सत्यमेव जयते

CAUSES OF DEATH

STATISTICS 2017-19

Office of The Registrar General & Census Commissioner, India
Ministry of Home Affairs, Government of India

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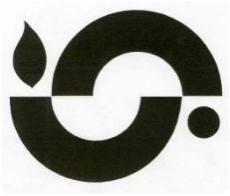
CAUSES OF DEATH STATISTICS 2017-2019



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PREFACE

The data on the levels and causes of mortality is critical in determining the public health importance of specific health problems and in designing appropriate interventions to reduce mortality. Accurate information on the nature and prevalence of causes of death is essential to guide policy-makers in setting priorities for different health programs. The size and geographical distribution of occurrence of deaths by their causes for different age-groups, sex, residence and various other characteristics are of immense value to the public health planners, medical scientists, epidemiologists and researchers. The present report on Causes of Death in India: 2017-19 under the domain of Sample Registration System (SRS) is comprehensive in coverage and is representative.

With the merging of Survey of Causes of Death for rural areas to the Sample Registration System (SRS) in 1999, there was an imperative need for reliable, timely, representative and relevant information on causes of death due to diseases, injuries and risk factors for the entire cross-section of population in the country. In view of this, the method of Verbal Autopsy (VA) was used to determine the underlying cause of death starting from 2001-2003 under the domain of SRS, which is an ongoing, low cost and long-term fertility and mortality measurement system. The classification conforms to the World Health Organization's (WHO) International Classification of Diseases (ICD) tenth revision to facilitate comparison with similar national and international estimates. The assignment of cause of death has been done through a process of medical evaluation by two independent trained physicians with support and coordination from AIIMS Technical Support Unit (ATSU) under the MoU with All India Institute of Medical Sciences (AIIMS).

The present Report on Causes of Death: 2017-2019 is based on direct source, provides causes of death cross classified by age, sex, residence, EAG states and Assam vs. Other States and major zones across the country. The Report reviews the top ten causes of death stratified by different variables besides examining the mortality from special conditions such as cardiovascular disease, Malignant & other neoplasms, Diabetes mellitus, Tuberculosis, Malaria, and HIV/AIDS. The important findings of the Report, inter-alia are the non-communicable diseases are the predominant cause in the overall mortality pattern in the country. Perinatal condition is the topmost cause of under-five age deaths. The cardiovascular disease, a lifestyle disease, is the leading cause in 30+ age group while unintentional injuries: Motor Vehicle Accidents is the most occurring cause of death in 15-29 age group.

The SRS has been a joint effort of the Centre and State Governments. The field work for the present study has become possible with the active support of the officials in the Directorates of Census Operations including the Directorates of Economics and Statistics of Kerala and Maharashtra. My sincere thanks to different stakeholders of the project, and the SRS Unit of the Vital Statistics Division, ORGI for their constructive support in formulation this publication.

New Delhi
February 2023

Sh. Mritunjay Kumar Narayan
Registrar General & Census Commissioner, India

CHAPTER 1

INTRODUCTION, SURVEY DESIGN AND ESTIMATION PROCEDURE

1.1 Background

Long-term mortality measurement by cause, gender and geographic area has been the requirement of every country. With this in view, Medical Certification of Causes of Death (MCCD) was introduced in the country by providing statutory backing under Section 10 of the Registration of Births and Deaths Act, 1969. Despite its operationalization in almost all the States/UTs, the scheme has been working at different levels of efficiency across the States in terms of coverage, reporting and quality of data. Initially, deaths occurring in urban medical institutions were only covered under the scheme. Owing to these limitations, the cause specific mortality flowing from MCCD was far from satisfactory. The gap was bridged to an extent by the 'Survey of Causes of Death' undertaken in sample villages of selected Primary Health Centers (PHC) in rural areas. However, the 'Survey of Causes of Death' had been merged with the Sample Registration System (SRS) from 1999, thus encompassing both rural and urban areas. Since then, a system of Verbal Autopsy under the domain of SRS has been in operation. to effect improvement in the system, the Office of the Registrar General, India (ORGI) has been trying to establish a reliable system to measure the causes of death in the country.

1.2 Objectives

The primary objective of the survey is to build up statistics on most probable causes of death using lay diagnosis reporting (post death verbal autopsy) method through enquiry based on symptoms, conditions, duration and anatomical site of the diseases as observed by family members of the deceased at the time of death.

1.3 Methodology

1.3.1 The SRS sample is replaced every ten years based on the latest census frame. The current frame is in use since base line survey i.e. 2014 based on Census 2011. The present study is, based on the sample drawn from 2011 Census frame covering 8844 sample units (4,960 rural and 3,884 urban units) with approximately 8.2 million population across 29 states and 7 union territories for the year 2017-19.

1.3.2 The causes of death have been determined using an advanced form of Verbal Autopsy called the "RHIME" or Representative, Re-sampled, Routine Household Interview of Mortality with Medical Evaluation method. Each household in the SRS sample units where a death occurs is visited, retrospectively, by the SRS supervisors to collect the details of signs and symptoms for determining to the extent possible, the underlying causes of death. The frequency of the survey is half yearly i.e. first half year is from January to June and second half year from July to December. AIIMS Technical Support Unit (ATSU), located at Centre for Community Medicine,

All India Institute of Medical Sciences, New Delhi facilitates cause of death assignment from verbal autopsy forms. The SRS field staff are trained extensively by ATSU, in collaboration with a network of 26 medical colleges (including AIIMS) also called Network Partner Institutes (List at Annexure 4). Training for facilitating collection of symptoms, signs and key circumstances leading to death using a two-page structured Form with a brief narrative in local language, is undertaken regularly. Importantly, field staff are instructed not to assign a cause of death, but only collect the measure symptoms and narrative of the events leading up to death. The training aims to improve the Supervisors ability to collect data from the respondents in the open/closed format using symptom checklists and probing questions. The goal is to obtain a complete and logical history of the signs, symptoms and supportive details of each death.

1.4 Assignment of Causes of Death

1.4.1 The assignment of cause of death involved medical evaluation by two independent trained physicians who examines the field reports using a web-based system developed specifically for this study. This has been done to reduce the inter-physician variation. Physicians undergo standardized training and have guidelines for the most common causes. The two physicians, based on examination of household reports, would either agree on the underlying ICD-10 code assigned for the cause of death pending which their forms would be anonymously shuffled between them for re-conciliations. Continuing disagreements would be referred to a senior third physician who adjudicates the final ICD-10 code. The causes of death are classified /coded from a list of 79 common causes and are based on 10^{th} revision of International Classification of Diseases (ICD-10). The analysis of these data would provide a reliable profile of death of major cause groups at National level, which is the need of the time.

1.4.2 A random sample of about 5% of the units has been re-surveyed by an independent team to ensure the quality of fieldwork, completeness and accuracy.

1.5 Forms Canvassed & Symptom list

1.5.1 The RHIME forms were designed after seeking expert opinion from the World Health Organization (WHO) and also after review of the literature on validation studies. All forms have a common format that includes a basic demographic profile of the respondent and the deceased, details of illness and a narrative section. These forms conform to the latest standards and are provided as a single-leaf, double sided layout in easy to carry booklets. Each type of form (neonatal, child, adult and maternal) is colour coded and bound according to the type of form for ease of identification in field.

1.5.2 In the revised set up the causes of deaths are collected through four forms (structured and narrative) which have been developed on the basis of existing experience of WHO, Chinese Surveillance system and other International/National studies and are as under:

i. Neo-Natal Form (10A)- Children of age 0-28 days

ii. Childhood Form (10B)- Children of age 29 days to 14 years

iii. Adult Form (10C)- Adults of age above 14 years

iv. Maternal Death Form (10D)- Maternal Deaths

1.6 Estimation Procedure:

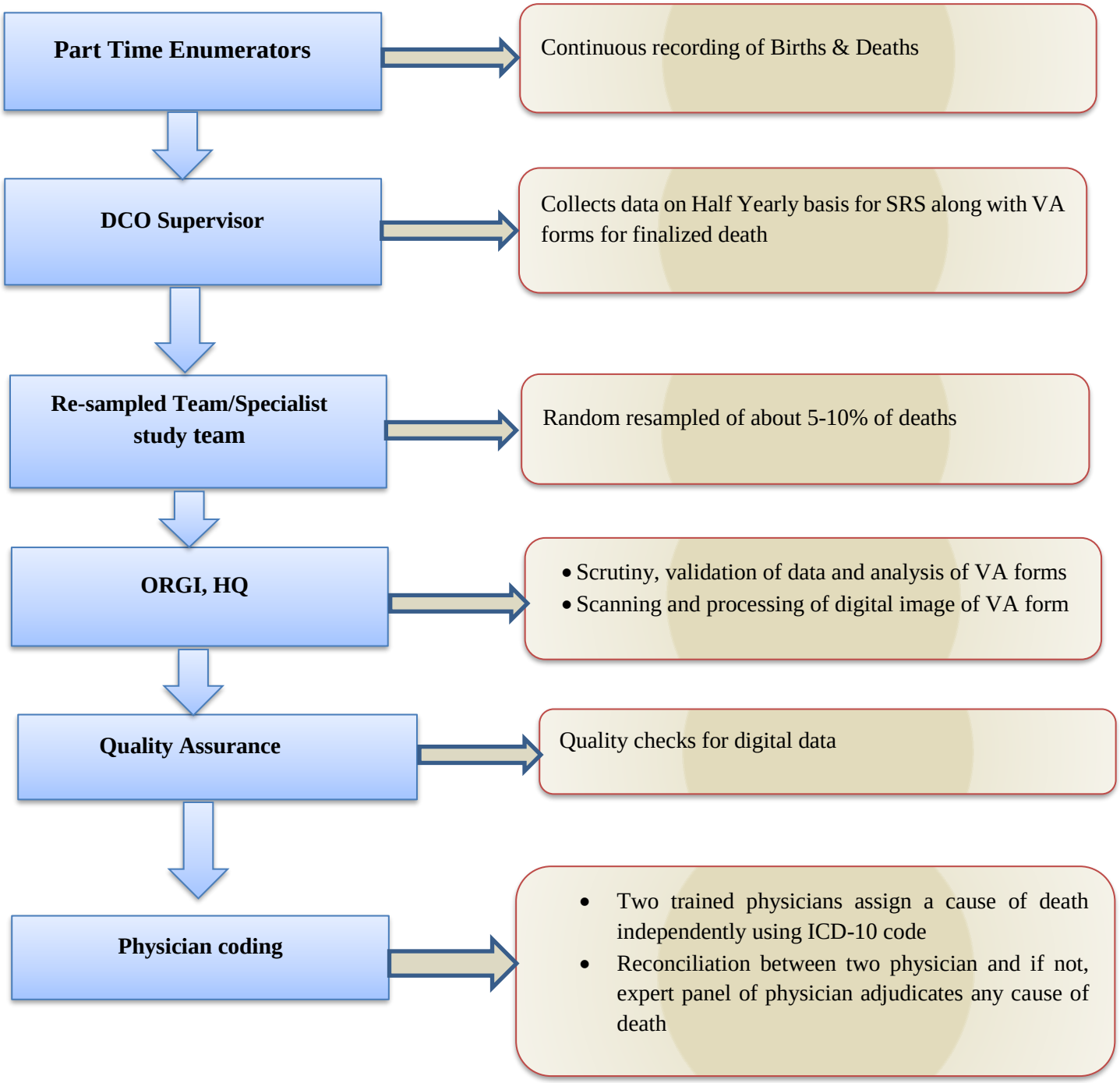
1.6.1 The various diseases have been grouped into three categories: (I) communicable, maternal, perinatal and nutritional conditions; (II) non-communicable diseases; and (III) injuries. This classification conforms to the WHO's "Global Burden of Disease (GBD)" categorization of deaths and would facilitate comparability with WHO estimates for India and for other countries. For transparency and ease of understanding, a fourth category namely symptoms, signs and ill-defined conditions has been added.

1.6.2 For the purpose of this Report, the states have been grouped into two major categories; the first category comprises the "Empowered Action Group" (EAG) states of Bihar, Jharkhand, Madhya Pradesh, Chhattisgarh, Orissa, Rajasthan, Uttar Pradesh and Uttarakhand. The state of Assam has also been added to this list. These states have had historically higher child mortality indicators, higher poverty levels and lower life-expectancy and other indicators than most other states. The second category covers the remaining major states and has been labelled as 'Other States'. The other major grouping is rural or urban residence, as defined in the SRS.

1.6.3 The major statistics presented are simple: proportion of deaths by major causes, along with specific proportions for the various diseases at different ages, gender (male or female) and residence (rural/urban). In all, 95% of all deaths collected had been double coded by two physicians. The reasons for exclusion from analysis were chiefly due to poor quality of image, non-legible or incorrect language code, incomplete coding etc. Thus, the study is based on the 1,38,648 deaths coded to for the year 2017-19.

1.6.4 In SRS, the usual practice is to present the estimates of vital indicators after applying multiplication factors to the sample values. The proportions based on estimates generally do not vary significantly from those arrived from the sample values at broader level of aggregations. However, the results are presented in the Report based on sample deaths.

Field Activities and Cause of Death assignment



1.7 Executive Summary:

- Overall non-communicable diseases are the leading causes of death in the country, constituting 56.0% of all deaths. Communicable, maternal, perinatal and nutritional conditions constitute another 21.5% of deaths. In 2016-2018 period, the corresponding value were 54.5% and 22.0% respectively. Injuries constitute 10.4% of deaths and ill-defined causes constitute 12.2% of deaths. However, majority of ill-defined causes are at older ages (70 or higher years).

- In Other states, there is significantly higher proportion of deaths due to non-communicable diseases (59.8%) vis-à-vis 49.0% in EAG states and Assam. The mortality due to communicable, maternal, perinatal and nutritional conditions diseases is more in proportion in the EAG states and Assam (29.1 %) vis-à-vis Other States (17.3%).

- Rural and urban areas report more deaths (54.5% and 61.3% respectively) due to non-communicable diseases. The differences in proportion in communicable and non-communicable diseases are visible in urban (18.2% and 61.3%) and in rural area (22.4% and 54.5%). Both the rural and urban areas have a lower number of deaths from communicable, maternal, perinatal and nutritional conditions. Injuries constitute in rural and urban areas as 10.7% and 9.1% proportion of total deaths, however, the specific causes of injury vary.

- Overall, the leading cause of death is cardiovascular disease (28.9%), followed by ill-defined conditions, all other symptoms, signs and abnormal clinical and laboratory findings including senility(12.2%), respiratory diseases (7.3%), malignant and other neoplasm (6.8%), fever of unknown origin (5.0%), Digestive diseases (5.0%), unintentional injuries: other than motor vehicle accidents(4.0%), perinatal conditions (3.7%), respiratory infections (3.6%) and unintentional injuries: motor vehicle accidents(3.6%)

- Notable differences by gender are seen in the case of cardiovascular diseases with 30.8% of male deaths against 26.2% of female deaths. Higher proportion of female deaths can be seen from analysis in ill-defined conditions, all other symptoms, signs and abnormal clinical and laboratory findings including senility 15.5% vis-à-vis males 9.7%, respiratory diseases with 7.0% of male deaths vis-à-vis 7.7% female deaths, and malignant and other neoplasm with 6.4% of male deaths versus 7.3% of female deaths.

- Cardiovascular disease is the leading cause of death among males as well as females. However, the male-female patterns are different. In contrast, males have higher number of deaths from Unintentional injuries: Motor Vehicle Accidents (5.2%) versus females (1.4%).

- The specific analysis of causes of death from tuberculosis, Malaria, Cardiovascular diseases, HIV/AIDS, etc shows that tuberculosis is the leading cause among these three conditions, causing about 2.9% of all deaths, and 4.2% at ages 30-69. Malaria follows it, causing about 0.4% proportion of all deaths.

- There is a marked regional variation in the contribution of various causes to the leading deaths. Cardiovascular disease is the leading cause of death in all the regions of India, with the highest proportion in the Southern region (33.0%) and the lowest in the Central region (21.4%). The second leading cause of death varies across all the regions

- Respiratory diseases account for substantial proportion of deaths in all the regions with the maximum reported in the Central region (9.8%) followed by Northern region (8.6%) and the

minimum in the North Eastern region (5.7%). The highest proportions of deaths due to ill-defined/ All other symptoms, signs and abnormal clinical and laboratory findings is observed in Western region (17.4%) followed by Eastern regions with (13.0%) each.

- Malignant and other Neoplasm are responsible for the maximum proportion of deaths in North-East (8.2%), Southern region (8.0%) followed by North (7.8%), Central (5.7%). For East and West regions, Malignant and other Neoplasm attribute 5.5% and 5.4% proportion respectively. The proportion of deaths attributable to tuberculosis is 4.4% in Central region. Tuberculosis is not in the top 10 causes of death in North, Eastern, North-Eastern, Western and Southern region for present round.

1.8 Conclusion

1.8.1 It is observed that there has been a decreasing trend of death in early ages and a visible shift of deaths to higher age groups. It shows impact of proper health facilities, which is suggestive that proper prevention programmes and health care facilities can certainly result in improving the situation. The findings of the Report highlight specifically the need for augmenting interventionist strategies and programs for reducing the mortality resulting from health problems in childhood. The spread of non-communicable diseases, particularly, the Cardiovascular diseases, respiratory disease and Malignant and other Neoplasms, which are causing maximum deaths in rural and urban areas across EAG states & Assam and the Other States, is another important finding of the Report.

1.8.2 There is, however, a need for a word of caution. The mortality results presented in the Report should be interpreted carefully as the chance of misclassification of causes is not completely ruled out. However, despite this limitation, the study brings out findings which should definitely help enrich understanding of the mortality situation and challenges thereof in the country.

Table 1.1 Number of sample units and population covered, India, States and Union Territories, 2019

India/States/ Union Territories	Number of sample units			Population covered (in'000)		
	Total	Rural	Urban	Total	Rural	Urban
India	**8844**	**4960**	**3884**	**8209**	**6003**	**2206**
Bigger States						
1. Andhra Pradesh	325	198	127	343	273	70
2. Assam	299	89	210	227	111	116
3. Bihar	330	200	130	378	298	79
4. Chhattisgarh	158	73	85	121	73	47
5. Delhi	197	10	187	145	16	129
6. Gujarat	478	231	247	439	305	134
7. Haryana	256	144	112	259	195	64
8. Jammu & Kashmir	350	226	124	288	236	52
9. Jharkhand	210	91	119	164	99	65
10. Karnataka	511	361	150	496	414	82
11. Kerala	280	175	105	369	314	55
12. Madhya Pradesh	448	285	163	413	316	97
13. Maharashtra	661	306	355	537	357	180
14. Odisha	405	290	115	362	298	65
15. Punjab	249	130	119	214	149	65
16. Rajasthan	350	236	114	340	278	62
17. Tamil Nadu	545	235	310	534	343	191
18. Telangana	224	121	103	217	159	57
19. Uttar Pradesh	500	328	172	532	427	105
20. Uttarakhand	374	195	179	301	192	110
21. West Bengal	555	304	251	565	431	134
Smaller States						
1. Arunachal Pradesh	65	50	15	44	33	11
2. Goa	95	45	50	91	68	24
3. Himachal Pradesh	210	155	55	121	94	27
4. Manipur	165	120	45	152	125	27
5. Meghalaya	130	95	35	85	65	20
6. Mizoram	45	25	20	36	25	11
7. Nagaland	50	35	15	35	27	8
8. Sikkim	65	50	15	63	50	12
9. Tripura	90	65	25	113	97	16
Union Territories						
1. Andaman & Nicobar Islands	55	37	18	51	39	11
2. Chandigarh	40	5	35	35	10	24
3. Dadra & Nagar Haveli	35	15	20	42	29	13
4. Daman & Diu	25	15	10	30	22	7
5. Lakshadweep	14	2	12	13	3	9
6. Puducherry	55	18	37	54	29	25

Note: Rural and Urban population may not add up to the total population due to rounding.

Table 1.2: Comparison of Percentage of Deaths in Verbal Autopsy (2017-2019) and Sample Registration System (SRS-2017-2019) in different age groups

Age Group	EAG States & Assam		Other States	
	SRS	VA	SRS	VA
0-4	14.6	13.2	6.1	4.3
05-14	1.9	1.9	1.0	0.8
15-29	6.0	6.3	4.7	5.5
30-34	2.5	2.6	2.4	2.4
35-44	6.2	6.1	6.7	6.6
45-54	8.4	7.7	11.0	10.6
55-69	25.7	26.0	29.1	28.9
70+	34.6	36.2	39.0	40.9

Table 1.3A - Distribution of Deaths in India: 2017-2019, Person

Causes of Death	Age-Group (Percentage of Deaths)							
	Person	0-4	05-14	15-29	30-44	45-54	55-69	70+
Communicable, maternal, perinatal and nutritional conditions	**21.5**	**83.6**	**38.2**	**19.8**	**14.3**	**12.2**	**14.7**	**18.1**
Acute bacterial sepsis & severe infections	0.5	4.0	0.4	0.4	0.3	0.2	0.3	0.2
Diarrhoeal diseases	3.3	5.8	9.2	2.8	1.5	1.4	2.4	4.2
Fever of unknown origin	5.0	4.1	9.1	4.4	2.5	2.4	4.5	6.7
HIV/AIDS	0.2	0.0	0.1	0.4	0.8	0.4	0.1	0.0
Malaria	0.4	0.3	1.9	1.0	0.5	0.4	0.4	0.2
Maternal conditions	0.2	0.0	0.0	2.6	0.7	0.0	0.0	0.0
Nutritional deficiencies	0.4	0.8	1.4	0.4	0.3	0.3	0.3	0.5
Other infectious and parasitic diseases	0.9	1.8	6.5	2.0	1.3	0.8	0.7	0.4
Perinatal conditions	3.7	49.0	0.1	0.0	0.0	0.0	0.0	0.0
Respiratory infections	3.6	17.4	6.3	1.0	0.9	1.2	1.9	3.7
Selected tropical diseases	0.4	0.3	2.3	1.0	0.7	0.4	0.4	0.2
Tuberculosis	2.9	0.1	0.9	3.8	4.8	4.7	3.8	1.8
Non-Communicable diseases	**56.0**	**10.1**	**25.0**	**29.5**	**55.4**	**72.7**	**74.4**	**52.5**
Cardiovascular diseases	28.9	0.6	1.5	9.4	24.4	37.1	40.0	29.0
Congenital anomalies	0.5	5.7	4.1	0.8	0.2	0.0	0.0	0.0
Diabetes mellitus	3.2	0.0	0.2	0.7	1.6	3.4	5.0	3.4
Digestive diseases	5.0	1.8	7.7	6.9	11.5	9.3	5.7	2.4
Genito-urinary diseases	3.0	0.2	1.2	2.4	4.0	4.5	3.9	2.5
Malignant and other Neoplasms	6.8	0.4	3.7	5.1	9.4	12.9	10.0	4.0
Neuro-psychiatric conditions	0.8	0.8	4.7	2.4	1.7	0.9	0.6	0.5
Respiratory diseases	7.3	0.3	0.9	1.4	2.2	4.3	8.9	10.5
Other Non-Communicable Diseases	0.3	0.3	1.0	0.5	0.4	0.3	0.3	0.3
Injuries	**10.4**	**4.9**	**33.5**	**47.1**	**28.0**	**12.9**	**6.1**	**3.7**
Injuries of Undetermined intent	0.1	0.0	0.5	0.5	0.4	0.1	0.0	0.0
Intentional injuries: Other Than Suicide	0.2	0.1	0.6	1.0	0.6	0.3	0.1	0.0
Intentional injuries: Suicide	2.5	0.0	2.3	17.4	8.2	3.3	1.1	0.3
Unintentional injuries: Motor Vehicle Accidents	3.6	0.7	7.7	18.4	12.5	5.1	2.1	0.6
Unintentional injuries: Other Than Motor Vehicle Accidents	4.0	4.0	22.4	9.8	6.3	4.0	2.8	2.8
Symptoms, signs and III-defined conditions	**12.2**	**1.4**	**3.3**	**3.6**	**2.3**	**2.2**	**4.8**	**25.7**
Ill-defined/All other symptoms, signs and abnormal clinical and laboratory findings	12.2	1.4	3.3	3.6	2.3	2.2	4.8	25.7

Table 1.3B - Distribution of Deaths in India: 2017-2019, Male

Causes of Deaths	Age-Group (Percentage of Deaths)							
	Person	0-4	05-14	15-29	30-44	45-54	55-69	70+
Communicable, maternal, perinatal and nutritional conditions	**19.4**	**82.6**	**34.4**	**14.0**	**12.1**	**11.1**	**13.5**	**17.3**
Acute bacterial sepsis & severe infections	0.5	3.8	0.2	0.4	0.2	0.2	0.3	0.3
Diarrhoeal diseases	2.7	5.4	7.4	2.0	1.2	1.2	1.9	3.7
Fever of unknown origin	4.2	4.1	8.5	3.5	2.1	1.8	3.7	6.1
HIV/AIDS	0.2	0.0	0.1	0.4	0.8	0.5	0.1	0.0
Malaria	0.3	0.2	1.5	0.8	0.4	0.3	0.3	0.2
Nutritional deficiencies	0.3	0.7	1.3	0.1	0.2	0.2	0.2	0.5
Other infectious and parasitic diseases	0.8	1.7	5.9	1.6	1.1	0.8	0.6	0.4
Perinatal conditions	3.4	49.4	0.0	0.0	0.0	0.0	0.0	0.0
Respiratory infections	3.2	16.8	6.0	0.6	0.7	1.0	1.7	3.7
Selected tropical diseases	0.4	0.3	2.7	1.0	0.6	0.3	0.3	0.2
Tuberculosis	3.3	0.1	0.8	3.5	4.8	4.9	4.3	2.3
Non-Communicable diseases	**58.3**	**10.7**	**23.1**	**28.1**	**54.0**	**71.9**	**75.5**	**56.9**
Cardiovascular diseases	30.8	0.7	1.6	9.4	24.9	38.8	42.0	31.5
Congenital anomalies	0.5	6.0	3.2	0.7	0.1	0.0	0.0	0.0
Diabetes mellitus	3.0	0.0	0.0	0.6	1.4	2.9	4.5	3.5
Digestive diseases	6.3	1.9	6.6	7.2	13.6	11.1	6.7	2.8
Genito-urinary diseases	3.2	0.2	1.5	2.2	3.7	4.3	3.9	2.8
Malignant and other Neoplasms	**6.4**	**0.4**	**3.8**	**4.1**	**6.6**	**10.1**	**9.1**	**4.5**
Neuro-psychiatric conditions	0.8	0.8	4.6	2.4	1.6	0.8	0.5	0.5
Respiratory diseases	7.0	0.3	0.8	1.1	1.8	3.7	8.4	11.0
Other Non-Communicable Diseases	0.2	0.3	1.1	0.3	0.2	0.2	0.2	0.2
Injuries	**12.5**	**5.1**	**39.6**	**54.7**	**31.9**	**15.0**	**6.9**	**3.6**
Injuries of Undetermined intent	0.1	0.0	0.6	0.4	0.5	0.2	0.1	0.0
Intentional injuries: Other Than Suicide	0.3	0.0	0.6	1.4	0.8	0.3	0.1	0.0
Intentional injuries: Suicide	2.8	0.0	1.9	15.5	8.3	3.8	1.3	0.4
Unintentional injuries: Motor Vehicle Accidents	5.2	0.8	8.3	26.0	15.7	6.5	2.7	0.8
Unintentional injuries: Other Than Motor Vehicle Accidents	4.1	4.3	28.3	11.5	6.6	4.2	2.7	2.4
Symptoms, signs and III-defined conditions	**9.7**	**1.6**	**2.9**	**3.2**	**2.0**	**1.9**	**4.0**	**22.3**
Ill-defined/All other symptoms, signs and abnormal clinical and laboratory findings	9.7	1.6	2.9	3.2	2.0	1.9	4.0	22.3

Table 1.3C - Distribution of Deaths in India: 2017-19, Female

Causes of Deaths	Age-Group (Percentage of Deaths)							
	Person	0-4	05-14	15-29	30-44	45-54	55-69	70+
Communicable, maternal, perinatal and nutritional conditions	**24.3**	**84.7**	**42.8**	**28.9**	**19.5**	**14.4**	**16.6**	**19.0**
Acute bacterial sepsis & severe infections	0.6	4.2	0.7	0.3	0.4	0.4	0.3	0.2
Diarrhoeal diseases	4.1	6.2	11.4	4.1	2.2	1.9	3.1	4.8
Fever of unknown origin	6.0	4.1	9.8	5.8	3.3	3.5	5.5	7.4
HIV/AIDS	0.2	0.0	0.1	0.4	0.8	0.4	0.1	0.0
Malaria	0.4	0.3	2.5	1.4	0.9	0.4	0.5	0.2
Maternal conditions	0.5	0.0	0.0	6.6	2.2	0.1	0.1	0.0
Nutritional deficiencies	0.6	1.0	1.5	0.8	0.5	0.5	0.5	0.5
Other infectious and parasitic diseases	1.0	1.9	7.2	2.5	1.8	0.9	0.8	0.4
Perinatal conditions	4.0	48.4	0.3	0.0	0.0	0.0	0.0	0.0
Respiratory infections	4.2	18.1	6.7	1.6	1.4	1.7	2.3	3.8
Selected tropical diseases	0.4	0.3	1.7	1.0	1.0	0.5	0.4	0.2
Tuberculosis	2.3	0.1	0.9	4.4	4.9	4.2	3.0	1.4
Non-Communicable diseases	**52.7**	**9.5**	**27.1**	**31.5**	**58.6**	**74.3**	**72.6**	**47.9**
Cardiovascular diseases	26.2	0.6	1.5	9.4	23.3	33.6	36.9	26.5
Congenital anomalies	0.6	5.4	5.1	0.9	0.2	0.1	0.0	0.0
Diabetes mellitus	3.5	0.0	0.5	0.8	2.1	4.4	5.8	3.2
Digestive diseases	3.4	1.6	9.0	6.4	6.7	5.7	4.1	1.9
Genito-urinary diseases	2.8	0.3	0.8	2.6	4.6	5.0	3.7	2.1
Malignant and other Neoplasms	7.3	0.4	3.6	6.6	15.9	18.6	11.2	3.4
Neuro-psychiatric conditions	0.9	0.8	4.8	2.3	2.1	1.0	0.7	0.5
Respiratory diseases	7.7	0.2	0.9	1.9	3.1	5.6	9.6	9.9
Other Non-Communicable Diseases	0.4	0.2	0.9	0.6	0.7	0.5	0.4	0.4
Injuries	**7.5**	**4.7**	**26.3**	**35.3**	**19.1**	**8.5**	**4.9**	**3.8**
Injuries of Undetermined intent	0.1	0.1	0.4	0.6	0.2	0.0	0.0	0.0
Intentional injuries: Other Than Suicide	0.1	0.1	0.7	0.5	0.3	0.1	0.1	0.0
Intentional injuries: Suicide	2.1	0.0	2.8	20.3	7.9	2.3	0.8	0.2
Unintentional injuries: Motor Vehicle Accidents	1.4	0.7	7.1	6.7	5.0	2.4	1.1	0.3
Unintentional injuries: Other Than Motor Vehicle Accidents	3.8	3.8	15.4	7.2	5.7	3.6	2.8	3.3
Symptoms, signs and III-defined conditions	**15.5**	**1.2**	**3.7**	**4.2**	**2.8**	**2.7**	**5.9**	**29.3**
III-defined/All other symptoms, signs and abnormal clinical and laboratory findings	15.5	1.2	3.7	4.2	2.8	2.7	5.9	29.3

CHAPTER 2

MAJOR CAUSES OF DEATHS

2.1 This chapter present the statistics relating Major Cause Groups of deaths in India for 2017-19 with segregated information for Gender, Residence and EAG States and Assam and other States. In addition to this, this chapter also provides Top 10 causes of deaths in India and segregation at the level of Gender, Residence and EAG States and Assam and other States.

2.2.1 Table 2.1A depicts the proportion of deaths by major cause groups in India for a period of 2017-2019. Overall non-communicable diseases are the leading causes of deaths in the country, constituting 56.0 percentage proportion of all deaths followed by Communicable, maternal, perinatal and nutritional conditions which constitute another 21.5 percentage proportion of deaths. Proportion of male deaths in total deaths is higher for non-communicable diseases and injuries whereas for symptoms, signs and ill-defined conditions and Communicable, maternal, perinatal and nutritional conditions, proportion of female deaths is higher than male deaths. The deaths due to Symptoms, signs and ill-defined conditions is higher in female (15.5%) than male (9.7%). Chart - 1 provides the distribution of deaths by major cause groups, for male, female and person for the period 2017-19. Chart 2 provides distribution of deaths by major cause groups for persons in India for the period 2017-2019.

Table 2.1.A - Distribution of Deaths by Major Cause Groups in India: 2017-2019

Cause of Death	Number and Proportion of Death					
	Male	Male (%)	Female	Female (%)	Person	Person (%)
Non-Communicable diseases	46699	58.3	30893	52.7	77592	56.0
Communicable, maternal, perinatal and nutritional conditions	15564	19.4	14223	24.3	29787	21.5
Injuries	10010	12.5	4374	7.5	14384	10.4
Symptoms, signs and Ill-defined conditions	7781	9.7	9104	15.5	16885	12.2
Total	**80054**	**100**	**58594**	**100**	**138648**	**100**

Chart 1-Distribution of Deaths by Major Cause Groups by Gender, India, 2017-2019

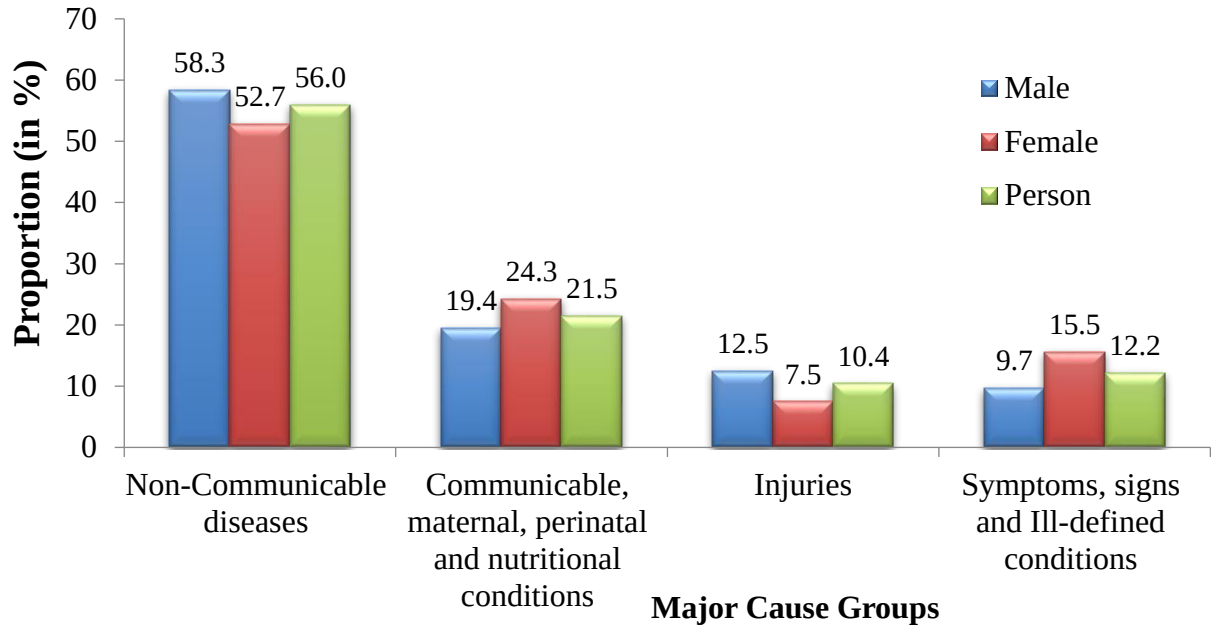
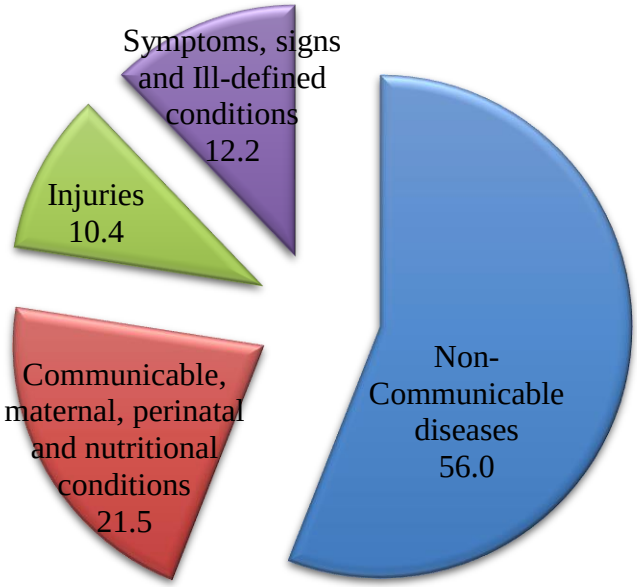


Chart 2- Distribution of Deaths by Major cause groups in India: 2017-2019

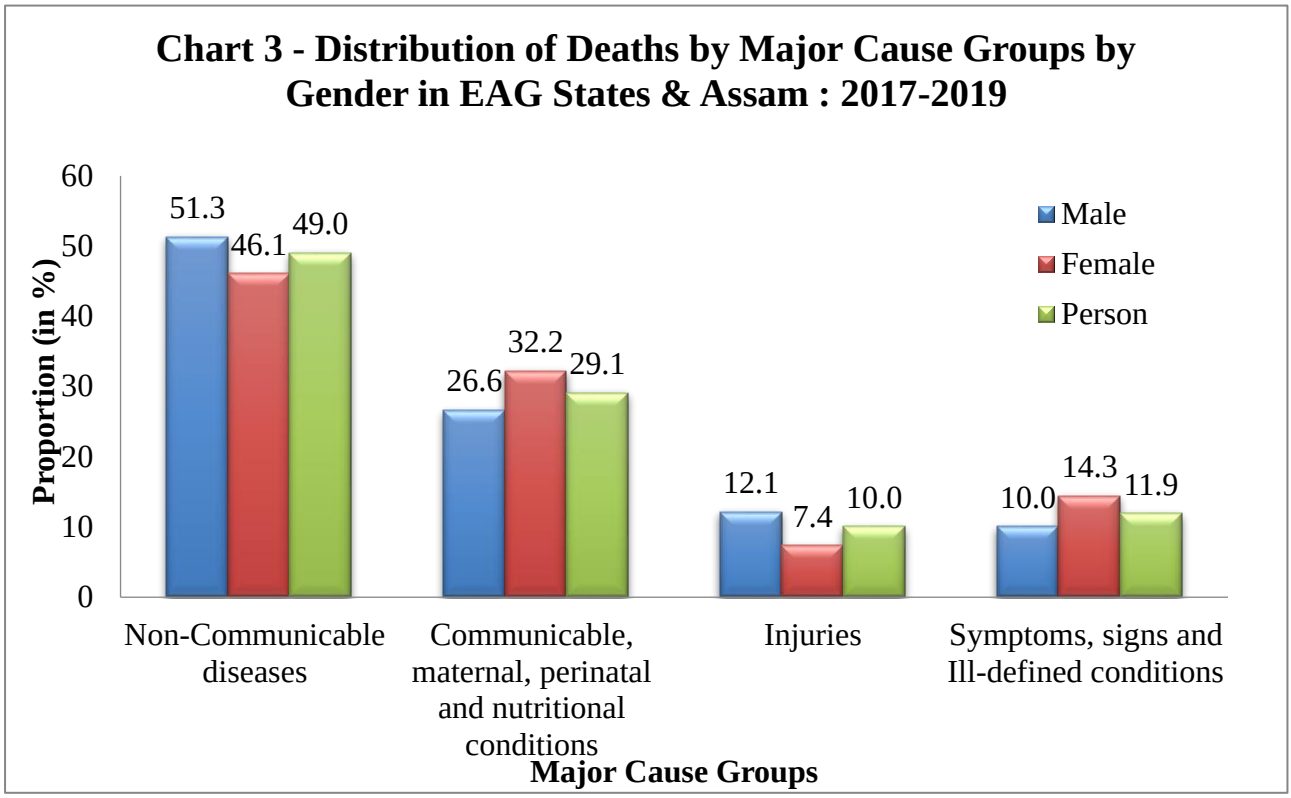


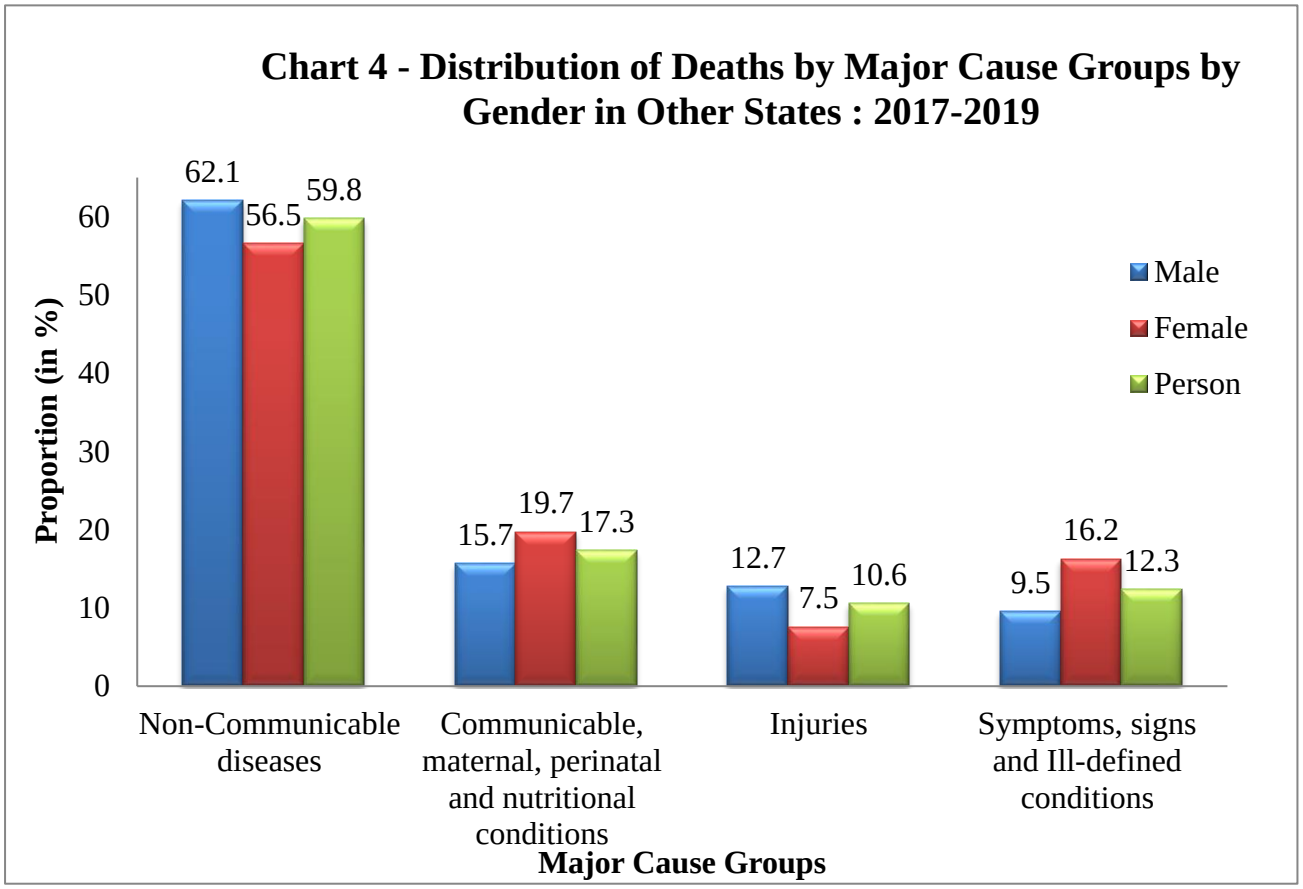
2.2.2 Table 2.1B shows the proportion of deaths in EAG States & Assam and Other states by major cause group of deaths. At national level, non- communicable diseases (56.0%) are leading the cause of death. The proportion of deaths due to non-communicable diseases continues to be higher in Other states (59.8%) as compared to EAG states & Assam (49.0%). Communicable diseases as second major cause of death group has higher proportion of deaths in EAG states &

Assam (29.1%) as compared to Other states (17.3%). It is observed that the proportion of deaths due to Symptoms, signs and ill-defined conditions is higher in females for both categories of EAG & Assam States (14.3%) and Other States (16.2%). Similarly, the proportion of deaths due to Injuries is higher in males for both categories of EAG & Assam States (12.1%) and Other States (12.7%). Chart 3 and 4 provides details about the distribution of the deaths by major cause groups for males, females and persons in EAG States and Assam and Other States respectively.

Table 2.1.B – Distribution of Deaths by Major Cause Groups in EAG States & Assam and Other States: 2017-2019

Cause of Death	Number and Proportion of Deaths					
	Male	Male (%)	Female	Female (%)	Person	Person (%)
EAG and Assam						
Non-Communicable diseases	14206	51.3	9854	46.1	24060	49.0
Communicable, maternal, perinatal and nutritional conditions	7371	26.6	6892	32.2	14263	29.1
Symptoms, signs and ill-defined conditions	2784	10.0	3068	14.3	5852	11.9
Injuries	3351	12.1	1572	7.4	4923	10.0
Others						
Non-Communicable diseases	32493	62.1	21039	56.5	53532	59.8
Communicable, maternal, perinatal and nutritional conditions	8193	15.7	7331	19.7	15524	17.3
Symptoms, signs and ill-defined conditions	4997	9.5	6036	16.2	11033	12.3
Injuries	6659	12.7	2802	7.5	9461	10.6



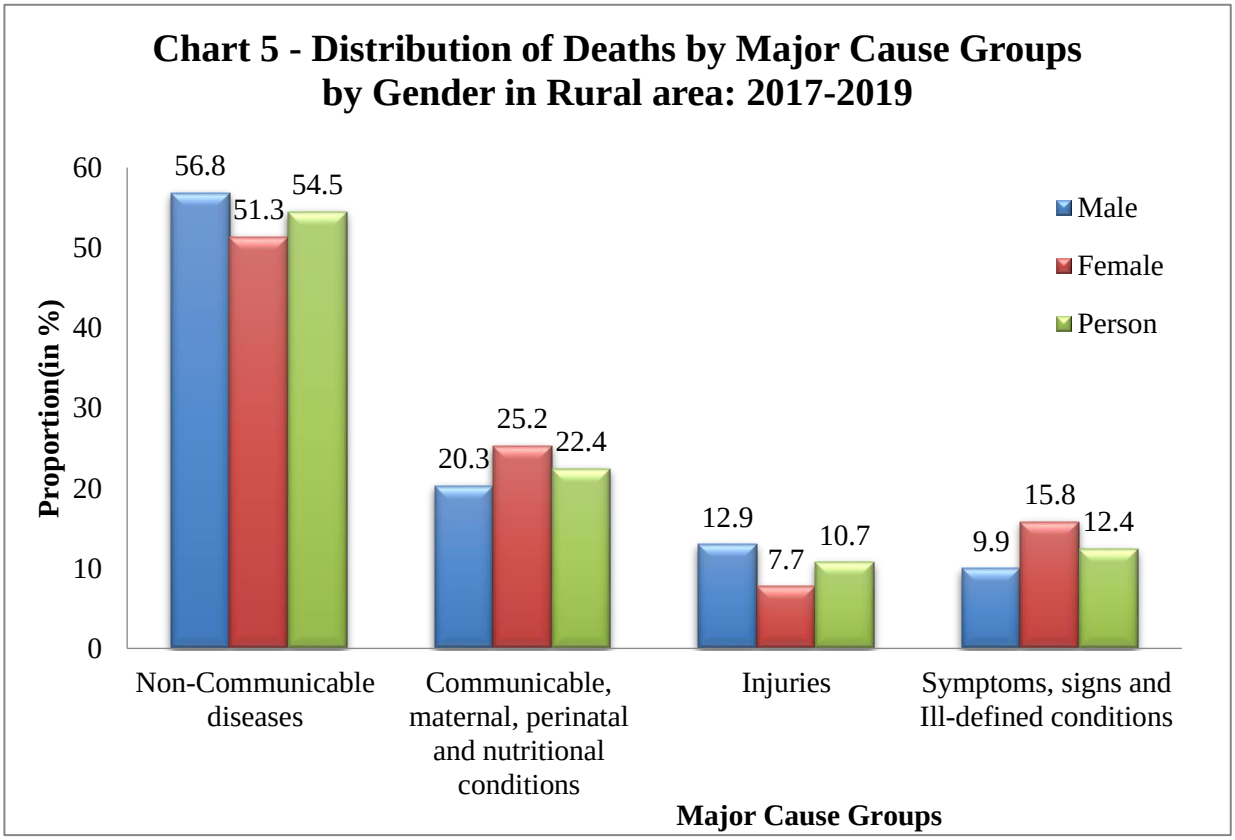


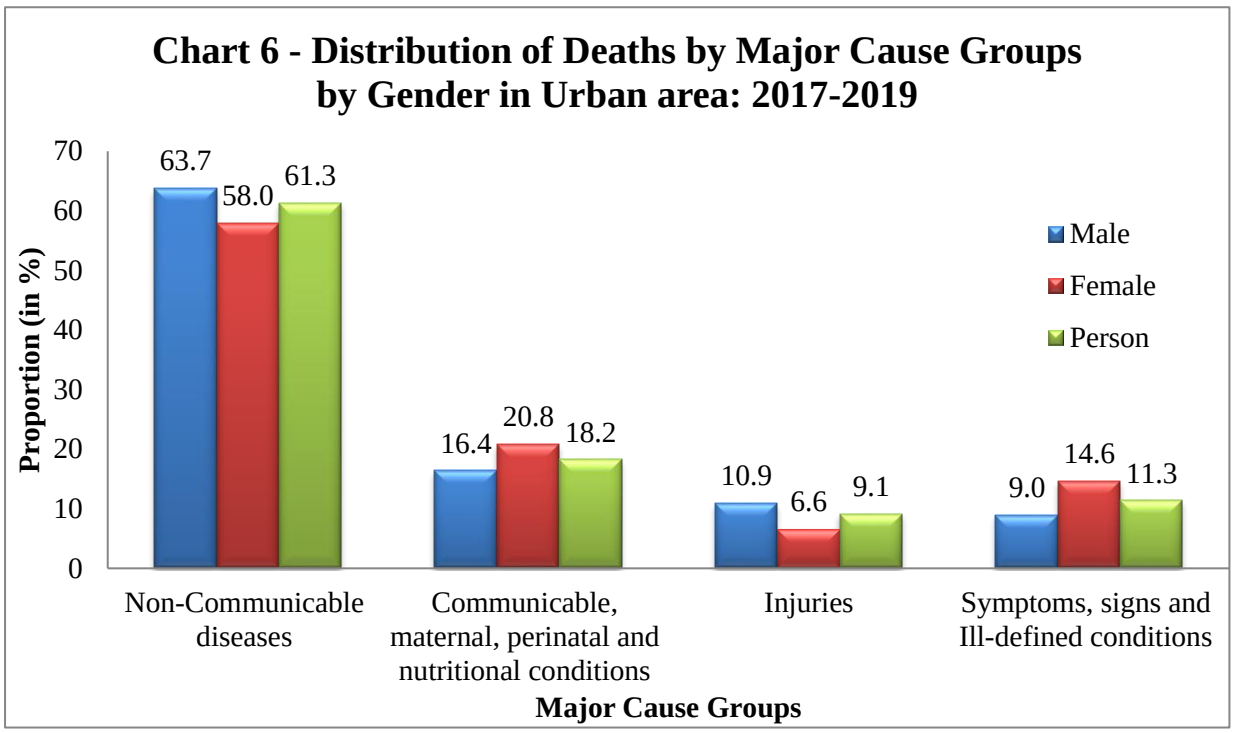
2.2.3 Table 2.1C represents the proportion of deaths in rural and urban areas by Major Cause Groups of Deaths. Non-communicable diseases which is major cause of death, contributes higher deaths both in rural and urban area with share of 54.5% and 61.3% percent respectively. The differences in proportion in communicable, maternal, perinatal and nutritional conditions and

non-communicable diseases are visible in urban area (18.2% and 61.3%) and in rural area (22.4% and 54.5%). Both the rural and urban areas have a lowest proportion of deaths from injuries. Symptoms, signs and ill-defined conditions constitute 12.4 and 11.3 percent deaths in rural and urban areas respectively. Chart 5 and 6 provides details about the distribution of the deaths by major cause groups for males, females and persons in Rural and Urban areas respectively.

Table 2.1.C – Distribution of Deaths by Major Cause Groups and Residence: 2017-2019

Cause of Death	Number and Proportion of Deaths					
	Male	Male (%)	Female	Female (%)	Person	Person (%)
Rural						
Non-Communicable diseases	35592	56.8	23674	51.3	59266	54.5
Communicable, maternal, perinatal and nutritional conditions	12710	20.3	11627	25.2	24337	22.4
Symptoms, signs and ill-defined conditions	6216	9.9	7285	15.8	13501	12.4
Injuries	8107	12.9	3553	7.7	11660	10.7
Urban						
Non-Communicable diseases	11107	63.7	7219	58.0	18326	61.3
Communicable, maternal, perinatal and nutritional conditions	2854	16.4	2596	20.8	5450	18.2
Symptoms, signs and ill-defined conditions	1565	9.0	1819	14.6	3384	11.3
Injuries	1903	10.9	821	6.6	2724	9.1

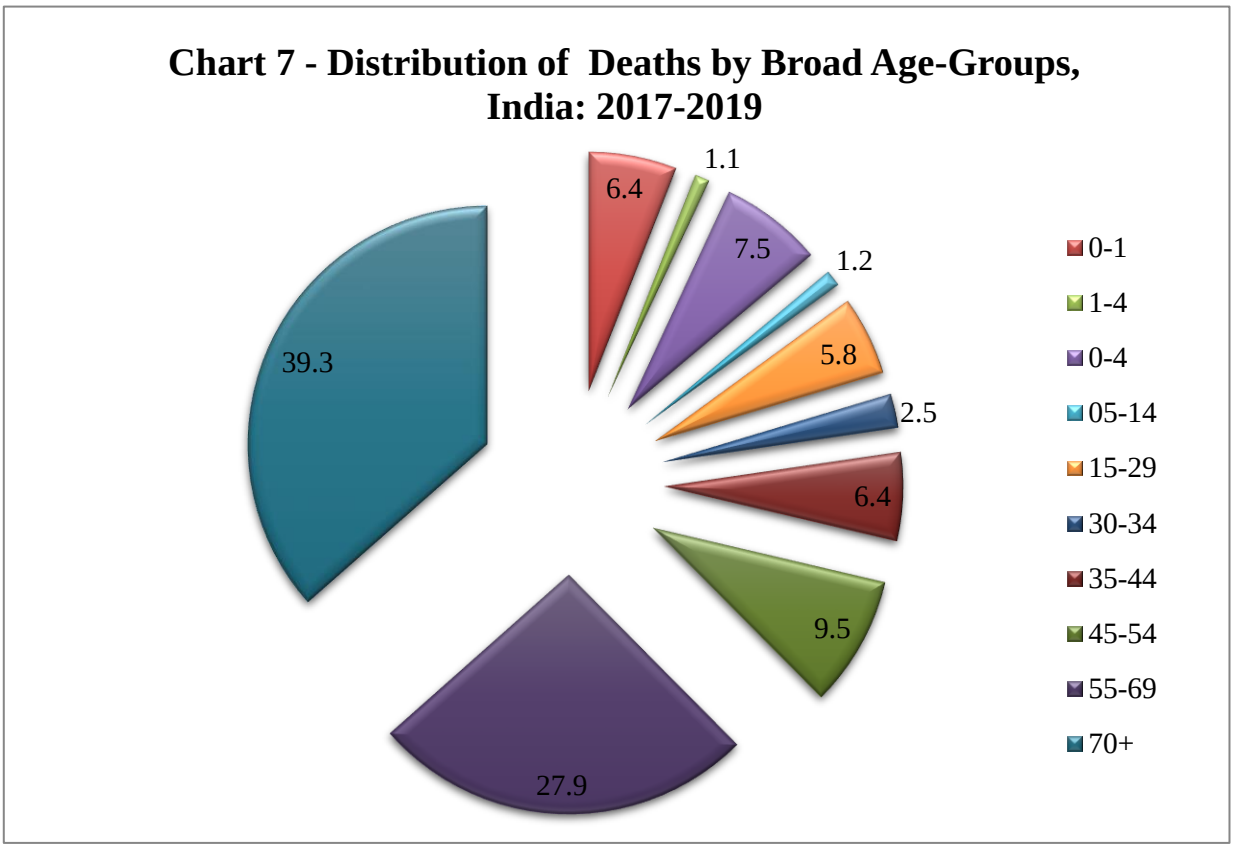


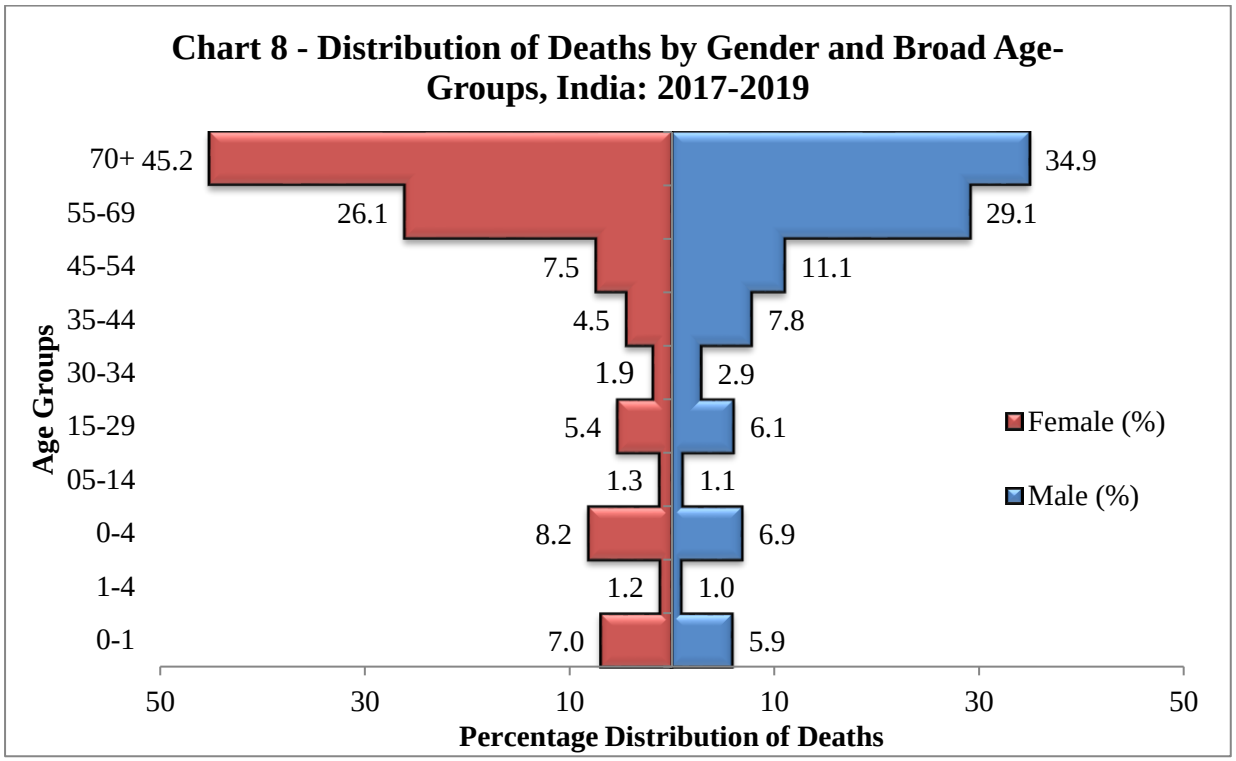


2.3.1 Table 2.2A shows the distribution of deaths in India in different age group. The majority of deaths in year 2017-2019 were occurred in old-age (70+ years). Rate of mortality is increasing with age. The age group 0-4 is further sub-categorized into two groups: 0-1 and 1-4 years. The contribution of female deaths (7.0) in infants is higher than male deaths (5.9%), whereas the deaths of females in age group 1-4 years (1.2%) are more than male deaths (1.0). In age group 5-14 and 70+: share of female deaths is more than male deaths. For other age groups, the share of male deaths is more than female deaths. Chart 7 and 8 depicts broad age-group distribution of the deaths for persons and gender respectively.

Table 2.2.A – Distribution of Deaths in India by age and gender: 2017-2019

Age Group	Number and Proportion of Deaths					
	Male	Male (%)	Female	Female (%)	Person	Person (%)
0-1	4759	5.9	4094	7.0	8853	6.4
1-4	790	1.0	703	1.2	1493	1.1
0-4	5549	6.9	4797	8.2	10346	7.5
05-14	895	1.1	748	1.3	1643	1.2
15-29	4875	6.1	3146	5.4	8021	5.8
30-34	2345	2.9	1107	1.9	3452	2.5
35-44	6272	7.8	2634	4.5	8906	6.4
45-54	8859	11.1	4371	7.5	13230	9.5
55-69	23313	29.1	15311	26.1	38624	27.9
70+	27946	34.9	26480	45.2	54426	39.3



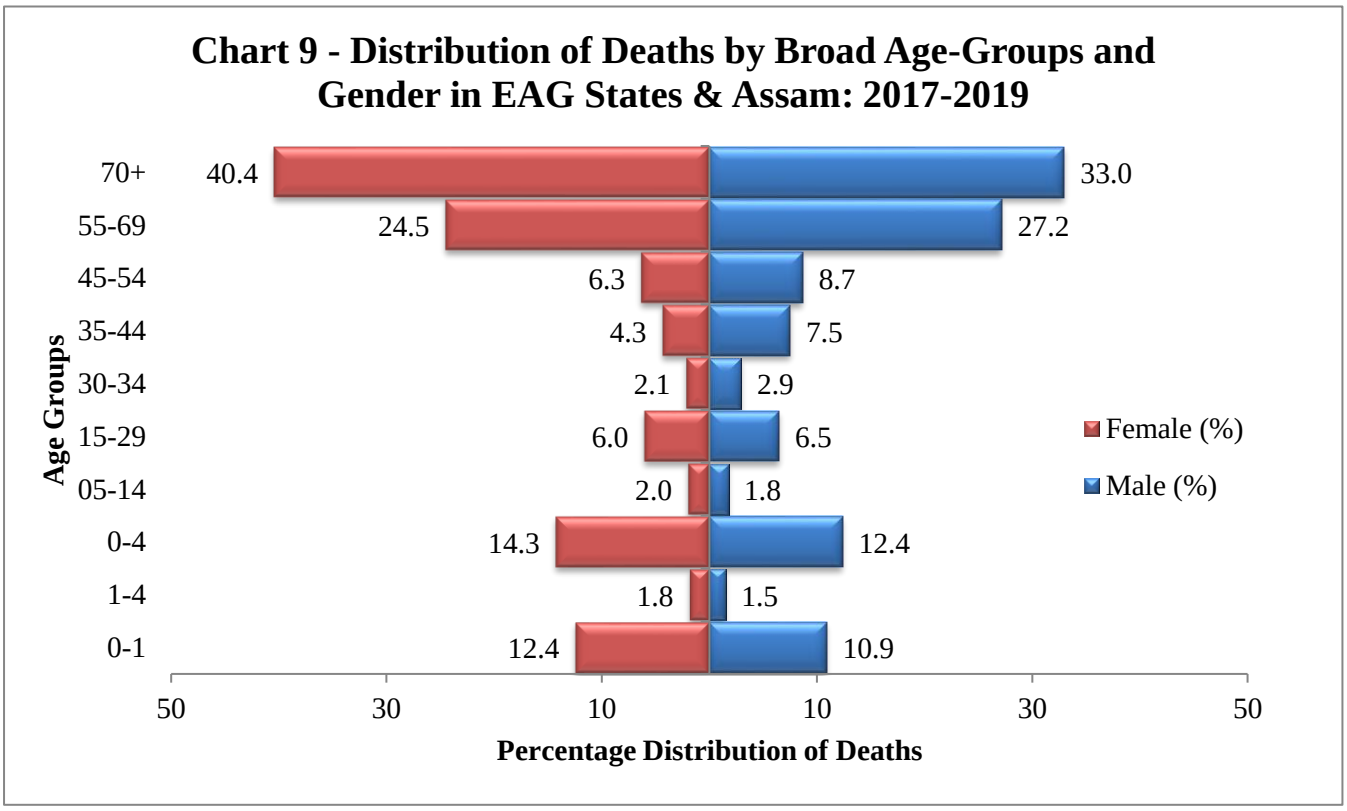


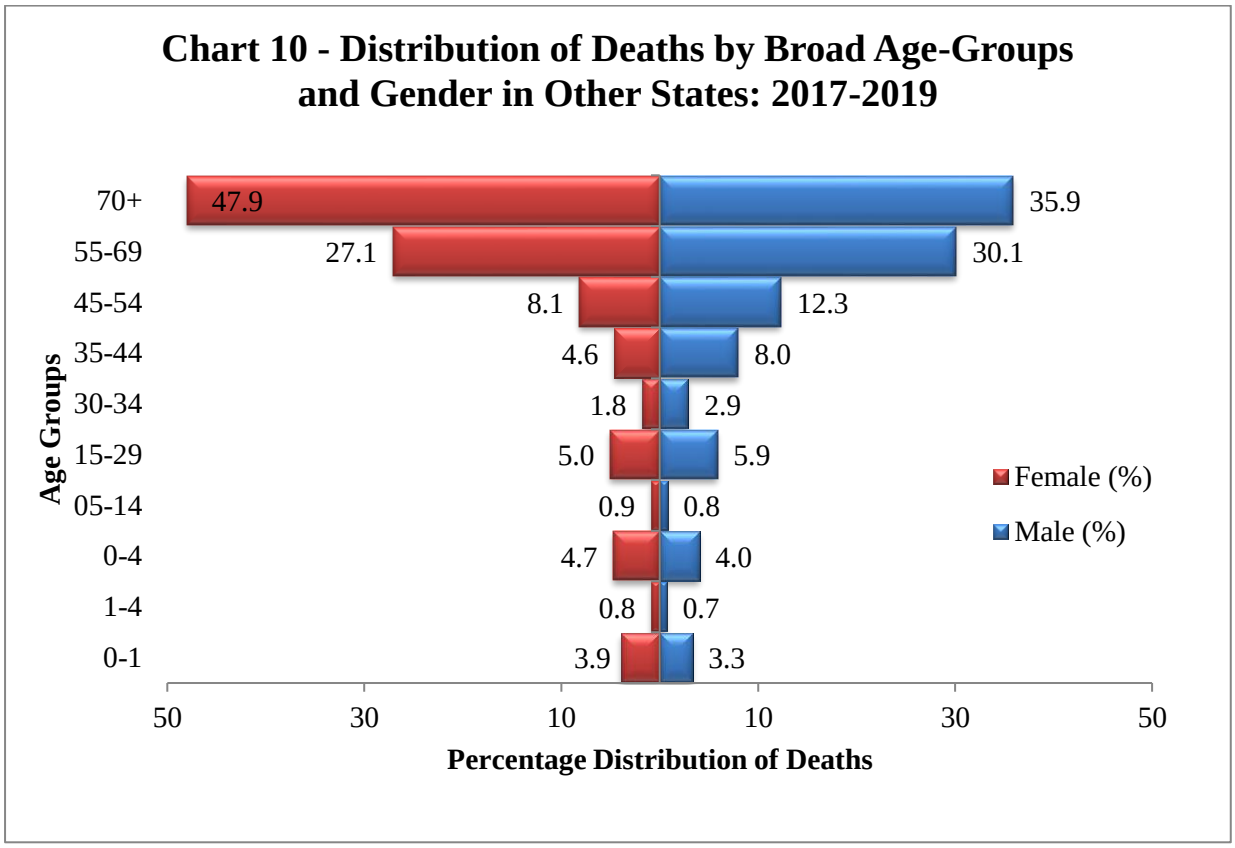
2.3.2 Table 2.2B represents the broad age-group wise distribution of deaths in EAG States & Assam and Other states for period of 2017-2019. Majority of deaths are in older age groups. The

proportion of deaths is higher for female in age groups 1-4, 5-14 and 70+ years for EAG states & Assam and Other states as well. The share of infant deaths (0-1 years) in EAG states & Assam (11.6%) is more than triple than that of Other States (3.5%). For age group 1-4 years, proportion for deaths is more than double in EAG states & Assam (1.8%) than in Other States (0.8%). The proportion of deaths in EAG States and Assam is more than Other States for all age-groups till 30-34 and the same is reversed afterward showing higher proportions of deaths in Other States than EAG States and Assam. Chart 9 and 10 depicts broad age-group distribution of the deaths according to gender for EAG States and Assam and Other States respectively.

Table 2.2.B – Distribution of deaths in EAG States & Assam and Other States by different age groups: 2017-2019

Age Group	Number and Proportion of Deaths											
	EAG States and Assam						Other States					
	Male	Male %	Female	Female %	Person	Person %	Male	Male %	Female	Female %	Person	Person %
0-1	3022	10.9	2660	12.4	5682	11.6	1737	3.3	1434	3.9	3171	3.5
1-4	415	1.5	391	1.8	806	1.6	375	0.7	312	0.8	687	0.8
0-4	3437	12.4	3051	14.3	6488	13.2	2112	4.0	1746	4.7	3858	4.3
05-14	489	1.8	423	2.0	912	1.9	406	0.8	325	0.9	731	0.8
15-29	1797	6.5	1288	6.0	3085	6.3	3078	5.9	1858	5.0	4936	5.5
30-34	817	2.9	455	2.1	1272	2.6	1528	2.9	652	1.8	2180	2.4
35-44	2084	7.5	928	4.3	3012	6.1	4188	8.0	1706	4.6	5894	6.6
45-54	2408	8.7	1355	6.3	3763	7.7	6451	12.3	3016	8.1	9467	10.6
55-69	7533	27.2	5239	24.5	12772	26.0	15780	30.1	10072	27.1	25852	28.9
70+	9147	33.0	8647	40.4	17794	36.2	18799	35.9	17833	47.9	36632	40.9

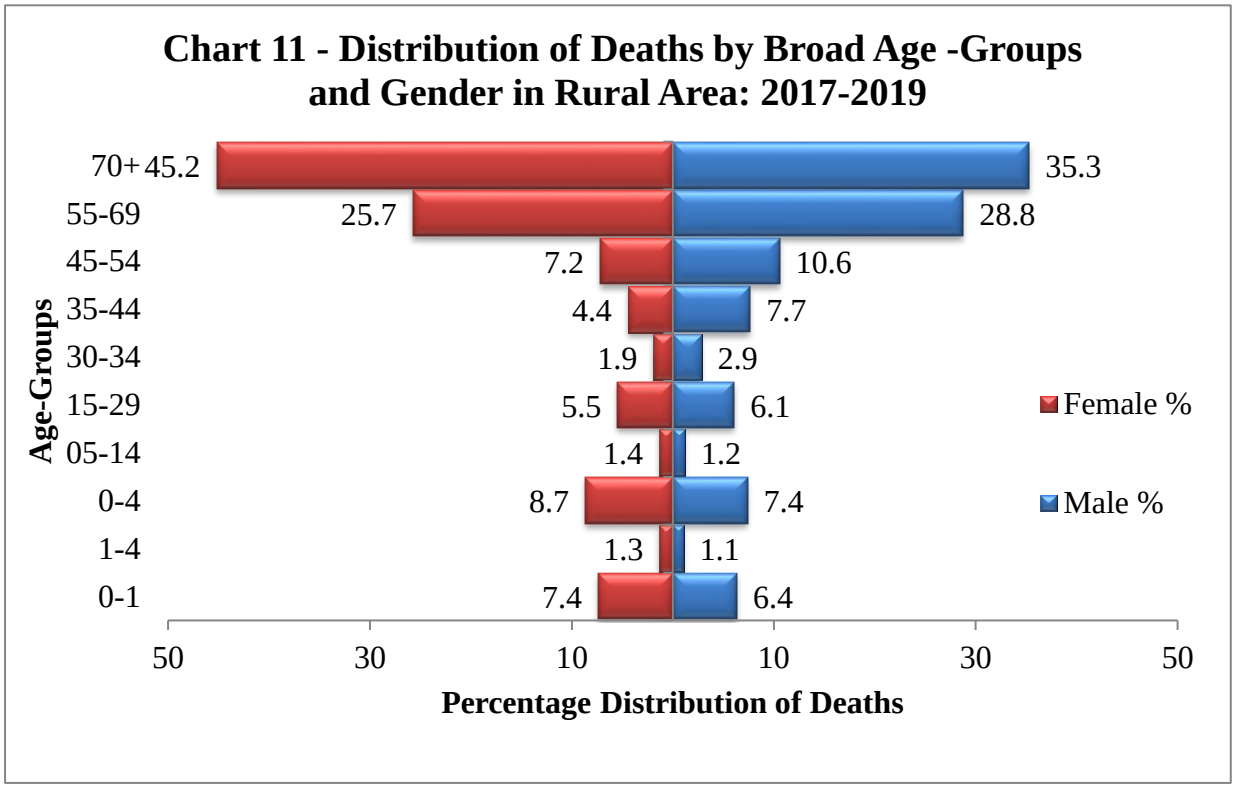


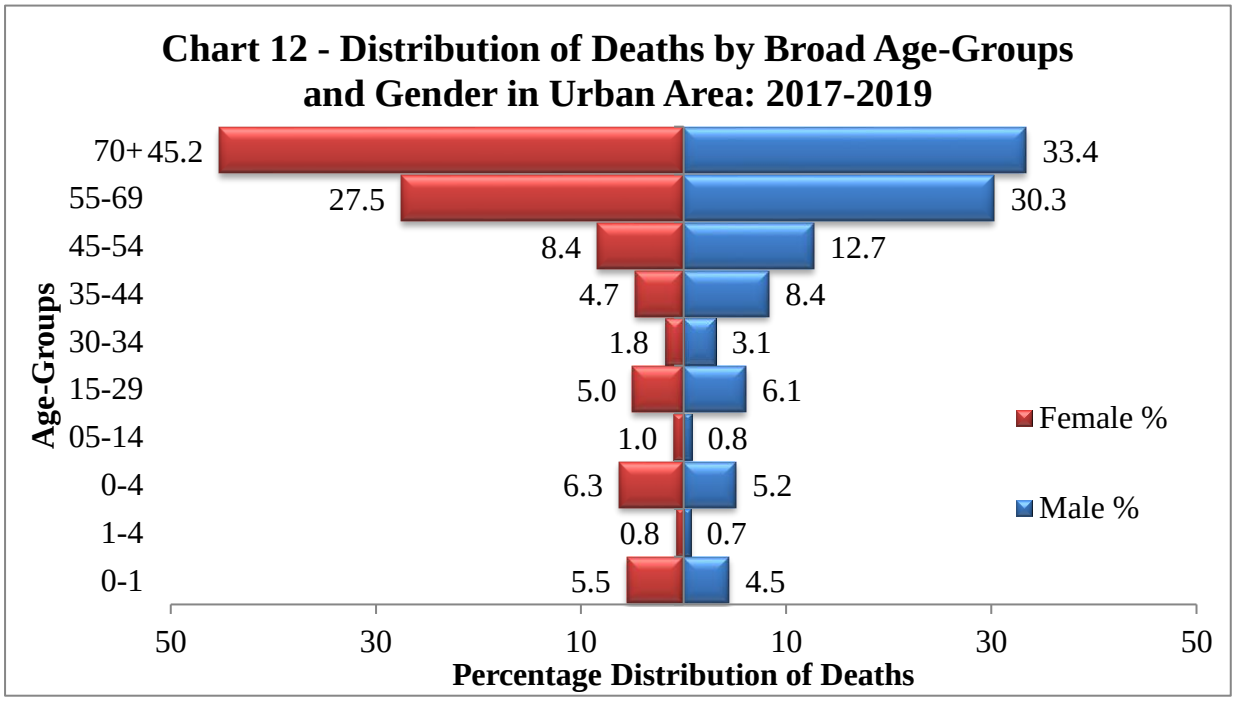


2.3.3 Table 2.2C depicts the distribution of deaths in rural & urban areas of country during the period 2017-2019. Both rural and urban areas report a greater number of deaths in age group 70+ years. Male deaths are more in all age groups compared to female deaths. Share of deaths in age groups 30-34, 35-44, 45-54 and 55-69 years is more in the urban area as compared to the rural area. However, for the remaining age-groups, proportion of deaths is higher in rural areas than urban areas. The difference in the proportion of deaths of males and females is more for the age group 70+ years, both in rural and urban area and variation is least in age-groups 15-29. Chart 11 and 12 depicts broad age-group distribution of the deaths according to gender for Rural and Urban areas respectively.

Table 2.2.C – Distribution of Deaths in Rural & Urban Areas by age and gender: 2017-2019

Age Group	Number and Proportion of Deaths											
	Rural						Urban					
	Male	Male %	Female	Female %	Person	Person %	Male	Male %	Female	Female %	Person	Person %
0-1	3980	6.4	3405	7.4	7385	6.8	779	4.5	689	5.5	1468	4.9
1-4	670	1.1	608	1.3	1278	1.2	120	0.7	95	0.8	215	0.7
0-4	4650	7.4	4013	8.7	8663	8.0	899	5.2	784	6.3	1683	5.6
05-14	756	1.2	624	1.4	1380	1.3	139	0.8	124	1.0	263	0.9
15-29	3814	6.1	2528	5.5	6342	5.8	1061	6.1	618	5.0	1679	5.6
30-34	1800	2.9	879	1.9	2679	2.5	545	3.1	228	1.8	773	2.6
35-44	4814	7.7	2047	4.4	6861	6.3	1458	8.4	587	4.7	2045	6.8
45-54	6641	10.6	3323	7.2	9964	9.2	2218	12.7	1048	8.4	3266	10.9
55-69	18026	28.8	11880	25.7	29906	27.5	5287	30.3	3431	27.5	8718	29.2
70+	22124	35.3	20845	45.2	42969	39.5	5822	33.4	5635	45.2	11457	38.3



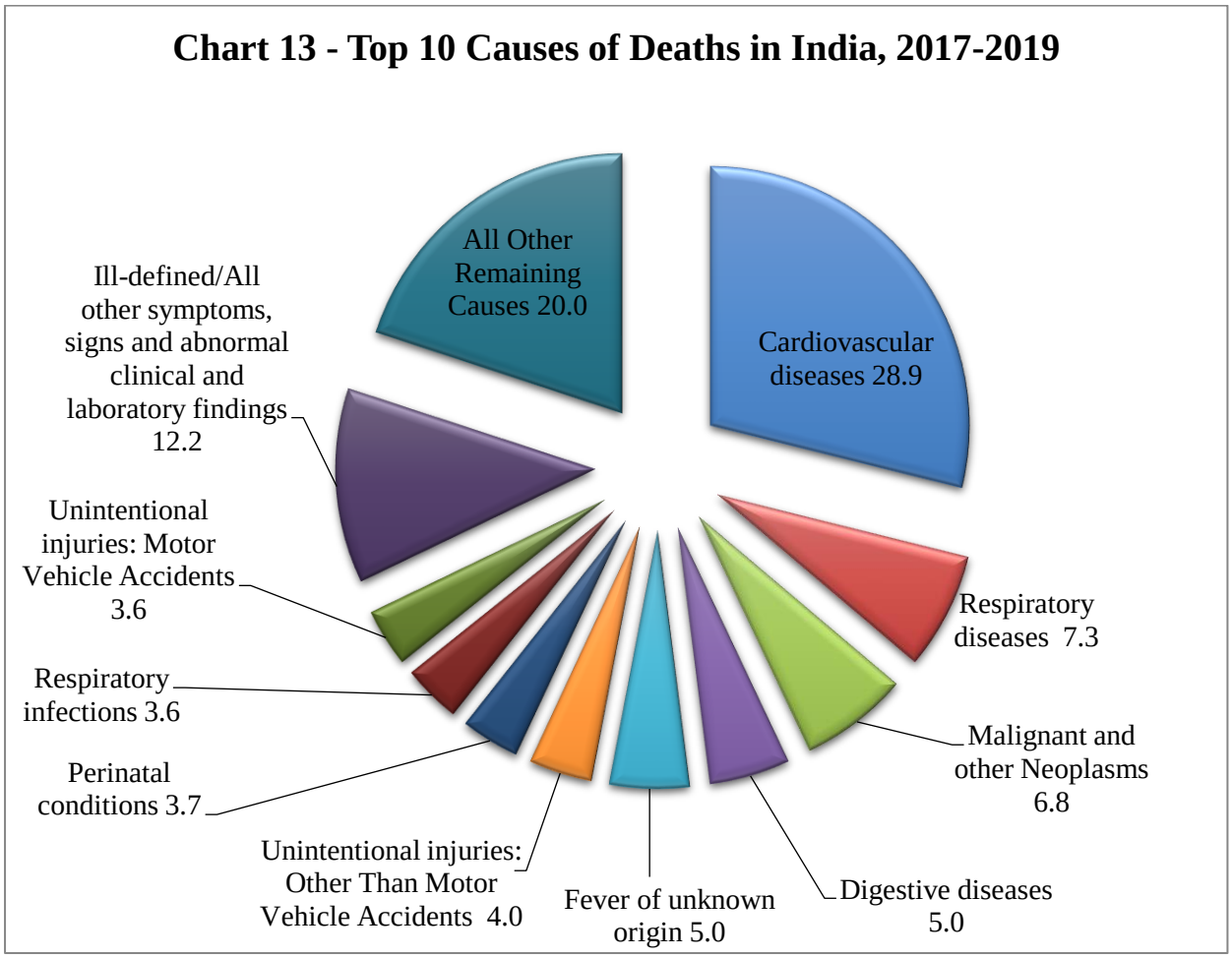


2..4.1 Table 2.3A represents the top 10 leading causes of deaths in the country for the period 2017-2019. Overall, the leading cause of deaths is cardiovascular disease (28.9%) followed by respiratory diseases (7.3%). The proportion of deaths due is Malignant and other neoplasm is higher in females i.e. 7.3% vis-à-vis 6.4% than in males. Notable differences by gender are seen with digestive diseases accounting for 6.3 percentage proportion of male deaths against 3.4 percentage proportion for female deaths and ill-defined/all other symptoms, signs and abnormal clinical and laboratory findings accounting for 15.5 percent of female deaths versus 9.7 percent of male deaths. Chart 13 shows the top 10 causes of deaths in the Country during 2017-19.

Table 2.3 A – Top 10 Causes of Deaths in India: 2017-2019

Rank	Cause of Death	Proportion of death		
		Male	Female	Person
1	Cardiovascular diseases	30.8	26.2	28.9
2	Respiratory diseases	7.0	7.7	7.3
3	Malignant and other Neoplasms	6.4	7.3	6.8
4	Digestive diseases	6.3	3.4	5.0
5	Fever of unknown origin	4.2	6.0	5.0
6	Unintentional injuries: Other Than Motor Vehicle Accidents	4.1	3.8	4.0
7	Perinatal conditions	3.4	4.0	3.7
8	Respiratory infections	3.2	4.2	3.6
9	Unintentional injuries: Motor Vehicle Accidents	5.2	1.4	3.6
10	Ill-defined/All other symptoms, signs and abnormal clinical and laboratory findings	9.7	15.5	12.2
	All Other Remaining Causes	19.6	20.5	20.0

Note: Symptoms, Signs and Abnormal Clinical and Laboratory Findings Not Elsewhere Classified (NEC) (R00-R99) was not properly diagnoses. So, it may not be considered as the second leading cause group.



2.4.2 Table 2.3 B shows the top 10 causes of deaths in EAG States & Assam and Other states for the period 2017-2019.The top 10 causes of death are common in the EAG states & Assam and in Other states, except for perinatal conditions and diarrhoeal diseases in EAG states & Assam and diabetes mellitus and unintentional injuries: Motor Vehicle Accidents in Other States. However, their relative order varies. The proportion of deaths due to cardiovascular disease in Other States (32.1%) is more than 9 percentage points in EAG States and Assam (23.0%). The proportion of deaths due to malignant and neoplasm and respiratory diseases are higher for female in both EAG States & Assam and Other States. Chart 14 and 15 depicts the top 10 causes of deaths in the Country during 2017-19 for EAG States and Assam and Other States respectively.

Table 2.3 B – Top 10 causes of death in EAG states & Assam and Other states: 2017-2019

Rank	Cause of Death	% Proportion of death		
		Male	Female	Person
EAG States & Assam				
1	Cardiovascular diseases	24.6	20.8	23.0
2	Respiratory diseases	7.6	8.1	7.9
3	Perinatal conditions	6.4	7.3	6.8
4	Fever of unknown origin	4.7	6.8	5.7
5	Digestive diseases	6.2	4.5	5.5
6	Malignant and other Neoplasms	5.3	5.5	5.4
7	Diarrhoeal diseases	4.1	6.0	4.9
8	Unintentional injuries: Other Than Motor Vehicle Accidents	4.7	4.2	4.5
9	Respiratory infections	3.8	4.8	4.2
10	Ill-defined/All other symptoms, signs and abnormal clinical and laboratory findings	10.0	14.3	11.9
	All Other remaining causes	22.4	17.7	20.4
Other States				
1	Cardiovascular diseases	34.1	29.3	32.1
2	Malignant and other Neoplasms	7.0	8.3	7.5
3	Respiratory diseases	6.7	7.5	7.0
4	Digestive diseases	6.3	2.7	4.8
5	Fever of unknown origin	4.0	5.5	4.6
6	Unintentional injuries: Other Than Motor Vehicle Accidents	3.8	3.5	3.7
7	Unintentional injuries: Motor Vehicle Accidents	5.2	1.4	3.6
8	Diabetes mellitus	3.2	4.0	3.5
9	Respiratory infections	2.9	3.8	3.3
10	Ill-defined/All other symptoms, signs and abnormal clinical and laboratory findings	9.5	16.2	12.3
	All Other remaining causes	17.3	17.6	17.4

Note: Symptoms, Signs and Abnormal Clinical and Laboratory Findings Not Elsewhere Classified (NEC) (R00-R99) was not properly diagnoses so it may not be considered as second leading cause group.

Chart 14 - Top 10 Causes of Deaths in EAG States & Assam, 2017-2019

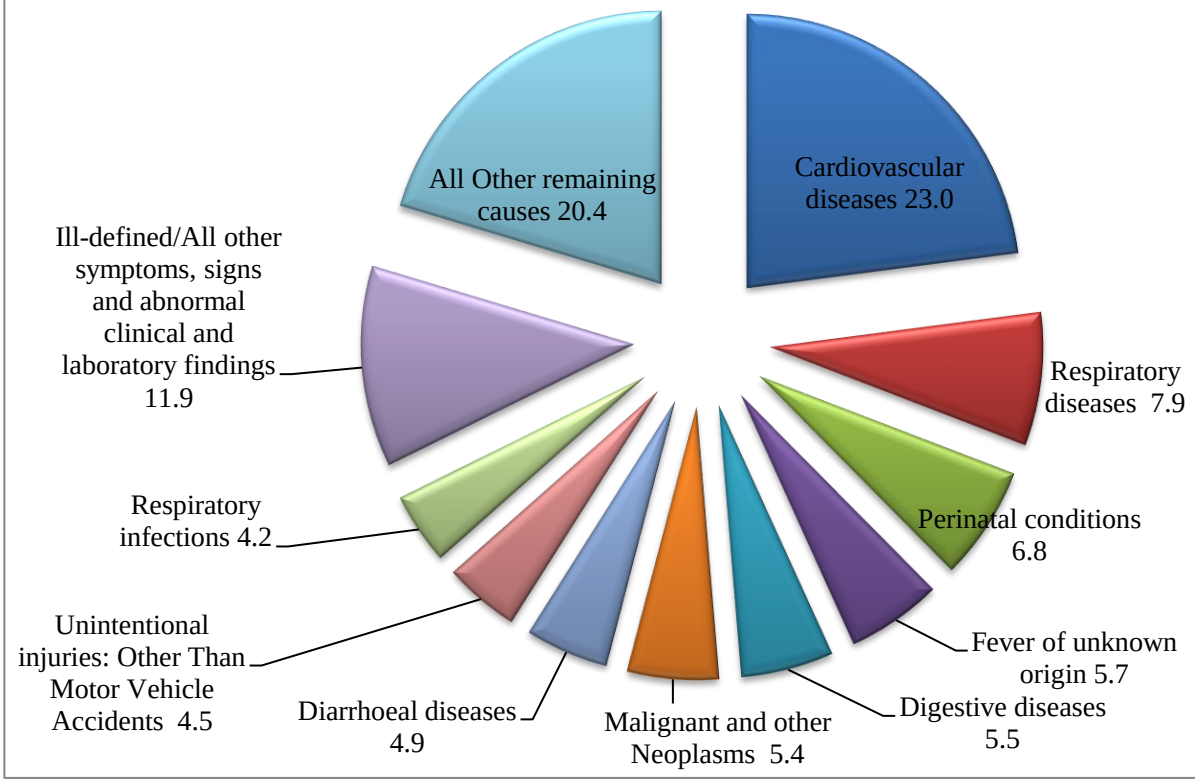
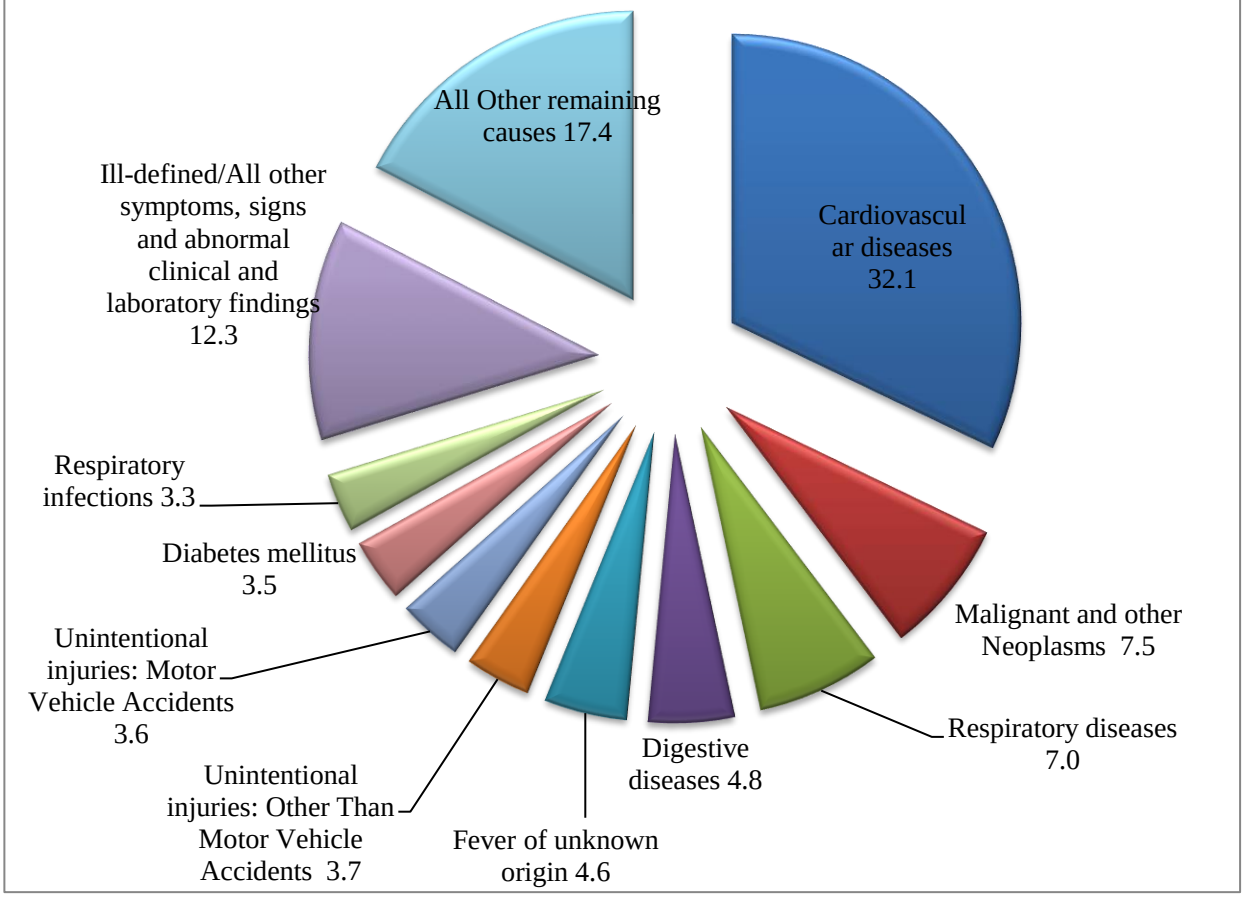


Chart 15 - Top 10 Causes of Deaths in Other States: 2017-2019



2.4.3 Table 2.3.C shows the top causes of death in rural and urban area for period of 2017-2019. The top 10 causes of deaths in the rural and urban areas are common except for deaths due to Respiratory infections and Perinatal conditions in rural area and diabetes mellitus and Genito-urinary diseases in urban area. However, their relative order varies. Cardiovascular diseases which is leading cause of death both in areas accounts for 33.6 percent of deaths in urban vis-à-vis 27.6 percent in rural area. The difference in proportion of male deaths due to perinatal condition is higher than female deaths both in rural and urban areas. The higher proportion of deaths of female due to respiratory diseases and malignant & other neoplasm. Chart 14 and 15 depicts the top 10 causes of deaths in the Country during 2017-19 for Rural and Urban areas respectively.

Table 2.3.C – Top 10 Causes of Death in Rural & Urban Areas: 2017-2019

Rank	Cause of Death	% Proportion of death		
		Male	Female	Person
Rural Area				
1	Cardiovascular diseases	29.4	25.1	27.6
2	Respiratory diseases	7.4	8.0	7.6
3	Malignant and other Neoplasms	6.3	7.2	6.7
4	Fever of unknown origin	4.4	6.2	5.2
5	Digestive diseases	6.1	3.3	4.9
6	Unintentional injuries: Other Than Motor Vehicle Accidents	4.3	3.9	4.1
7	Perinatal conditions	3.7	4.2	3.9
8	Respiratory infections	3.3	4.4	3.8
9	Unintentional injuries: Motor Vehicle Accidents	5.2	1.4	3.6
10	Ill-defined/All other symptoms, signs and abnormal clinical and laboratory findings	9.9	15.8	12.4
	All other Remaining Causes	19.9	20.6	20.2
Urban Area				
1	Cardiovascular diseases	36.0	30.2	33.6
2	Malignant and other Neoplasms	6.7	7.9	7.2
3	Respiratory diseases	5.7	6.7	6.1
4	Digestive diseases	6.8	3.5	5.4
5	Fever of unknown origin	3.6	5.3	4.3
6	Diabetes mellitus	3.8	4.7	4.2
7	Unintentional injuries: Motor Vehicle Accidents	5.1	1.5	3.6
8	Unintentional injuries: Other Than Motor Vehicle Accidents	3.3	3.3	3.3
9	Genito-urinary diseases	3.3	3.2	3.3
10	Ill-defined/All other symptoms, signs and abnormal clinical and laboratory findings	9.0	14.6	11.3
	All other Remaining Causes	16.7	19.1	17.7

Note: Symptoms, Signs and Abnormal Clinical and Laboratory Findings Not Elsewhere Classified (NEC) (R00-R99) was not properly diagnoses so it may not be considered as second leading cause group.

Chart 16 - Top 10 Causes of Deaths in Rural Area: 2017-2019

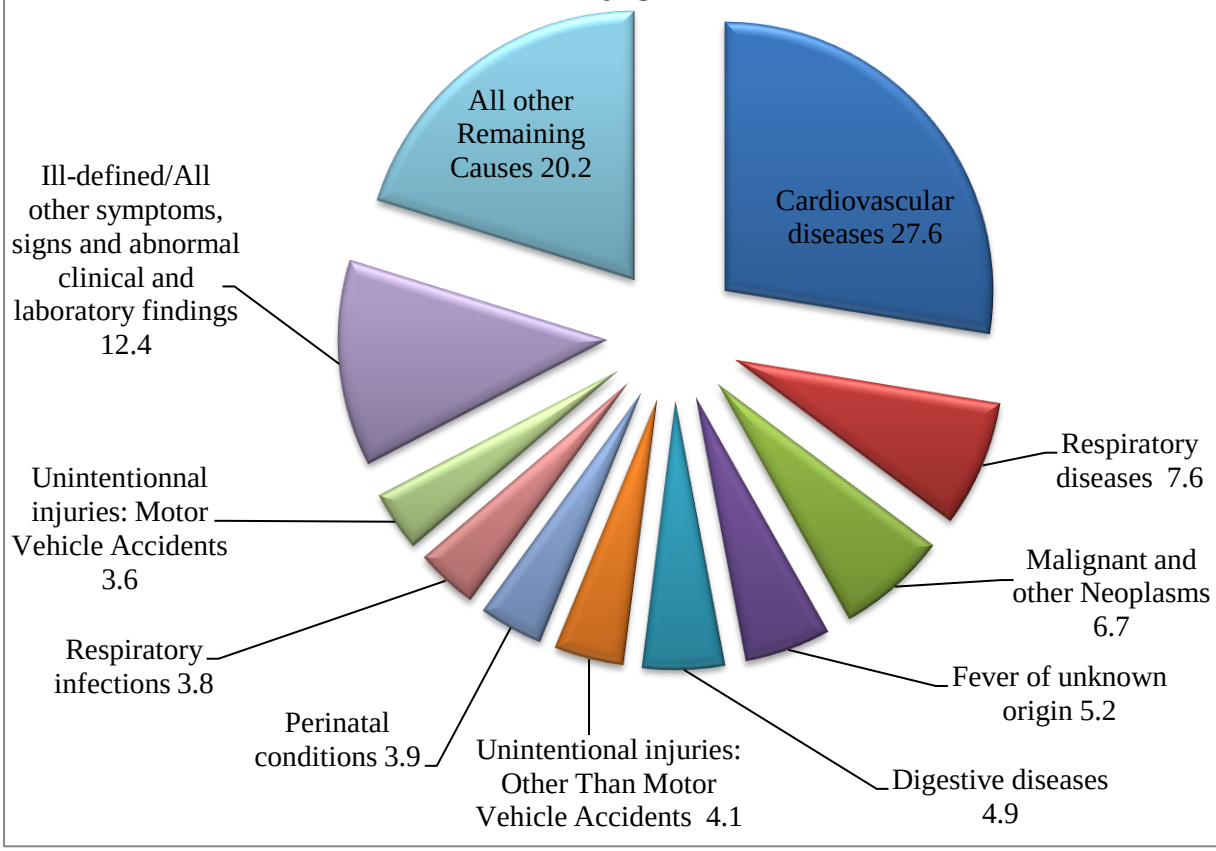
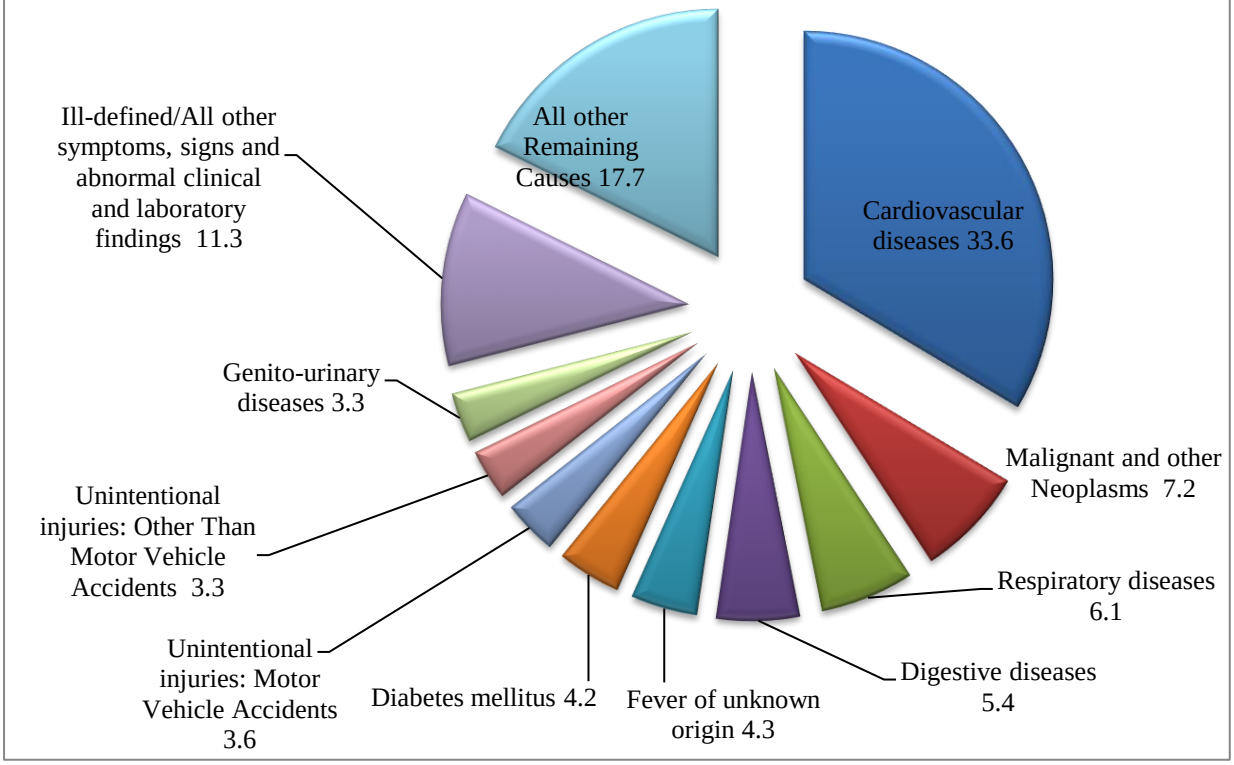


Chart 17 - Top 10 Causes of Deaths in Urban Area: 2017-2019



CHAPTER 3
MORTALITY PATTERNS IN SPECIFIC AGE-GROUPS

3.1 This chapter reviews the mortality pattern in different age groups by cause groups, stratified by gender, EAG states and Assam versus Other states, and Rural versus Urban areas. There are four different age groups namely Child mortality (age 0-4), Adolescent and young adult mortality (age 5 to 14 and age 15 to 29), Adult mortality in middle age (age 30-69) and adult mortality in old age (age 70 and older). The mortality in age group 0-4 has been further analyzed for age below 1 and ages between 1 to 4 to provide an insight into the specific causes of death which need attention in these two important age groups. The Sustainable Development Goals (SDG) have a target of reducing child mortality in the country from 25 per 1000 live births by 2030.

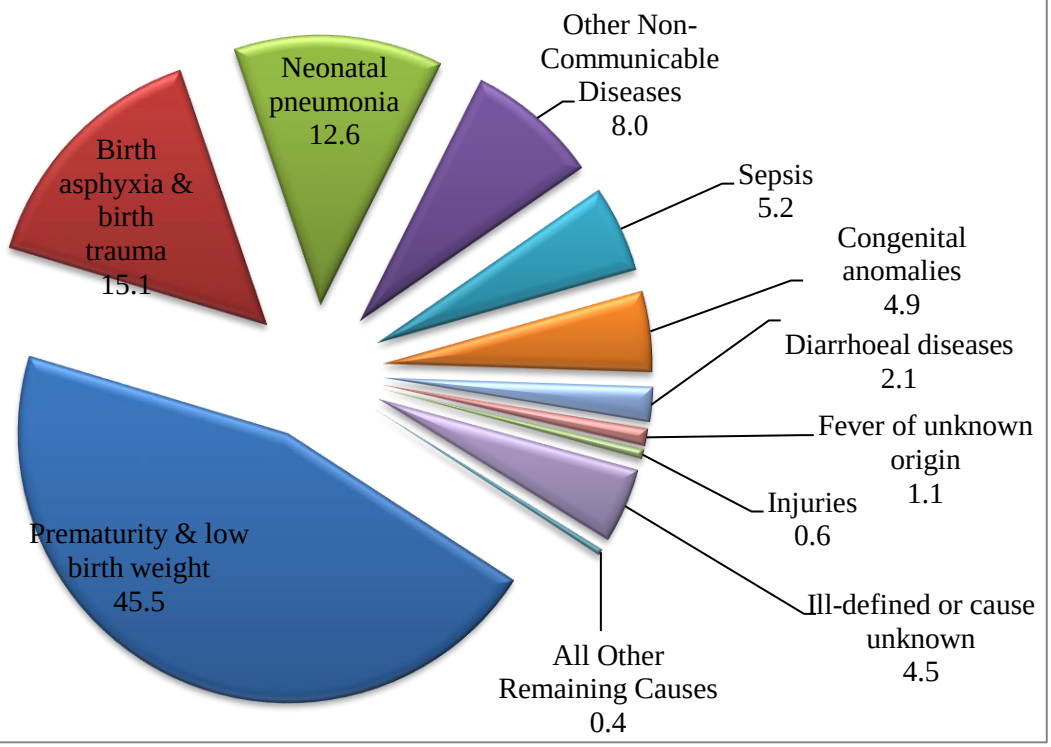
3.2.1 Table 3.1A represents the top 10 causes of deaths in the country for age groups below 29 days in year 2017-2019. Overall, this age group accounts for about 4.7 percentage proportion of the total deaths in the country comprising 4.4 % of the total male deaths and 5.0% of the total female deaths. Prematurity & low birth weight has the highest share of 45.5 percent of total proportion of deaths, followed by Birth asphyxia & birth trauma (15.1) in age group below 29 days. Chart 18 depicts Top 10 Causes of Deaths of Children below 29 days for India during 2017-2019.

Table 3.1 A: Top 10 Causes of Death for age group below 29 days in India: 2017-2019

Rank	Cause of Death	% Proportion of death		
		Male	Female	Person
1	Prematurity & low birth weight	44.8	46.2	45.5
2	Birth asphyxia & birth trauma	15.5	14.7	15.1
3	Neonatal pneumonia	12.0	13.4	12.6
4	Other Non-Communicable Diseases	8.1	7.8	8.0
5	Sepsis	4.9	5.7	5.2
6	Congenital anomalies	5.4	4.3	4.9
7	Diarrhoeal diseases	2.0	2.1	2.1
8	Fever of unknown origin	1.1	1.0	1.1
9	Injuries	0.5	0.7	0.6
10	Ill-defined or cause unknown	5.1	3.8	4.5
	All Other Remaining Causes	0.5	0.3	0.4

Note: Ill-defined or cause unknown constitutes instances where cause could not be properly diagnosed so has been categorised last among the top 10 leading cause group.

Chart 18 - Major Cause of Deaths of Childrens below 29 days, India, 2017-2019 (in %)

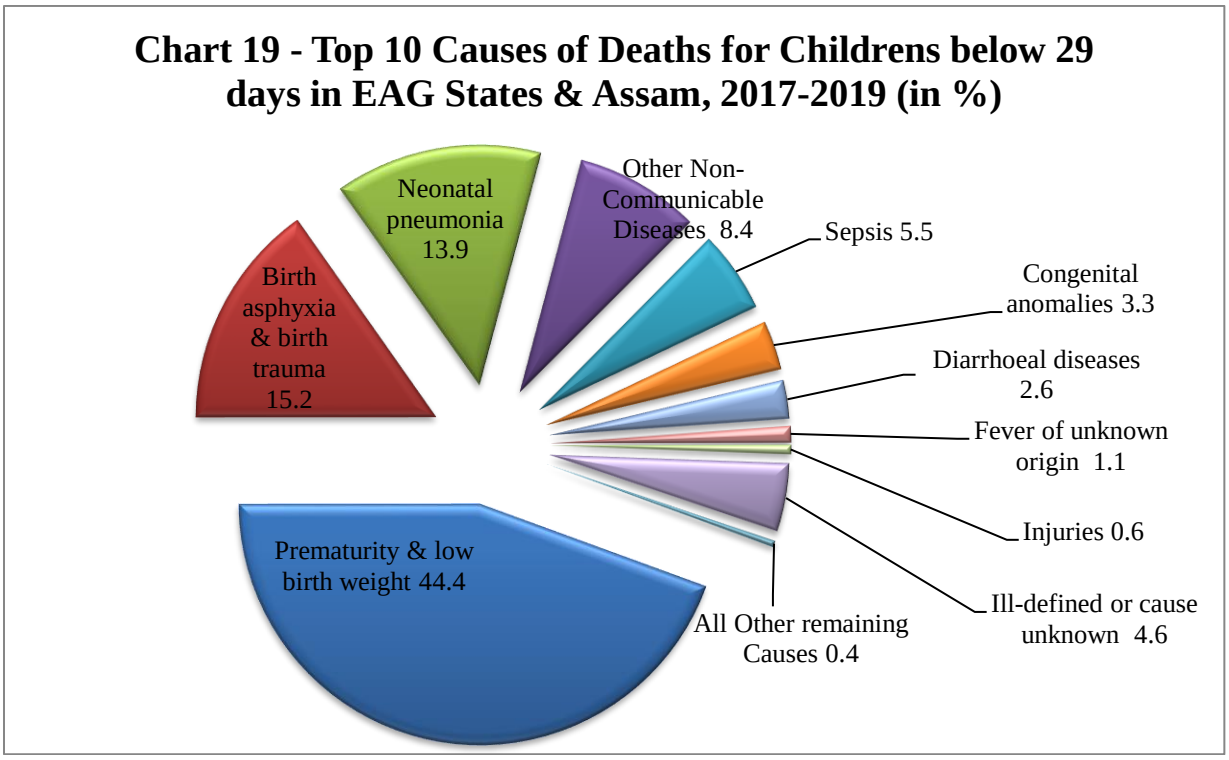


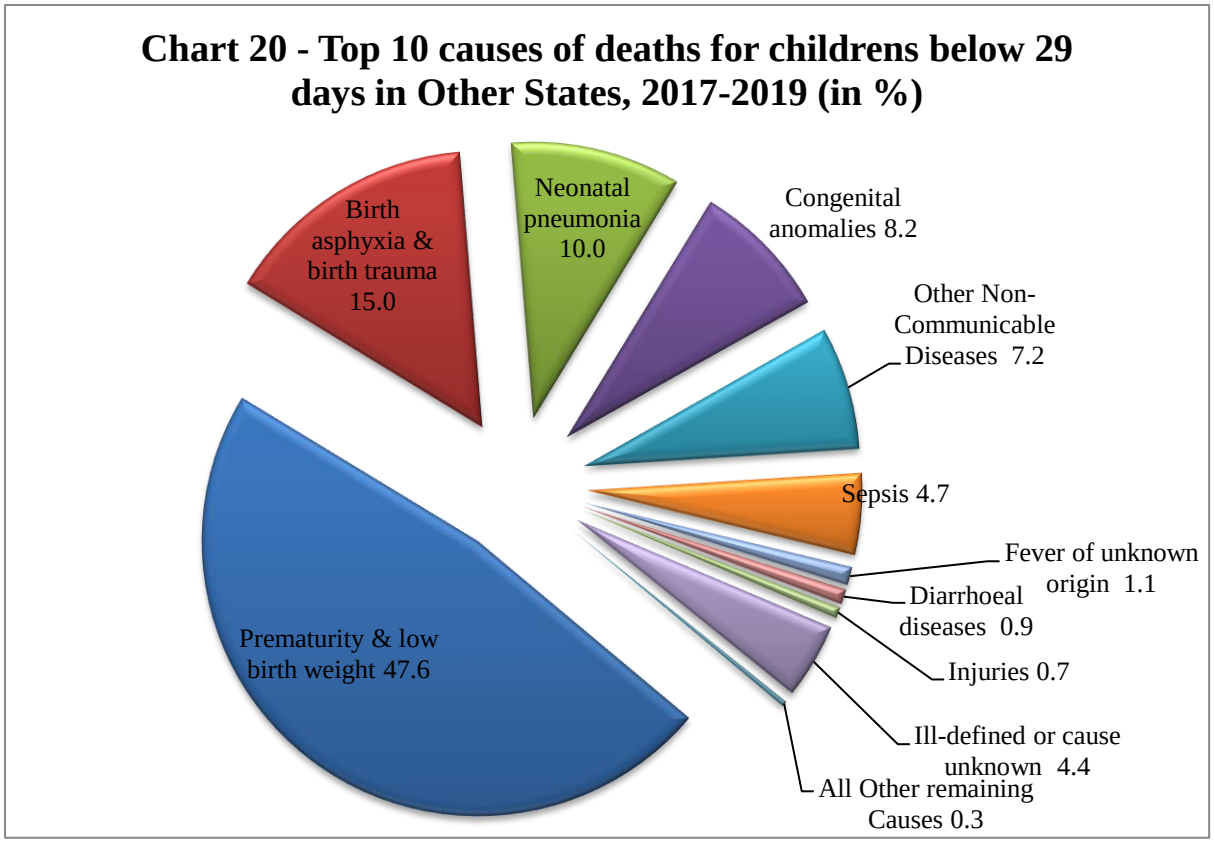
3.2.2 Table 3.1B shows the variation in causes of neonatal mortality as a proportion of total neonatal deaths in EAG states & Assam and Other states. The leading ten causes of deaths in both the category of states are same, but their relative ranking varies. Prematurity & low birth weight, Birth asphyxia & birth trauma and neonatal pneumonia, which are the first three causes of death in both the groups, together accounts for about 73 percentage proportion of deaths in EAG states & Assam and about 72 percentage proportion of deaths in the Other states. The mortality due to diarrhoeal diseases (2.6%) is more than double in EAG states & Assam as compared to Other States (0.9%). Top 10 Causes of deaths during 2017-2019 for children below 29 days in EAG States & Assam and Other States is given in Chart 19 and 20 respectively.

Table 3.1B: Top 10 Causes of Death for age group below 29 days in EAG States & Assam and Other States: 2017-2019

Rank	Causes of Death	% Proportion of Deaths		
		Male	Female	Person
EAG and Assam				
1	Prematurity & low birth weight	43.7	45.3	44.4
2	Birth asphyxia & birth trauma	15.8	14.6	15.2
3	Neonatal pneumonia	13.4	14.5	13.9
4	Other Non-Communicable Diseases	8.9	7.8	8.4
5	Sepsis	5.0	6.0	5.5
6	Congenital anomalies	3.7	2.8	3.3
7	Diarrhoeal diseases	2.7	2.5	2.6
8	Fever of unknown origin	1.1	1.0	1.1
9	Injuries	0.5	0.7	0.6
10	Ill-defined or cause unknown	4.8	4.3	4.6
	All Other remaining Causes	0.4	0.4	0.4
Other States				
1	Prematurity & low birth weight	47.1	48.2	47.6
2	Birth asphyxia & birth trauma	15.0	15.0	15.0
3	Neonatal pneumonia	9.2	11.0	10.0
4	Congenital anomalies	8.7	7.4	8.2
5	Other Non-Communicable Diseases	6.6	7.9	7.2
6	Sepsis	4.5	5.0	4.7
7	Fever of unknown origin	1.2	1.0	1.1
8	Diarrhoeal diseases	0.8	1.1	0.9
9	Injuries	0.7	0.6	0.7
10	Ill-defined or cause unknown	5.8	2.7	4.4
	All Other remaining Causes	0.5	0.1	0.3

Note: Ill-defined or cause unknown constitutes instances where cause could not be properly diagnosed so has been categorised last among the top 10 leading cause group.





3.2.3 Table 3.1C represents top ten causes of death in the country by rural and urban area for age group below 29 days. Prematurity & low birth weight is the top leading cause of death for age group below 29 days both in rural and urban area. The leading ten causes of death are common in rural as well as urban areas, with striking overall similarity in patterns with their relative varying ranking. In rural area, deaths due to prematurity & low birth weight is number one cause of deaths of children below 29 days and found to be similarly affecting male (45.4%) as compared to female (46.5%). In urban areas, deaths due to Prematurity & low birth weight were found to be more in females (44.7%) than males (42.1%). Share of deaths due to diarrhoeal diseases is higher in female as compared to male for both rural and urban areas. Top 10 Causes of Deaths during 2017-2019 for children below 29 days in Rural & Urban Areas is given in Chart 21 and 22 respectively.

Table 3.1C: Top 10 Causes of Death for age group below 29 days in Rural & Urban Areas: 2017-2019

Rank	Causes of deaths	% Proportion of death		
		Male	Female	Person
	Rural			
1	Prematurity & low birth weight	45.4	46.5	45.9
2	Birth asphyxia & birth trauma	14.8	14.3	14.6
3	Neonatal pneumonia	12.3	13.9	13.0
4	Other Non-Communicable Diseases	8.0	7.6	7.8
5	Sepsis	4.9	5.5	5.2
6	Congenital anomalies	5.4	4.1	4.8
7	Diarrhoeal diseases	2.0	2.1	2.0
8	Fever of unknown origin	1.2	1.1	1.1
9	Injuries	0.4	0.7	0.5
10	Ill-defined or cause unknown	5.1	3.9	4.6
	All other remining causes of deaths	0.4	0.4	0.4
	Urban			
1	Prematurity & low birth weight	42.1	44.7	43.3
2	Birth asphyxia & birth trauma	18.8	16.4	17.7
3	Neonatal pneumonia	10.4	11.1	10.7
4	Other Non-Communicable Diseases	8.6	9.0	8.8
5	Sepsis	4.6	6.7	5.6
6	Congenital anomalies	5.7	5.2	5.4
7	Diarrhoeal diseases	2.2	2.1	2.2
8	Injuries	1.0	1.0	1.0
9	Fever of unknown origin	0.7	0.8	0.7
10	Ill-defined or cause unknown	5.3	3.2	4.3
	All other remaining causes of deaths	0.5	0.0	0.3

Note: Ill-defined or cause unknown constitutes instances where cause could not be properly diagnosed so has been categorised last among the top 10 leading cause group.

Chart 21 - Top 10 causes of death in Rural area for age group below 29 days, 2017-2019 (in %)

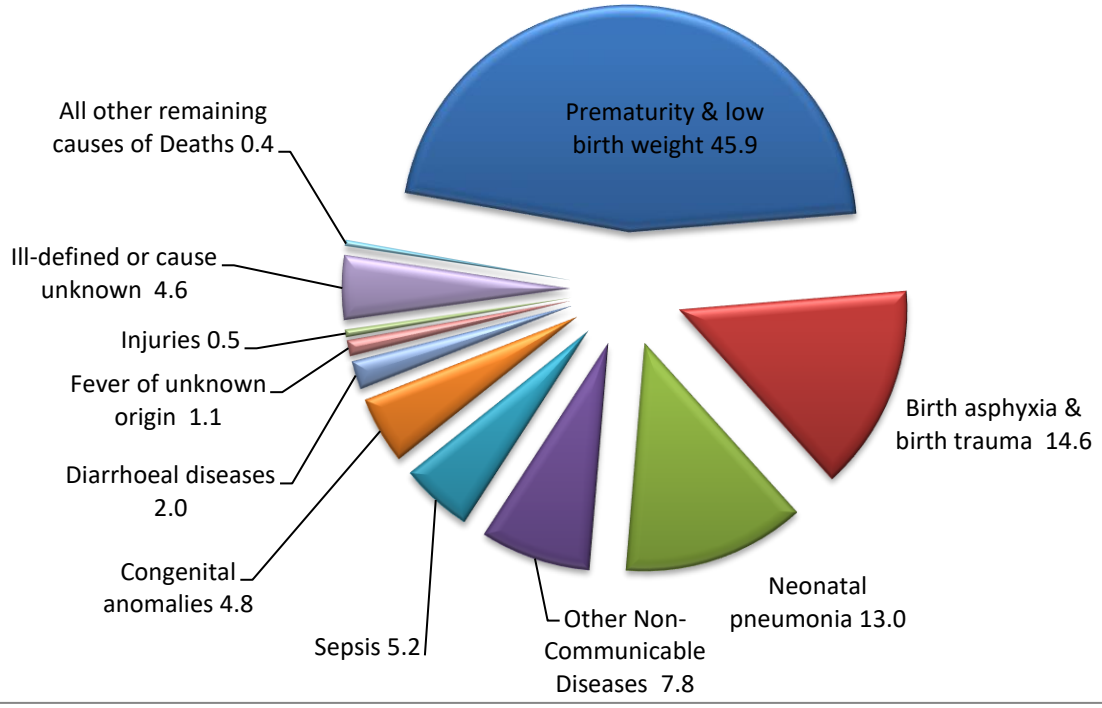
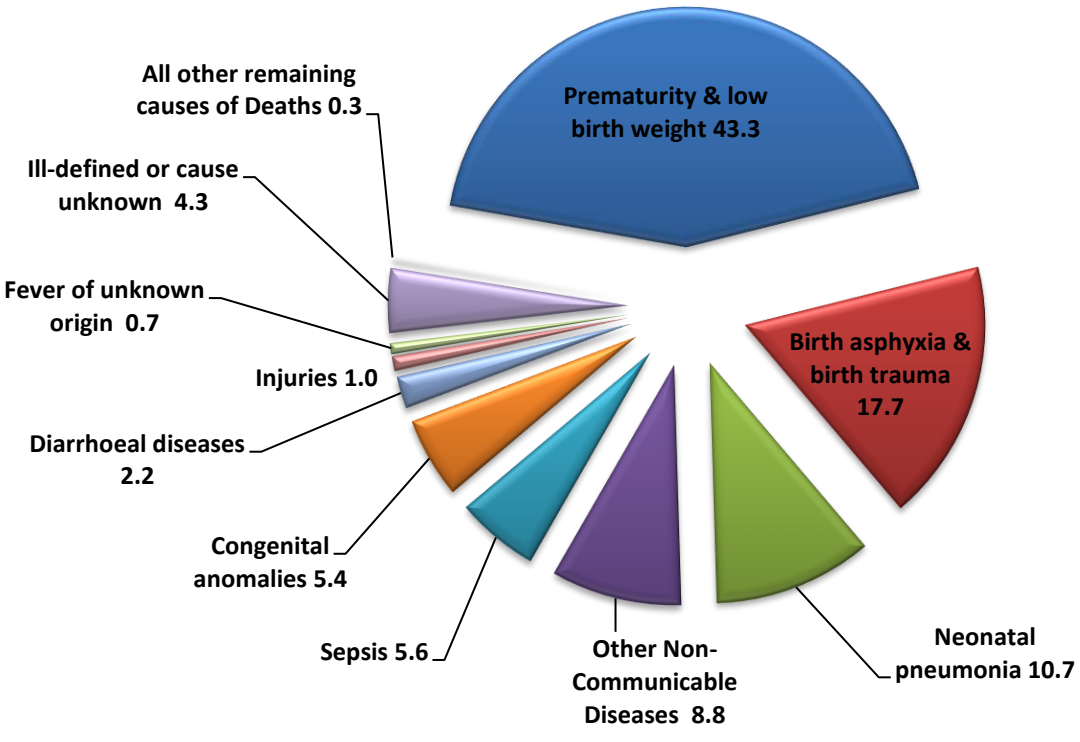


Chart 22 - Top 10 causes of death in Urban area for age group below 29 days, 2017-2019 (in %)

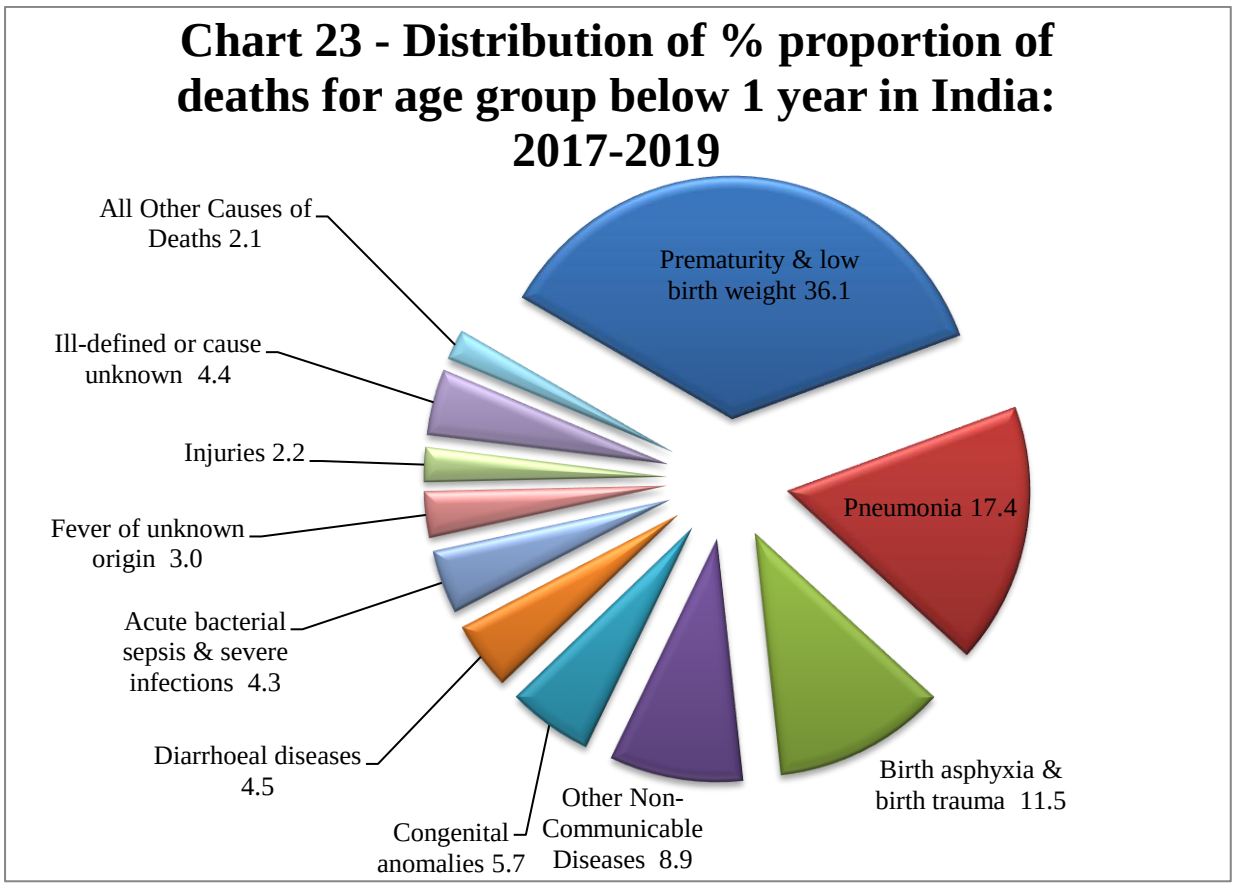


3.3.1 Table 3.2A shows the top 10 causes of death for infants during the period 2017-2019. Prematurity & low birth weight (36.1%), pneumonia (17.4%), birth asphyxia & birth trauma (11.5), and other non – communicable disease (8.9) are the main causes of death among infants and account for more than 73 percentage proportion of deaths in Infants. Top 10 Causes of Deaths during 2017-2019 for Infants is given in Chart 23.

Table 3.2A: Top 10 Causes of Death for age group below 1 year in India: 2017-2019

Rank	Causes of Death	% Proportions of Deaths		
		Male	Female	Persons
1	Prematurity & low birth weight	35.6	36.7	36.1
2	Pneumonia	17.0	17.8	17.4
3	Birth asphyxia & birth trauma	11.9	11.1	11.5
4	Other Non-Communicable Diseases	9.3	8.4	8.9
5	Congenital anomalies	6.0	5.3	5.7
6	Diarrhoeal diseases	4.3	4.8	4.5
7	Acute bacterial sepsis & severe infections	4.1	4.5	4.3
8	Fever of unknown origin	3.0	3.1	3.0
9	Injuries	2.3	2.1	2.2
10	Ill-defined or cause unknown	4.7	4.0	4.4
	All Other Causes of Deaths	1.8	2.3	2.1

Note: Ill-defined or cause unknown constitutes instances where cause could not be properly diagnosed so has been categorised last among the top 10 leading cause group.



3.3.2 Table 3.2B shows the variation in causes of infant mortality (age below 1 year) as a proportion of total infant deaths in EAG states & Assam and Other states. Infant deaths accounts for about 11.6 % proportion of the total deaths in EAG states & Assam and 3.5% proportion in the other states. Proportion of death from Prematurity & low birth weight being the top cause of death, accounts for 36.5% in EAG states & Assam as compared to 35.3% in Other States. Mortality due to diarrhoeal diseases (4.8%) is higher in proportion in EAG states & Assam as compared to Other States (4.0%). Congenital anomalies cause more deaths in the Other States (8.1%) via-a-vis those in the EAG states and Assam (4.3%). Contribution in female deaths due to pneumonia is higher in both categories, EAG states & Assam and Other States than male deaths. The deaths due to birth asphyxia & birth trauma are more pre-dominant among male than female. Top 10 Causes of Deaths during 2017-2019 for children below 1 year for EAG States & Assam and for Other States are given in Chart 24 and Chart 25 respectively.

Table 3.2B: Top 10 Causes of Death for age group below 1 year in EAG States & Assam and Other States: 2017-2019

Cause of Death	% Proportion of death		
	Male	Female	Person
EAG States and Assam			
Prematurity & low birth weight	35.6	37.5	36.5
Pneumonia	17.7	18.0	17.8
Birth asphyxia & birth trauma	12.5	11.5	12.0
Other Non-Communicable Diseases	9.9	8.2	9.1
Diarrhoeal diseases	4.6	5.2	4.8
Acute bacterial sepsis & severe infections	4.2	4.8	4.5
Congenital anomalies	4.7	3.9	4.3
Fever of unknown origin	2.7	2.6	2.6
Injuries	2.1	2.0	2.0
Ill-defined or cause unknown	4.4	4.2	4.3
All Other Remaining Causes	1.7	2.1	1.9
Other States			
Prematurity & low birth weight	35.5	35.1	35.3
Pneumonia	15.7	17.4	16.5
Birth asphyxia & birth trauma	10.9	10.2	10.6
Other Non-Communicable Diseases	8.3	8.7	8.5
Congenital anomalies	8.3	7.7	8.1
Diarrhoeal diseases	3.7	4.3	4.0
Acute bacterial sepsis & severe infections	3.9	3.8	3.8
Fever of unknown origin	3.6	4.1	3.8
Injuries	2.7	2.4	2.6
Ill-defined or cause unknown	5.3	3.5	4.5
All Other Remaining Causes	2.0	2.7	2.3

Note: Ill-defined or cause unknown constitutes instances where cause could not be properly diagnosed so has been categorised last among the top 10 leading cause group.

Chart 24 - Top 10 causes of death in EAG & Assam States for age group below 1 year, 2017-2019 (in %)

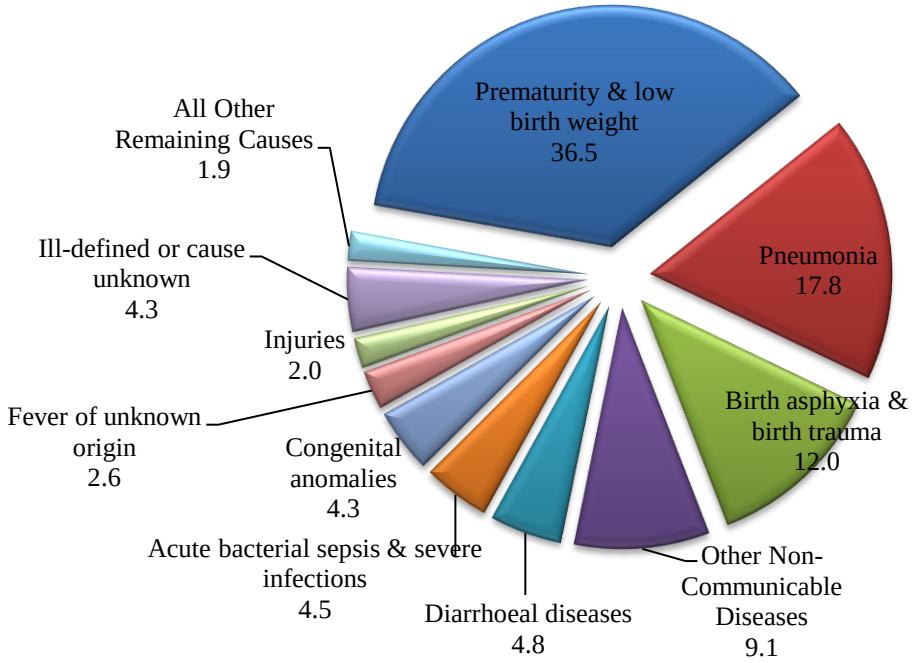
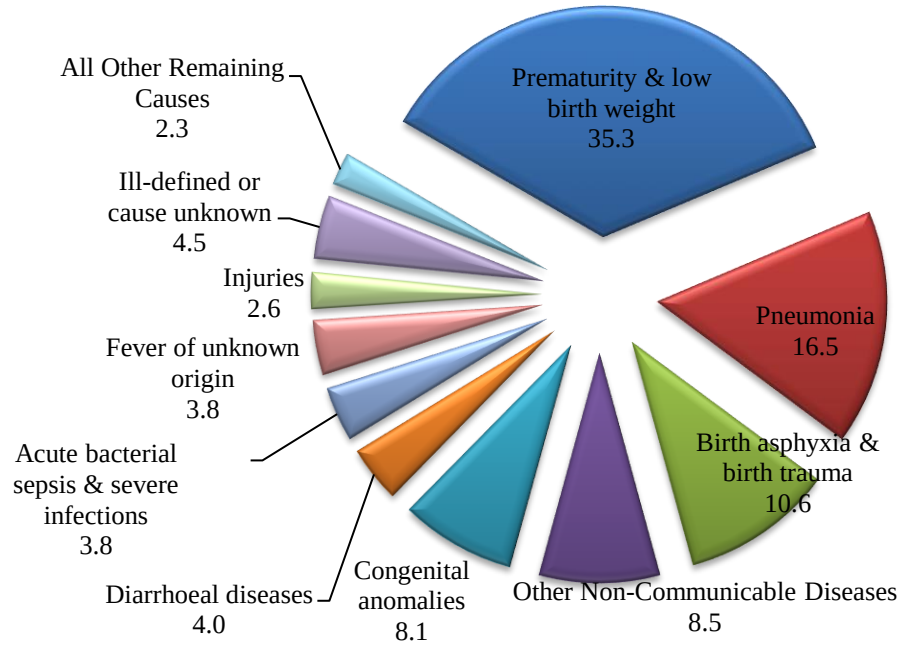


Chart 25 - Top 10 causes of death in Other States for age group below 1 year, 2017-2019 (in %)



3.3.3 Table 3.2C shows the major causes of death for age group below 1 year by rural and urban areas in the country. About 6.8 percentage proportion of the total deaths in rural areas and 4.9% proportion of deaths in the urban areas pertain to infants. The top causes of death are common in rural as well as urban areas, with their relative varying ranking. Prematurity & low birth weight, pneumonia, birth asphyxia & birth trauma, other non-communicable diseases and diarrhoeal diseases clubbed together account for more than 75 percent of infant deaths in rural and urban areas. The incidence of female deaths (6.4%) due to congenital anomalies in urban areas is higher as compared to rural areas (5.0%). Variation is observed between male and female deaths due to prematurity & low birth weight in both rural and urban areas. The top 10 causes of deaths during 2017-2019 for children below 1 year for urban and rural areas are given in Chart 26 and Chart 27 respectively.

Table 3.2C: Top 10 Causes of Death for age group below 1 year in Rural & Urban areas: 2017-2019

Cause of Death	% Proportion of death		
	Male	Female	Person
Rural			
Prematurity & low birth weight	35.9	36.7	36.2
Pneumonia	17.3	18.5	17.8
Birth asphyxia & birth trauma	11.4	10.7	11.1
Other Non-Communicable Diseases	9.4	8.2	8.8
Congenital anomalies	5.9	5.0	5.5
Diarrhoeal diseases	4.3	5.0	4.6
Acute bacterial sepsis & severe infections	4.0	4.4	4.2
Fever of unknown origin	3.0	3.3	3.1
Injuries	2.3	2.0	2.2
Ill-defined or cause unknown	4.7	4.0	4.4
All Other remaining causes	1.8	2.3	2.0
Urban			
Prematurity & low birth weight	34.0	36.7	35.3
Pneumonia	15.5	14.2	14.9
Birth asphyxia & birth trauma	14.6	12.9	13.8
Other Non-Communicable Diseases	8.9	9.3	9.1
Congenital anomalies	6.5	6.4	6.5
Acute bacterial sepsis & severe infections	4.4	5.1	4.7
Diarrhoeal diseases	3.9	4.1	4.0
Fever of unknown origin	3.0	2.3	2.7
Injuries	2.4	2.8	2.6
Ill-defined or cause unknown	4.9	3.8	4.4
All Other remaining causes	1.9	2.5	2.2

Note: Ill-defined or cause unknown constitutes instances where cause could not be properly diagnosed so has been categorised last among the top 10 leading cause group.

Chart 26 - Top 10 causes of death in Rural area for age group below 1 year: 2017-2019 (in %)

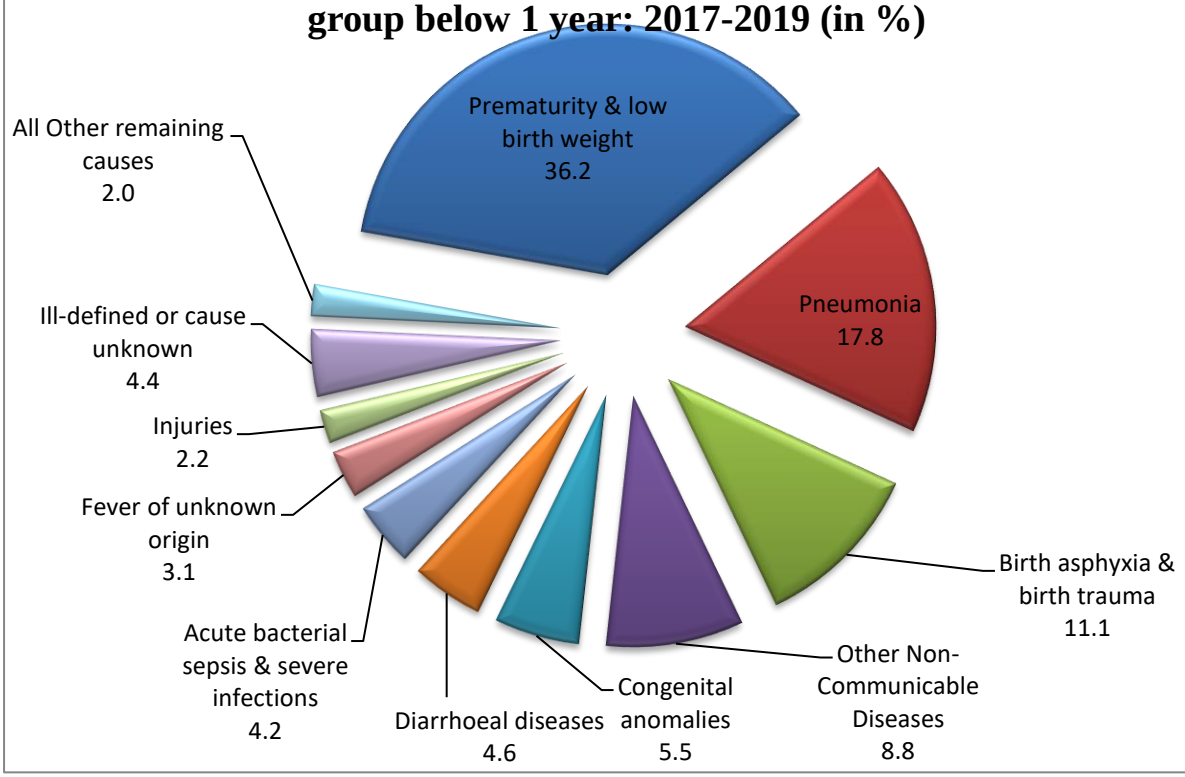
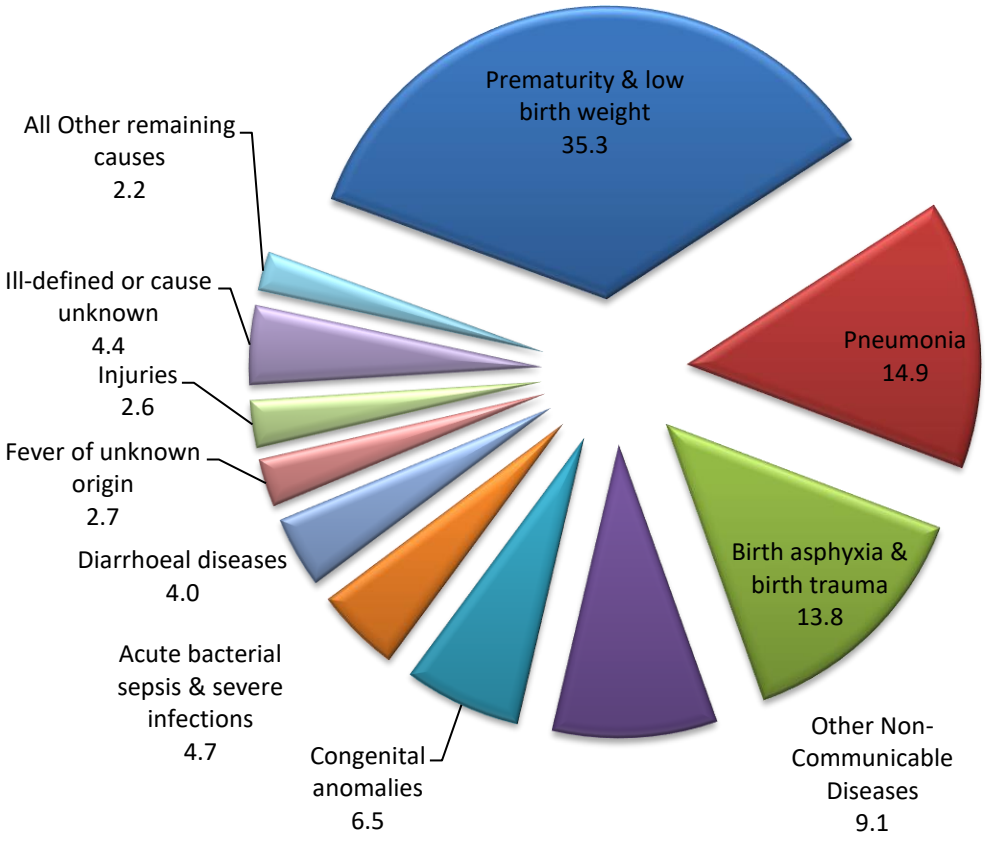


Chart 27 - Top 10 causes of death in Urban area for age group below 1 year: 2017-2019 (in %)



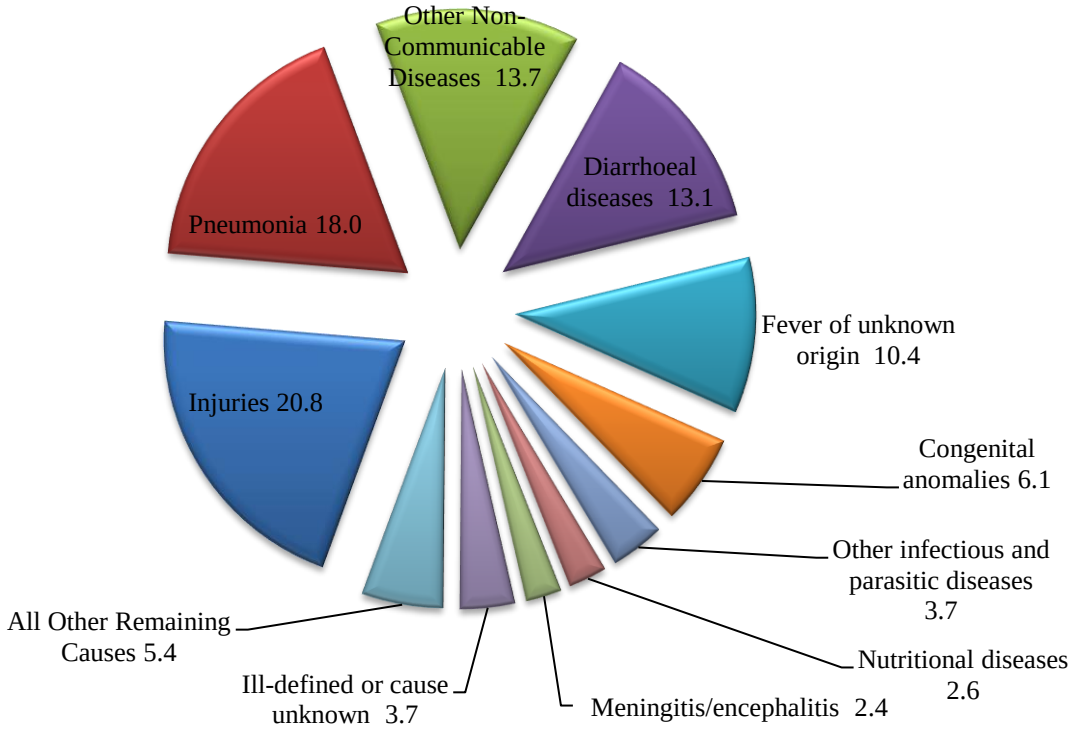
3.4.1 Table 3.3A presents the top ten causes of death for child mortality at ages 1-4 years during the period 2017-2019. Injuries is the leading cause of death accounting for 20.8 percentage proportion of deaths in age group 1-4 years followed by Pneumonia (18.0%). Proportion of female deaths (13.9%) due to diarrhoeal diseases is higher than male deaths (12.4%). The incidence of deaths due to congenital anomalies in female (6.3%) is higher than of males (5.9%). The top 10 causes of deaths during 2017-2019 for children between age group 1-4 years is given in Chart 28.

Table 3.3A: Top 10 Causes of Death for age group 1- 4 years in India: 2017-2019

Cause of Death	% Proportion of death		
	Male	Female	Person
Injuries	21.9	19.5	20.8
Pneumonia	16.1	20.2	18.0
Other Non-Communicable Diseases	14.7	12.7	13.7
Diarrhoeal diseases	12.4	13.9	13.1
Fever of unknown origin	11.0	9.8	10.4
Congenital anomalies	5.9	6.3	6.1
Other infectious and parasitic diseases	3.4	4.0	3.7
Nutritional diseases	2.7	2.6	2.6
Meningitis/encephalitis	2.3	2.6	2.4
Ill-defined or cause unknown	4.1	3.3	3.7
All Other Remaining Causes	5.6	5.3	5.4

Note: Ill-defined or cause unknown constitutes instances where could not be properly diagnosed so has been categorised last among the top 10 leading cause group

Chart 28 - Distribution of % proportion of deaths for age group 1-4 year in India: 2017-2019



3.4.2 Table 3.3B shows the top 10 causes of child mortality at ages 1-4 years as a proportion of total deaths by EAG states & Assam and Other states. The leading causes of deaths remains the same in both the category of states except for nutritional diseases in EAG states & Assam. Other than the mortality from pneumonia, which is significant in both the groups, injuries, diarrhoeal diseases are more acutely prevalent in EAG states & Assam as compared to the Other States. The proportion of female deaths due to diarrhoeal diseases and fever of unknown origin is higher than that in males in both the group of states. The proportion of female deaths (23.3%) due to injuries is more than that of male deaths (21.2%) in EAG States & Assam. The top 10 causes of deaths during 2017-2019 for children between age group 1-4 years for EAG States & Assam and Other States are given in Chart 29 and Chart 30, respectively.

Table 3.3B: Top 10 Causes of Death for age group 1- 4 year in EAG states & Assam and Other states: 2017-2019

Cause of Death	% Proportion of death		
	Male	Female	Person
EAG States and Assam			
Injuries	21.2	23.3	22.2
Pneumonia	15.4	17.4	16.4
Other Non-Communicable Diseases	15.9	11.8	13.9
Diarrhoeal diseases	11.8	13.0	12.4
Fever of unknown origin	10.8	10.7	10.8
Congenital anomalies	5.8	5.9	5.8
Other infectious and parasitic diseases	3.4	5.1	4.2
Nutritional diseases	3.6	2.6	3.1
Meningitis/encephalitis	1.9	3.1	2.5
Ill-defined or cause unknown	5.5	3.1	4.3
All Other Remaining Causes	4.6	4.1	4.3
Other States			
Pneumonia	16.8	23.7	19.9
Injuries	22.7	14.7	19.1
Diarrhoeal diseases	13.1	15.1	14.0
Other Non-Communicable Diseases	13.3	13.8	13.5
Fever of unknown origin	11.2	8.7	10.0
Congenital anomalies	6.1	6.7	6.4
Prematurity & low birth weight	3.5	2.9	3.2
Other infectious and parasitic diseases	3.5	2.6	3.1
Meningitis/encephalitis	2.7	1.9	2.3
Ill-defined or cause unknown	2.4	3.5	2.9
All Other Remaining Causes	4.8	6.4	5.5

Note: Ill-defined or cause unknown constitutes instances where cause could not be properly diagnosed so has been categorised last among the top 10 leading cause group.

Chart 29 - Top 10 causes of death in EAG States & Assam for age group 1-4 year: 2017-2019 (in %)

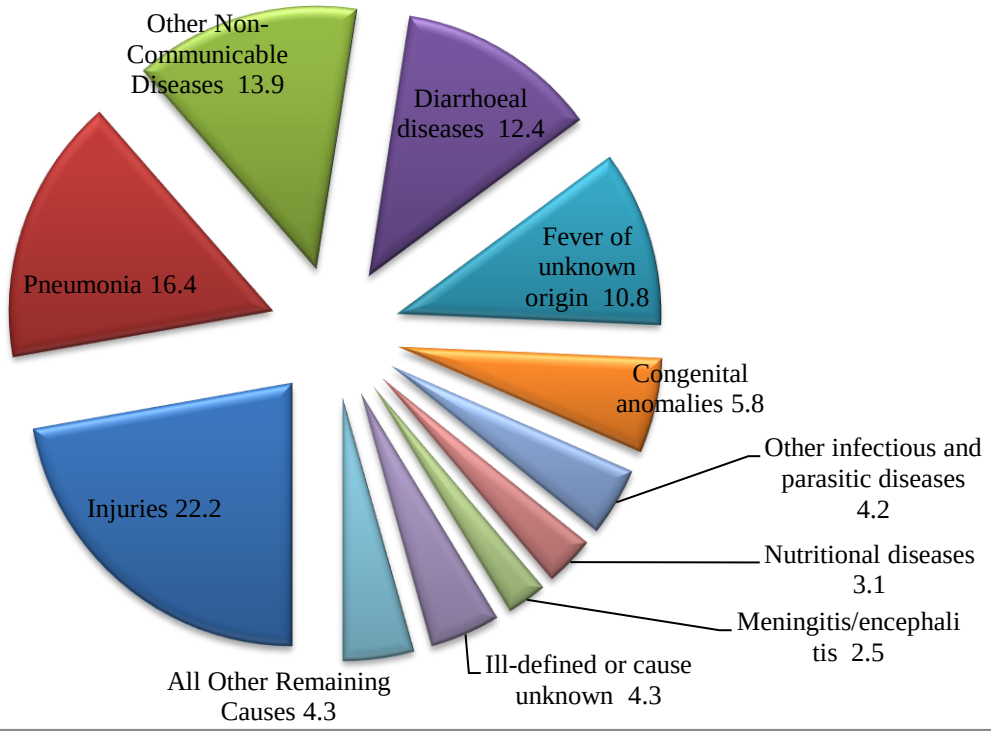
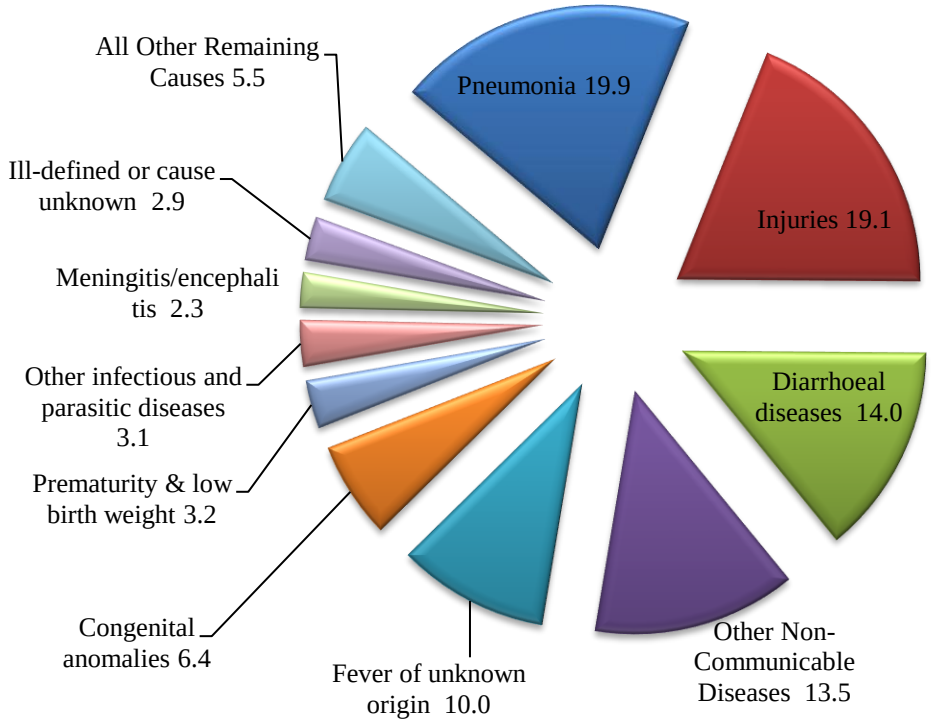


Chart 30 - Top 10 causes of death in Other States for age group 1-4 year: 2017-2019 (in %)



3.4.3 Table 3.3C represents the top ten causes of death in age group 1-4 years by rural and urban areas in the country. About 1.4% proportion of the total deaths in rural areas and 0.9% in urban areas are of children in the age group 1-4. Overall pattern of leading causes of death is broadly similar except meningitis/encephalitis in urban areas and malaria in rural areas. Share of deaths due to pneumonia in rural is 19.1% whereas, proportion of death in urban areas is 21.9%. Deaths due to diarrhoeal diseases is more prevalent in females in both the groups. In urban area, female deaths (9.5%) due to fever of unknown origin is more severe than male deaths (9.2%). The top 10 causes of deaths during 2017-2019 for children between age group 1-4 years for Urban and Rural areas are given in Chart 31 and Chart 32, respectively.

Table 3.3C: Top 10 Causes of Death for age group 1- 4 years in Rural & Urban areas: 2017-2019

Cause of Death	% Proportion of death		
	Male	Female	Person
Rural			
Injuries	21.0	18.2	19.7
Pneumonia	17.9	20.4	19.1
Diarrhoeal diseases	13.2	14.7	13.9
Other Non-Communicable Diseases	14.0	12.7	13.4
Fever of unknown origin	10.2	11.6	10.9
Congenital anomalies	6.1	5.5	5.8
Other infectious and parasitic diseases	3.1	3.5	3.3
Nutritional diseases	2.3	2.1	2.2
Prematurity & low birth weight	2.1	1.8	2.0
Ill-defined or cause unknown	3.6	2.9	3.3
All Other Remaining Causes	6.5	6.4	6.5
Urban			
Pneumonia	22.5	21.1	21.9
Injuries	17.5	12.6	15.3
Other Non-Communicable Diseases	15.0	13.7	14.4
Diarrhoeal diseases	10.0	13.7	11.6
Fever of unknown origin	9.2	9.5	9.3
Congenital anomalies	7.5	9.5	8.4
Other infectious and parasitic diseases	5.0	4.2	4.7
Nutritional diseases	2.5	4.2	3.3
Prematurity & low birth weight	3.3	3.2	3.3
Ill-defined or cause unknown	3.3	3.2	3.3
All Other Remaining Causes	4.2	5.3	4.7

Note: Ill-defined or cause unknown constitutes instances where cause could not be properly diagnosed so has been categorised last among the top 10 leading cause group.

Chart 31 - Top 10 causes of death in Rual area for age group 1-4 year: 2017-2019 (in %)

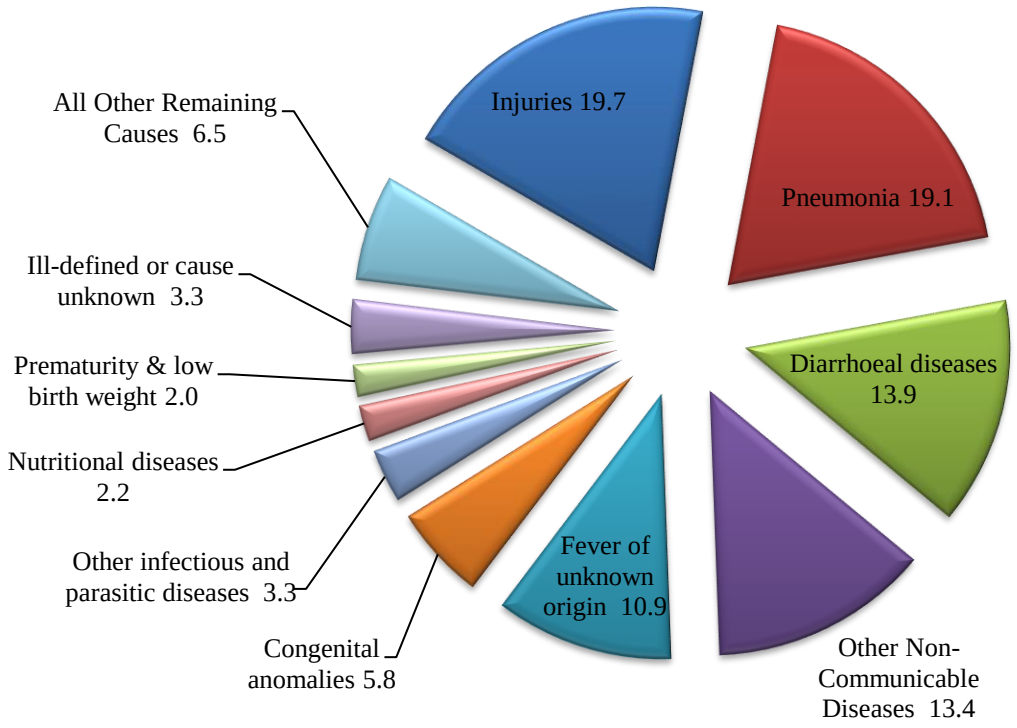
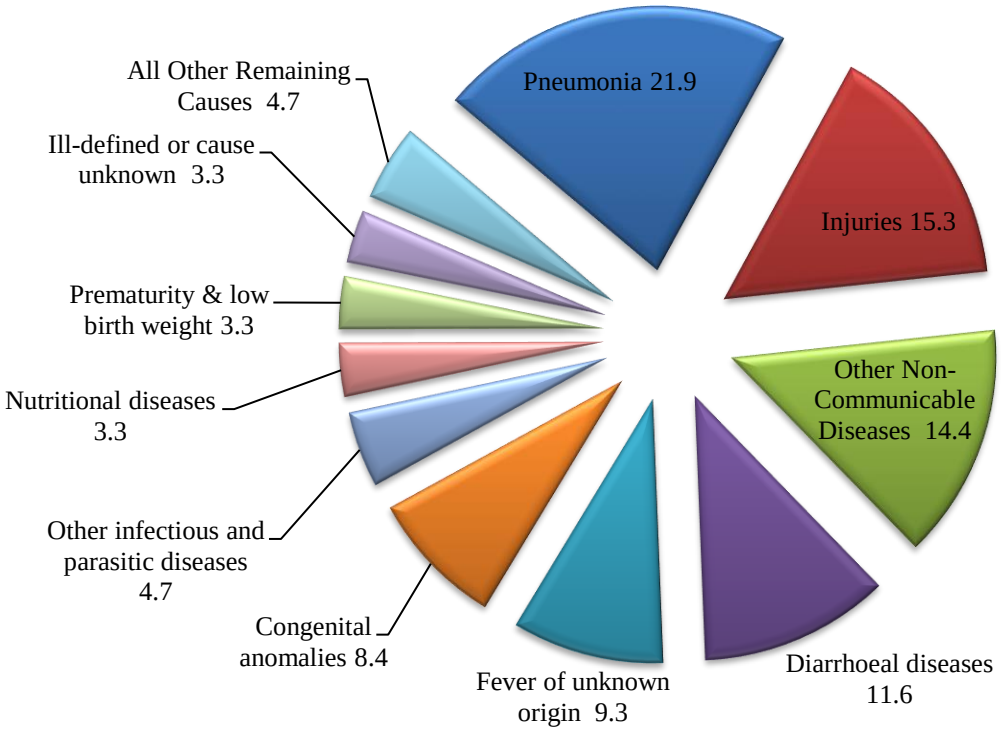


Chart 32 - Top 10 causes of death in Urban area for age group 1-4 year: 2017-2019 (in %)

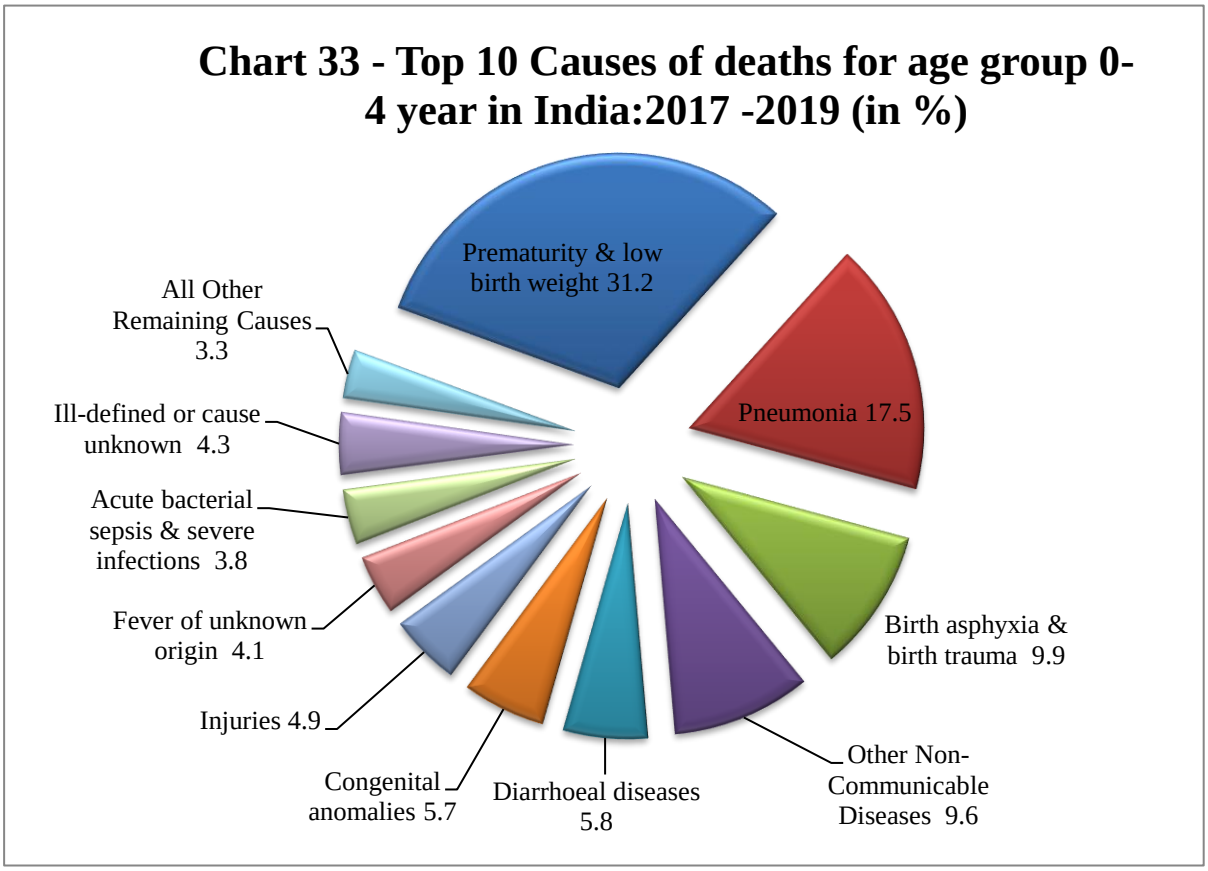


3.5.1 Table 3.4A shows the top ten causes of deaths in age group 0-4 years. Nearly 7.5% proportion of total sample deaths in the country occurred among children in the age group 0-4 years. Prematurity & low birth weight is the predominant cause of deaths among this age group causing 31.2% proportion of deaths with difference of 1.2% point between male and female. Pneumonia which is second leading cause of death (17.5%) which is quite low in comparison to proportion of deaths due to prematurity and low birth weight (31.2%). Proportion of deaths of females (6.2%) due to diarrhoeal diseases is more than proportion of male deaths (5.4%). The top 10 causes of deaths during 2017-2019 for children between age group 0-4 years is given in Chart 33.

Table 3.4A: Top 10 Causes of Death for age group 0-4 year in India: 2017-2019

Cause of Death	% Proportion of death		
	Male	Female	Person
Prematurity & low birth weight	30.8	31.6	31.2
Pneumonia	16.8	18.2	17.5
Birth asphyxia & birth trauma	10.3	9.4	9.9
Other Non-Communicable Diseases	10.1	9.0	9.6
Diarrhoeal diseases	5.4	6.2	5.8
Congenital anomalies	6.0	5.4	5.7
Injuries	5.1	4.7	4.9
Fever of unknown origin	4.1	4.1	4.1
Acute bacterial sepsis & severe infections	3.6	4.0	3.8
Ill-defined or cause unknown	4.6	3.9	4.3
All Other Remaining Causes	3.0	3.7	3.3

Note: Ill-defined or cause unknown constitutes instances where cause could not be properly diagnosed so has been categorised last among the top 10 leading cause group.



3.5.2 Table 3.4B shows the variation in causes of child mortality at ages 0-4 years as a proportion of deaths by EAG states & Assam and Other states. The share of this age group in the total deaths for the EAG states & Assam and Other states is 14.5% and 5.0% respectively. The leading cause of death remains the same in both the category. However, their relative ranking of causes of deaths varies. Other than the mortality from prematurity & low birth weight, which is significant in both groups, pneumonia, other non-communicable diseases, birth asphyxia & birth trauma are more acutely prevalent in EAG states & Assam than in the Other States. Proportion of male deaths due to prematurity & low birth weight is more than that of proportion of deaths of females in both groups. The proportion of female deaths due to pneumonia, diarrhoeal diseases, injuries and fever of unknown origin is higher than that of males in both the group of states. The top 10 causes of deaths during 2017-2019 for children between age group 0-4 years in EAG States & Assam and Other States are given in Chart 34 and Chart 35, respectively.

Table 3.4B: Top 10 Causes of Death for age group 0-4 year in EAG States & Assam and Other States: 2017-2019

Cause of Death	% Proportion of death		
	Male	Female	Person
EAG States and Assam			
Prematurity & low birth weight	31.4	32.9	32.1
Pneumonia	17.4	17.9	17.7
Birth asphyxia & birth trauma	11.0	10.1	10.6
Other Non-Communicable Diseases	10.6	8.6	9.7
Diarrhoeal diseases	5.4	6.2	5.8
Injuries	4.4	4.7	4.5
Congenital anomalies	4.8	4.2	4.5
Acute bacterial sepsis & severe infections	3.8	4.3	4.0
Fever of unknown origin	3.7	3.6	3.6
Ill-defined or cause unknown	4.6	4.1	4.3
All Other Remaining Causes	2.8	3.6	3.2
Other States			
Prematurity & low birth weight	29.8	29.3	29.6
Pneumonia	15.9	18.6	17.1
Other Non-Communicable Diseases	9.2	9.6	9.4
Birth asphyxia & birth trauma	9.0	8.4	8.7
Congenital anomalies	8.0	7.6	7.8
Diarrhoeal diseases	5.4	6.2	5.8
Injuries	6.3	4.6	5.5
Fever of unknown origin	4.9	4.9	4.9
Acute bacterial sepsis & severe infections	3.3	3.4	3.4
Ill-defined or cause unknown	4.8	3.5	4.2
All Other Remaining Causes	3.4	3.9	3.6

Note: Ill-defined or cause unknown constitutes instances where cause could not be properly diagnosed so has been categorised last among the top 10 leading cause group.

Chart 34 - Top 10 causes of death in EAG States & Assam for age group 0-4 year, 2017-2019 (in %)

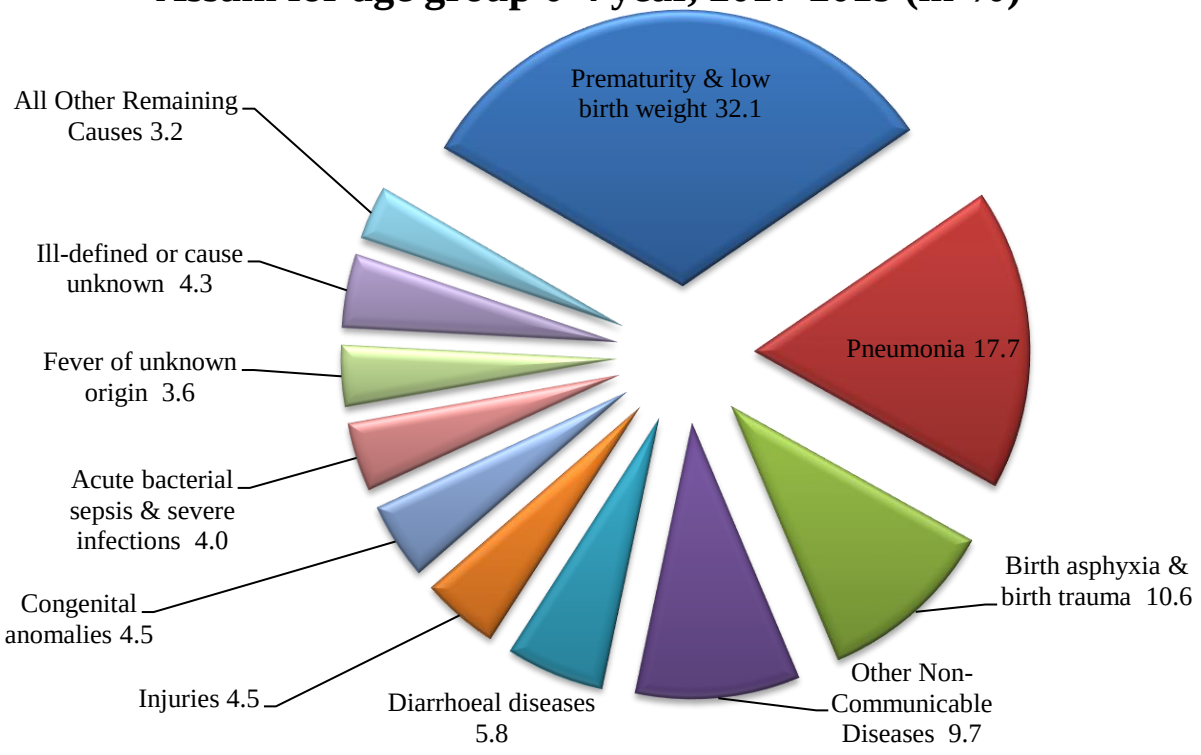
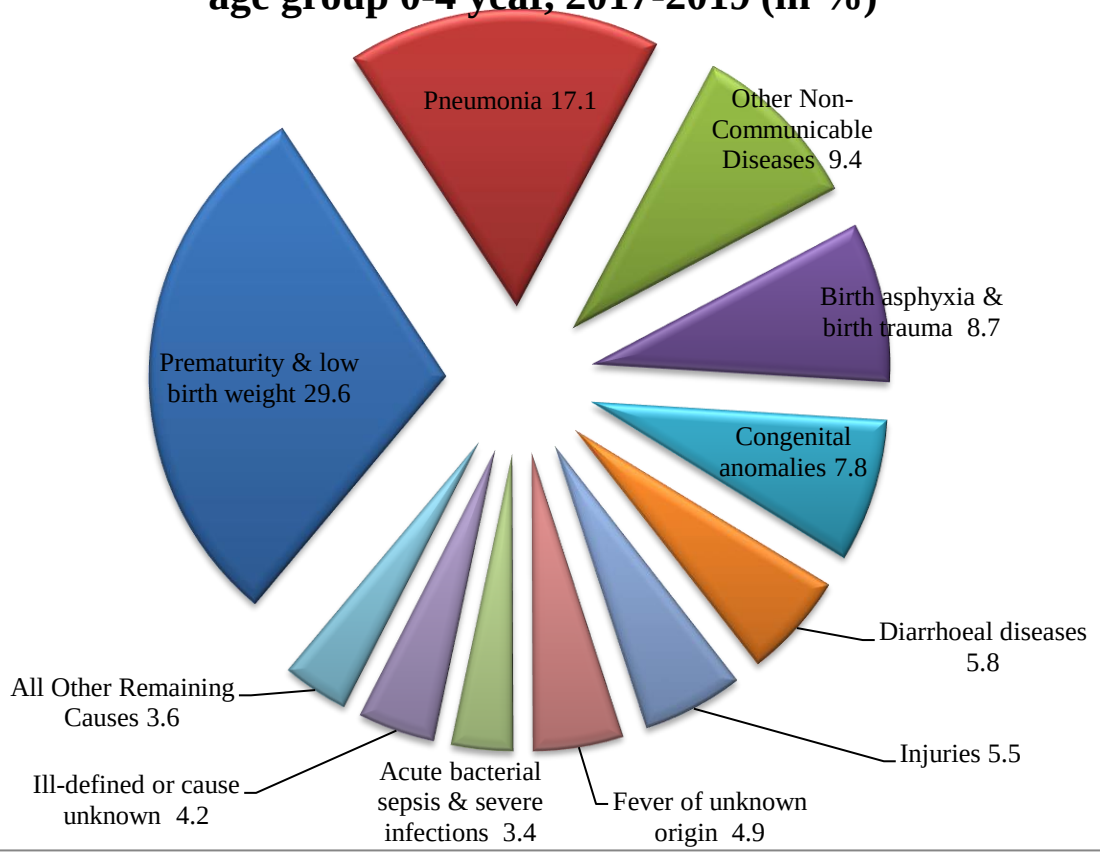


Chart 35 - Top 10 causes of death in Other States for age group 0-4 year, 2017-2019 (in %)



3.5.3 Table 3.4C shows the top ten causes of death at ages 0-4 years by rural and urban areas in the country. About 8.0 % proportion of total sample deaths in the rural areas and 5.6% in the urban areas are of children in the age group 0 to 4 years. The overall pattern of leading causes of death is broadly similar in EAG states & Assam and Other states. The incidence of deaths due to prematurity & low birth weight is more prevalent in male than female in both rural and urban areas. Whereas, reverse scenario can be observed in case of pneumonia, diarrhoeal diseases and injuries. Top 10 Causes of Deaths during 2017-2019 for children between age group 0-4 years in Urban and Rural areas are given in Chart 36 and Chart 37, respectively.

Table 3.4C: Top 10 Causes of Death for age group 0-4 year in Rural & Urban Areas: 2017-2019

Cause of Death	% Proportion of deaths		
	Male	Female	Person
Rural			
Prematurity & low birth weight	31.0	31.4	31.2
Pneumonia	16.9	18.8	17.8
Other Non-Communicable Diseases	10.2	8.8	9.5
Birth asphyxia & birth trauma	9.8	9.1	9.5
Diarrhoeal diseases	5.6	6.4	5.9
Congenital anomalies	5.9	5.1	5.5
Injuries	5.2	4.8	5.0
Fever of unknown origin	4.2	4.3	4.2
Acute bacterial sepsis & severe infections	3.6	3.9	3.7
Ill-defined or cause unknown	4.6	3.9	4.3
All Other Remaining Causes	3.0	3.7	3.3
Urban			
Prematurity & low birth weight	29.9	32.7	31.2
Pneumonia	16.5	15.1	15.8
Birth asphyxia & birth trauma	12.7	11.4	12.1
Other Non-Communicable Diseases	9.7	9.8	9.7
Congenital anomalies	6.7	6.8	6.7
Diarrhoeal diseases	4.7	5.2	4.9
Acute bacterial sepsis & severe infections	4.0	4.5	4.2
Injuries	4.4	4.0	4.2
Fever of unknown origin	3.8	3.2	3.5
Ill-defined or cause unknown	4.7	3.7	4.2
All Other Remaining Causes	3.0	3.8	3.4

Note: Ill-defined or cause unknown constitutes instances where cause could not be properly diagnosed so has been categorised last among the top 10 leading cause group.

Chart 36 - Top 10 causes of death in Rural area for age group 0-4 year: 2017-2019 (in %)

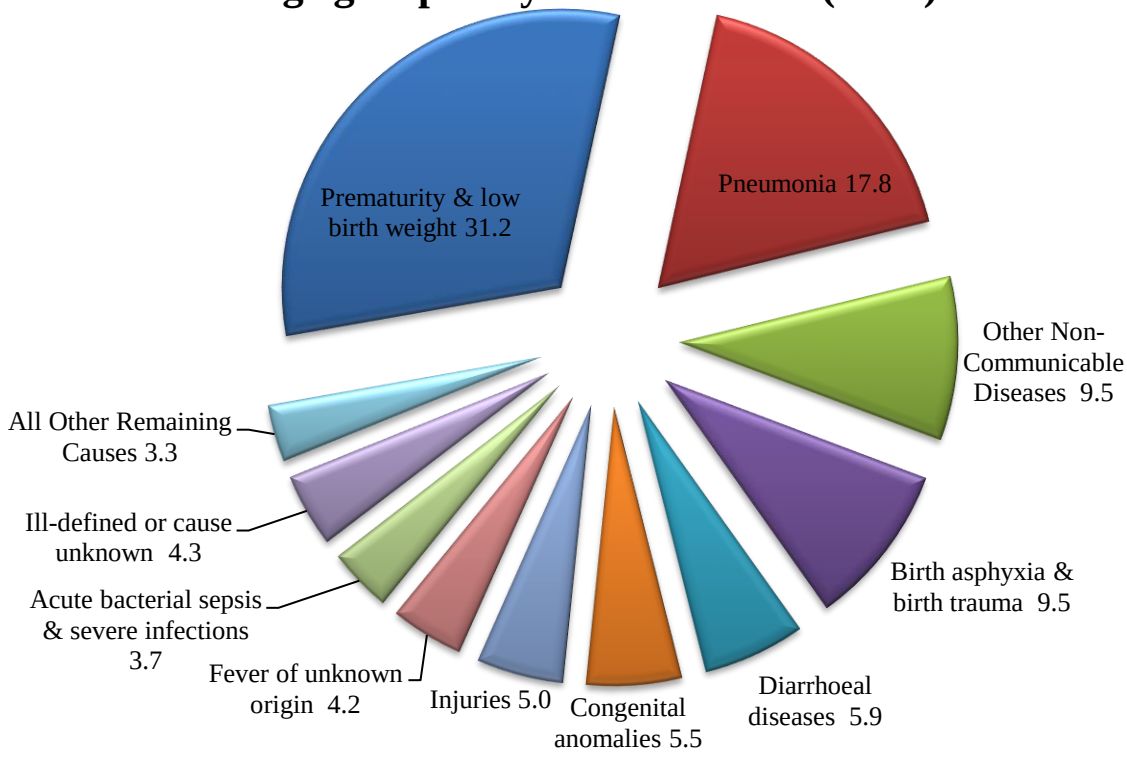
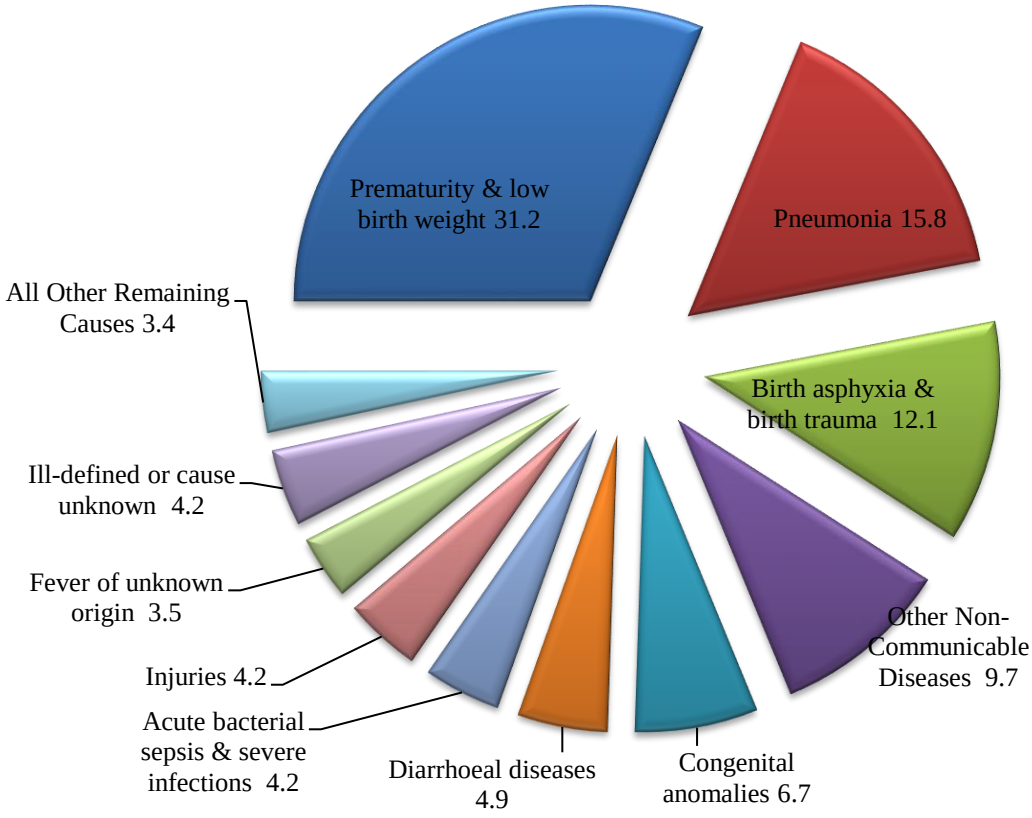


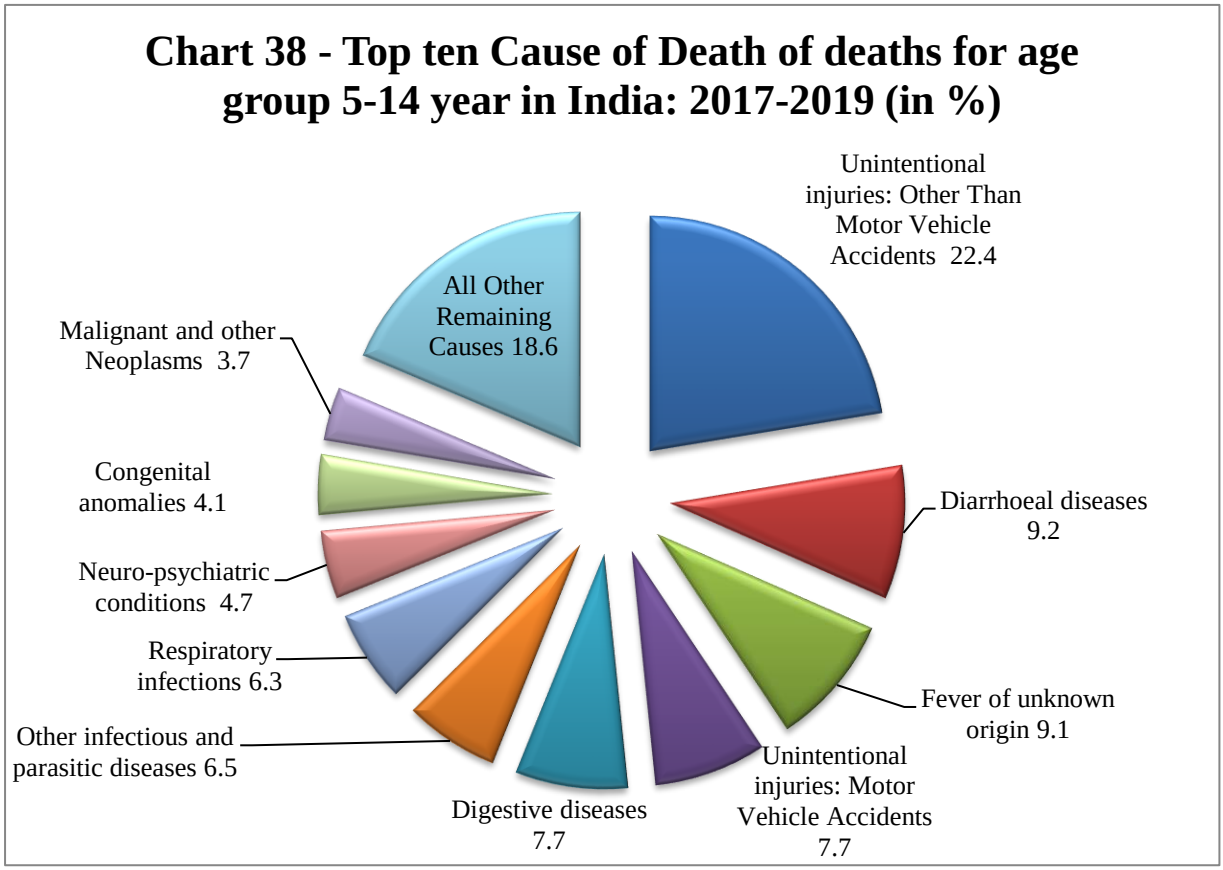
Chart 37 - Top 10 causes of death in Urban area for age group 0-4 year: 2017-2019 (in %)



3.6.1 Table 3.5A shows the leading causes of death at ages 5-14, which is generally regarded as a period of lower mortality than that at ages 0-4 years. The overall contribution of this age group to the total deaths is 1.2%, with 1.0% of male deaths and 1.2% of female deaths. The leading cause of deaths is unintentional injuries: other Than Motor Vehicle Accidents contributes 22.4% of total proportion of deaths in age group 5-14 years. Diarrhoeal diseases (9.2%), Fever of unknown origin (9.1%), Unintentional injuries: Motor Vehicle Accidents (7.7), Digestive diseases (7.7%) are other prominent causes of death. Female have higher proportion of death from digestive diseases, other infectious and parasitic diseases, respiratory diseases, and neuro-psychiatric conditions. On the contrary, males have a higher proportion of deaths from unintentional injuries: Other Than Motor Vehicle Accidents and unintentional injuries: motor vehicle accidents. The top 10 causes of deaths during 2017-2019 for children between age group 5-14 years is given in Chart 38.

Table 3.5A-Top 10 Causes of Death for age group 5-14 years in India: 2017-2019

Cause of Death	% Proportion of deaths		
	Male	Female	Person
Unintentional injuries: Other Than Motor Vehicle Accidents	28.3	15.4	22.4
Diarrhoeal diseases	7.4	11.4	9.2
Fever of unknown origin	8.5	9.8	9.1
Unintentional injuries: Motor Vehicle Accidents	8.3	7.1	7.7
Digestive diseases	6.6	9.0	7.7
Other infectious and parasitic diseases	5.9	7.2	6.5
Respiratory infections	6.0	6.7	6.3
Neuro-psychiatric conditions	4.6	4.8	4.7
Congenital anomalies	3.2	5.1	4.1
Malignant and other Neoplasms	3.8	3.6	3.7
All Other Remaining Causes	17.4	20.1	18.6



3.6.2 Table 3.5B shows the variation in causes of mortality at ages 5-14 as a proportion of deaths by EAG States & Assam and Other States. Nearly, 1.9% and 0.8% of the total deaths in the EAG states & Assam and Other states occur in this age group respectively. The overall pattern of the leading causes of death is similar in EAG states & Assam and Other states with varying relative ranking. Deaths due to unintentional injuries: other than motor vehicle accidents, diarrhoeal diseases and unintentional injuries: motor vehicle accidents as causes of deaths dominate among males than females in both the category of states. On the other hand, digestive diseases accounts for more proportion of deaths among females. The top 10 causes of deaths during 2017-2019 for children between age group 5-14 years in EAG States & Assam and Other States are given in Chart 39 and Chart 40, respectively.

Table 3.5B: Top 10 Causes of Death for age group 5-14 years in EAG States & Assam and Other States: 2017-2019

Cause of Death	% Proportion of deaths		
	Male	Female	Person
EAG States and Assam			
Unintentional injuries: Other Than Motor Vehicle Accidents	30.5	15.8	23.7
Diarrhoeal diseases	8.0	12.1	9.9
Fever of unknown origin	7.6	10.9	9.1
Digestive diseases	8.0	10.2	9.0
Other infectious and parasitic diseases	7.6	9.2	8.3
Unintentional injuries: Motor Vehicle Accidents	8.0	6.4	7.2
Respiratory infections	5.5	7.3	6.4
Neuro-psychiatric conditions	3.5	4.5	3.9
Malignant and other Neoplasms	4.1	2.6	3.4
Congenital anomalies	2.2	3.1	2.6
All Other Remaining Causes	15.1	18.0	16.4
Other States			
Unintentional injuries: Other Than Motor Vehicle Accidents	25.6	14.8	20.8
Fever of unknown origin	9.6	8.3	9.0
Diarrhoeal diseases	6.7	10.5	8.3
Unintentional injuries: Motor Vehicle Accidents	8.6	8.0	8.3
Respiratory infections	6.7	5.8	6.3
Digestive diseases	4.9	7.4	6.0
Congenital anomalies	4.4	7.7	5.9
Neuro-psychiatric conditions	5.9	5.2	5.6
Other infectious and parasitic diseases	3.9	4.6	4.2
Malignant and other Neoplasms	3.4	4.9	4.1
All Other Remaining Causes	20.2	22.8	21.3

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Chart 39 - Top 10 causes of death in EAG States & Assam for age group 5-14 year: 2017-2019 (in %)

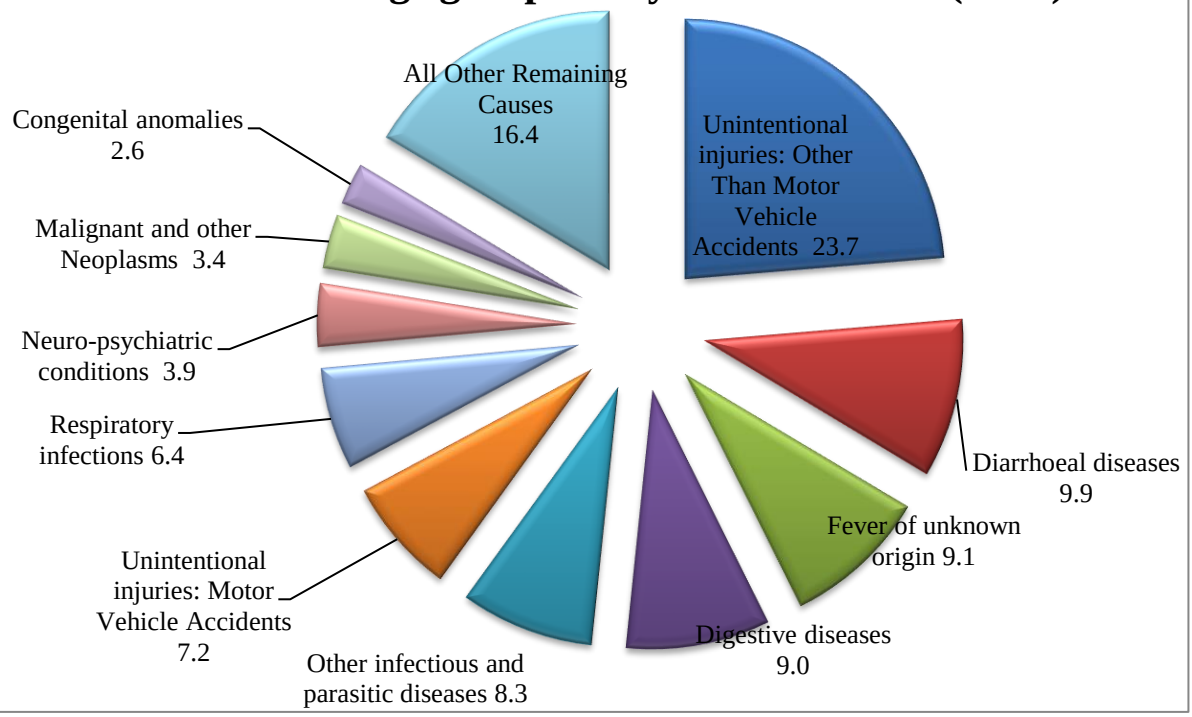
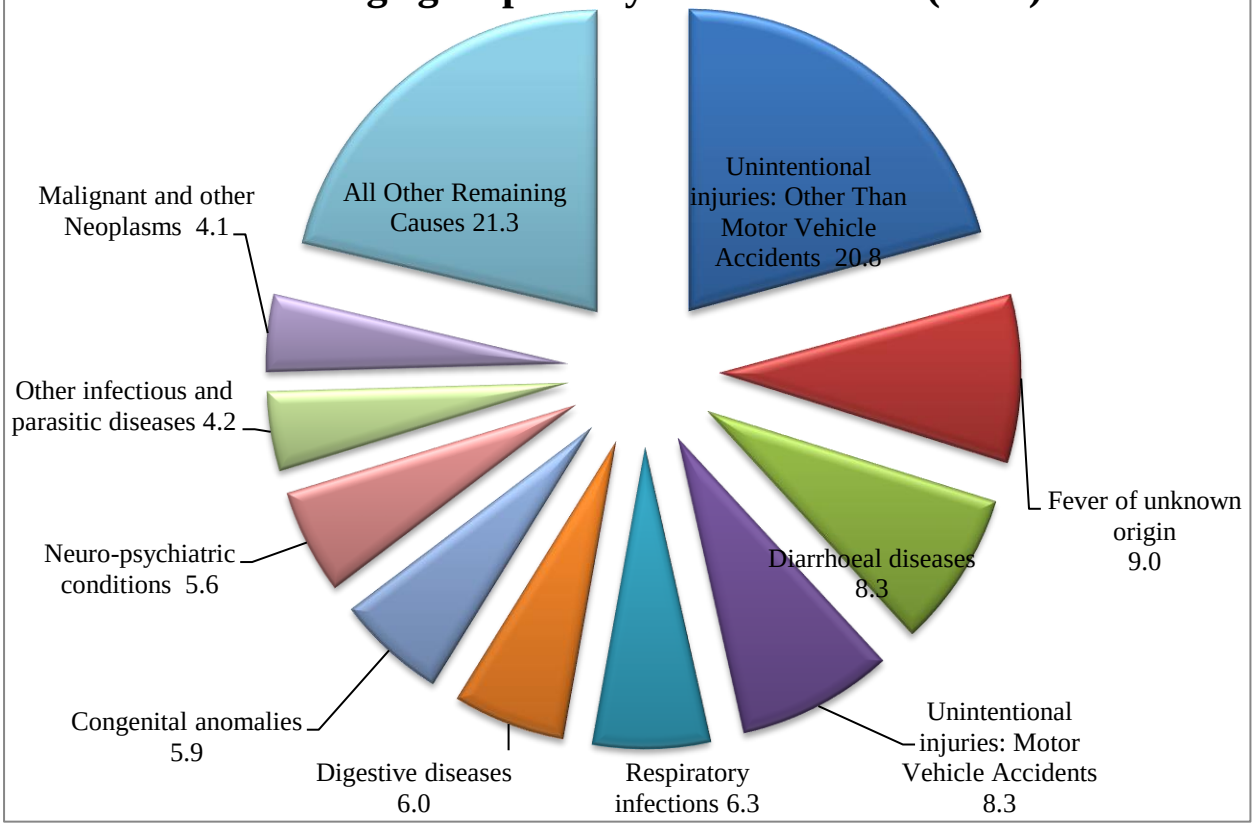


Chart 40 - Top 10 causes of death in Other States for age group 5-14 year: 2017-2019 (in %)



3.6.3 Table 3.5C shows the results for rural and urban areas in the country for age group 5-14 years. The leading causes of deaths are common with varying degrees of proportions. The proportion of deaths due to respiratory infections in rural areas are about 6.7% of the total deaths of age group 5-14 years, compared to 4.2% in urban areas. Deaths from neuro-psychiatric conditions account for 5.7% of the deaths in urban area vis-à-vis 4.5% in rural area. The top 10 causes of deaths for age group 5-14 years in Rural & Urban areas for the year 2017-2019 is in Chart 41 and Chart 42, respectively.

Table 3.5C: Top 10 Causes of Death for age group 5-14 years in Rural & Urban areas: 2017-2019

Cause of Death	% Proportion of deaths		
	Male	Female	Person
Rural area			
Unintentional injuries: Other Than Motor Vehicle Accidents	29.9	15.7	23.5
Diarrhoeal diseases	7.5	11.5	9.3
Fever of unknown origin	8.1	8.8	8.4
Digestive diseases	7.0	7.9	7.4
Unintentional injuries: Motor Vehicle Accidents	7.1	7.2	7.2
Respiratory infections	6.3	7.2	6.7
Other infectious and parasitic diseases	6.0	7.4	6.6
Neuro-psychiatric conditions	4.1	5.0	4.5
Congenital anomalies	3.2	5.1	4.1
Malignant and other Neoplasms	3.8	3.4	3.6
All Other Remaining Causes	16.9	20.8	18.7
Urban area			
Unintentional injuries: Other Than Motor Vehicle Accidents	19.4	13.7	16.7
Fever of unknown origin	10.8	14.5	12.5
Unintentional injuries: Motor Vehicle Accidents	14.4	6.5	10.6
Digestive diseases	4.3	14.5	9.1
Diarrhoeal diseases	6.5	10.5	8.4
Other infectious and parasitic diseases	5.8	6.5	6.1
Neuro-psychiatric conditions	7.2	4.0	5.7
Respiratory infections	4.3	4.0	4.2
Congenital anomalies	3.6	4.8	4.2
Malignant and other Neoplasms	3.6	4.8	4.2
All Other Remaining Causes	20.1	16.1	18.3

Chart 41 - Top 10 causes of death in Rural area for age group 5-14 year: 2017-2019 (in %)

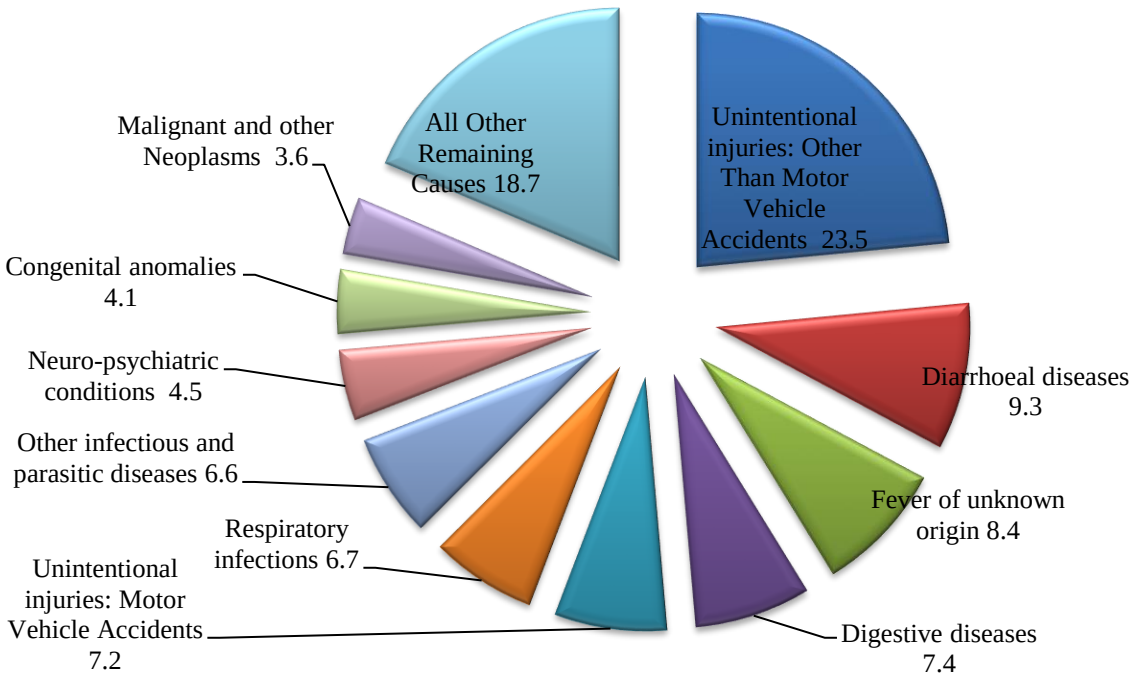
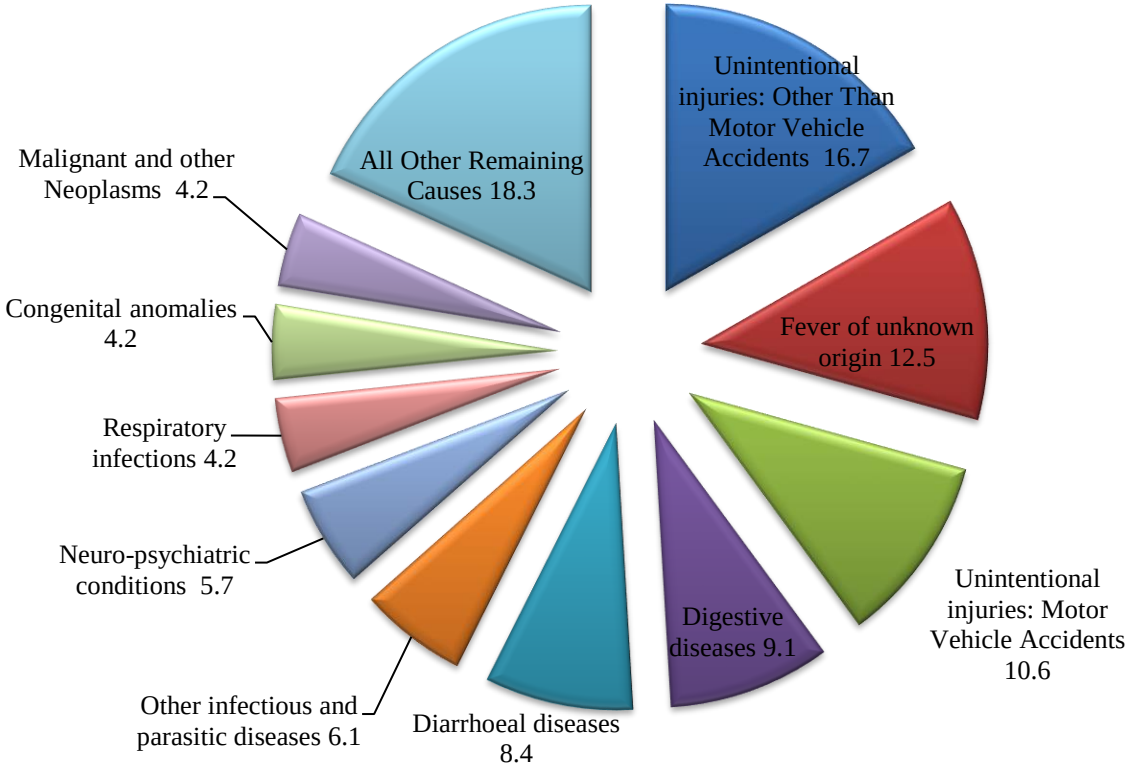


Chart 42 - Top 10 causes of death in Urban area for age group 5-14 year: 2017-2019 (in %)

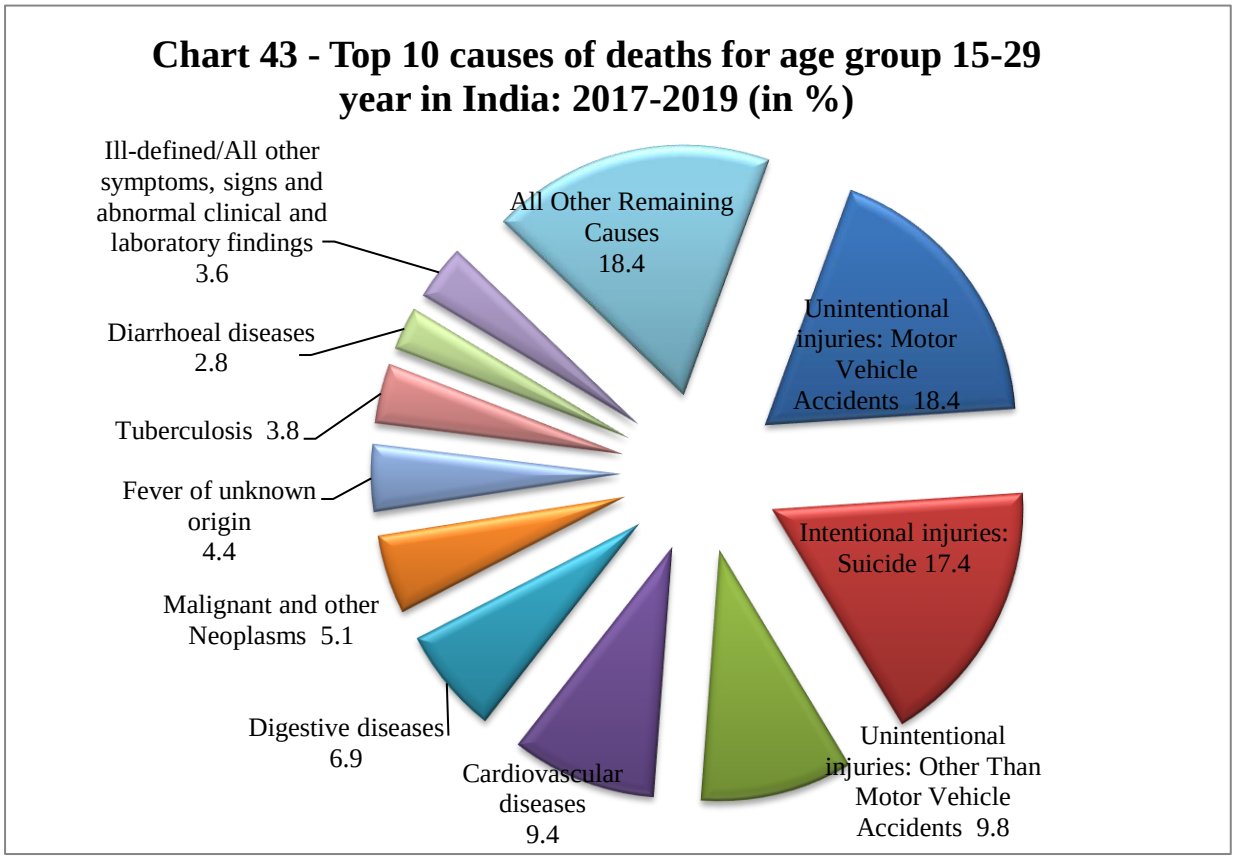


3.7.1 Table 3.6A shows top ten causes of deaths in age group 15-29 years. About 5.8 of total proportion of deaths occur in age group 15-29 years, accounting for 6.1% proportion of male and 5.4 % of female deaths. Approximately, 45 percent of proportion of deaths in this age group are dominated by non-medical causes such as unintentional injuries: motor vehicle accidents, intentional injuries: suicide and unintentional injuries: other than motor vehicle accidents. The proportion of female deaths (20.3%) due to intentional injuries: suicide is higher than male deaths (15.5%). The top 10 causes of deaths during 2017-2019 for age group 15-29 years is given in Chart 43.

Table 3.6A: Top 10 Causes of Death for age group 15-29 years in India: 2017-2019

Cause of Death	% Proportion of deaths		
	Male	Female	Person
Unintentional injuries: Motor Vehicle Accidents	26.0	6.7	18.4
Intentional injuries: Suicide	15.5	20.3	17.4
Unintentional injuries: Other Than Motor Vehicle Accidents	11.5	7.2	9.8
Cardiovascular diseases	9.4	9.4	9.4
Digestive diseases	7.2	6.4	6.9
Malignant and other Neoplasms	4.1	6.6	5.1
Fever of unknown origin	3.5	5.8	4.4
Tuberculosis	3.5	4.4	3.8
Diarrhoeal diseases	2.0	4.1	2.8
Ill-defined/All other symptoms, signs and abnormal clinical and laboratory findings	3.2	4.2	3.6
All Other Remaining Causes	14.1	24.9	18.4

Note: Ill-defined/All other symptoms, signs and abnormal clinical and laboratory findings, constitutes instances where cause could not be properly diagnosed so has been categorised last among the top 10 leading cause group.



3.7.2 Table 3.6B shows the pattern of top ten causes of death in age 15-29 years in EAG States & Assam and Other States: 2017-2019. Overall pattern of deaths in EAG States & Assam and Other States is relatively similar with varying ranking. Share of total deaths in EAG states and Assam due to suicide account for 12.9% which is significantly less that share of deaths due suicide in other states (20.2%). The proportion of female death is more due to Intentional injuries: Suicide, Malignant and other Neoplasms, fever of unknown origin and Diarrhoeal diseases in comparison of proportion of death in males. The top 10 causes of deaths during 2017-19 for age group 15-29 years in rural and urban area are given in Chart 44 and Chart 45, respectively.

Table 3.6B: Top 10 Causes of Death for age group 15-29 years in EAG States & Assam and Other States: 2017-2019

Cause of Death	% Proportion of deaths		
	Male	Female	Person
EAG States and Assam			
Unintentional injuries: Motor Vehicle Accidents	26.4	5.9	17.8
Intentional injuries: Suicide	11.4	15.1	12.9
Unintentional injuries: Other Than Motor Vehicle Accidents	13.2	10.1	11.9
Digestive diseases	8.8	9.3	9.0
Cardiovascular diseases	7.1	7.2	7.1
Tuberculosis	4.7	5.4	5.0
Fever of unknown origin	3.2	6.6	4.6
Malignant and other Neoplasms	4.4	4.7	4.5
Diarrhoeal diseases	2.8	5.7	4.0
Ill-defined/All other symptoms, signs and abnormal clinical and laboratory findings	3.7	4.6	4.1
All Other Remaining Causes	14.4	25.4	19.0
Other States			
Intentional injuries: Suicide	17.9	24.0	20.2
Unintentional injuries: Motor Vehicle Accidents	25.7	7.2	18.8
Cardiovascular diseases	10.8	10.9	10.8
Unintentional injuries: Other Than Motor Vehicle Accidents	10.6	5.3	8.6
Digestive diseases	6.2	4.4	5.6
Malignant and other Neoplasms	4.0	7.9	5.4
Fever of unknown origin	3.7	5.2	4.3
Tuberculosis	2.8	3.6	3.1
Genito-urinary diseases	2.2	2.8	2.5
Ill-defined/All other symptoms, signs and abnormal clinical and laboratory findings	2.4	3.4	2.8
All Other Remaining Causes	16.1	28.7	20.9

Note: Ill-defined/All other symptoms, signs and abnormal clinical and laboratory findings constitutes instances where cause could not be properly diagnosed so has been categorised last among the top 10 leading cause group.

Chart 44 - Top 10 causes of death in EAG and Assam for age group 15-29 year, 2017-2019 (in %)

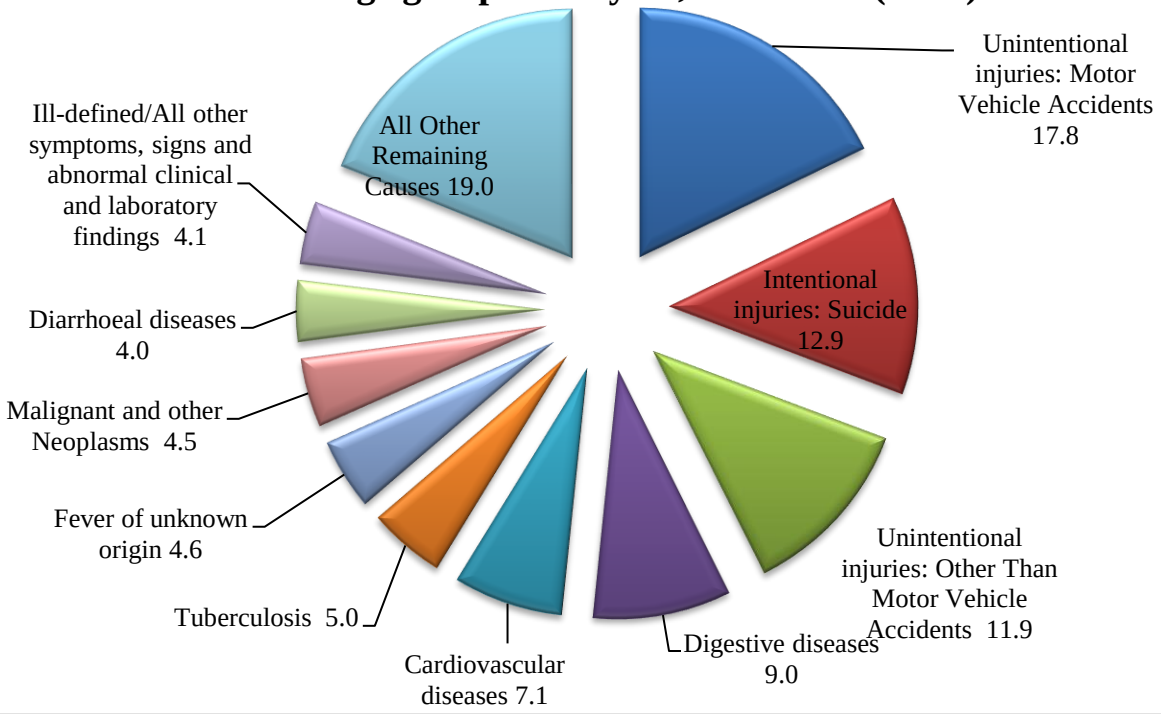
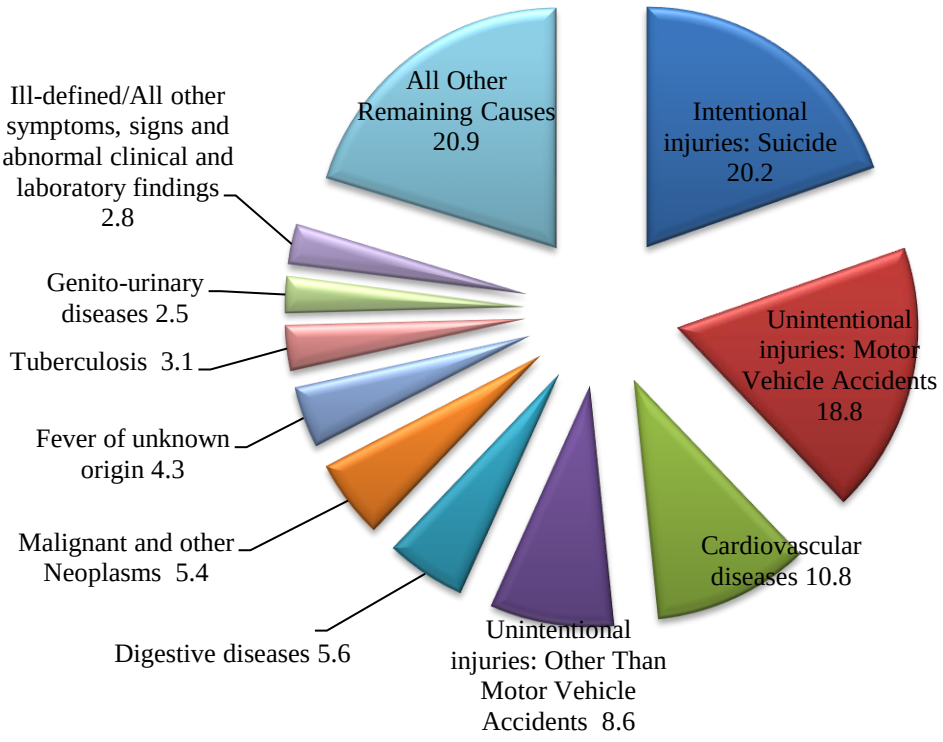


Chart 45- Top 10 causes of death in Other States for age group 15-29 year: 2017-2019 (in %)



3.7.3 Table 3.6C shows the top ten causes of death by rural and urban in country for age group 15-29 years for 2017-2019. Overall top ten causes of death in both categories can be observed as similar with relative varying ranking. Proportion of male deaths due to unintentional injuries: motor vehicle accidents are more dominant than female deaths in both rural and urban area. Cardiovascular diseases are more prevalent in urban area (12.6%) than rural area (8.5%). The top 10 causes of deaths during 2017-2019 for age group 15-29 years in rural and urban area are given in Chart 46 and Chart 47, respectively.

Table 3.6C: Top 10 Causes of Death for age group 15-29 years in Rural & Urban Areas: 2017-2019

Cause of Death	% Proportion of deaths		
	Male	Female	Person
Rural			
Unintentional injuries: Motor Vehicle Accidents	26.5	6.5	18.5
Intentional injuries: Suicide	16.0	20.9	18.0
Unintentional injuries: Other Than Motor Vehicle Accidents	12.3	7.0	10.2
Cardiovascular diseases	8.4	8.8	8.5
Digestive diseases	6.9	6.5	6.8
Malignant and other Neoplasms	4.1	6.8	5.2
Fever of unknown origin	3.6	5.7	4.5
Tuberculosis	3.4	4.1	3.7
Diarrhoeal diseases	1.8	4.0	2.7
Ill-defined/All other symptoms, signs and abnormal clinical and laboratory findings	2.6	3.9	3.1
All Other Remaining Causes	14.2	25.8	18.8
Urban			
Unintentional injuries: Motor Vehicle Accidents	24.0	7.3	17.9
Intentional injuries: Suicide	13.5	18.1	15.2
Cardiovascular diseases	13.0	11.8	12.6
Unintentional injuries: Other Than Motor Vehicle Accidents	8.8	8.3	8.6
Digestive diseases	8.1	6.0	7.3
Malignant and other Neoplasms	4.2	5.5	4.7
Tuberculosis	3.8	5.5	4.4
Fever of unknown origin	3.0	6.1	4.2
Diarrhoeal diseases	2.5	4.2	3.2
Ill-defined/All other symptoms, signs and abnormal clinical and laboratory findings	2.8	2.8	2.8
All Other Remaining Causes	16.2	24.4	19.2

Note: Ill-defined/All other symptoms, signs and abnormal clinical and laboratory findings constitutes instances where cause could not be properly diagnosed so has been categorised last among the top 10 leading cause group.

Chart 46 - Top 10 causes of death in Rural area for age group 15-29 year: 2017-2019 (in %)

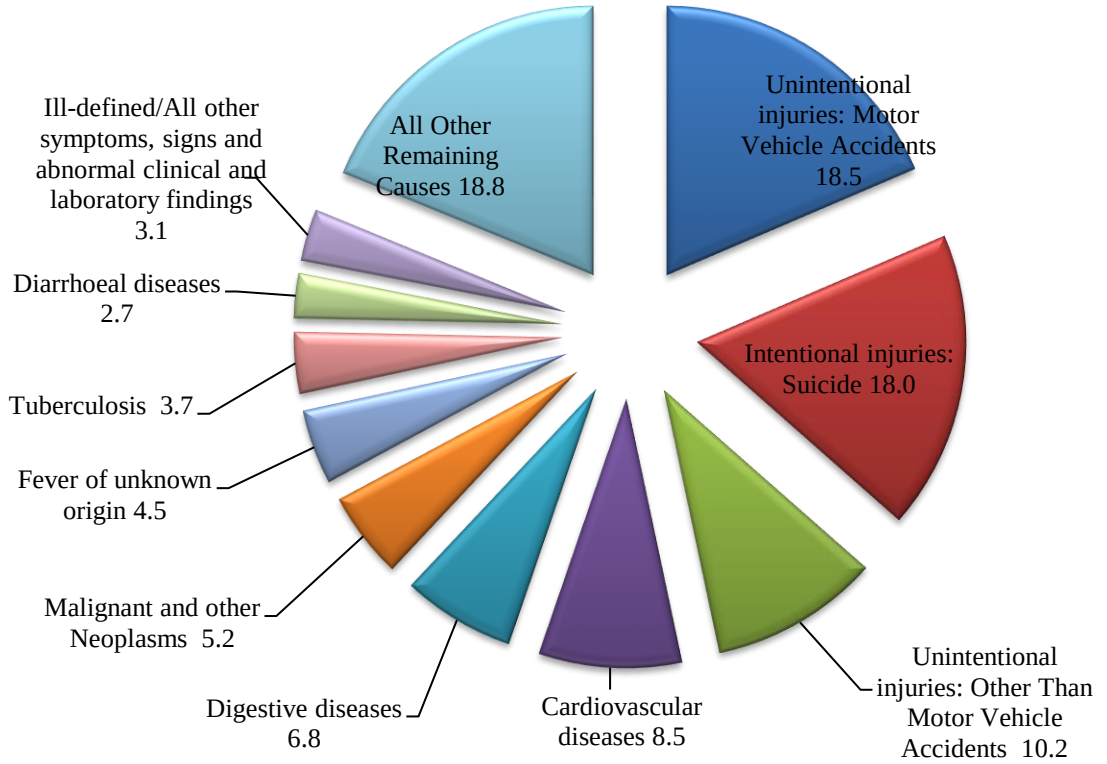
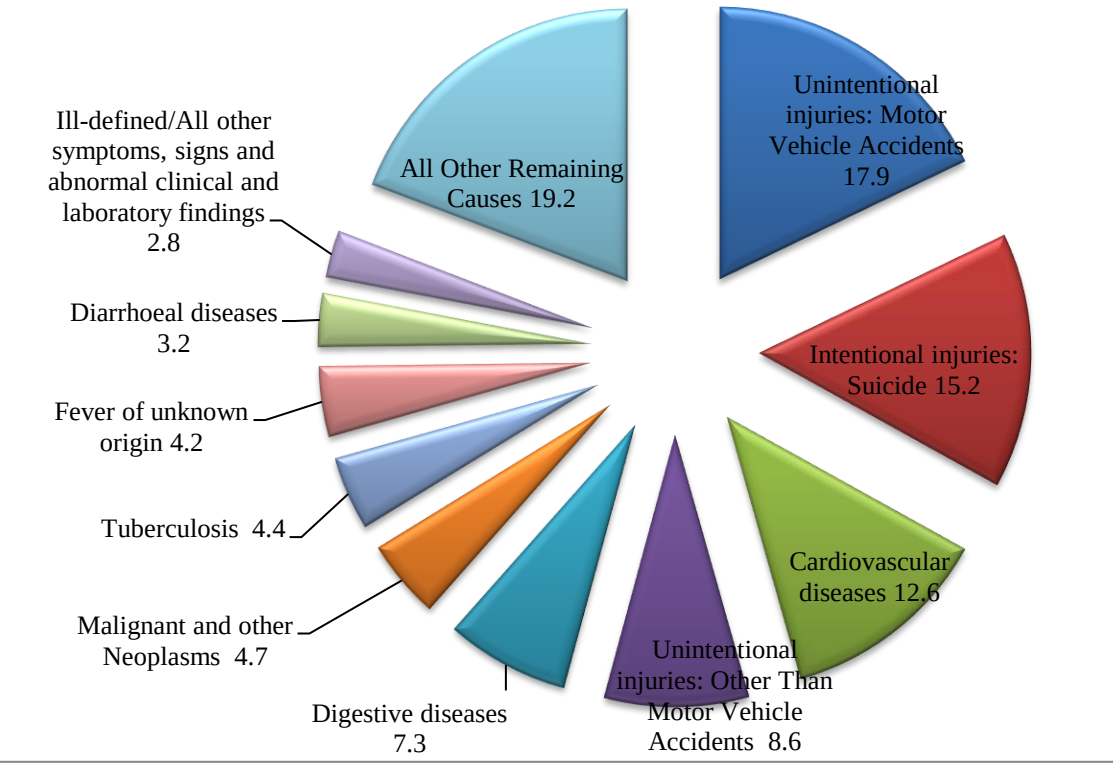


Chart 47 - 10 causes of death in Urban area for age group 15-29 year: 2017-2019 (in %)

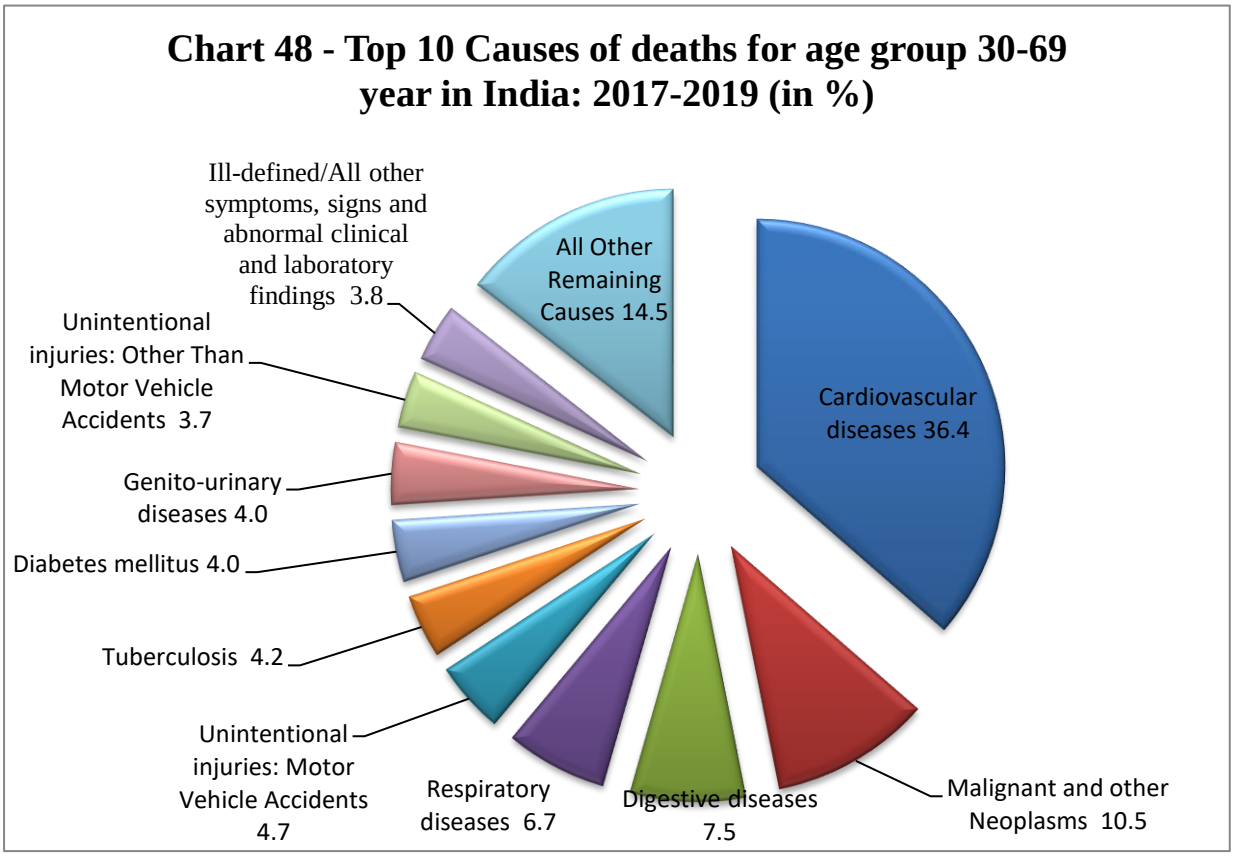


3.8.1 Table 3.7A shows the top ten causes of death among adults in the age group 30-69 in country. Mortality rates rises sharply during the ages 30-69. The leading causes of death in this age group are cardiovascular diseases (36.4%), malignant and other neoplasms (10.5%), digestive diseases (7.5%), and respiratory diseases (6.7%). There are a notable higher proportion of female deaths 13.3% and 7.8% due to malignant and neoplasms and respiratory diseases than among males 8.8% and 6.0% respectively. Whereas, contribution of male deaths (6.3%) due to unintentional injuries: motor vehicle accidents are higher than female deaths (2.0%). The top 10 causes of deaths during 2017-2019 for age group 30-69 years is in Chart 48.

Table 3.7A -Top 10 causes of death for age group 30-69 years in India: 2017-2019

Cause of Death	% Proportion of deaths		
	Male	Female	Person
Cardiovascular diseases	37.7	34.1	36.4
Malignant and other Neoplasms	8.8	13.3	10.5
Digestive diseases	9.1	4.8	7.5
Respiratory diseases	6.0	7.8	6.7
Unintentional injuries: Motor Vehicle Accidents	6.3	2.0	4.7
Tuberculosis	4.5	3.6	4.2
Diabetes mellitus	3.5	5.0	4.0
Genito-urinary diseases	4.0	4.1	4.0
Unintentional injuries: Other Than Motor Vehicle Accidents	3.9	3.4	3.7
Ill-defined/All other symptoms, signs and abnormal clinical and laboratory findings	3.2	4.8	3.8
All Other Remaining Causes	13.0	17.1	14.5

Note: Ill-defined/All other symptoms, signs and abnormal clinical and laboratory findings constitutes instances where cause could not be properly diagnosed so has been categorised last among the top 10 leading cause group.



3.8.2 Table 3.7B shows the pattern of deaths at ages 30-69 in EAG States & Assam and Other States. The leading causes of death are common in both the category but with different rankings. A cardiovascular disease which is the leading cause of death is widely prevalent in Other States (38.8%) as compared to EAG States & Assam (31.5%). Deaths due to malignant & neoplasms constitute a higher proportion in female than males in both categories. The top 10 causes of deaths during 2017-2019 for age group 30-69 years in rural and urban area are given in Chart 49 and Chart 50, respectively.

Table 3.7B -Top 10 causes of death for age group 30-69 years in EAG states & Assam and Other states: 2017-2019

Cause of Death	% Proportion of deaths		
	Male	Female	Person
EAG and Assam			
Cardiovascular diseases	32.8	29.4	31.5
Malignant and other Neoplasms	8.0	10.9	9.1
Respiratory diseases	7.7	9.6	8.4
Digestive diseases	8.9	6.4	7.9
Tuberculosis	6.6	4.8	5.9
Unintentional injuries: Motor Vehicle Accidents	6.6	2.0	4.8
Unintentional injuries: Other Than Motor Vehicle Accidents	4.6	4.2	4.4
Fever of unknown origin	3.5	5.8	4.4
Genito-urinary diseases	3.8	4.1	3.9
Ill-defined/All other symptoms, signs and abnormal clinical and laboratory findings	3.5	5.3	4.2
All Other Remaining Causes	14.1	17.5	15.4
Other States			
Cardiovascular diseases	40.0	36.6	38.8
Malignant and other Neoplasms	9.2	14.6	11.1
Digestive diseases	9.2	4.0	7.4
Respiratory diseases	5.2	6.9	5.8
Unintentional injuries: Motor Vehicle Accidents	6.1	2.0	4.6
Diabetes mellitus	3.5	5.4	4.2
Genito-urinary diseases	4.1	4.1	4.1
Intentional injuries: Suicide	4.0	2.7	3.5
Unintentional injuries: Other Than Motor Vehicle Accidents	3.6	3.0	3.4
Ill-defined/All other symptoms, signs and abnormal clinical and laboratory findings	3.0	4.6	3.6
All Other Remaining Causes	12.2	16.1	13.5

Note: Ill-defined/All other symptoms, signs and abnormal clinical and laboratory findings constitutes instances where cause could not be properly diagnosed so has been categorised last among the top 10 leading cause group.

Chart 49 - Top 10 causes of death in EAG States & Assam for age group 30-69 year: 2017-2019 (in %)

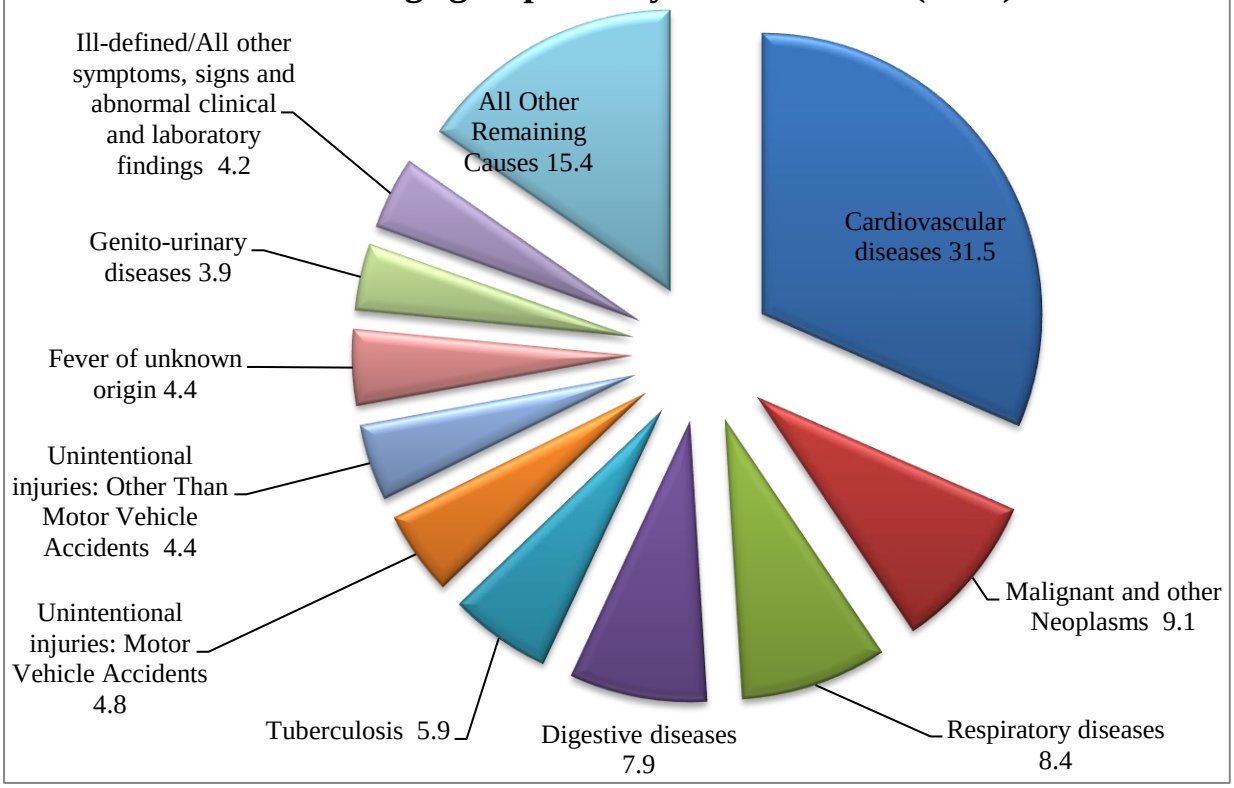
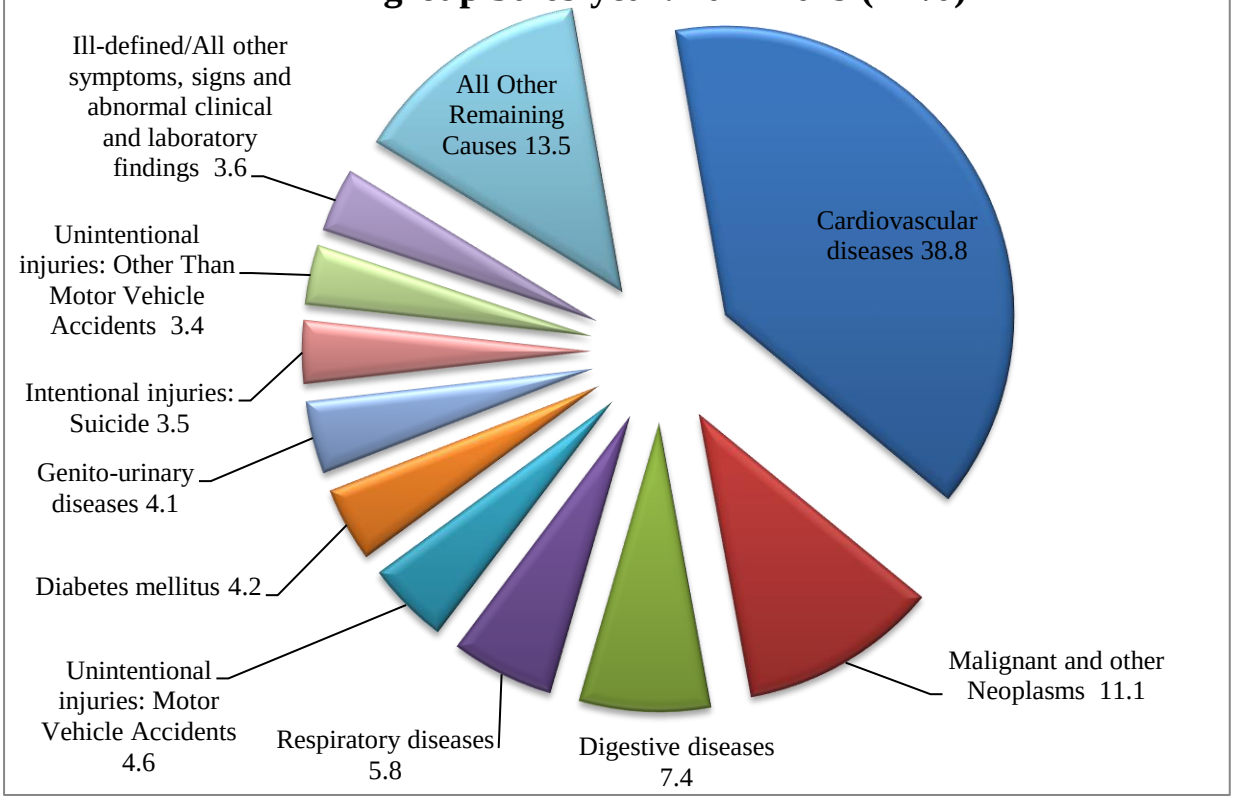


Chart 50 - Top 10 causes of death in Other States for age group 30-69 year: 2017-2019 (in %)



3.8.3 Table 3.7C shows the top ten causes of death by rural and urban in country for age group 30-69 years. Overall top ten causes of death in both categories can be observed as similar with relative varying ranking except Unintentional injuries: Other Than Motor Vehicle Accidents in rural areas and Diabetes mellitus in urban areas. Deaths due to cardiovascular diseases and digestive diseases are more prevalent in male than female in both rural and urban areas. Whereas, reverse scenario can be observed in case of malignant and other neoplasms, respiratory diseases where proportion of female deaths are higher than that of male deaths. The top 10 causes of deaths during 2017-2019 for age group 30-69 years in rural and urban area are given in Chart 51 and Chart 52, respectively.

Table 3.7.C -Top 10 causes of death for age group 30-69 years in Rural and Urban Area: 2017-2019

Cause of Death	% Proportion of deaths		
	Male	Female	Person
Rural			
Cardiovascular diseases	36.2	33.3	35.1
Malignant and other Neoplasms	8.9	13.3	10.5
Digestive diseases	8.9	4.8	7.4
Respiratory diseases	6.4	8.1	7.0
Unintentional injuries: Motor Vehicle Accidents	6.4	1.9	4.8
Tuberculosis	4.9	3.7	4.4
Unintentional injuries: Other Than Motor Vehicle Accidents	4.2	3.8	4.0
Genito-urinary diseases	4.0	3.9	3.9
Fever of unknown origin	3.1	5.1	3.8
Ill-defined/All other symptoms, signs and abnormal clinical and laboratory findings	3.2	5.0	3.8
All Other Remaining Causes	14.0	17.3	15.2
Urban			
Cardiovascular diseases	42.7	37.2	40.7
Malignant and other Neoplasms	8.6	13.5	10.4
Digestive diseases	9.9	5.0	8.1
Respiratory diseases	4.8	6.6	5.5
Diabetes mellitus	4.1	6.1	4.8
Unintentional injuries: Motor Vehicle Accidents	5.8	2.2	4.5
Genito-urinary diseases	4.0	4.9	4.3
Tuberculosis	3.3	3.2	3.3
Fever of unknown origin	2.5	4.0	3.0
Ill-defined/All other symptoms, signs and abnormal clinical and laboratory findings	3.1	4.3	3.5
All Other Remaining Causes	11.2	13.0	11.9

Note: Ill-defined/All other symptoms, signs and abnormal clinical and laboratory findings constitutes instances where cause could not be properly diagnosed so has been categorised last among the top 10 leading cause group.

Chart 51 - Top 10 causes of death in Rural for age group 30-69 year: 2017-2019 (in %)

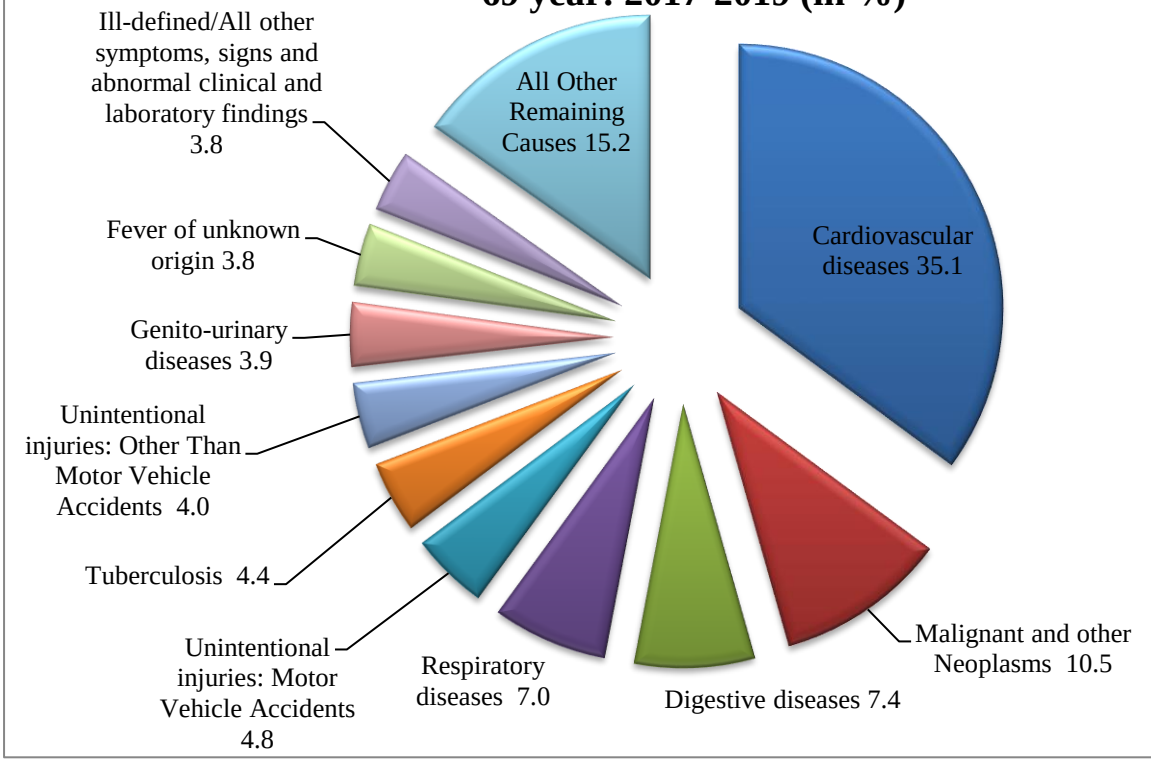
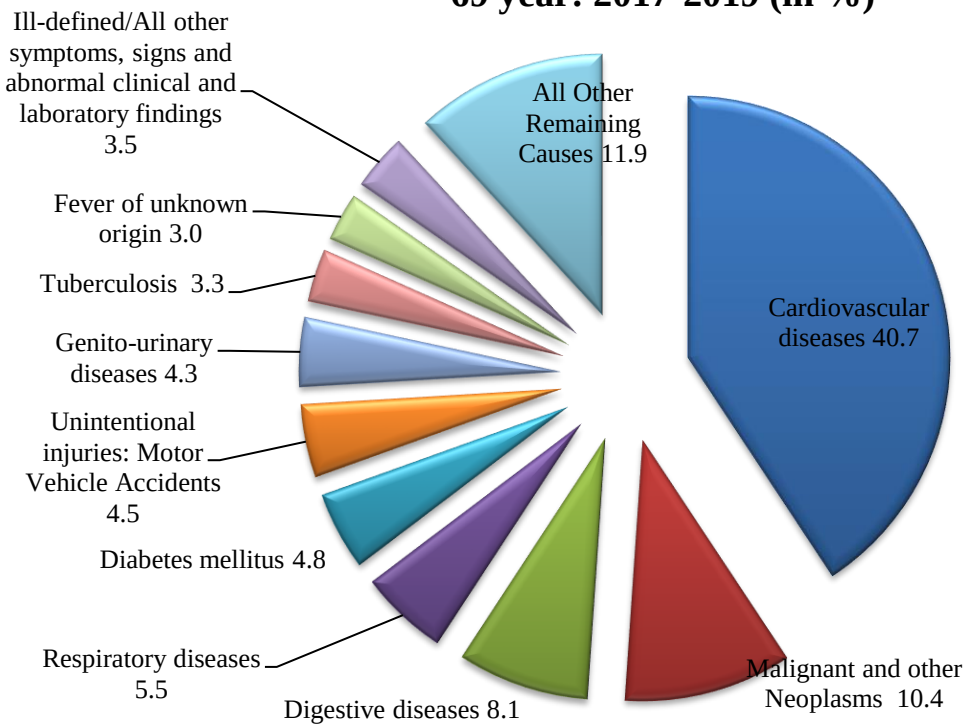


Chart 52 - Top 10 causes of death in Urban for age group 30-69 year: 2017-2019 (in %)

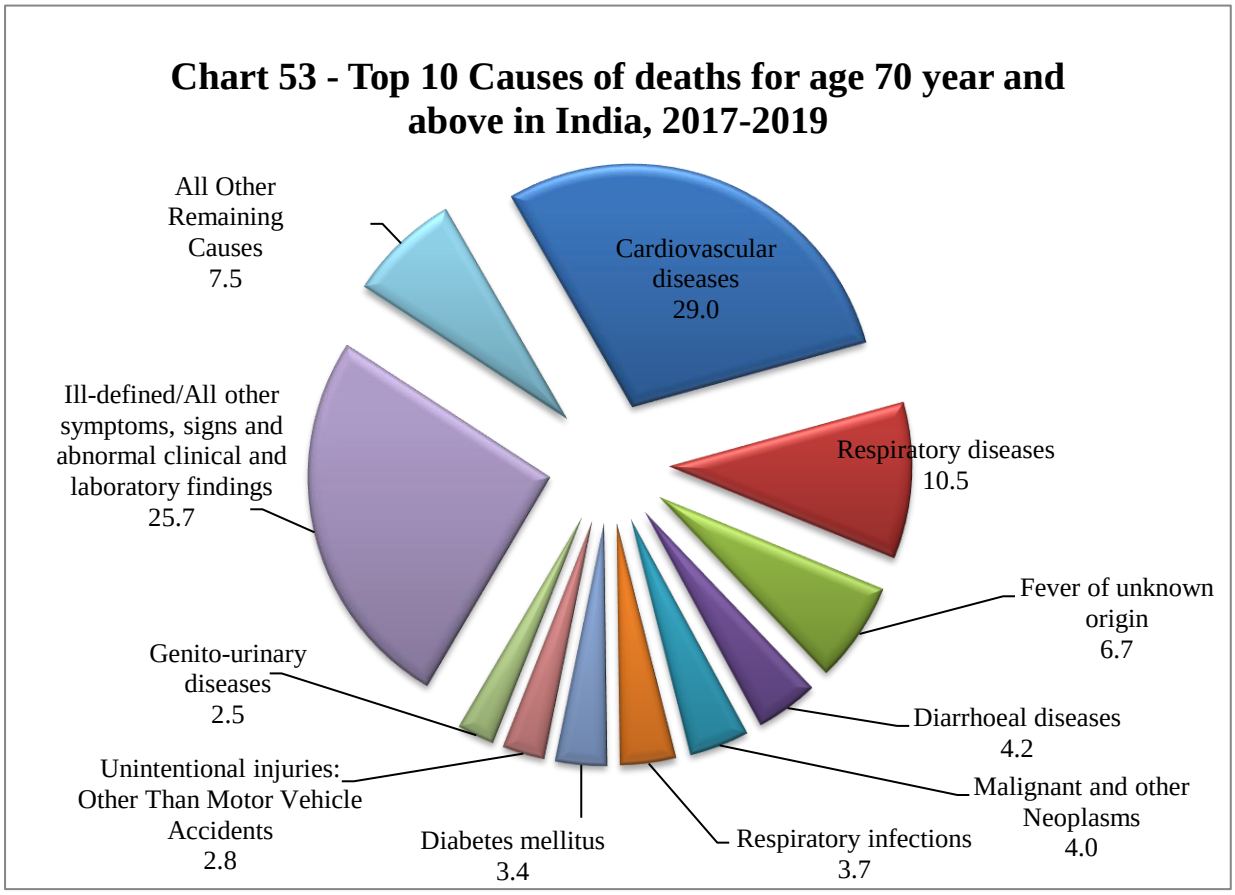


3.9.1 Table 3.8A reviews the causes of death in the country at ages 70 years and above. About 39.3 percentage proportion of total deaths is occurring in age group 70 years and above with 34.9% and 45.2% share of male and female, respectively. The leading cause of deaths in this age group is cardiovascular diseases with maximum share of 29.0% followed by respiratory diseases 10.5%. Contribution of female deaths is higher in fever of unknown origin, diarrhoeal diseases than male deaths. The top 10 causes of deaths during 2017-2019 for age group 70+ is given in Chart 53.

Table 3.8.A -Top 10 causes of death for age group 70 years and above in India: 2017-2019

Cause of Death	% Proportion of deaths		
	Male	Female	Person
Cardiovascular diseases	31.5	26.5	29.0
Respiratory diseases	11.0	9.9	10.5
Fever of unknown origin	6.1	7.4	6.7
Diarrhoeal diseases	3.7	4.8	4.2
Malignant and other Neoplasms	4.5	3.4	4.0
Respiratory infections	3.7	3.8	3.7
Diabetes mellitus	3.5	3.2	3.4
Unintentional injuries: Other Than Motor Vehicle Accidents	2.4	3.3	2.8
Genito-urinary diseases	2.8	2.1	2.5
Ill-defined/All other symptoms, signs and abnormal clinical and laboratory findings	22.3	29.3	25.7
All Other Remaining Causes	8.6	6.3	7.5

Note: Ill-defined/All other Symptoms, Signs and Abnormal Clinical and Laboratory Findings Not Elsewhere Classified (NEC) (R00-R99) was not properly diagnoses so it may not be considered as second leading cause group.



3.9.2 Table 3.8B shows the pattern of causes of death in EAG states & Assam and Other states. The overall pattern of top ten causes of death in both categories is same except tuberculosis in EAG states & Assam and respiratory infection in Other States with varying ranking. Cardiovascular disease is the leading cause of deaths in both the category with maximum share in Other States (31.0%) as compared to EAG states & Assam (25.0%). Proportion of deaths due to diarrhoeal diseases is approximately double in EAG states & Assam (6.3%) as compared to Other States (3.2%). The top 10 causes of deaths during 2017-2019 for age group 70+ in EAG & Assam and other States are given in Chart 54 and Chart 55, respectively.

Table 3.8.B -Top 10 causes of death for age group 70 years and above in EAG States & Assam and Other States: 2017-2019

Cause of Death	% Proportion of deaths		
	Male	Female	Person
EAG States and Assam			
Cardiovascular diseases	26.9	23.0	25.0
Respiratory diseases	11.9	11.0	11.5
Fever of unknown origin	7.1	8.8	7.9
Diarrhoeal diseases	5.6	7.2	6.3
Malignant and other Neoplasms	3.6	2.7	3.1
Respiratory infections	3.0	3.2	3.1
Digestive diseases	3.4	2.7	3.1
Diabetes mellitus	3.4	2.5	3.0
Genito-urinary diseases	2.9	2.2	2.5
Ill-defined/All other symptoms, signs and abnormal clinical and laboratory findings	24.1	29.4	26.6
All Other Remaining Causes	8.2	7.5	7.9
Other States			
Cardiovascular diseases	33.7	28.2	31.0
Respiratory diseases	10.6	9.4	10.0
Fever of unknown origin	5.6	6.7	6.1
Malignant and other Neoplasms	5.0	3.8	4.4
Respiratory infections	4.0	4.1	4.0
Diabetes mellitus	3.6	3.6	3.6
Diarrhoeal diseases	2.7	3.6	3.2
Unintentional injuries: Other Than Motor Vehicle Accidents	2.5	3.5	3.0
Genito-urinary diseases	2.8	2.1	2.5
Ill-defined/All other symptoms, signs and abnormal clinical and laboratory findings	21.4	29.3	25.2
All Other Remaining Causes	8.2	5.8	7.1

Note: Ill-defined/All other Symptoms, Signs and Abnormal Clinical and Laboratory Findings Not Elsewhere Classified (NEC) (R00-R99) was not properly diagnoses so it may not be considered as second leading cause group.

Chart 54 - Top 10 causes of death in EAG states & Assam States for age 70 year and above: 2017-2019 (in %)

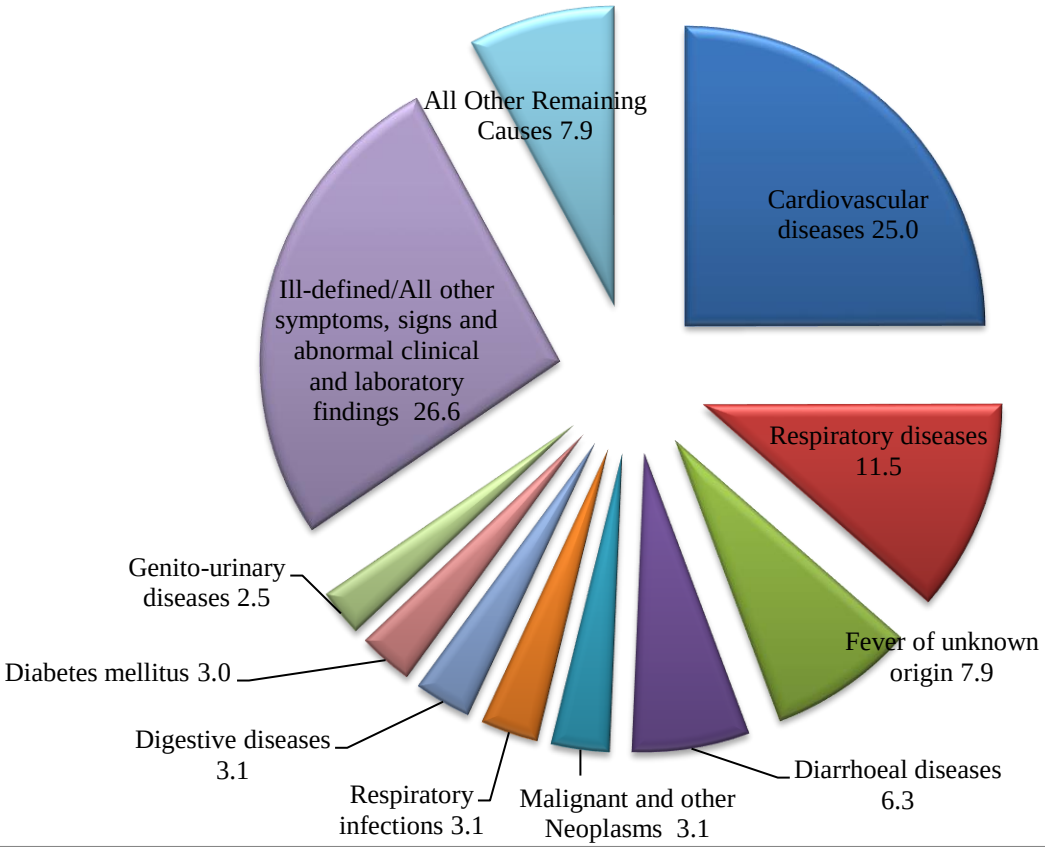
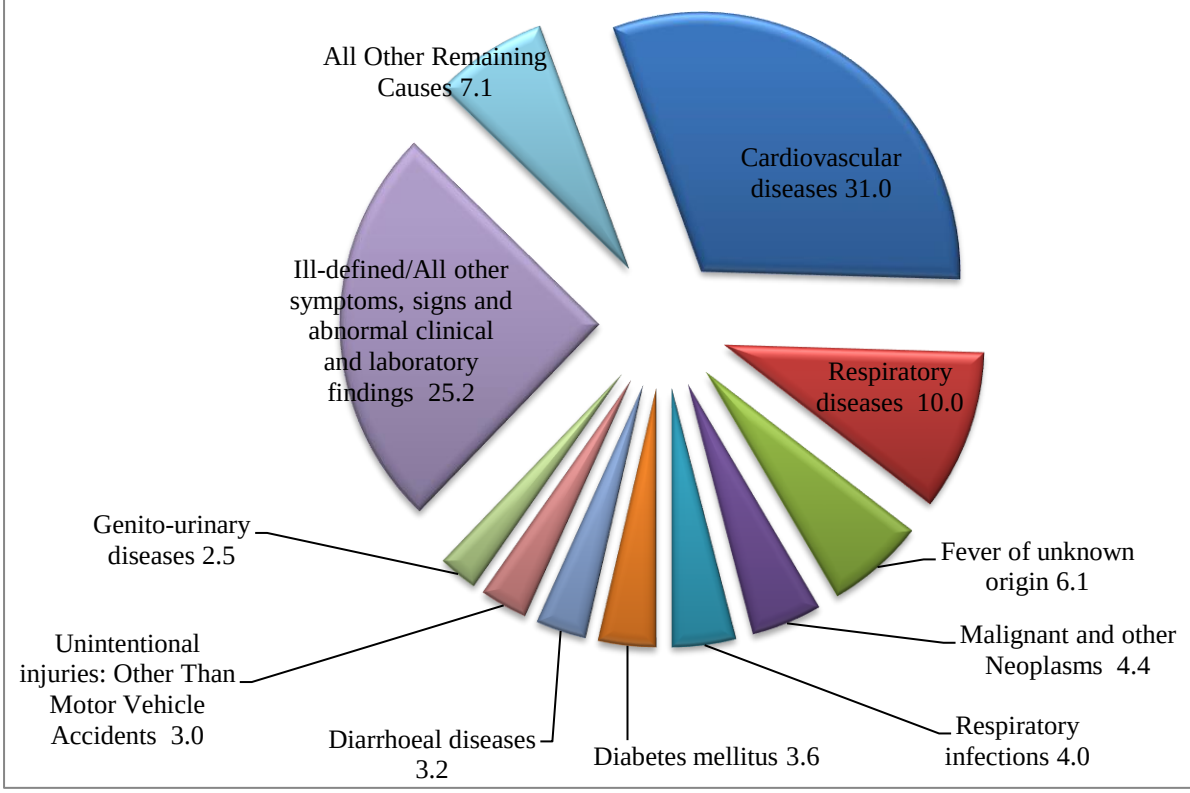


Chart 55 - Top 10 causes of death in Other States for age 70 year and above: 2017-2019 (in %)



3.9.3 Table 3.8C shows the pattern of causes of death in Rural and Urban areas. The overall pattern of top ten causes of death in both categories with varying ranking. Cardiovascular disease is the leading cause of deaths in both the category with the maximum share in urban (33.0%) as compared to rural (28.0%). Proportion of deaths due to diarrhoeal diseases is comparatively higher in Rural area (4.4%) than in Urban area (3.3%). Share of male deaths due to malignant and neoplasms in rural area (4.4%) is lower than that of urban area (4.9%). The top 10 causes of deaths during 2017-2019 for age group 70+ in rural and urban area are given in Chart 56 and Chart 57, respectively.

Table 3.8.C -Top 10 causes of death for age group 70 years and above in Rural and Urban Area: 2017-2019

Cause of Death	% Proportion of deaths		
	Male	Female	Person
Rural			
Cardiovascular diseases	30.4	25.4	28.0
Respiratory diseases	11.6	10.4	11.0
Fever of unknown origin	6.3	7.6	6.9
Diarrhoeal diseases	3.8	5.1	4.4
Malignant and other Neoplasms	4.4	3.3	3.8
Respiratory infections	3.7	3.9	3.8
Diabetes mellitus	3.2	2.9	3.1
Unintentional injuries: Other Than Motor Vehicle Accidents	2.4	3.3	2.8
Genito-urinary diseases	2.8	2.1	2.5
Ill-defined/All other symptoms, signs and abnormal clinical and laboratory findings	22.6	29.7	26.1
All Other Remaining Causes	8.9	6.5	7.7
Urban			
Cardiovascular diseases	35.4	30.5	33.0
Respiratory diseases	8.9	8.1	8.5
Fever of unknown origin	5.4	6.7	6.0
Diabetes mellitus	4.7	4.5	4.6
Malignant and other Neoplasms	4.9	4.0	4.5
Respiratory infections	3.7	3.5	3.6
Diarrhoeal diseases	3.0	3.7	3.3
Unintentional injuries: Other Than Motor Vehicle Accidents	2.5	3.5	3.0
Genito-urinary diseases	2.9	2.2	2.5
Ill-defined/All other symptoms, signs and abnormal clinical and laboratory findings	21.0	27.6	24.3
All Other Remaining Causes	7.6	5.8	6.6

Note: Ill-defined/All other Symptoms, Signs and Abnormal Clinical and Laboratory Findings Not Elsewhere Classified (NEC) (R00-R99) was not properly diagnoses so it may not be considered as second leading cause group.

Chart 56 - Top 10 causes of death in Rural area for age 70 year and above: 2017-2019 (in %)

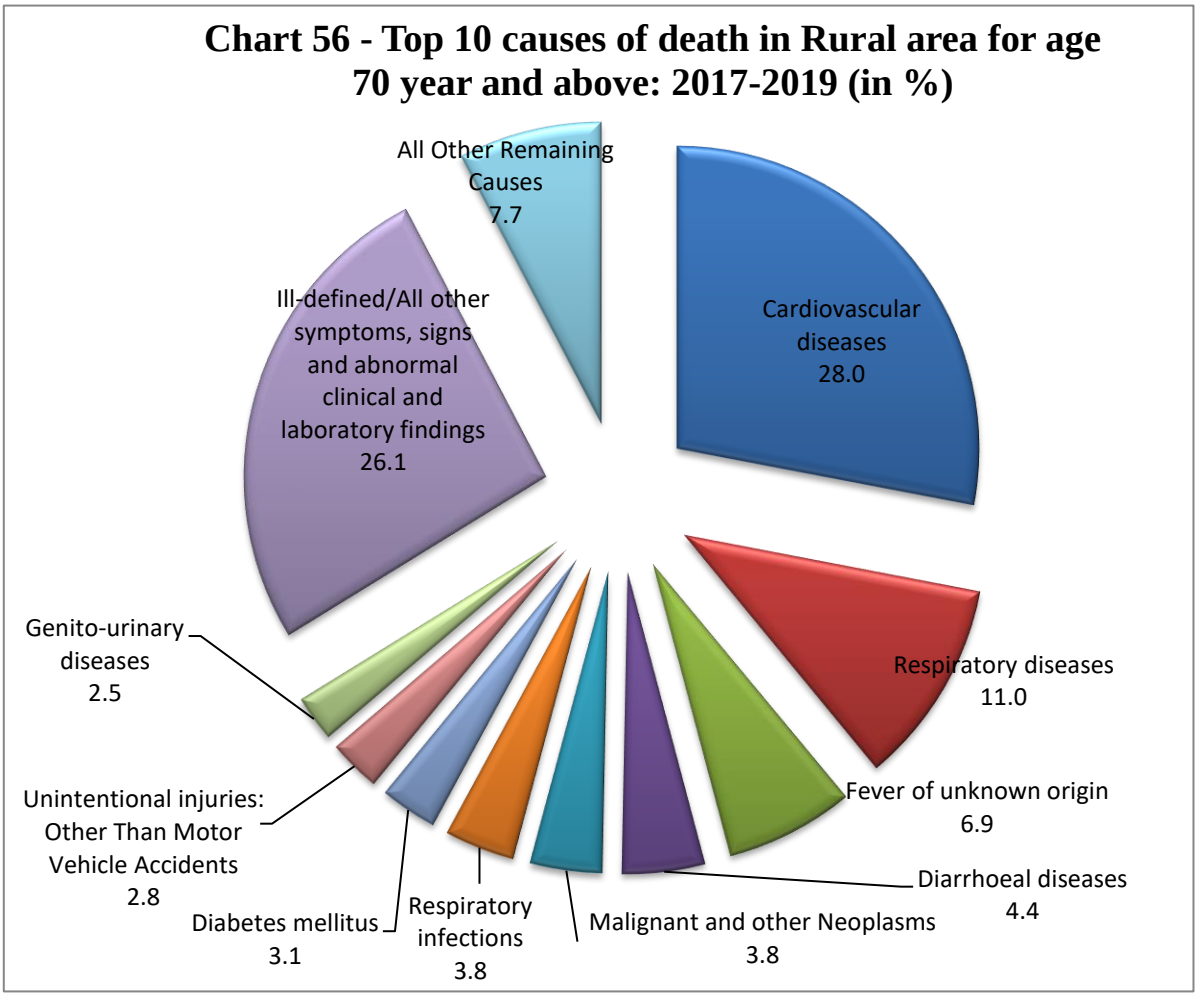
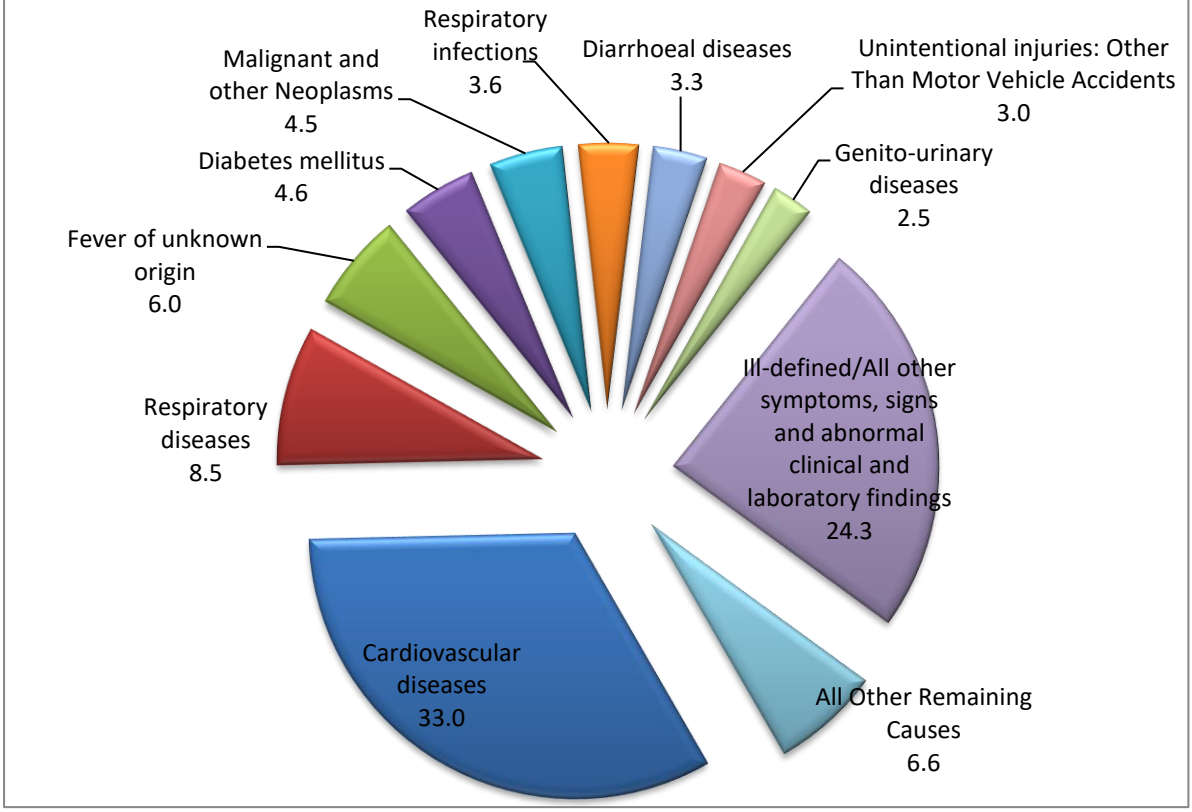


Chart 57 - Top 10 causes of death in Urban area for age 70 year and above: 2017-2019 (in %)



CHAPTER 4

DEATHS DUE TO SPECIFIC MEDICAL CAUSES

4.1 This chapter present the statistics relating to percentage proportion of death attributed to specific medical clauses for the year 2017-19. The list of specific medical cases includes: Cardiovascular diseases, Malignant and other Neoplasms, Diabetes mellitus, Tuberculosis, Malaria, Maternal conditions and HIV/AIDS. The results have been prepared gender wise, Residence and EAG States & Assam and other States, separately for all age groups and for middle age group i.e 30-69.

4.2 Table 4.1 shows the proportion of total deaths from specific medical causes for all ages and for adults in middle age (30-69 years) by gender. Cardiovascular disease is the leading cause among these seven conditions, causing about 28.9 percentage proportion of total deaths and 36.4 percentage proportion of deaths in middle age 30-69 years. The second leading cause of deaths, malignant and other neoplasms contributes with 6.8 % in all ages and 10.5 in middle age 30-69 years. Proportion of deaths due to diabetes mellitus is higher among female in middle age 30-69 (5.0%) as compared to female of all ages (3.5%). It may be seen that tuberculosis as a cause of death is more prevalent in age 30-69 years with share of 4.2%. The proportion of female deaths due to malaria is higher than that of males.

Table 4.1 – Percentage Proportion of deaths from specific medical causes in India: 2017-2019

Cause of Death	Male	Female	Person
All Ages			
Cardiovascular diseases	30.8	26.2	28.9
Malignant and other Neoplasms	6.4	7.3	6.8
Diabetes mellitus	3.0	3.5	3.2
Tuberculosis	3.3	2.3	2.9
Malaria	0.3	0.4	0.4
Maternal conditions	-	0.5	-
HIV/AIDS	0.2	0.2	0.2
Ages 30 – 69			
Cardiovascular diseases	37.7	34.1	36.4
Malignant and other Neoplasms	8.8	13.3	10.5
Tuberculosis	4.5	3.6	4.2
Diabetes mellitus	3.5	5.0	4.0
Malaria	0.3	0.5	0.4
Maternal conditions	-	0.4	-
HIV/AIDS	0.3	0.3	0.3

4.3 Table 4.2 highlights the distribution of deaths due to seven specific medical causes in EAG States & Assam and Other States. The proportion of deaths due to cardiovascular diseases is higher in Other States as compared to EAG States & Assam in both all age groups and for

age 30-69. The proportion of deaths due to HIV/AIDS in Other states is thrice of its value for EAG states & Assam, for all ages. Whereas for middle age 30-69 years, the proportion of deaths due to HIV/AIDS in Other States is four times its value for EAG States & Assam.

Table 4.2 – Percentage Proportion of deaths from specific medical causes in EAG States & Assam and Other States: 2017-2019

Cause of Death	EAG States & Assam			Other States		
	Male	Female	Person	Male	Female	Person
All Ages						
Cardiovascular diseases	24.6	20.8	23.0	34.1	29.3	32.1
Malignant and other Neoplasms	5.3	5.5	5.4	7.0	8.3	7.5
Diabetes mellitus	2.8	2.6	2.7	3.2	4.0	3.5
Tuberculosis	4.3	2.8	3.6	2.8	2.0	2.5
Malaria	0.5	0.7	0.6	0.2	0.3	0.3
Maternal conditions	-	0.6	-	-	0.5	-
HIV/AIDS	0.1	0.0	0.1	0.3	0.2	0.3
Ages 30 – 69						
Cardiovascular diseases	32.8	29.4	31.5	40.0	36.6	38.8
Malignant and other Neoplasms	8.0	10.9	9.1	9.2	14.6	11.1
Diabetes mellitus	3.5	4.0	3.7	3.5	5.4	4.2
Tuberculosis	6.6	4.8	5.9	3.5	2.9	3.3
Malaria	0.6	0.8	0.7	0.2	0.4	0.3
Maternal conditions	-	0.5	-	-	0.4	-
HIV/AIDS	0.1	0.1	0.1	0.4	0.4	0.4

4.4 Table 4.3 shows the distribution of proportion of deaths due to seven specific medical causes in rural and urban area for period of 2017-2019. Share of deaths due to cardiovascular diseases is higher among the middle age group 30-69 years as compared to all ages in both rural and urban area. The proportion of deaths due to HIV/AIDS in middle age group 30-69 years is lower for urban area than its share in rural areas.

Table 4.3 – Percentage Proportion of deaths from specific medical causes in Rural & Urban Areas: 2017-2019

Cause of Death	Rural (in %)			Urban (in %)		
	Male	Female	Person	Male	Female	Person
All Ages						
Cardiovascular diseases	29.4	25.1	27.6	36.0	30.2	33.6
Malignant and other Neoplasms	6.3	7.2	6.7	6.7	7.9	7.2
Diabetes mellitus	2.8	3.2	3.0	3.8	4.7	4.2
Tuberculosis	3.5	2.3	3.0	2.6	2.2	2.4
Malaria	0.3	0.5	0.4	0.2	0.4	0.3
Maternal conditions	-	0.6	-	-	0.4	-
HIV/AIDS	0.2	0.2	0.2	0.1	0.1	0.1
Ages 30 – 69						
Cardiovascular diseases	36.2	33.3	35.1	42.7	37.2	40.7
Malignant and other Neoplasms	8.9	13.3	10.5	8.6	13.5	10.4
Diabetes mellitus	3.3	4.6	3.8	4.1	6.1	4.8
Tuberculosis	4.9	3.7	4.4	3.3	3.2	3.3
Malaria	0.4	0.5	0.4	0.2	0.5	0.3
Maternal conditions	-	0.4	-	-	0.3	-
HIV/AIDS	0.4	0.3	0.4	0.2	0.2	0.2

CHAPTER 5

Region-wise Top 10 Causes of Death

5.1 This chapter present the statistics on region-wise top ten causes of death for the year 2017-19. In this regard, the country has been divided into six regions which are as below:

i. North region includes Chandigarh, Delhi, Haryana, Himachal Pradesh, Jammu & Kashmir, Punjab and Uttarakhand

ii. North-East region includes Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura

iii. East region includes Bihar, Jharkhand, Orissa and West Bengal

iv. Central region includes Chhattisgarh, Madhya Pradesh, Rajasthan and Uttar Pradesh

v. West region includes Dadra & Nagar Haveli, Daman & Diu, Goa, Gujarat and Maharashtra

vi. South region includes Andhra Pradesh, Andaman & Nicobar Islands, Karnataka, Kerala, Lakshadweep, Puducherry, Tamil Nadu and Telangana

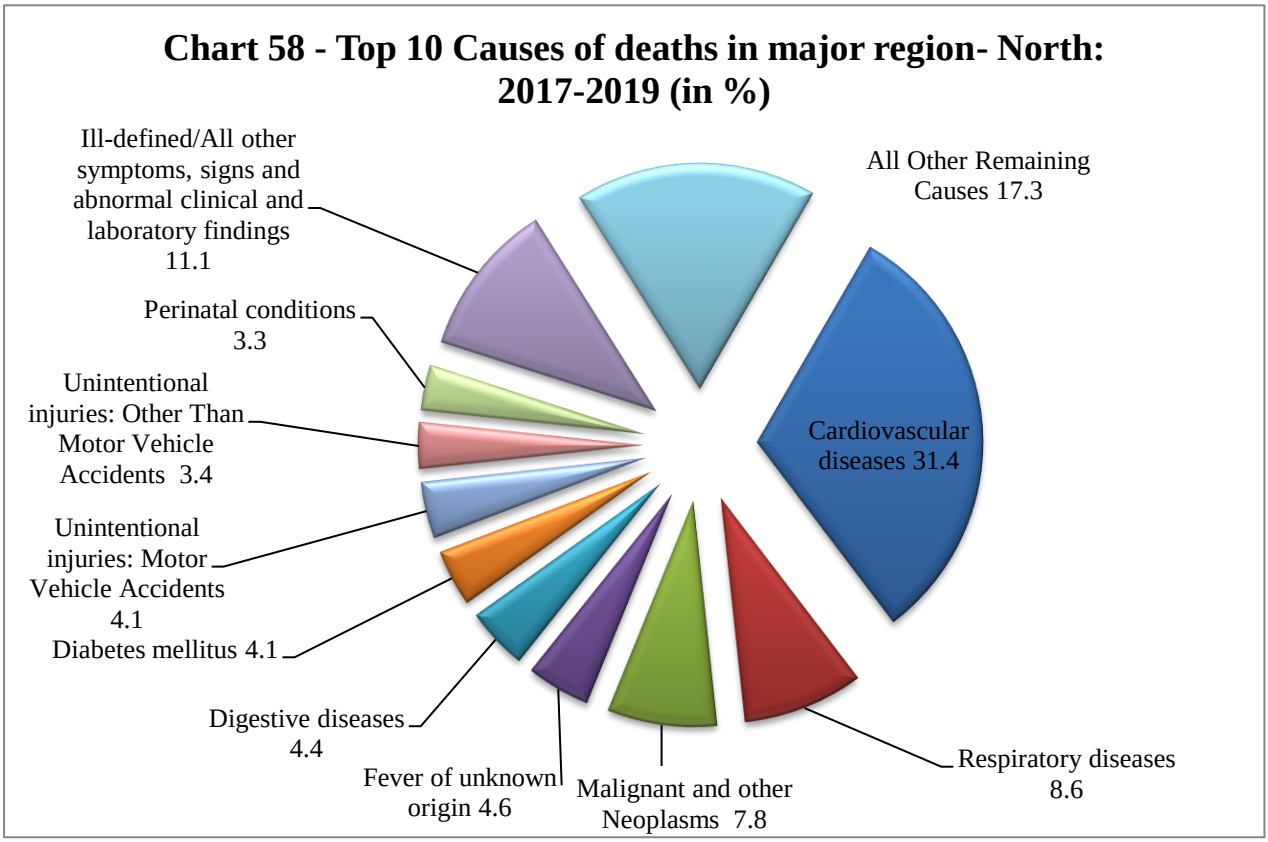
Further, the distribution of deaths percentage proportion by Age and Gender in all the above-mentioned regions is also presented for the year 2017-2019.

5.2.1 Table 5.1A shows the top 10 causes of death in the North region of the country for period of 2017-2019. The leading cause of deaths, which is cardiovascular diseases contributes 31.4 percentage proportion of total deaths in north region followed by respiratory diseases (8.6%). The proportion of female deaths (8.6%) due to malignant and other neoplasms is higher as compared to male deaths (7.3%). The share of female deaths is higher (9.0%) due to respiratory diseases as compared to male deaths (8.3%) in north region.

Table - 5.1A: Top 10 Causes of Death in North region: 2017-2019

Rank	Cause of Death	% Proportion of Deaths		
		Male	Female	Person
1	Cardiovascular diseases	33.2	28.5	31.4
2	Respiratory diseases	8.3	9.0	8.6
3	Malignant and other Neoplasms	7.3	8.6	7.8
4	Fever of unknown origin	3.9	5.6	4.6
5	Digestive diseases	5.5	2.9	4.4
6	Diabetes mellitus	3.3	5.2	4.1
7	Unintentional injuries: Motor Vehicle Accidents	5.7	1.6	4.1
8	Unintentional injuries: Other Than Motor Vehicle Accidents	3.7	2.8	3.4
9	Perinatal conditions	3.0	3.6	3.3
10	Ill-defined/All other symptoms, signs and abnormal clinical and laboratory findings	9.1	14.2	11.1
	All Other Remaining Causes	16.9	17.9	17.3

Note: Symptoms, Signs and Abnormal Clinical and Laboratory Findings Not Elsewhere Classified (NEC) (R00-R99) was not properly diagnoses so it may not be considered as second leading cause group.



5.2.2 Table 5.1B shows the top 10 causes of death in North-East region of the country for period of 2017-2019. The leading cause of deaths, which is cardiovascular diseases contributes 26.0 percentage proportion of total death in North-East region followed by digestive diseases (9.3%) where proportion of male deaths (11.3%) is higher than female deaths (6.4%). The

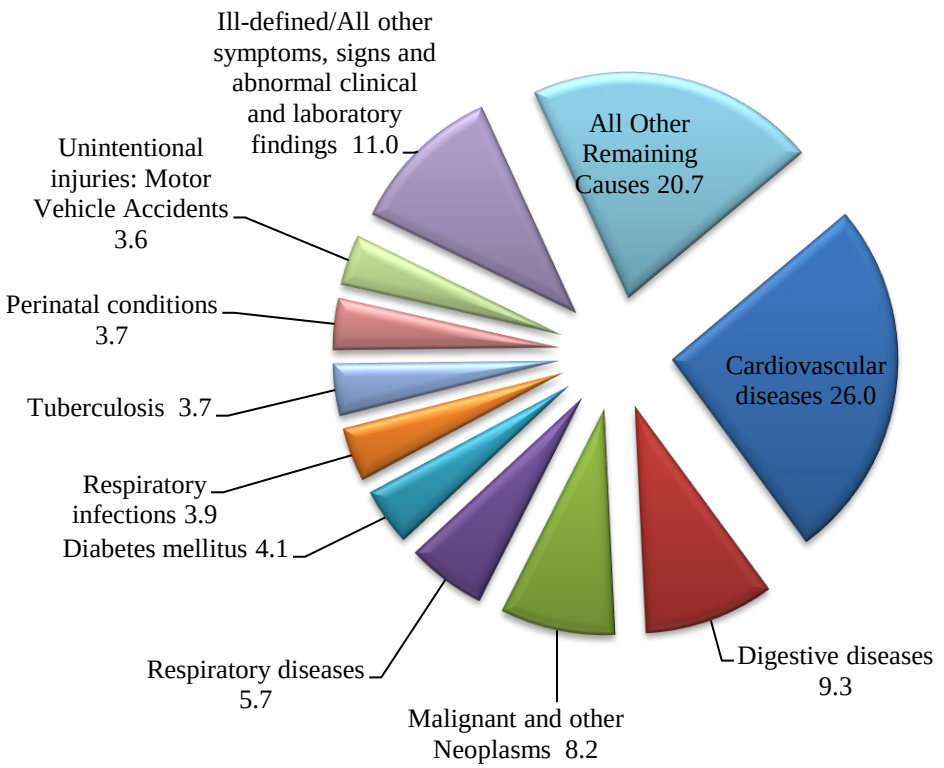
proportion of female deaths (8.6%) due to malignant and other neoplasms is higher as compared to male deaths (8.0%).

Table - 5.1B: Top 10 Causes of Death in North-East region: 2017-2019

Rank	Cause of Death	% Proportion of Deaths		
		Male	Female	Person
1	Cardiovascular diseases	27.2	24.3	26.0
2	Digestive diseases	11.3	6.4	9.3
3	Malignant and other Neoplasms	8.0	8.6	8.2
4	Respiratory diseases	5.2	6.4	5.7
5	Diabetes mellitus	4.3	3.8	4.1
6	Respiratory infections	3.5	4.3	3.9
7	Tuberculosis	3.9	3.5	3.7
8	Perinatal conditions	3.1	4.6	3.7
9	Unintentional injuries: Motor Vehicle Accidents	5.2	1.4	3.6
10	Ill-defined/All other symptoms, signs and abnormal clinical and laboratory findings	9.0	13.9	11.0
	All Other Remaining Causes	19.3	22.8	20.7

Note: Ill-defined/All other Symptoms, Signs and Abnormal Clinical and Laboratory Findings Not Elsewhere Classified (NEC) (R00-R99) was not properly diagnoses so it may not be considered as second leading cause group.

Chart 59 - Top 10 Causes of deaths in major region- North-East: 2017-2019 (in %)



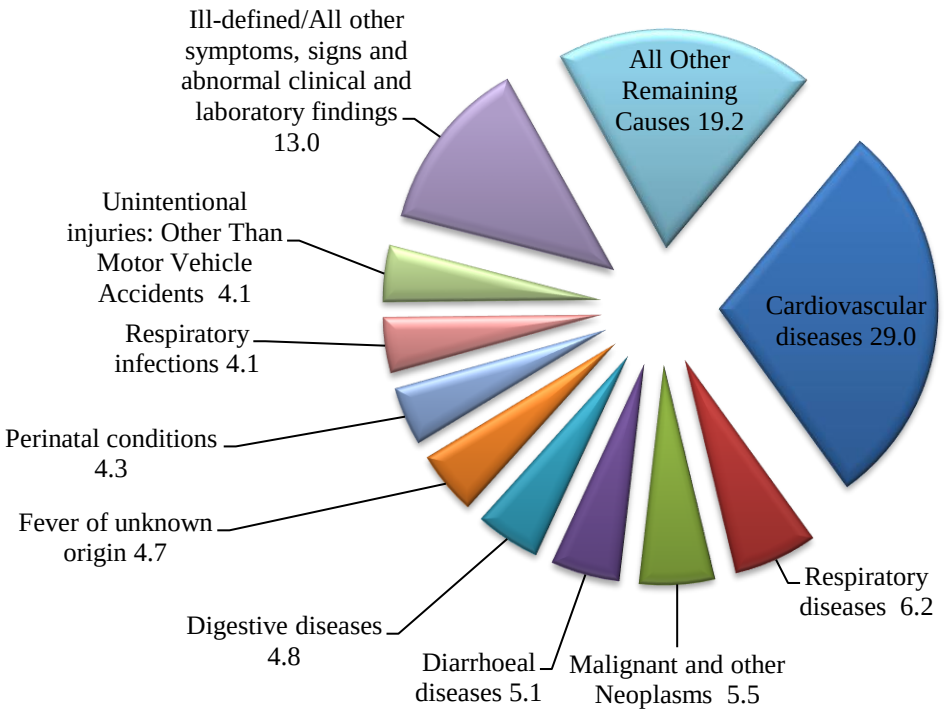
5.2.3 Table 5.1C shows the top 10 causes of deaths in East region of the country for period of 2017-2019. The leading cause of deaths, which is cardiovascular diseases contributes 29.0 percentage proportion of total deaths in east region followed by Respiratory Diseases (6.2%). For Respiratory diseases, Diarrhoeal diseases and Fever of unknown origin where proportion of female deaths is higher than male deaths.

Table - 5.1C: Top 10 Causes of Death in East region: 2017-2019

Rank	Cause of Death	% Proportion of Deaths		
		Male	Female	Person
1	Cardiovascular diseases	30.4	27.3	29.0
2	Respiratory diseases	5.7	6.8	6.2
3	Malignant and other Neoplasms	5.6	5.5	5.5
4	Diarrhoeal diseases	4.3	5.9	5.1
5	Digestive diseases	5.5	3.9	4.8
6	Fever of unknown origin	4.1	5.4	4.7
7	Perinatal conditions	4.0	4.7	4.3
8	Respiratory infections	4.0	4.3	4.1
9	Unintentional injuries: Other Than Motor Vehicle Accidents	4.5	3.8	4.1
10	Ill-defined/All other symptoms, signs and abnormal clinical and laboratory findings	11.2	15.1	13.0
	All Other Remaining Causes	20.8	17.2	19.2

Note: Symptoms, Signs and Abnormal Clinical and Laboratory Findings Not Elsewhere Classified (NEC) (R00-R99) was not properly diagnoses so it may not be considered as second leading cause group.

Chart 60 - Top 10 Causes of deaths in major region- East: 2017-2019 (in %)



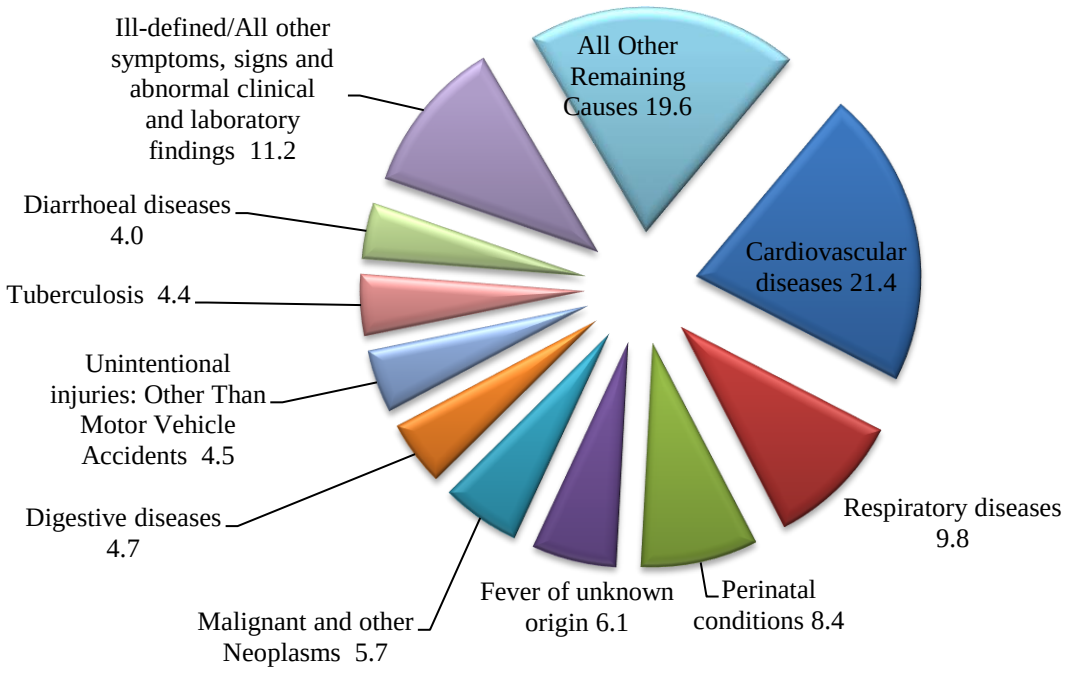
5.2.4 Table 5.1D shows the top 10 causes of death in Central region of the country for period of 2017-2019. The leading cause of deaths, which is cardiovascular diseases contributes 21.4 percentage proportion of total deaths in central region followed by respiratory diseases (9.8%) where contribution of female deaths (9.8%) is lower than male deaths (9.9%).

Table - 5.1D: Top 10 Causes of Death in Central Region: 2017-2019

Rank	Cause of Death	% Proportion of Deaths		
		Male	Female	Person
1	Cardiovascular diseases	22.7	19.6	21.4
2	Respiratory diseases	9.9	9.8	9.8
3	Perinatal conditions	8.1	8.9	8.4
4	Fever of unknown origin	5.0	7.6	6.1
5	Malignant and other Neoplasms	5.4	6.1	5.7
6	Digestive diseases	5.4	3.8	4.7
7	Unintentional injuries: Other Than Motor Vehicle Accidents	4.7	4.3	4.5
8	Tuberculosis	5.2	3.3	4.4
9	Diarrhoeal diseases	3.5	4.9	4.0
10	Ill-defined/All other symptoms, signs and abnormal clinical and laboratory findings	9.5	13.8	11.2
	All Other Remaining Causes	20.7	18.0	19.6

Note: Ill-defined/All other symptoms, Signs and Abnormal Clinical and Laboratory Findings Not Elsewhere Classified (NEC) (R00-R99) was not properly diagnoses so it may not be considered as second leading cause group.

Chart 61 - Top 10 Causes of deaths in major region-Central: 2017-2019 (in %)

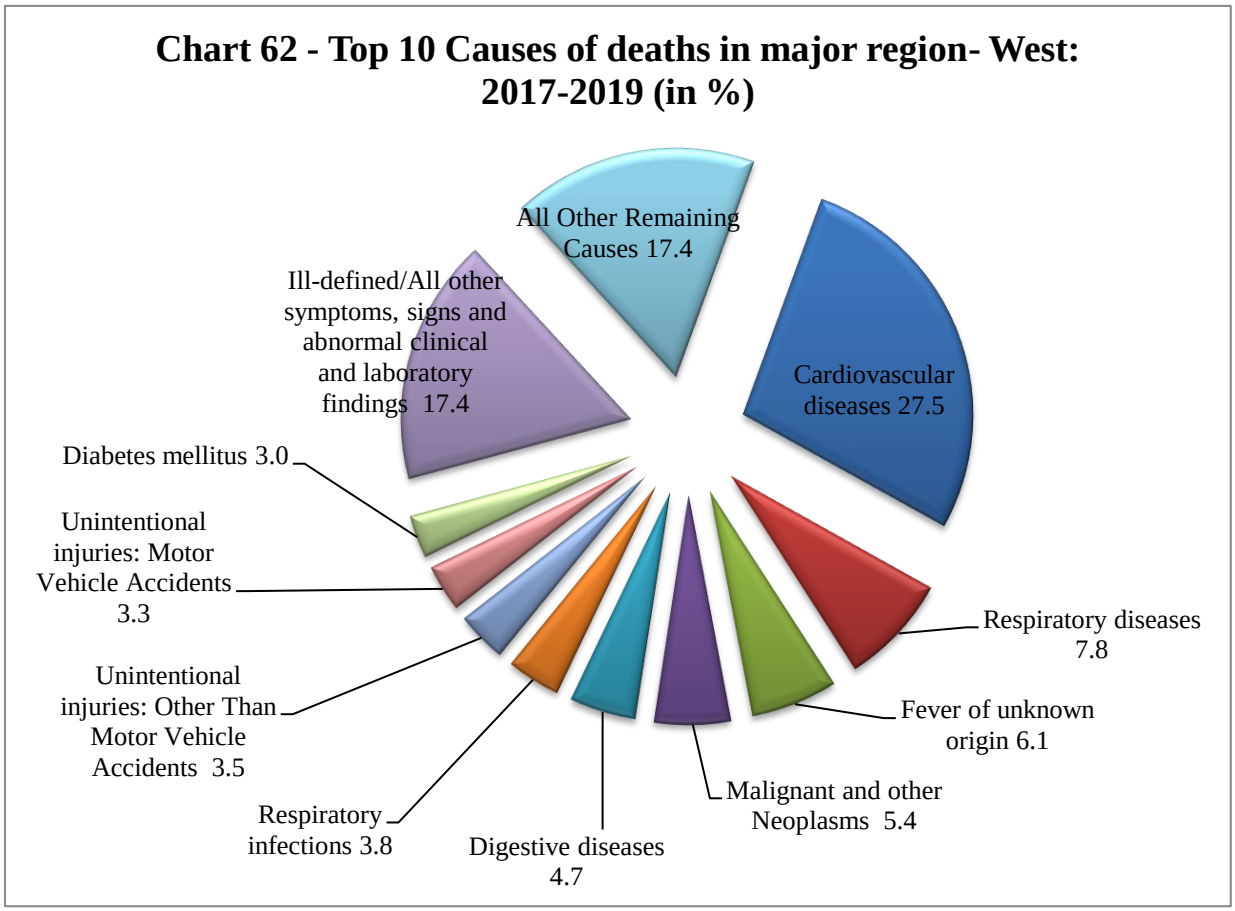


5.2.5 Table 5.1E shows the top 10 causes of deaths in West region of the country for period of 2017-2019.The leading cause of deaths, which is Cardiovascular diseases contributes, 27.5 percentage proportion of total deaths in West region followed by Respiratory diseases (7.8%) where contribution of female deaths (8.5%) is higher than male deaths (7.3%).

Table - 5.1E: Top 10 Causes of Death in West Region: 2017-2019

Rank	Cause of Death	% Proportion of Deaths		
		Male	Female	Person
1	Cardiovascular diseases	30.0	24.1	27.5
2	Respiratory diseases	7.3	8.5	7.8
3	Fever of unknown origin	5.4	7.2	6.1
4	Malignant and other Neoplasms	5.0	6.0	5.4
5	Digestive diseases	6.5	2.1	4.7
6	Respiratory infections	3.3	4.4	3.8
7	Unintentional injuries: Other Than Motor Vehicle Accidents	3.8	3.2	3.5
8	Unintentional injuries: Motor Vehicle Accidents	4.8	1.3	3.3
9	Diabetes mellitus	3.0	3.1	3.0
10	Ill-defined/All other symptoms, signs and abnormal clinical and laboratory findings	14.0	22.1	17.4
	All Other Remaining Causes	17.0	17.9	17.4

Note: Symptoms, Signs and Abnormal Clinical and Laboratory Findings Not Elsewhere Classified (NEC) (R00-R99) was not properly diagnoses so it may not be considered as second leading cause group.



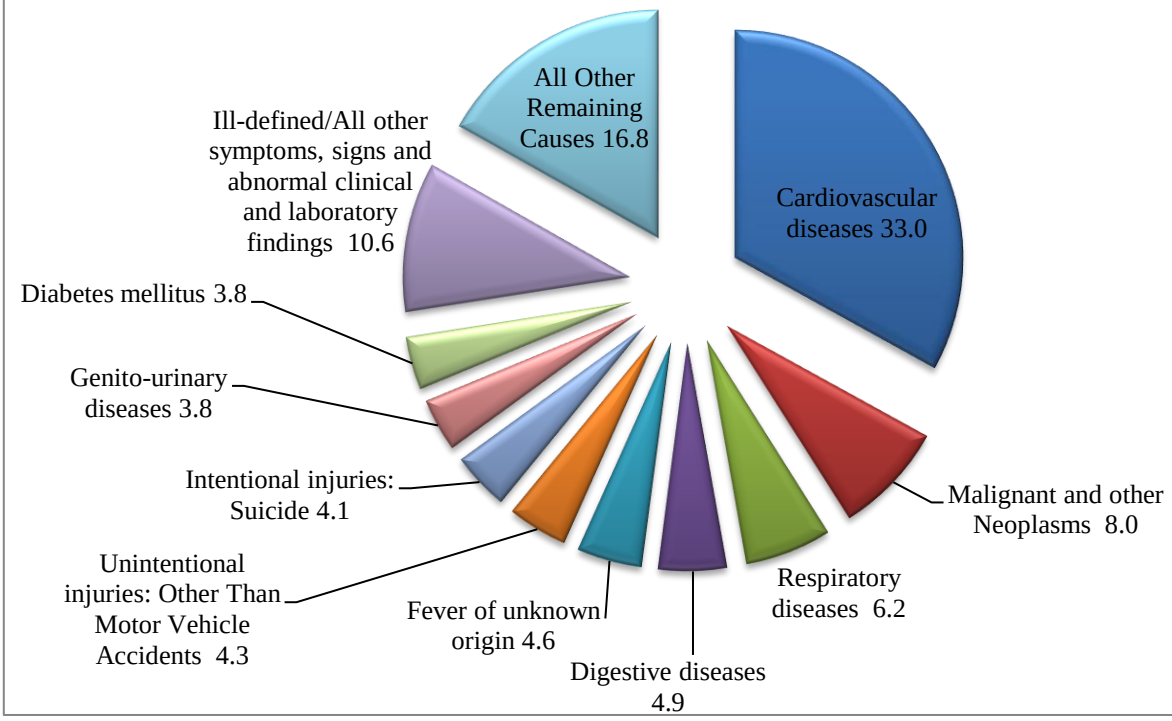
5.2.6 Table 5.1F shows the top 10 causes of death in South region of the country for period of 2017-2019. The leading cause of deaths, which is cardiovascular diseases contributes, 33.0 percentage proportion of total death in south region followed by malignant and other neoplasms (8.0%) where contribution of female deaths (9.0%) is higher than male deaths (7.2%). The proportion of male deaths (6.3%) due to digestive diseases is approximately double when compared proportion of female deaths (2.9%).

Table - 5.1F: Top 10 Causes of Death by Age and Gender in South Region: 2017-2019

Rank	Cause of Death	% Proportion of Deaths		
		Male	Female	Person
1	Cardiovascular diseases	35.5	29.7	33.0
2	Malignant and other Neoplasms	7.2	9.0	8.0
3	Respiratory diseases	5.9	6.6	6.2
4	Digestive diseases	6.3	2.9	4.9
5	Fever of unknown origin	3.9	5.6	4.6
6	Unintentional injuries: Other Than Motor Vehicle Accidents	4.1	4.5	4.3
7	Intentional injuries: Suicide	4.7	3.3	4.1
8	Genito-urinary diseases	4.0	3.4	3.8
9	Diabetes mellitus	3.4	4.3	3.8
10	Ill-defined/All other symptoms, signs and abnormal clinical and laboratory findings	7.7	14.6	10.6
	All Other Remaining Causes	17.3	16.1	16.8

Note: Symptoms, Signs and Abnormal Clinical and Laboratory Findings Not Elsewhere Classified (NEC) (R00-R99) was not properly diagnoses so it may not be considered as second leading cause group.

Chart 63 - Top 10 Causes of deaths in major region- South: 2017-2019 (in %)

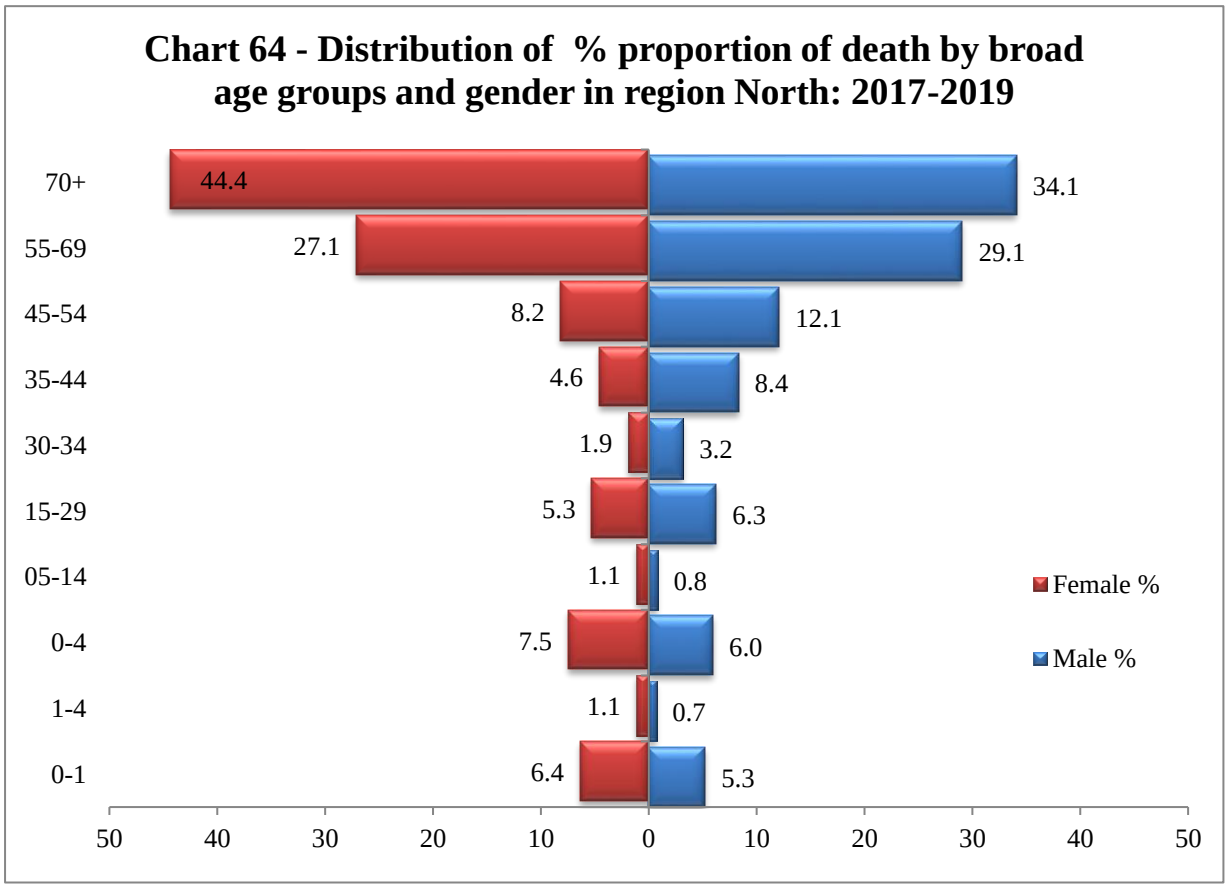


5.3.1 Table 5.2A shows distribution of deaths in different age groups in north region for year 2017-2019. Share of deaths of age group 70+ years to total deaths is higher as rate of mortality is increasing with age. Moreover, proportion of female death (44.4%) in old age (70+ years) is higher than male deaths (34.1%). Proportion of male death (5.3%) in infant is lower than proportion of female deaths (6.4%), also the proportion of deaths of female in age group 1-4 years (1.1%) which is more than that of proportion of male deaths (0.7%).

Table - 5.2A: Distribution of Deaths by Age and Gender in North Region: 2017-2019

Age- Group	Male	Male %	Female	Female %	Person	Person %
0-1	648	5.3	519	6.4	1167	5.7
1-4	89	0.7	92	1.1	181	0.9
0-4	737	6.0	611	7.5	1348	6.6
05-14	102	0.8	91	1.1	193	0.9
15-29	775	6.3	433	5.3	1208	5.9
30-34	395	3.2	154	1.9	549	2.7
35-44	1030	8.4	375	4.6	1405	6.9
45-54	1495	12.1	667	8.2	2162	10.5
55-69	3587	29.1	2215	27.1	5802	28.3
70+	4204	34.1	3627	44.4	7831	38.2

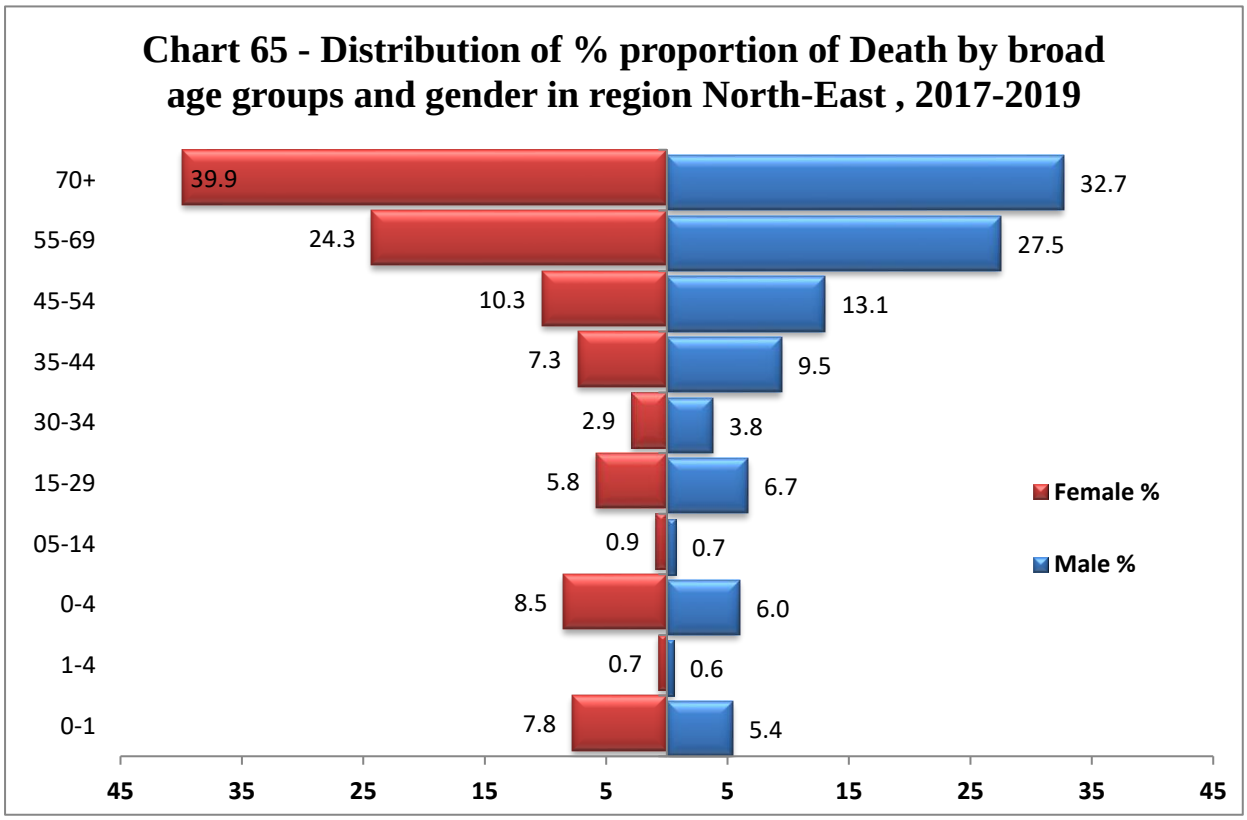
Note: North region includes Chandigarh, Delhi, Haryana, Himachal Pradesh, Jammu & Kashmir, Punjab and Uttarakhand



5.3.2 Table 5.2B shows distribution of deaths in different age group in north-east region for year 2017-2019. The share of deaths of age group 70+ years to total deaths is higher. Also, proportion of female death (39.9) in old age (70+ years) is higher than male deaths (32.7). Contribution of female deaths (7.8%) in infant is more than that of male deaths (5.4%), whereas the deaths of female in age group 1-4 years (0.7%) are higher than male deaths (0.6%).

Table - 5.2B: Distribution of Deaths by Age and Gender in North –East region: 2017-2019

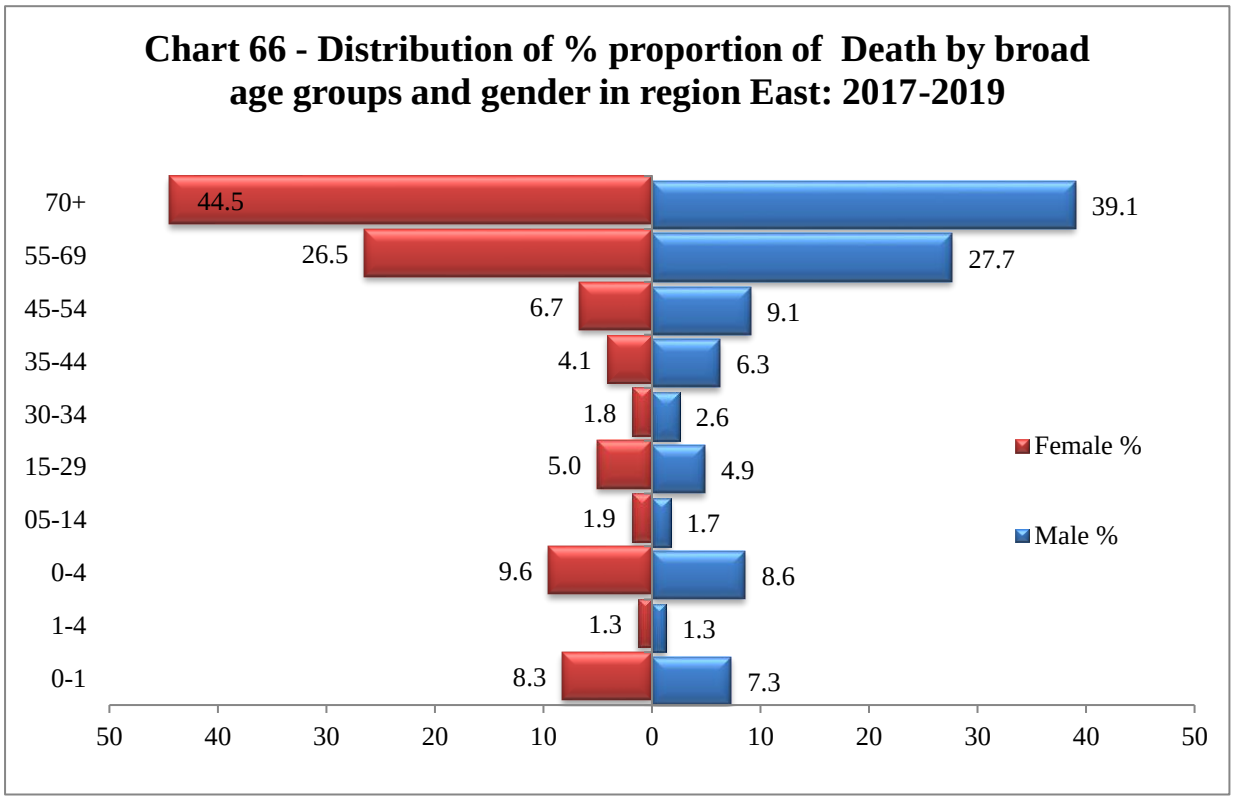
Age-Group	Male	Male %	Female	Female %	Person	Person %
0-1	325	5.4	315	7.8	640	6.4
1-4	34	0.6	29	0.7	63	0.6
0-4	359	6.0	344	8.5	703	7.0
05-14	44	0.7	38	0.9	82	0.8
15-29	399	6.7	236	5.8	635	6.3
30-34	227	3.8	118	2.9	345	3.4
35-44	566	9.5	297	7.3	863	8.6
45-54	780	13.1	416	10.3	1196	11.9
55-69	1645	27.5	983	24.3	2628	26.2
70+	1953	32.7	1614	39.9	3567	35.6



5.3.3. Table 5.2C shows distribution of deaths in different age group in east region for year 2017-2019. The share of deaths of age group 70+ years to total deaths is higher. Also, proportion of female death (44.5%) in old age (70+ years) is higher than male deaths (39.1). Proportion of male death (7.3%) in infant is less than proportion of female deaths (8.3%). It is observed that the deaths of female in age group 1-4 years (1.3%) is equivalent to male deaths (1.3%).

Table - 5.2C: Distribution of Deaths by Age and Gender in East Region: 2017-19

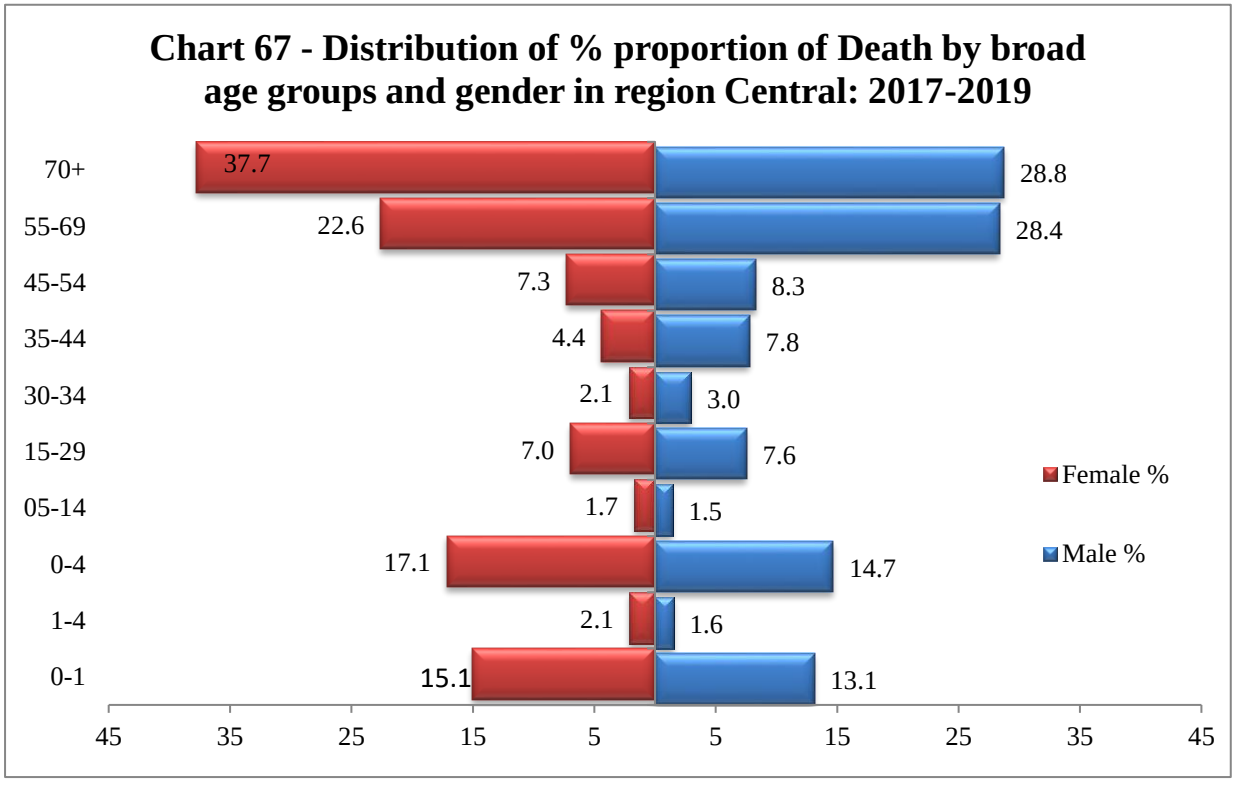
Class Interval	Male	Male %	Female	Female %	Person	Person %
0-1	1016	7.3	974	8.3	1990	7.8
1-4	184	1.3	152	1.3	336	1.3
0-4	1200	8.6	1126	9.6	2326	9.1
05-14	239	1.7	219	1.9	458	1.8
15-29	681	4.9	594	5.0	1275	5.0
30-34	357	2.6	213	1.8	570	2.2
35-44	876	6.3	482	4.1	1358	5.3
45-54	1270	9.1	789	6.7	2059	8.0
55-69	3846	27.7	3120	26.5	6966	27.1
70+	5427	39.1	5238	44.5	10665	41.5



5.3.4 Table 5.2D shows distribution of deaths in different age group in Central region for year 2017-2019. The share of deaths of age group 70+ years to total deaths is higher. Also, proportion of female death (37.7%) in old age (70+ years) is higher than male deaths (28.8%). Proportion of male death (13.1%) is lower than proportion of female deaths (15.1%) for age group 0-1 (in infant).

Table - 5.2D: Distribution of Deaths by Age and Gender in Central region: 2017-2019

Age-Group	Male	Male %	Female	Female %	Person	Person %
0-1	1193	13.1	962	15.1	2155	13.9
1-4	141	1.6	133	2.1	274	1.8
0-4	1334	14.7	1095	17.1	2429	15.7
05-14	133	1.5	109	1.7	242	1.6
15-29	686	7.6	445	7.0	1131	7.3
30-34	271	3.0	137	2.1	408	2.6
35-44	710	7.8	281	4.4	991	6.4
45-54	754	8.3	465	7.3	1219	7.9
55-69	2579	28.4	1444	22.6	4023	26.0
70+	2611	28.8	2411	37.7	5022	32.5

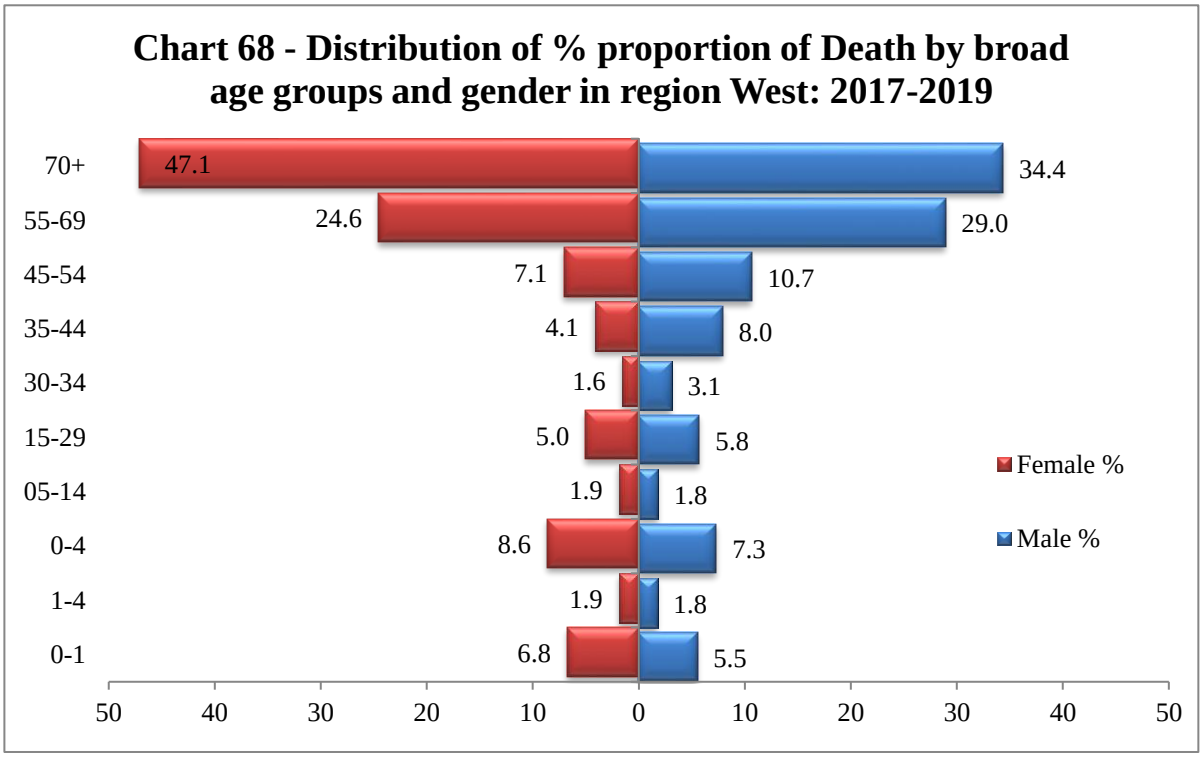


5.3.5 Table 5.2E shows distribution of deaths in different age group in Western region for year 2017-2019. The share of deaths of age group 70+ years to total deaths is higher. Also, proportion

of female deaths (47.1%) in old age (70+ years) is higher than male deaths (34.4%). Proportion of male deaths (5.5%) in infant is higher than that of proportion of female deaths (6.8%). It is observed that the deaths of female in age group 1-4 years (1.9%) are higher than male deaths (1.8%).

Table - 5.2E: Distribution of Deaths by Age and Gender in West Region: 2017-2019

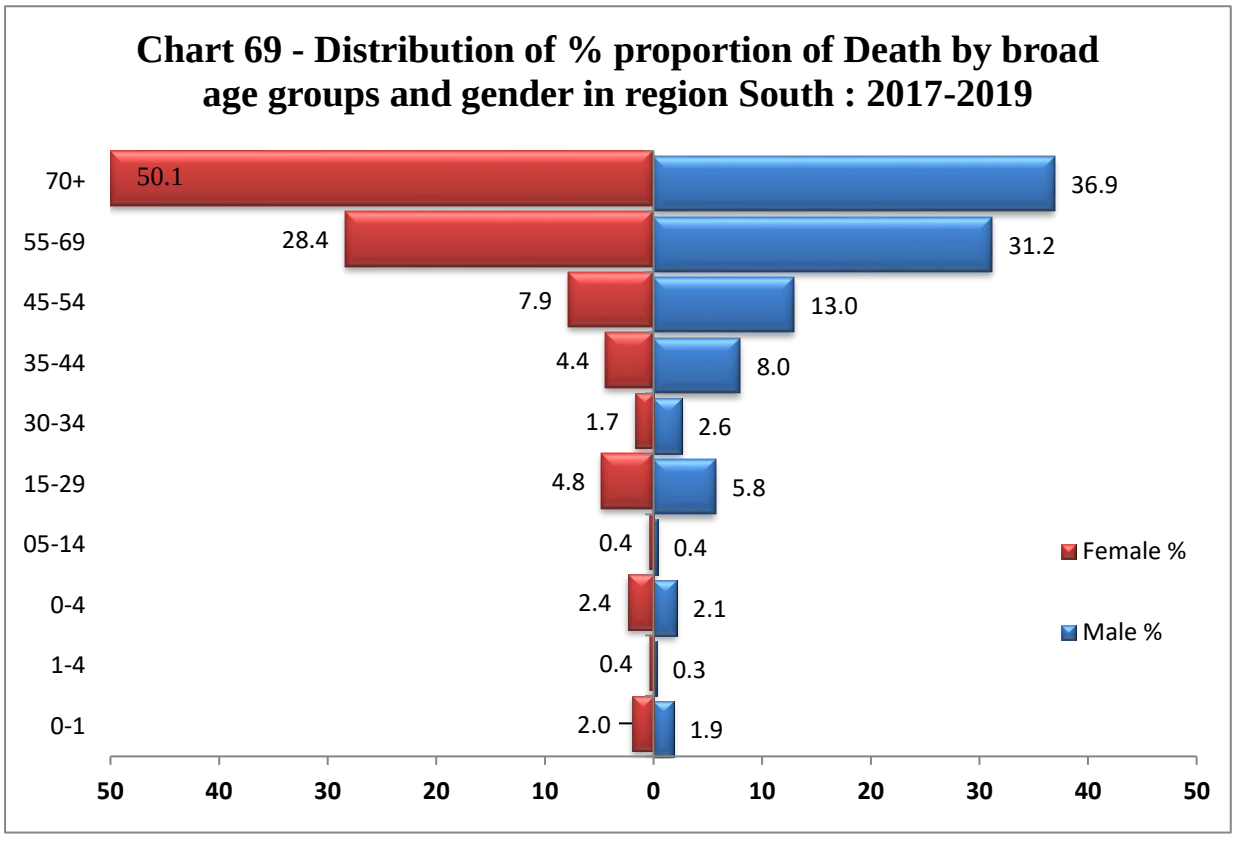
Age-Group	Male	Male %	Female	Female %	Person	Person %
0-1	607	5.5	532	6.8	1139	6.1
1-4	196	1.8	147	1.9	343	1.8
0-4	803	7.3	679	8.6	1482	7.9
05-14	202	1.8	148	1.9	350	1.9
15-29	630	5.8	396	5.0	1026	5.5
30-34	342	3.1	125	1.6	467	2.5
35-44	871	8.0	326	4.1	1197	6.4
45-54	1169	10.7	557	7.1	1726	9.2
55-69	3172	29.0	1933	24.6	5105	27.1
70+	3766	34.4	3705	47.1	7471	39.7



5.3.6 Table 5.2F shows distribution of deaths in different age group in Ssouth region for year 2017-2019. The share of deaths of age group 70+ years to total deaths is higher. Also, proportion of female deaths (50.1 %) in old age (70+ years) is higher than male deaths (36.9%). Proportion of male deaths (1.9%) in infant is less than female deaths (2.0%) for 0-1 age group.

Table - 5.2F: Distribution of Deaths by Age and Gender in South Region: 2017-2019

Age-Group	Male	Male %	Female	Female %	Person	Person %
0-1	429	1.9	332	2.0	761	1.9
1-4	66	0.3	69	0.4	135	0.3
0-4	495	2.1	401	2.4	896	2.2
05-14	86	0.4	74	0.4	160	0.4
15-29	1332	5.8	811	4.8	2143	5.4
30-34	605	2.6	285	1.7	890	2.2
35-44	1856	8.0	742	4.4	2598	6.5
45-54	3004	13.0	1326	7.9	4330	10.8
55-69	7222	31.2	4795	28.4	12017	30.0
70+	8555	36.9	8453	50.1	17008	42.5



ANNEXURE - 1

Neonatal Classification (Deaths in Age 0- 28 Days)

Main Group	Sub-Group	Disease	ICD 10 Range
Communicable, perinatal and nutritional conditions	**Neonatal infection**	Neonatal pneumonia	A37, H65-H68, H70, H71, J00-J22, J32, J36, J85, J86, P23, U04
		Sepsis	A20-A28, A32, A38, A40-A44, A46, A48, A49, A68-A70, A74, A75, A77-A79, B95, B96, H10, H60, I30, I32-I133, I39-I41, K65, K67, K81, L00-L04, L08, M00-M01, M60, M86, N10, N30, N34, N41, N49, N61, P35-P39
		Meningitis/encephalitis	A39, A81-A89, G00-G09
	Other communicable Diseases	Diarrhoeal diseases	A00-A09
		Tetanus	A33-A35
		Poliomyelitis	A80, B91
		Measles	B01, B05
		Malaria	B50-B54
		Other infectious and parasitic diseases	A15-A19, A30-A31, A36, A50-A67, A71, A90-A99, B00, B02-B04, B06-B09, B15-B27, B30, B33-B49, B55-B60, B64-B83, B85-B90, B92, B94, B97, B99, J65, K04, K05, K61, N70-N74, R75, U00, Y95
		Fever of unknown origin	R50
	Perinatal conditions	Prematurity & low birthweight	P01, P05, P07, P22, P25-P28, P52, P61, P77, R04
		Birth asphyxia & birth trauma	P00, P02, P03, P10-P15, P20, P21, P24, P29, P50, P90, P91
	Other conditions	Congenital anomalies	G10-G99, Q00-Q99
		Nutritional diseases	D50-D53, E00-E02, E40-E46, E50-E56, E59-E61, E63, E64, X53-X54,
Non-Communicable Diseases	**Other Non-Communicable Diseases**	Other Non-Communicable Diseases	C00-C97, D01-D48, D55-D89, E03-E35, E65-E90, F00-F99, H00-H06, H11-H59, H61-H62, H69, H72-H95, I00-I28, I31, I34-I38, I42-I99, J30, J31, J33-J35, J37-J47, J60, J64, J66-J70, J80-J82, J84, J90-J99, K00-K03, K06-K60, K62-K63, K70-K80, K82-K93, L05, L10-L99, M02-M54, M61-M85, M87-M99, N00-N08, N11-N29, N31-N33, N35-N40, N42-N48, N50-N51, N60, N62-N64, N75-N99, P04, P08, P51, P53-P60, P70-P72, P74-P76, P78, P80-P83, P92-P94, R00, R01, R03, R05, R06, R11-R23, R26, R27, R29-R36, R39-R49, R55, R56, R59, R63, R70-R74, R76-R77, R80-R82, R84-R87, R90, R91
Injuries	**Injuries**	Injuries	S00-S99, T00-98, V01-V99, W00-W99, X00-X52, X57-X99, Y00-Y91, Y97-Y98
Ill-defined conditions	**Ill-defined or cause unknown**	Ill-defined or cause unknown	P96, R02, R07, R09, R10, R25, R51-R54, R57-R58, R60-R62, R64, R68, R69, R78, R79, R83, R89, R92-R99

ANNEXURE - 2

Child Classification (Deaths in age 1–59 months)

Main Group	Sub-Group	Disease	ICD 10 Range
Communicable, perinatal and nutritional conditions	**Early Childhood infections**	Pneumonia	A37, H65-H68, H70, H71, J00-J22, J32, J36, J85, J86, P23, U04
		Acute bacterial sepsis & severe infections	A20-A28, A32, A38, A40-A44, A46, A48, A49, A68-A70, A74, A75, A77-A79, B95, B96, H10, H60, I30, I32, I33, I39-I41, K65, K67, K81, L00-L04, L08, MOO-M01, M60, M86, N10, N30, N34, N41, N49, N61, P36, P38
		Meningitis/encephalitis	A39, A81-A89, G00-G09,
	Other communicable Diseases	Diarrhoeal diseases	A00-A09
		Tuberculosis	A15-A19, B90, J65
		Tetanus	A33-A35
		Poliomyelitis	A80, B91
		Measles	B01, B05
		HIV/AIDS	B20-B24, R75
		Malaria	B50-B54
		Other infectious and parasitic diseases	A30, A31, A36, A50-A67, A71, A90-A99, B00, B02-B04, B06-B09, B15-B19, B25-827, B30, B33-B49, B55-B60, B64-B83,B85-B89, B92, B94, B97, B99, K02, K04, K05, K61, N70-N74, P35, P37, P39, U00, Y95
		Fever of unknown origin	R50
	Perinatal conditions	Prematurity & low birth weight	P01, P05, PO7, P22, P25-P28, P52, P61, P77
		Birth asphyxia & birth trauma	P00, P02, P03, P10-P15, P20, P21, P24, P29, P50, P90, P91
	Other conditions	Nutritional diseases	D50-D53, E00-E02, E40-E46, E50-E56, E59-E61, E63, E64, X53-X54
		Congenital anomalies	Q00-Q07, Q10-18, Q20-Q28, Q30-Q45, Q50-56, Q60-Q87, Q89-Q93, Q95, Q96-Q99
Non-Communicable Diseases	**Other Non-Communicable Diseases**	Other Non-Communicable Diseases	C00-C97, D01-D48, D55-D89, E03-E35, E65-E90, F00-F99,G10-G99, H00-H06, H11-H59, H61-H62, H69, H72-H95, I00-I28, I31, I34-I38, I42-I99, J30, J31, J33-J35, J37-J47, J60, J64, J66-J70, J80-J82, J84, J90-J99, K00-K01, K03, K06-K60, K62-K63, K70-K80, K82-K93, L05, L10-L99, M02-M54, M61-M85, M87-M99, N00-N08, N11-N29, N31-N33, N35-N40, N42-N48, N50-N51, N60, N62-N64, N75-N99, P04, P08, P51, P53-P60, P70-P72, P74-P76, P78, P80-P83, P92-P94, R00, R01, R03-R05, R06, R11-R23, R26, R27, R29-R49, R55-R56, R59, R63, R70-R74, R76-R77, R80-R82, R84-R87, R90-R91
Injuries	**Injuries**	Injuries	S00-S99, T00-T98, V01-V99, W00-W99, X00-X52, X57-X99, Y00-Y91, Y97-Y98
Ill-defined conditions	**Ill-defined or cause unknown**	Ill-defined or cause unknown	P96, R02, R07, R09, R25, R51-R54, R57-R58, R60-R62, R64, R68, R69, R78, R79, R83, R89, R92-R99

ANNEXURE-3

Adult classification (Deaths in age 5 year and above)

Main Group	Disease	ICD 10 Range
Communicable, maternal, perinatal and nutritional conditions	Tuberculosis	A15-A19, B90, J65
	HIV/AIDS	B20-B24, C46, D84, R75
	Diarrhoeal diseases	A00-A09
	Malaria	B50-B54
	Selected tropical diseases	A30, A71, A90-A99, B55-B58, B60-B83, B92
	Respiratory infections	H65-H68, H70-H71, J00-J22, J32, J36, J85-J86, P23, U04
	Acute bacterial sepsis & severe infections	A20-A28, A32, A38, A40-A49, A68, A70, A74-A79, B95-B96, H10, H60, I30, I32-I33, I39-I41, K02, K04-K05 ,K61, K65, K67, K81, L00-L04, L08, M00-M01, M60, M86, N10, N30, N34, N41, N49, N61, P36-P39, U80-U89
	Other infectious and parasitic diseases	A31, A33, A35-A37, A39, A50-A67, A69, A80-A89, B00, B01-B09, B15-B17, B19, B25-B49, B59, B85-B89, B91, B94, B97-B99, G00-G09, N70-N74, P35, Y95
	Maternal conditions	O00-099, A34, F53
	Perinatal conditions	P00-P22, P24-P29, P50-P96, R95, R96**
	Nutritional deficiencies	D50-D53, D64, E00-E02, E40-E46, E50-E64, X53-X54
	Fever of unknown origin	R50
Non-Communicable diseases	Malignant and other Neoplasms	C00-C45, C47-C97, D00-D48, N60, N62-N64, N87, R59
	Diabetes mellitus	E10-E14
	Neruo-psychiatric conditions	F00-F09, F11-F52, F54-F99, G10-G44, G47-G80, G90-G99, R26-R29, R40-R49, R56, R90
	Cardiovascular diseases	G45-G46, G81-G83, I00-I28, I31, I34-I38, I42-I84, I86-I99, R00-R01, R03, R55, R96**
	Respiratory diseases	J30-J31, J33-J35, J37-J64, J66-J84, J90-J99, R04-R06, R84, R91
	Digestive diseases	B18, F10, I85, K20-K60, K62-K63, K66, K70-K80, K82-K93, R10-R19, R63, R85, X45, Y15, Y90, Y91
	Genito-urinary diseases	N00-N08, N11-N29, N31-N33, N35-N40, N42-N48, N50-N51, N75-N86, N88-N99, R30-R39, R80, R82, R86, R87
	Congenital anomalies	Q00-Q99
	Other Non-Communicable Diseases	D55-D63, D65-D83, D86-D89, E03-E07, E15-E16, E20-E35, E65-E90, H00-H06, H11-H59, H61-H62, H69, H72-H95, K00-K01, K03, K06-K14, L05, L10-L99, M02-M54, M61-M85, M87-M99, R20-R23, R70-R74, R76-R77, R81

Injuries	Unintentional injuries: Motor Vehicle Accidents	V01-V89
	Unintentional injuries: Other Than Motor Vehicle Accidents	V90-V98, W00-W99, X00-X44, X46-X52, X57-X59, Y40-Y89
	Intentional injuries: Suicide	X60-X84
	Intentional injuries: Other Than Suicide	X85-Y09, Y35, Y36
	Injuries of Undetermined Intent	Y10-Y14, Y16-Y34, Y96-Y98
Symptoms, signs and Ill-defined conditions	Ill-defined/All other symptoms, signs and abnormal clinical and laboratory findings	R02, R07-R09, R25, R51-R54, R57-R58, R60-R62, R64-R69, R78-R79, R83, R89, R92-R94, R96**, R98-R99
Note. ** R96 - Sudden deaths are in 'Perinatal conditions' (when age<1 year), in 'cardiovascular diseases' (when age>30 year) and else in 'ill-defined conditions'		

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6	All India Institute of Medical Sciences (AIIMS), Rishikesh, Uttarakhand
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8	Banaras Hindu University (BHU), Varanasi, Uttar Pradesh
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