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**Government of Kerala**

**A REPORT ON  
MEDICAL CERTIFICATION OF  
CAUSE OF DEATH 1997**

**Department of Economics & Statistics  
Thiruvananthapuram**



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# **MEDICAL CERTIFICATION OF CAUSE OF DEATH –1997**

## **CENTRE: TRIVANDRUM CORPORATION**

### **INTRODUCTION**

The genuine and precise data on morbidity and mortality have a fundamental rôle in planning and implementation of various health improvement schemes. The data on cause of death help to identify the occurrence of major diseases and thereby enable the planners and administrators to take preventive measures against these diseases. Statistics of cause of death also provides valid parameters for the assessment of effectiveness of various health improvement schemes.

The scheme – “Medical Certification of cause of death” was introduced in the year 1969. The scheme, with its inherent drawbacks, supplies effective guidelines to medical practitioners, social workers, policy formulators and others interested in the field.

This report deals with the analysis of cause of death in the corporation of Thiruvananthapuram.

### **1.1 OBJECTIVES**

The main objectives of the scheme are the following:

- (1) To obtain reliable information underlying the cause of death.
- (2) To pin point the leading cause of death for male and female.
- (3) To identify individual causes of death in certain special groups such as infants mothers and aged persons.
- (4) To study the mortality pattern of certain important diseases like heart disease, tuberculosis, cancer, etc.
- (5) To enable public health and medical authorities to undertake specific investigation and studies into the mortality pattern of diseases for the evaluation and planning of health activities.

### **METHODOLOGY**

The scheme envisages the collection of accurate data relating to all death in the medical institutions in the corporation area having facilities for in-patient treatment. The attending physician is required to furnish the data on cause of death in the prescribed form. The cause of death certificates are scrutinized and causes of death are identified and coded by the Deputy Health Officer appointed for the purposes. For coding the cause of death, the list ‘A’ of the International Classification of Disease (IX Revision) is adopted.

## CAUSE OF DEATH

Cause of death has been defined as the morbid condition or disease process abnormality, injury or poisoning leading directly or indirectly to death. Every death is likely to have multiple causes and death occurs as a result of a chain of causes.

In this report, only the causes of death which account for atleast 3% of the death occurred in the ~~center~~<sup>centre</sup> are analyzed in detail. The causes of death, which are insignificant, are grouped under 'others.' The prominent causes of death are listed below:

- (1) Heart diseases
- (2) Accidents injuries and poisoning
- (3) Cerebrovascular disease
- (4) Neoplasm
- (5) Diseases of the digestive system
- (6) Diseases of the respiratory system
- (7) Conditions originating in the prenatal period
- (8) Nutritional and metabolic diseases and immunity disorders

## LIMITATIONS

The survey pertains to the capital city of the state. Hence a lionshare of death occurred in the state lies outside the purview of the survey.

1. It is significant to note that heart disease was the most predominant cause of death and the percentage is higher among males than in females. The causes of death reported for the Thiruvananthapuram Corporation are discussed below in details
2. As per the 1991 Census, population of Thiruvananthapuram Corporation was 5.25 lakhs with an area of 75 Sq.Kms. The density of population of the City Corporation was 7000 per Sq.Kms. During the year under report, the number of medical forms received and analyzed were 6429, with male and female break up of 4039 and 2390 respectively.
3. Sex-wise distribution of the leading causes of death in the Thiruvananthapuram Corporation.

## HEART DISEASE

Heart disease was the most predominant cause of death in Thiruvananthapuram Corporation area. Out of the total deaths, 19.09% of the death was due to heart disease with male and female break-up-of 20.08% and 17.41% respectively.

### 3.1 Accidents, Injuries and poisoning

The percentage of death due to accidents, injuries and poisoning was 10.03%. The male and female share of death due to this cause is M- 10.65 and F-9.00 respectively.

### 3.2 Cerebrovascular diseases

It is one of the major causes of death. The percentage share of death due to this disease was 12.69%. The male and female break-up is 11.44% and 14.81% respectively.

### 3.3 Neoplasm's

The percentage of death due to Neoplasm was 10.70. Out of this 10.45% forms male death and 11.13% forms female death.

### 3.4 Diseases of the Digestive System

Deaths due to the disease of the digestive system was not negligible. Its percentage share was 6.86 for the corporation. The male and female break-up is 8.22% and 4.56% respectively

### 3.5 Diseases of the respiratory system

Another major causes of death are the disease of the respiratory system. It's share of the total cause of death forms as 5.74% of which 6.14% forms male and 5.06% forms female death.

### 3.6 Condition originating in the prenatal period

Percentage of death due to this cause is 5.96, with male and female break-up of M-4.33% and F-8.7% respectively.

### 3.7 Nutritional and metabolic diseases and immunity disorders

Percentage of death due to this cause forms 6.41% for the Corporation. Out of this male and female share forms as 6.14% and 6.86% respectively.

3.8 Diseases such as intestinal infections diseases, Tuberculosis other bacterial diseases, diseases of the nervous system and sense organs, signs and symptoms of all ill defined conditions are other significant causes of death's in this center centre.

## Deaths according to age group- Annexure II

The percentage of death for the age group below 1 year (infants) is 8.63% followed by 3.58% for the group 1- 14. The percentage of death occurred in the age-group 15- 44 is that 21.99% and 65.80% of death occurred in the age group of 45 and above.

The major killer disease in the age-group of below 1 year (infants) was conditions originating in the prenatal period (68.66%) and major cause of death of the age-

group 1- 14 was Neoplasm (26.96%). Accidents, injuries and poisoning act as major killer items (22.35%) for the age group 15- 44. For the age group of 45 and above, heart diseases forms the major killer disease (23.76%)

## CONCLUSION

As usual, heart diseases seemed to be the major cause of death, especially in the age group of 45 and above. (19.09) Followed by Neoplasm (10.70) and accidents, injuries and poisoning (10.03). The conditions originating in the prenatal period was the chief cause of infant death.



## APPENDIX - II

### Death according to age group Thiruvananthapuram

SL.No	Age Group	Percentage	
1.	Below 1 Year	8.63	555
2.	1 - 14	3.58	230
3.	15 - 44	21.99	1414
4.	45 and above	65.80	4230
<b>Total</b>		<b>100.00</b>	<b>6429</b>

## APPENDIX - I

### Percentage of death due to major diseases with Male and Female break-up

Sl.No.	Code No.	Major diseases	Males %	Female %	Total %
1.	VII 390-429	Heart Diseases	20.08	17.41	19.09
2.	XVII 800-999	Accidents, Injuries and Poisoning	10.65	9.00	10.03
3.	VIII 430-438	Cerebrovascular Diseases	11.44	14.81	12.69
4.	II 140-239	Neoplasm	10.45	11.13	10.70
5.	IX 520-579	Diseases of the digestive system	8.22	4.56	6.86
6.	VIII 460-519	Diseases of the respiratory systems	6.14	5.06	5.74
7.	XV 760-779	Conditions originating in the perinatal period	4.33	8.70	5.96
8.	III 240-279	Nutritional and metabolic diseases and immunity disorders	6.14	6.86	6.41
<b>Percentage Total</b>			<b>77.45</b>	<b>77.53</b>	<b>77.48</b>

### APPENDIX - III

#### Sex wise details of Medically Certified Death in Thiruvananthapuram

Sl No	Code No.	Cause of death	Male	Percentage	Female	Percentage	Total	Percentage
1	001-009	Intestinal Infection diseases	14	0.34	3	0.13	17	0.26
2	010-018	Tuberculosis	213	5.27	57	2.38	270	4.20
3	020-041	Other Bacterial Diseases	52	1.29	31	1.30	83	1.29
4	045-079	Viral Diseases	46	1.14	36	1.51	82	1.28
5	140-239	Neoplasm's	422	10.45	266	11.13	688	10.70
6	240-279	Nutritional and Metabolic diseases and immunity diseases	248	6.14	164	6.86	412	6.41
7	320-389	Diseases of the nervous systems and sense organs	101	2.50	89	3.72	190	2.95
8	390-429	Heart diseases	811	20.08	416	17.41	1227	19.09
9	430-438	Cerebrovascular diseases	462	11.44	354	14.81	816	12.69
10	460-519	Diseases of the respiratory system	248	6.14	121	5.06	369	5.74
11	520-579	Disease of the digestive system	332	8.22	109	4.56	441	6.86
12	580-629	Disease of the urinary system	149	3.69	78	3.26	227	3.53
13	760-779	Conditions originating in the prenatal period	175	4.33	208	8.70	383	5.96
14	780-799	Signs, Symptoms of ill defined conditions	128	3.17	68	2.85	196	3.05
15	800-999	Accidents, injuries and poisoning	430	10.65	215	9.00	645	10.03
16	80-139 280-319 439-459 630-759	Others	208	5.15	175	7.32	383	5.96
<b>Total</b>			<b>4039</b>	<b>100.00</b>	<b>2390</b>	<b>100.00</b>	<b>6429</b>	<b>100.00</b>

APPENDIX - IV

Statement Showing the leading cause of death in the centre according to age group Thiruvananthapuram

Sl. No.	Code	Cause of Death	Below -1	Percent- tage	1-14	Percent- age	15-441	Percent- age	45 & above	Percent- age	Total	Percent- age
1	1001-009	Intestinal Infection diseases	-	-	1	0.43	7	0.49	9	0.21	17	0.26
2	010-018	Tuberculosis	-	-	4	1.74	75	5.30	191	4.52	270	4.20
3	020-041	Other Bacterial Diseases	1	0.18	1	0.43	21	1.48	60	1.42	83	1.29
4	045-079	Viral Diseases *	-	-	5	2.17	41	2.90	36	0.85	82	1.28
5	140-239	Neoplasm's	10	1.80	62	26.96	192	13.58	424	10.02	688	10.70
6	240-279	Nutritional and Metabolic diseases and immunity diseases	3	0.54	2	0.87	53	3.75	354	8.37	412	6.41
7	320-389	Diseases of the nervous systems and sense organs	3	0.54	24	10.44	64	4.53	99	2.34	190	2.95
8	390-429	Heart diseases	6	1.08	14	6.09	202	14.29	1005	23.76	1227	19.09
9	430-438	Cerebrovascular diseases	1	0.18	2	0.87	72	5.09	741	17.52	816	12.69
10	460-519	Diseases of the respiratory system	7	1.26	8	3.48	51	3.61	303	7.16	369	5.74
11	520-579	Disease of the digestive system	6	1.08	13	5.65	105	7.42	317	7.49	441	6.86

(Contd..)

*Statement Showing the leading cause of death in the centre according to age group Thiruvananthapuram (Contd..)*

Sl. No.	Code	Cause of Death	Below -1	Percentage	1-14	Percent-age	15-441	Percent-age	45 Z& above	Percent-age	Total	Percent-age
12	580-629	Disease of the urinary system	7	1.26	3	1.30	79	5.69	138	3.26	227	3.53
13	760-779	Conditions originating in the perinatal period	381	68.65	2	0.87	-	-	-	-	383	5.96
14	780-799	Signs, Symptoms of ill defined conditions	10	1.80	18	7.83	29	2.05	139	3.29	196	3.05
15	800-999	Accidents, injuries and poisoning	-	-	28	12.17	316	22.35	301	7.12	645	10.03
16	80-139 280-319 439-459 630-759	Others	120	21.62	43	18.70	107	7.57	113	2.67	383	5.96

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