural areas. Private doctors had the maximum share in urban areas followed by public hospitals, both accounting to 79% of the overall share of treatment of ailments in the urban sector.

3.3.6 Statement 3.4 also reveals that in the rural areas, 47% of the female population avail treatment from HSC/ANM, etc. whereas 60% of males avail the same from private doctors. In the urban areas, about 68% of the male population receives treatment from private doctors while about 41% of the female receive the same from public hospitals.

3.3.7 **Choice of type of treatment:** Persons who were ailing had different nature of treatment like allopathy, homeopathy, etc. Even sometimes no medical care was taken for their ailments. This round includes the options of 'Indian system of medicine' (including Ayurveda, Unani and Siddha), Homeopathy and Yoga or Naturopathy as nature of treatment. The following statement 3.5 gives the distribution of spells of ailment by different nature of treatments.

Statement 3.5: Per thousand distribution of spells of ailment by nature of treatment received for each gender

Per 1000 no. of spells of ailment with treatment received from	Rural	Urban
None	1	0
Allopathy	929	959
Indian system of medicine	0	29
Homeopathy	20	7
Yoga	50	0
Other sources	0	5
All	1000	1000

3.3.8 Statement 3.5 reveals that allopathy as a nature of treatment is significantly preferred in both the rural and urban areas alike. Allopathy alone has accounted for 93% in rural areas and 96% in the urban areas, showing an explicit inclination towards Western medicine.

3.4 Hospitalized treatment of ailments

3.4.1 **Proportion of persons hospitalized in last 365 days:** Medical treatment of an ailing person as an in-patient in any medical institution having provision of treating the sick as in-patients is considered as hospitalized treatment. Here, all hospitalization for childbirth is excluded. All such cases (hospitalization for childbirth) are discussed in the next chapter. Statement 3.6 gives the distribution of hospitalization cases (Excluding Childbirth) during a reference period of 365 days.

Statement 3.6: Per 1000 distribution of hospitalization cases (EC) during last 365 days over broad age-groups

Age group	Rural	Urban	Rural + Urban
0-14	316	316	316
15-29	112	337	174
30-44	200	156	188
45-59	270	146	236
60-69	57	32	50
70+	45	13	37
60+	102	45	86
All	1000	1000	1000

3.4.2 This statement reveals that the proportion of hospitalization cases has been highest in rural areas for children aged 0-14 years, while the same is highest among the age group of 15-29 years in the urban areas. The proportion of hospitalization cases seem to be greater for the lower age groups in urban areas (0-29 years) whereas the same is comparatively higher in the higher age groups (30-70+ years) in the rural areas.

3.4.3 **Hospitalization by broad ailment type:** Statement 3.7 describes the distribution (per 1000) of hospitalized cases over broad ailment category separately for rural and urban.

Statement 3.7: Per 1000 distribution of hospitalized cases (EC) over broad ailment categories for each gender

Broad ailment category	Rural			Urban		
	Male	Female	All	Male	Female	All
Infections	348	600	492	648	549	601
Cancers	23	2	11	14	17	15
Blood diseases (incl. anaemia)	5	6	5	0	5	2
Endocrine, metabolic & nutrition	0	0	0	13	17	15
Psychiatric & neurological	17	57	40	34	42	38
Eye	50	0	22	50	10	31
Ear	0	1	0	27	0	14

Cardio-vascular	29	3	14	21	0	11
Respiratory	9	133	80	17	60	37
Gastro-intestinal	219	101	152	62	72	67
Skin	3	8	6	21	14	18
Musculo-skeletal	235	20	112	23	57	39
Genito-urinary	58	49	53	12	93	50
Obstetric & neonatal	0	11	6	0	53	25
Injuries	2	9	6	60	12	37
Other	0	1	0	0	0	0
All	1000	1000	1000	1000	1000	1000

- 3.4.4 This statement reveals that in both the rural and urban sectors, the highest proportion for hospitalization is recorded for 'Infection' (inclusive of all types of fevers, jaundice, tuberculosis, tetanus, diarrhoeas/dysentery and other infection). In rural areas, gastro-intestinal and musculo-skeletal problems were highly contributive of hospitalization cases. In the urban areas however, gastro-intestinal problems were second most common reason for hospitalization, followed by genito-urinary ailments.
- 3.4.5 It is observed that the proportion of ailments such as 'Infections' and 'Respiratory' problems seem to be more common for female than males in the rural areas. On the other hand, ailments like 'Musculo-skeletal', 'Gastro-intestinal', 'Eye', 'Cardio-vascular' and 'cancers' seem to be more in proportion as causes of hospitalization among males in rural areas.
- 3.4.6 In the urban areas, the proportion of hospitalization cases based on 'Infections', 'Eye', 'Ear', 'Cardio-vascular' and 'Injuries' seem to be greater for male than female. Whereas, the more common ailments causing hospitalization in females more than male seem to be for ailments like 'Respiratory', 'Genito-urinary', 'Obstetric and neonatal' and 'Musculo-skeletal' in the urban areas.
- 3.4.7 **Hospitalization and Type of Hospital:** Statement 3.8 gives the share of government and private institutions in treating the hospitalized cases of ailments in the rural and urban areas for a reference period of 365 days.

Statement 3.8: Per 1000 distribution of hospitalized cases (EC) during last 365 days by type of hospital

Sector	Public hospital			Private hospital		
	Male	Female	Persons	Male	Female	Persons
Rural	358	485	842	71	87	158
Urban	348	345	693	180	127	307
All	355	446	801	101	98	199

- 3.4.8 It is seen that the public hospitals dominate in treating the in-patients in both the rural and urban sectors. The overall difference between the public hospitals and private hospitals in terms of the treatment of hospitalized cases is seen to be 602 points.
- 3.4.9 Generally, there seems to be no perceptible gender gap regarding hospitalization in exception of the public hospitals in rural areas where the number of female treated is greater than male by 127 points and in private hospitals in urban areas, that of male greater than female by 53 points.

3.5 Cost of non-hospitalized treatment

3.5.1 In the present survey, data on expenses incurred for medical treatment was collected separately for each case of hospitalization for hospitalized treatment, 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. *Medical expenses* included expenditure on items like cost of medicines, bed charges for hospitalized treatment, charges for diagnostic tests and fees for doctor/surgeon. The 'other expenses' constituted all expenses relating to treatment of an ailment incurred by the household in connection with treatment of an ailing member of the household, but other than the exclusive expenditure on medical treatment. This category of expenditure included 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 'other expenditure'.

3.5.2 **Average expenditure for non-hospitalized treatment per ailment and level of care:** Statement 3.9 gives the estimates of total expenditure per ailment incurred for non-hospitalized treatment during the reference period of 15 days. The statement provides separate estimates for treatment at different levels of care in the rural and urban sectors. It is seen that, on an average, a higher amount was incurred for non-hospitalized treatment by the urban population than that by rural population. The statement reflects perceptible difference of expenditure incurred among the levels of care utilized for the treatment.

Statement 3.9: Average total medical expenditure for non-hospitalized treatments per ailment by level of care

Sector	Average total medical expenditure (Rs.) for treatment per person in					All
	HSC/ANM/ASHA/AWW	PHC/dispensary CHC/mobile medical unit	Public hospital	Private doctor/clinic	Private hospital	
Rural	450	405	1009	648	3850	853
Urban	0	220	1348	1431	2128	1467
All	450	381	1139	860	3147	992

3.5.3 It can be observed that on average, a higher amount was incurred by both the rural and urban population in private hospitals. Also, the statement reveals that on an average, the overall expenditure was least in PHC/CHC/Mobile medical units in rural areas and in HSC/ANM/ASHA/AWW in urban areas.

3.5.4 **Break-up of average expenditure for non-hospitalized treatment and level of living:** Statement 3.10 shows the average expenditure on different items in each quintile class of monthly per capita consumer expenditure, widely considered to reflect the level of living of a household, in both rural and urban sectors. The classification of expenditure in the sub-head 'Others' includes such expenses as attendant charges, physio-therapy, personal medical appliances, blood, oxygen, etc. It is seen that the highest proportion of expenses is incurred towards 'Medicine (non-AYUSH)' in the rural areas through all quintile classes except in the 4th quintile class, where expenses on 'Diagnostic tests' are moderately higher. In the urban areas,

the overall expenditure on an average is highest for 'Medicine (non-AYUSH)' followed by 'Doctor's fee' and 'Medicine (AYUSH)'.

Statement 3.10: Break-up of average medical expenditure (Rs.) for non-hospitalized treatment per ailing person, for each quintile class of MPCE

Quintile class of MPCE	Average medical expenditure (Rs.) per treated ailing person for treatment under					All
	Doctor's fee	Medicine: AYUSH	Medicine: Non-AYUSH	Diagnostic tests	Others	
Sector: Rural						
01	177	0	432	0	0	609
02	413	380	666	202	52	1714
03	12	0	393	0	13	417
04	29	0	254	278	71	632
05	268	200	615	135	169	1387
All	146	82	441	121	63	853
Sector: Urban						
01	477	721	326	723	485	2733
02	148	0	411	0	217	776
03	445	343	310	12	185	1294
04	191	42	268	438	394	1332
05	148	193	547	212	136	1236
All	283	282	405	255	242	1467

3.5.5 This statement also reveals that, on an average, the rural population in the 2nd quintile class of MPCE incurs the highest expenses for non-hospitalized treatment, followed by those in the 5th quintile class. In the urban sector, the maximum average expenditure for non-hospitalized treatment has been incurred by those in the 1st quintile class, followed by the 4th quintile class of MPCE.

3.6 Cost of hospitalized treatment

3.6.1 For the hospitalized treatment, information on expenses was collected separately for each different event of hospitalization during the reference period. Besides the expenses treated as medical expenses for non-hospitalized treatment, expenditure on items like bed charges, cost of medicines and other materials and services supplied by the hospital, charges for diagnostic tests done at the hospital were included in the medical expenditure for hospitalized treatment. The 'other expenses' relating to hospitalized treatment is the same as that for non-hospitalized treatment. The estimates of 'total expenditure' for hospitalized treatment were arrived at as the sum of 'medical expenses' and 'other expenses'.

3.6.2 **Average expenditure for hospitalized treatment per ailment:** Statement 3.11 gives the estimates of total expenditure incurred for hospitalized treatment (EC) during the reference period of 365 days. The statement provides separate estimates for treatment of male and female patients of rural and urban areas.

Statement 3.11: Average total medical expenditure (Rs.) for treatment per hospitalization case (EC) during stay at hospital

Average total medical expenditure for treatment (Rs.) per case								
Rural			Urban			All		
Male	Female	Persons	Male	Female	Persons	Male	Female	Persons
10985	6416	8375	5472	6900	6146	9233	6531	7763

3.6.3 It can be seen that the expenses on hospitalized cases incurred on male patients outweigh those of female patients in the rural areas and overall (Rural + Urban). The statement also shows that, on an average, the rural population spent a higher amount for hospitalized treatment than their urban counterparts.

3.6.4 **Medical and Non-medical expenditure on account of hospitalization:** Statement 3.12 gives the estimates of medical and non-medical expenditure on account of hospitalization separately for male and female residing in rural and urban sectors. Here, 'Non-medical expenditure' includes those expenses on transportation, food, lodging and other expenses. The statement shows that the average medical expenditure 'during stay at hospital' is substantially higher for males in rural areas, whereas the same is higher for females in urban areas.

Statement 3.12: Average medical expenditure (Rs.) and non-medical expenditure (Rs.) on

Sector	Average medical expenditure (Rs.)			Average of other expenses (Rs.)			Average total expenditure (Rs.)		
	During stay at hospital			On account of hospitalization			Per hospitalization case		
	Male	Female	Persons	Male	Female	Persons	Male	Female	Persons
Rural	10895	6416	8375	4075	3254	3606	15060	9670	11981
Urban	5472	6900	6146	2150	2406	2271	7622	9306	8417
All	9233	6531	7763	3464	3052	3240	12697	9584	11003

3.6.5 It can be seen that the average of 'other expenses' (non-medical) on account of hospitalization is higher for male than female in rural areas, while the same is higher for female in urban areas. The statement also shows that, on an average, the rural population spends a higher amount on account of hospitalization as compared to the urban population. Also, the estimates of total expenditure (medical and non-medical) per case of hospitalization show that a higher proportion of the expenses are made on male and lesser on females.

3.6.6 **Cost per hospitalization by type of hospital:** The following Statement 3.13 gives the estimates of item wise break-up of medical expenditure for an event of hospitalization in different types of establishments for the rural and urban population for a reference period of 365 days. It is seen that the average expenditure for hospitalized treatment from a public sector hospital was much lower than that from a private sector in both rural and urban areas.

Statement 3.13: Average medical expenditure (Rs.) per hospitalization case (EC) and its break-up by type of hospitals

Type of hospital	Avg. expenditure (Rs.) per hospitalization case for treatment under						Total
	Package component	Doctor's fee	Diagnostic test	Bed charges	Other services	Medicines	
Rural							
Public	1686	1029	722	915	557	2775	7683
Private	515	2686	1654	2550	506	4160	12070
Urban							
Public	437	414	550	305	521	2131	4358
Private	930	1947	1051	2180	1101	2979	10188

3.6.7 The rural population, on an average spent Rs. 7683 for a hospitalized treatment in public sector hospital, with 'Medicines' incurring the highest expenses among the items of expenditure. An average of Rs. 12,070 was incurred for the same in a private sector hospital, with 'Medicines' covering the most significant part of the expenses.

3.6.8 The average total expenditure of the urban population for a hospitalized treatment in a public and private hospital were Rs. 4358 and Rs. 10,188 respectively. In both types of hospitals in the urban areas, the maximum proportion of the expenses was incurred on 'Medicines'.

3.7 Coverage of Health expenditure support

3.7.1 **Coverage of health expenditure support:** Statement 3.14 reveals the extent of coverage of health expenditure support for the population of both rural and urban areas, by quintile classes of usual monthly per capita consumer expenditure (UMPCE). It is seen that about 97% of the rural population and 99% of the urban population were still not covered under any scheme of health expenditure support.

Statement 3.14: Per 1000 distribution of persons by coverage of health expenditure support for each quintile class of UMPCE

Quintile class of UMPCE	Per 1000 number of persons having coverage of scheme of health expenditure support					
	Not covered	Govt. funded insurance scheme	Employer supported health protection	Arranged by household with insurance companies	Others	All
Rural						
Q01	1000	0	0	0	0	1000
Q02	947	53	0	0	0	1000
Q03	998	0	0	2	0	1000
Q04	1000	0	0	0	0	1000
Q05	997	0	0	2	0	1000
All	968	11	0	1	0	1000
Urban						
Q01	993	7	0	0	0	1000
Q02	999	1	0	0	0	1000
Q03	996	3	1	0	1	1000
Q04	996	0	0	0	4	1000
Q05	994	0	1	0	4	1000
All	996	2	0	0	2	1000

3.7.2 The statement also reveals that the Government was able to cover about 1.1% of rural population under its insurance schemes. In both sectors, there has been negligible impact of health expenditure support either from employers or from private insurance companies and 'Others'.

3.7.3 **Source of finance for hospitalized treatment during last 365 days:** The following statement 3.15 reflects the contributions of different sources of financing, if not covered by some health protection scheme, to meet the total expenditure on hospitalization.

Statement 3.15: Per 1000 distribution of hospitalized cases (EC) by major source of finance of expenditure for each gender

Sector	Per 1000 no. of hosp. case for which major source of financing expenditure					
	Household income/savings	Borrowings	Sale of physical assets	Friends & relatives	Others	All
Rural	852	59	0	87	2	1000
Urban	987	6	0	7	0	1000
All	889	44	0	65	2	1000

3.7.4 It is seen that both the rural and urban households primarily depend on their 'household income/savings' for financing expenditure on hospitalization. Again, in both the rural and urban sectors, 'friends & relatives' was the second highest contributor in financing expenditure, though the proportion is higher for rural than urban areas.