



Hospitalization & health expenditure in Odisha: Evidence from National Sample Survey (1995-2014)

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Background & objectives: Financing healthcare services through out-of-pocket payments is common in India. Household impoverishments due to health expenditure can be daunting, especially among the economically vulnerable households. This study investigated hospitalization and patient's health expenditure in Odisha State in India.

Methods: The national sample survey data were used to assess hospitalization and patient's health expenditure over two time periods (1995 and 2014). Disease classification was made following International Classification of Diseases 10th revision (ICD-10). The hospitalization rate and health expenditure were estimated for infectious, cardiovascular, non-communicable, disability and other diseases. Andersen model was used to examine the determinants of healthcare expenditure.

Results: Findings of the study revealed that hospitalization in Odisha increased nearly three folds and health expenditure by more than two times between 1995 to 2014. While the hospitalization for other diseases remained consistently higher, health expenditure for disability was the highest and it increased three times within the last two decades. The socio-economic and demographic divides in the hospitalization rate and health expenditure were evident.

Interpretation & conclusions: Our analysis indicated that predisposing factors such as age and marital status played an important role in hospitalization whereas, enabling factors likely determined the health expenditure. There is a need to recognize the unique vulnerabilities of older population, widowed and health financial mechanism for disability-related illness.

Key words Health expenditure - hospitalization - morbidities - NSSO - Odisha - socio-economic status

Every year, millions of households are pushed to poverty on account of high spending in healthcare services, especially in low- and middle-income countries¹⁻³. Financing healthcare services through out-of-pocket (OOP) payments is the general norm in many

Asian countries including India⁴. Nearly eight per cent of population in India are pushed to below the poverty line due to OOP payments for healthcare services⁵. Evidently, public health spending in India is abysmally low as compared to many developing nations given

that the health budget of India is only one per cent of its gross domestic product⁶. More importantly, about 67 per cent of the health expenses are managed by the households, making India one of the highly privatized healthcare systems in the world⁷. The ever-rising cost of healthcare services remains a grave concern in India more so in the poor states.

Although India witnessed a rapid increase in non-communicable diseases (NCDs) indicating a pattern of an epidemiological transition but an overwhelming burden of communicable diseases is suggestive of a double burden of diseases⁸. With the changing morbidity profile, hospitalization and health expenditure patterns are also expected to alter and pose a serious threat, especially to the socio-economically weaker sections of the society in the absence of adequate health financing mechanism. It was shown that proportion of OOP expenditure for hospitalization was significantly higher among the economically weaker sections of the society^{9,10}.

Odisha is an economically poor State and catastrophic health spending in Odisha is one of the highest in India¹¹. Despite the majority of the healthcare institutions in Odisha are in the public sector, OOP expenditure remained high¹². Odisha has a high percentage of older population in India (10%) and an elevated rate of hospitalization and health expenditure among them is a growing concern¹³. In India, health being a State subject, the majority of healthcare planning and interventions are state specific. Therefore, State-level analysis is important to inform health policy.

Population-based large scale surveys are an important source of evidence to identify the emerging health concerns and thereby effectively design and implement health programmes. While there are several studies on catastrophic health expenditure and its effect on household impoverishment at the national level^{3,5,9}, but studies at the State level are sparse. Considering Odisha has a high poverty rate and high catastrophic health spending¹¹, examining the interplay between the socio-economic and demographic characteristics of population with hospitalization and health spending over a period of time may provide new insights. This study was undertaken to investigate hospitalization and patient's health expenditure in Odisha over the two time periods (1995-2014) using the National Sample Survey (NSS) data.

Material & Methods

The data from the 52nd and 71st round of NSS were used, which were available in public domain ([http://](http://www.icssrdataservice.in)

www.icssrdataservice.in, accessible on request). The total sample for Odisha comprised 21,723 individuals in 52nd round and 11576 in 71st round of NSS. The survey design including the methods of data collection and other survey-related information can be found elsewhere^{14,15}. As the objective of the study was to assess the variations of socio-economic and demographic factors on hospitalization and health spending in the long run (over 2 decades), the 52nd and 71st round of NSS were chosen.

Andersen's behavioural model of healthcare utilization was used to examine the predisposing, enabling and need factors¹⁶. Andersen's model postulates that the utilization of healthcare services by the households is a function of their predisposition to use services that emerge by naturally possessed conditions such as geographical accessibility, gender, caste and any other affiliations¹⁷. The enabling factors are further dependent on the economic positions, educational attainment, place of residence and other basic infrastructure-related factors that facilitate access. At the end, the utilization of healthcare services is determined by the need of the households based on health condition and disease burden.

The rate of hospitalization and health expenditure were examined by the socio-economic and demographic characteristics as the predisposing and enabling factors for five distinct morbidity categories: infectious diseases, cardiovascular diseases (CVDs), NCDs, disability and other diseases. The morbidity classifications are based on the 10th revision of the international classification of disease¹⁸ (Supplementary Table). The reference period for hospitalization cases was 365 days preceding the survey. Health expenditure is provided in Indian rupees (₹) and for comparison purpose, the expenditure value of the year 1995 was adjusted for inflation as per the Reserve Bank of India by taking base year as 2014¹⁹.

The socio-economic and demographic characteristics used in this study were gender (male, female), place of residence (rural, urban), age groups (0-14, 15-34, 35-59, 60 yr and above), level of education (illiterate, primary, higher secondary, graduate and above), marital status (never married, currently married, widowed/separated), household size (1-5 members, 6-7 members, 8 and above members), caste (ST/SC, OBC, other), religion (Hindu, others), monthly per capital expenditure, *i.e.*

MPCE (poorest, poor, medium, rich, richest), regions (northern, coastal, southern), whether health service was sought in private or public facility, and whether had insurance coverage or not. Hospitalization rate was calculated using the following formula:

$$H_i = \frac{h_i}{p_i} \times 1000$$

Where, h_i = Number of persons hospitalized in the past 365 days; p_i = Total number of persons alive in the sample households.

Bivariate analysis was conducted to examine hospitalization rate by socio-economic covariates and health expenditure was estimated for two different time period *i.e.* year 1995 and 2014. Data analysis was conducted using STATA 12 (StataCorp LP, College Station, Texas, USA).

Results

Hospitalization by socio-economic and demographic characteristics: Hospitalization rate in Odisha nearly increased by three times between 1995 and 2014 from 12 per thousand to 30 per thousand population. Hospitalization for CVDs followed by disability and NCDs showed a steep increase between 1995 and 2014 (Table I). Further, hospitalization rates for CVDs and NCDs, especially among the older population (aged 60 yr and above) and the widowed or separated were the highest. For instance, seven of 1000 older persons and widowed or separated reported hospitalization due to CVDs and 16 of 1000 for NCDs in the year 2014. On the other hand, hospitalization for other diseases remained consistently higher in both the time periods. Other disease category comprised the diseases other than the remaining four categories, *i.e.* infectious, CVDs, NCDs and disability. In 2014, hospitalization for other diseases was higher among widowed (17/1000), other religion (16/1000), and in Southern region of Odisha (13 in 1000). Overall, hospitalization was higher among urban resident, older population, widowed, those who were economically well-off and lived in the coastal region of Odisha as opposed to their counterparts.

Patient's health expenditure by types of morbidities: The health expenditure for hospitalization in Odisha doubled in the period between 1995 and 2014 (Table II), of which, expenditure for disability-related illness increased three folds and other morbidity by

over two times. Although health expenditure for CVDs was the highest in 1995, in 2014, health expenditure for disability was the highest followed by CVDs and NCDs. Remarkably, health expenditure almost reduced by half for infectious disease and CVDs between 1995 and 2014. Health expenditure for most of the diseases was higher among male population, urban resident, in the age group 15-59, among never married, persons with higher level of education, affluent households, and those who were hospitalized in private health facilities. The health expenditure for CVDs among those who were hospitalized in private health facility, richest MPCE households, and with education level of graduate and above crossed rupees 0.1 million in the year 1995 and 2014. Further, irrespective of the type of morbidities, health expenditure was generally higher among wealthy households, in the coastal region of Odisha and those who were hospitalized in the private health facility in 1995 and 2014 with few exceptions.

A comparison of hospitalization trend between Odisha and at the all India level indicated that total hospitalization rate in Odisha was lower than the national average in 1995 and 2014. However, the 2018 data suggested that total hospitalization in Odisha surpassed the national average (43/1000 vs. 39/1000 population) (Fig. 1). On the other hand, total health expenditure in Odisha remained consistently lower than the national average over a period of time (Fig. 2).

Discussion

This study revealed that hospitalization in Odisha increased nearly three folds and health expenditure by more than two times between 1995 to 2014. Hospitalization for other diseases remained consistently higher over the period of time. However, the increase in hospitalization for CVDs, disability and NCDs was considerably higher between the last two decades. Similarly, health expenditure for disability was the highest in 2014 and the increase was three times higher than 1995. A decreasing pattern of health expenditure for infectious disease and CVDs during the same period was encouraging.

Hospitalization in Odisha was generally lower than the national average with a few exceptions, but health expenditure was noticeably lower than the national average. Further, the socio-economic and demographic divides in the hospitalization rate and health expenditure were evident. Predisposing factors

Table I. Hospitalization per 1000 population by type of diseases across socio-economic groups in Odisha, 1995-2014 (during last 365 days)

Variables	Infectious		CVDs		NCDs		Disability		Others		Total	
	1995-96	2014	1995-96	2014	1995-96	2014	1995-96	2014	1995-96	2014	1995-96	2014
Gender												
Male	2.5	6.0	0.3	1.7	1.1	4.7	1.7	7.3	8.0	8.8	13.6	28.5
Female	2.6	8.9	0.2	2.1	1.3	8.0	0.5	4.3	5.5	7.9	10.1	31.2
Place of residence												
Rural	2.4	7.3	0.2	1.6	1.1	5.7	0.9	5.4	6.9	8.5	11.5	28.5
Urban	3.1	8.2	0.7	3.1	2.1	9.3	2.2	8.3	5.8	7.7	13.9	36.6
Age groups												
0-14	1.6	5.3	0	0.2	0.4	2.9	0.3	1.9	4.5	6.7	6.8	17.0
15-34	1.8	5.5	0.1	0.2	0.8	5.0	1.0	5.0	6.7	6.6	10.4	22.3
34-59	3.7	8.8	0.4	3.3	2.1	7.6	2.0	9.0	8.1	11.2	16.3	39.9
60+	6.8	15.8	1.6	7.8	4.7	15.9	2.9	9.0	14.9	10.7	30.9	59.2
Level of education												
Illiterate	3.5	9.3	0.1	2.4	1.0	8.2	1.0	5.3	8.2	10.1	13.8	35.3
Primary	1.5	8.1	0.3	1.4	1.4	5.5	1.1	6.2	5.4	8.3	9.7	29.5
Higher secondary	0.9	4.5	0	1.5	0.5	5.4	3.3	4.5	3.1	9.2	7.8	25.1
Graduate and above	0.1	6.5	3.1	1.9	3.5	5.4	2.1	6.5	4.2	6.7	13.0	27.0
Religion												
Hindu	NA	7.5	NA	1.9	NA	6.3	NA	5.7	NA	8.2	NA	29.6
Others	NA	6.5	NA	1.2	NA	5.9	NA	11.1	NA	15.8	NA	40.5
Caste												
ST/SC	3.0	5.8	0.1	1.5	0.9	5.6	0.7	4.1	6.6	8.7	11.3	25.7
OBC	NA	10.0	NA	3.3	NA	8.4	NA	8.6	NA	8.0	NA	38.3
Others	2.1	7.8	0.4	1.5	1.5	5.9	1.4	6.2	6.9	8.3	12.3	29.7
Marital status												
Never married	1.5	5.7	0	0.3	0.3	2.8	0.4	4.2	4.5	6.3	6.7	19.3
Currently married	3.2	8.3	0.4	2.7	2.2	8.4	1.8	7.4	9.0	9.3	16.6	36.1
Widowed/separated	6.6	13.0	0.8	7.4	1.6	15.5	1.4	4.0	9.7	16.8	20.1	56.7
Household size												
1-5 members	2.8	7.6	0.2	1.9	1.1	5.9	1.2	6.0	8.8	10.4	14.1	31.8
6-7 members	2.5	8.2	0.4	1.3	1.2	6.5	0.7	5.8	4.9	5.2	9.7	27.0
8 and above members	2.0	4.8	0.2	2.7	1.5	7.8	1.3	4.7	5.0	2.9	10.0	22.9
MPCE												
Poorest	2.1	7.2	0.1	1.7	0.6	5.9	0.8	3.9	5.6	8.8	9.2	27.5
Poor	1.8	5.2	0.1	0.5	0.3	6.3	0.4	4.9	5.0	9.9	7.6	26.8
Medium	2.6	8.9	0.1	2.1	1.3	4.8	0.9	5.6	5.6	11.5	10.5	32.9
Rich	3.7	6.2	0.4	1.4	1.2	4.9	1.1	6.4	8.3	6.0	14.7	24.9
Richest	2.4	9.3	0.5	3.4	2.6	9.6	2.4	8.7	9.4	6.1	17.3	37.1

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Variables	Infectious		CVDs		NCDs		Disability		Others		Total	
	1995-96	2014	1995-96	2014	1995-96	2014	1995-96	2014	1995-96	2014	1995-96	2014
Regions												
Northern	2.5	6.8	0.2	1.7	1.3	4.3	1.4	4.6	8.0	8.5	13.4	25.9
Coastal	2.8	8.1	0.4	2.6	1.3	7.5	1.1	6.8	6.9	6.1	12.5	31.1
Southern	1.5	7.1	0.1	0.7	0.7	7.0	0.4	5.8	2.8	12.9	5.5	33.5
Total	2.5	7.4	0.2	1.9	1.2	6.3	1.1	5.8	6.8	8.4	11.8	29.8

Source : Refs 14,15. NA indicates lack of information. MPCE, monthly per capita expenditure; CVDs, cardiovascular diseases; NCDs, non-communicable diseases; NSSO, National Sample Survey Organization

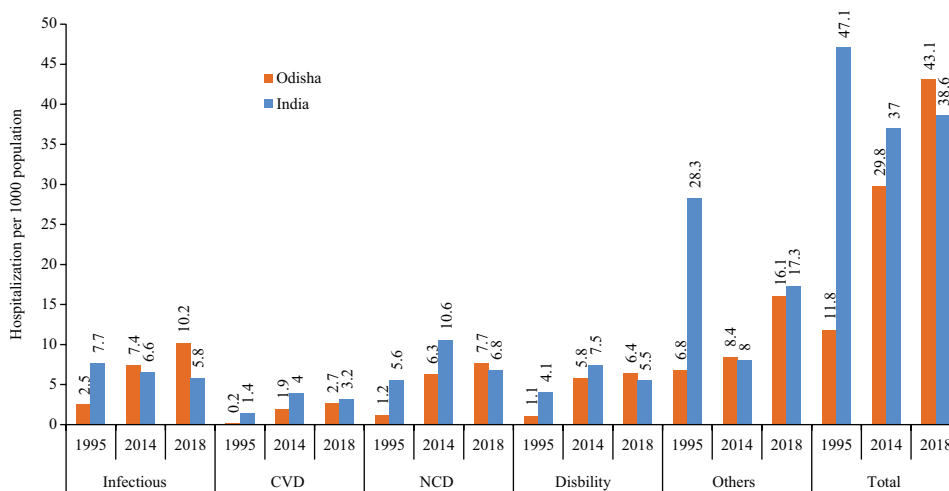


Fig. 1. Hospitalization per 1000 population (during last 365 days) by type of diseases in Odisha and India, 1995-2018). *Source:* Refs 14,15.

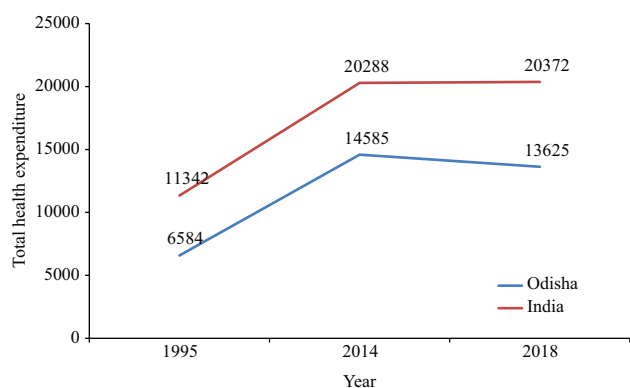


Fig. 2. Total health expenditure in Odisha and India, 1995-2018. *Source:* Refs 14,15.

such as age and marital status played an important role in hospitalization whereas enabling factors likely determined the health expenditure.

The results showed a clear distinction in hospitalization between older population and others as shown earlier^{9,10}. The hospitalization rate among the older population was two times more than others.

Similarly, widowed population were exposed to alleviated risk of hospitalization²⁰. Irrespective of the burden of diseases, the health expenditure among the richest MPCE was consistently higher than others²¹. People with higher level of education as compared to others spent the highest in hospitalization perhaps because they perceived health to be important. Similarly, higher health spending among male, working age population, wealthy households were indicative of ability to pay as well as gender-biased attitude.

Of the three regions in Odisha, the coastal region is considered as a developed region²². The study findings indicated that CVDs and NCDs-related hospitalization were higher in the Coastal region. This trend may indicate availability of healthcare services in the region²³. Moreover, higher health expenditure in the coastal region may also indicate the ability to pay as a possible determinant of health expenditure^{24,25}. The data indicated that fever comprised a major part in the other disease categories (data not shown) [In the 71st round of NSS (2014)], morbidity schedule introduced

Table II. Health expenditure by different types of morbidities across socio-economic and demographic characteristics in Odisha, 1995 and 2014 (in ₹)												
Background characteristics	Infectious		CVDs		NCDs		Disability		Others		Total	
	1995	2014	1995	2014	1995	2014	1995	2014	1995	2014	1995	2014
Gender												
Male	7389	6648	42,890	26,329	11,454	21,646	7376	25,451	4514	7479	6636	15452
Female	2789	9409	36,039	11,278	13,797	12,377	8329	18,534	3960	7645	4241	11441
Place of residence												
Rural	6085	9409	17,394	11,278	11,144	12,377	6554	18,534	3871	7645	5415	12616
Urban	5716	7199	73,359	18,554	13,428	13,764	10,247	23,818	7966	7072	12764	22713
Level of education												
Illiterate	3650	6119	3821	8488	10233	9802	4590	15421	4396	4494	4518	8422
Primary	8481	8005	29,340	12,161	11,078	15,141	8923	28,223	4128	6745	6970	13809
Higher secondary	1904	7874	10,230	25,898	NA	24,969	1129	29,301	24,328	10385	11570	17687
Graduate and above	16,355	4053	116,213	112,868	28,255	45,435	17,071	19,873	13,438	26847	31515	35018
Age group (yr)												
<15	2640	9320	6392	4861	NA	20,355	2475	37356	3221	2806	3350	19291
15-34	4805	7664	2353	21,717	9260	11,483	6943	41,112	2739	11048	3812	14510
35-59	7593	6364	76,022	13,137	15,497	21,669	8069	21,754	5861	6565	9019	13139
60 and above	4815	9131	13,659	43,288	7511	18,676	6131	20,978	3785	7599	5059	18015
Caste												
ST/SC	4534	6971	2752	9756	13,141	10,110	4300	14,212	2531	6517	3914	8841
OBC	NA	7650	NA	25,274	NA	13,601	NA	28,330	NA	8104	NA	14754
Others	7062	7530	51,896	39,001	11,118	36,301	8620	27,328	5564	8450	8111	22204
Religion												
Hindu	NA	7479	NA	23,358	NA	19,057	NA	24543	NA	7358	NA	14651
Others	NA	1829	NA	53,126	NA	19,105	NA	10,609	NA	10414	NA	12563
Marital status												
Never married	9309	13,539	6395	15,359	19,054	20,272	2449	27,855	2297	18567	7164	18530
Currently married	6221	6756	46,210	26,993	10,332	20,767	7630	25,245	4835	6841	6828	15114
Widowed/separated	3871	6906	25,502	6294	23,839	8118	6323	8938	1957	7076	5019	7469
Household size												
1-5 members	4980	7717	36,538	15,626	15893	20,869	7187	21,157	3990	7323	5871	13327
6-7 members	8144	6751	48,533	22,959	6791	16,449	6333	30,652	4858	7292	8243	15042
8 and above members	3307	5960	21,533	65,519	16,114	14,771	11,098	29,530	9560	11478	6580	23707

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Background characteristics	Infectious		CVDs		NCDs		Disability		Others		Total	
	1995	2014	1995	2014	1995	2014	1995	2014	1995	2014	1995	2014
MPCE												
Poorest	2280	7032	729	17,882	1973	7664	2039	20,876	1719	8750	1865	10138
Poor	3693	6135	3429	5425	3851	15,144	5501	17,307	3333	4384	3564	9514
Medium	6501	9838	4458	9460	10,963	13,667	4544	18,772	3518	8108	4630	11687
Rich	4161	7223	10,854	9913	6250	21,532	6442	18,844	4293	8574	4775	13256
Richest	16,790	7268	101,036	69,781	24,951	32,884	11,916	39,451	13,223	11075	19958	29377
NSS region												
Northern	3825	7552	7785	13,247	6452	14,939	5739	23,080	5412	5976	5310	11576
Coastal	7646	8516	66,733	37,866	16,206	25,192	9940	28,754	3086	7688	7950	19727
Southern	3990	4103	21,533	8809	12,784	9466	4511	11,907	5039	9128	5960	8608
Type of health facility												
Public	5471	5683	9286	6398	12,418	10,756	6808	14,621	4660	4655	5772	8074
Private	12,180	15,428	121,341	71,995	9785	40,389	11,936	47,785	8247	18778	17236	36097
Insurance coverage												
Not covered	NA	5010	NA	30,690	NA	16,401	NA	22,211	NA	7182	NA	15153
Covered	NA	8228	NA	21,013	NA	20,257	NA	24,691	NA	7651	NA	12821
Total	14,576	7368	42,019	23,854	11,679	19,057	7484	23,944	4406	7504	6584	14585

Price is adjusted for inflation. NA indicates lack of information. MPCE, monthly per capita expenditure; CVDs, cardiovascular diseases; NCDs, non-communicable diseases; NSS, national sample survey

‘all other fevers’ (includes malaria, typhoid and fevers of unknown origin) in the other disease category; for comparison purpose, fever was classified in other disease in 52nd round of NSS. Tropical diseases such as malaria and other vector-borne diseases are quite prevalent in this region²⁶⁻²⁸. Although increased rate of hospitalization is a positive sign for curative healthcare point of view, but from a public health perspective, it calls for better intervention strategies to control vector-borne diseases²⁹.

The increasing rate of hospitalization for disability-related illness as well as the highest spending on it may be due to road traffic accidents and injuries³⁰. On the other hand, greater financial burden for accidents and injuries is particularly high in poorer households³¹. Trauma care facilities and a better financial protection mechanism for disability-related illness in Odisha are essential. The reduction in health expenditure for infectious disease and CVDs over the years is encouraging. However, considering treatment cost for CVDs being commonly high, more studies are needed to understand the reason for this.

The findings needs to be interpreted in light of a few limitations. Health seeking behaviour including accessibility and affordability of health services considerably influence health service utilization. However, these factors were not taken into account in this study because this study was aimed to understand the changing role of socio-economic and demographic determinants (predisposing and enabling factors) to use health services. Second, in India, religion and caste are closely linked to class divisions, however, due to lack of information on religion and other backward class, the influence of these could not be determined in the 52nd round. We clubbed the religion variable considering low sample size for other religions.

The recently launched *Biju Swasthya Kalyan Yojana* (BSKY) in Odisha is a welcome step for universal health coverage. The experiences from the past have shown that such health insurance schemes have not yielded the desired result. Nevertheless, the new schemes in the State must recognize the unique vulnerabilities of older and widowed population for a better health finance mechanism for them. However, given that percentage share of older population in Odisha is high and expected to increase further, health system needs to prepare for gerontological care by equipping health facilities and training specialized human resources to cater to the needs of the older populations.

Hospitalisation depends on epidemiological pattern, availability and access of services at different levels and therefore, it is necessary to take in to account such factors apart from the socio-economic determinants to intervene policy. The health policy of the State needs to prioritise health financing mechanism in reducing patient’s expenditure and optimising hospitalisation rates by ensuring a responsive health system.

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Supplementary Table. Classification of disease based on International Classification of Disease-10

1995 (52 nd)	2014 (71 st)
Infectious disease	
Diarrhoea/dysentery	Fever with loss of consciousness or altered consciousness
Tetanus	Fever with rash/eruptive lesions
Diphtheria	Fever due to diphtheria, whooping cough
Whooping cough	Tuberculosis
Meningitis and viral encephalitis	Filariasis
Chicken pox	Tetanus
Measles/german measles	HIV/AIDS
Mumps	Other sexually transmitted diseases
Acute respiratory infection (including pneumonia)	Diarrhoeas/dysentery <i>etc.</i>
Chronic amoebiasis	Worms infestation
Pulmonary tuberculosis	Discomfort/pain in the eye with redness or swellings/boils
	Acute upper respiratory infections (cold, runny nose <i>etc.</i>)
Sexually transmitted diseases	Cough with sputum with or without fever and NOT diagnosed as TB
Guinea worm	Skin infection (boil, abscess, itching)
Filariasis (elephantiasis)	
Gastritis/hyper-acidity gastric/peptic ulcer	
CVD	
Heart failure	Stroke/haemiplegia
Diseases of heart	Hypertension
High/low blood pressure	Heart disease: Chest pain, breathlessness, CVD
NCD	
Cerebral stroke	Jaundice
Cough and acute bronchitis	Cancer
Ailment relating to pregnancy and child birth	Anaemia (any cause)
Jaundice	Bleeding disorders
Cancer	Diabetes
Other tumours	Under-nutrition
(General debility) anaemia	Goitre and other diseases of the thyroid
Goitre and thyroid disorders	Others (including obesity), high cholesterol
Diabetes	Cataract
Beri beri	Glaucoma
Rickets	Earache with discharge/bleeding from ear/infections
Other malnutrition diseases	Bronchial asthma <i>etc.</i>
Epilepsy	Abnormality in urination
Other diseases of nerves	Pelvic region/reproductive tract infection
Piles	Change/irregularity in menstrual cycle
Diseases of kidney/urinary system	Pregnancy with complications before or during labour
Prostrate disorder	Complications in mother after birth of child
	Illness in the newborn/sick newborn

Contd...

1995 (52 nd)	2014 (71 st)
	Disability disease
Diseases of eye	Mental retardation
Acute diseases of ear	Mental disorders
Diseases of mouth, teeth and gum	Headache
Injury due to accident and violence	Seizures or known epilepsy
Mental and behavioural disorder	Weakness in limb muscles and difficulty in movements
Visual disability (other than cataract)	Others including impaired cognition, memory loss, confusion
Cataract	Decreased vision
Other diseases of eye	Others (including disorders of eye movements)
Hearing disability	Decreased hearing or loss of hearing
Other diseases of ear	Diseases of mouth/teeth/gums
Speech disability	Joint or bone disease/pain or swelling in any of the joints
Diseases of mouth, teeth and gum	Back or body aches
Hydrocele	Accidental injury, road traffic accidents and falls
Pains in joints	Accidental drowning and submersion
Other disorder of bones and joints	Burns and corrosions
Locomotor disability	Poisoning
Other congenital deformities (excluding disability)	Intentional self-harm
	Assault
	Others disease
Fever of short duration	All other fevers (includes malaria, typhoid and fevers of unknown origin)
Other diagnosed ailment (of <30 days)	Pain in abdomen: Gastric and peptic ulcers/acid reflux/acute abdomen
Undiagnosed ailment (of <30 days)	Lump or fluid in abdomen or scrotum
Other diagnosed ailment (of >30 days)	Gastrointestinal bleeding
Undiagnosed ailment (of >30 days)	Contact with venomous/harm-causing animals and plants
	Symptom not fitting into any of the above categories
	Could not even state the main symptom

Source: Ref. 18. CVDs, cardiovascular diseases; NCDs, non-communicable diseases; TB, tuberculosis