



GOVERNMENT OF KERALA

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MEDICAL CERTIFICATION OF
CAUSE OF DEATH — 1987

DEPARTMENT OF ECONOMICS & STATISTICS
TRIVANDRUM
1989

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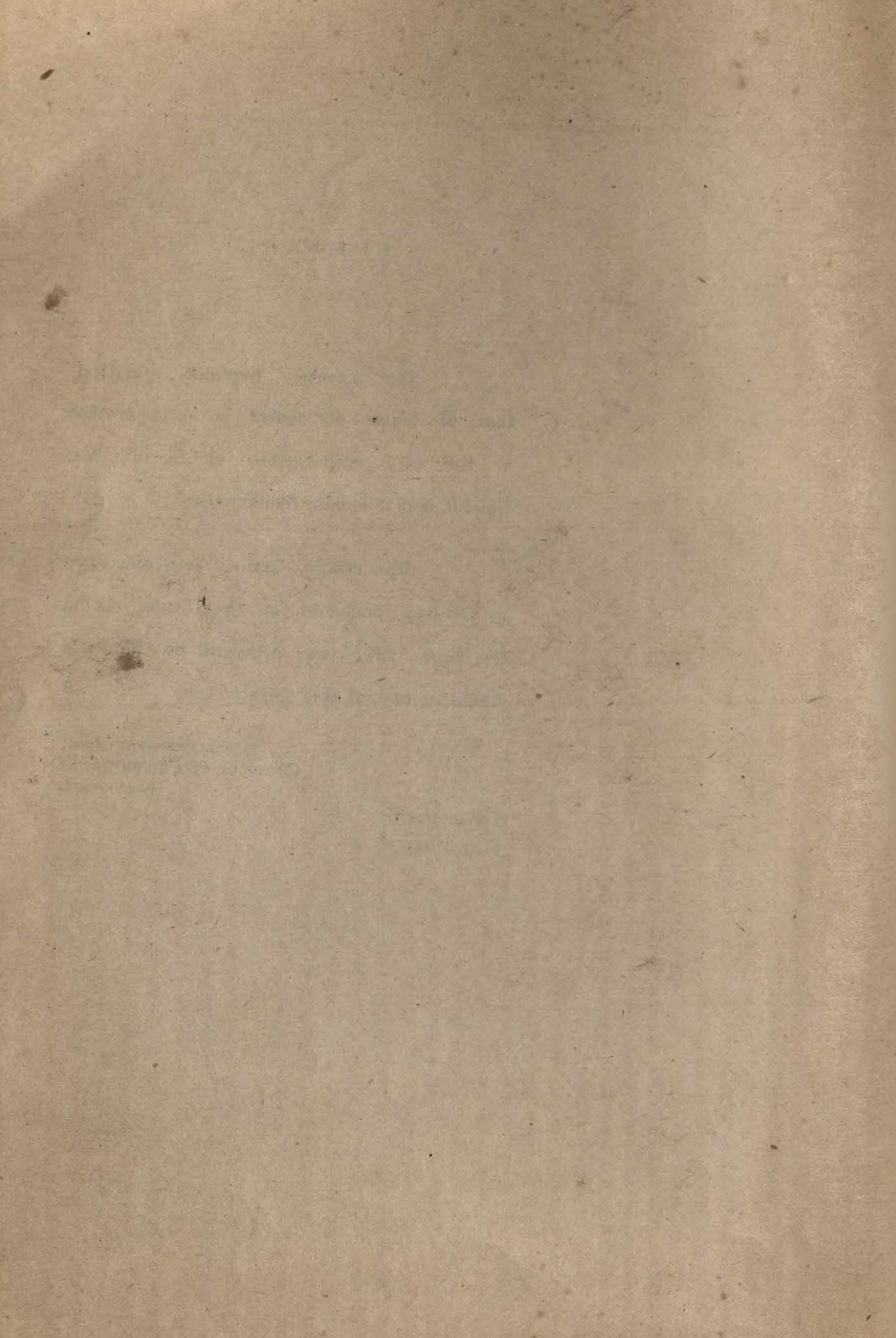
PREFACE

The scheme '**Medical certification of cause of death**' is in operation in the city corporations of Cochin and Calicut and in Quilon Municipality.

This report, dealing with mortality by causes occurred in the State during the year 1987, was prepared by the Vital statistics unit of this Department.

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C O N T E N T S

1. Introduction	1
2. Cochin corporation	3
3. Calicut corporation	6
4. Quilon municipality	9
5. Comparative study of the leading causes of death in the three centres	12
6. Sex-wise comparative study of leading causes in the three centres	12
7. Conclusion	13
8. Tables	15-24

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1. Introduction

Statistics on mortality by causes of deaths are important in the context of formulation of health improvement schemes. Although the registration of deaths done under the aegis of the Registration of Births and Deaths Act 1969 (RBD Act, 1969) has a provision to collect information on causes of every registered death, that information in overwhelming majority of cases is not authenticated by medical practitioners, or even by para-medical personnel and its utility is thus very limited. For obtaining information on cause of such death as get medically certified, the office of the Registrar General of India started a scheme of medical certification of cause of death under the RBD Act 1969. Though the scheme has inherent draw backs, it provides leading guidelines to medical practitioners, policy formulators, researchers and others.

This report deals with the cause of death analysis in the Corporations of Cochin and Calicut and in Quilon municipality for the year 1987.

1.2 Objectives

The main objectives of the scheme are the following --

- i. to obtain reliable information on the underlying causes of death.
- ii. to pinpoint the leading causes of death for males and females.
- iii. to identify individual causes of death in certain special groups.
Such as infants, mothers and aged persons.
- iv. to study the mortality pattern of certain important deceases like cancer, tuberculosis, heart diseases etc.
- v. to enable public health and medical authorities to undertake specific investigations and studies into the mortality pattern of diseases of the evaluations and planning of health activities.

1.3 Methodology

The scheme envisages the collection of relevant data relating to all deaths in the medical institutions within the municipality/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 scrutinised and the causes of death are identified and coded by the Deputy Health Officer appointed for the purpose. For, coding the cause of death, the list 'A' of the international classification of diseases (IX revision) is adopted.

1.4 Causes of death

We may define cause of death as the morbid condition or disease process, abnormality, injury or poisoning leading directly 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 deaths in any one or more of the three centres mentioned earlier are analysed in detail. The causes of death which are in significant are grouped under 'others'. The following are considered as the prominent causes of death.

- i. Intestinal infectious disease - code I (001 - 009)
- ii. Tuberculosis - I (010 - 018)
- iii. Other bacterial diseases - I (020 - 041)
- iv. Viral diseases - I (045 - 079)
- v. Neoplasms - II (140 - 239)
- vi. Diseases of the nervous system and sense organs VI (320-389)
- vii. Heart diseases - VII (390 - 429)
- viii. Cerebrovascular diseases - VII (430 - 438)
- ix. Diseases of the respiratory system VIII (460 - 519)
- x. Diseases of the digestive system IX (520 - 579)
- xi. Certain conditions originating in the perinatal period XV (760-779)
- xii. Signs, symptoms and ill-defined conditions XVI (780 - 799)
- xiii. Accidents, injuries and poisoning XVII (800-999)
- xiv. Others

1.5 Limitations

The data covers only institutional deaths, which constitute only a portion of the total death in the cities. So the indications on cause of death given in the report cannot be taken as all comprehensive.

1.6 In all the three centres, the outstanding cause of death during the year was heart disease. Also the incidence of heart disease in the three centres was greater in the 45 + age group and that too for males. Cerebro-vascular diseases caused much distress in the three centres. Other major causes of death are - (1) diseases of the respiratory system (2) neoplasms and (3) perinatal causes of death. The prevalence of cause of death due to certain conditions originating the perinatal period signifies the lack of proper medical care of the children below one year. The maximum number of deaths due to all causes occurred in the age group 45 +. The death toll of males was higher in all the three centres. The position in respect of the two corporations and Quilon municipality is discussed below:

2. Cochin corporation

The Cochin corporation was formed in 1967. According to the 1981 census the population of Cochin corporation was 5.13 lakhs with an area of 95 sq.Kms. The estimated mid year population for the year 1987 in respect of Cochin corporation is 566,600. During the year 1987, a total of 2827 medical certification forms regarding deaths were received from this corporation for analysis.

2.2 Sex-wise distribution of the leading causes of death

Of the 2827 deaths in Cochin, 1854 (65.58%) occurred to males and 973 (34.42%) to females.

2.3 Causes of death

Sex-wise distribution of leading causes of deaths are noted below.

i. Intestinal infectious diseases:

In Cochin corporation, death due to this cause for the year 1987 was not very alarming (males 1.08% and female 2.16%)

ii. Tuberculosis: During the period under report, tuberculosis claimed 5.23% male lives and 1.42 female lives.

iii. Other bacterial diseases: 3.18 per cent of male deaths and 4.01 per cent female deaths was due to other bacterial diseases.

iv. Viral diseases: Deaths due to viral diseases was 2.93% as against 3.84% during the previous year.

v. Neoplasms: Neoplasms accounted for 9.02 percent of total deaths. Among males the percentage was 9.17 and among females it was 8.74 per cent.

vi. Diseases of the nervous system: The effect of this cause was superficial in this year compared to other causes.

vii. Heart diseases: As in the previous years, this cause accounted for the maximum number of deaths (35.97%). About 36.52% male deaths and 34.94% female deaths were occurred due to this cause.

viii. Cerebrovascular diseases: Ranking as the second dominant cause of death, cerebrovascular diseases accounted for 12.73 per cent of total deaths. Among males the percentage was 10.52 and among females it was 16.96 per cent.

ix. Diseases of the respiratory system: About 6.65 per cent of deaths was due to this cause. Among males the percentage was 6.74 and among females it was 6.48 per cent

x. Diseases of the digestive system: 4.04 per cent males died due to this cause. Among females the percentage of deaths was 0.82.

xi. Conditions originating in the perinatal period: The total percentage of infant lives claimed by perinatal causes was 6.40. During the previous year, this percentage was 7.64.

xii. Signs, symptoms and ill defined conditions: 1.89 per cent and 2.6 per cent of male and female deaths respectively was due to the above cause.

xiii. Accidents, injury and poisoning: More males (6.85%) than females (2.26%) died due to accidents, injury and poisoning during the year 1987.

xiv. Miscellaneous causes, not included in the above, claimed about 5.45% of total deaths.

2.4 Deaths according to age

The age group 45 + suffered most due to the incidence of various causes. The analysis of each age group is given below.

0-1 year (infant deaths): For infants, the most fatal disease was certain conditions originating in the perinatal period. This cause claimed nearly 46.77 percent of deaths in this age group. Other bacterial diseases comes next contributing 13.18% of deaths among infants. Diseases of the respiratory system claimed 10.34% of infant lives. Heart diseases also cannot be overlooked as it claimed 9.04% of infant deaths.

1-14 years: The percentage of deaths in this age group (3.96 percent) was less compared to other age groups. Heart disease claimed the maximum number of lives in this age group (17.86 per cent). Diseases of the respiratory system ranked second affecting 16.07 percent lives this age group 14.28 percent of lives was claimed by viral diseases. Other major causes of death for this age group are accidents injuries and poisoning (8.04 percent) other bacterial diseases (7.14 percent) cerebrovascular diseases (7.14 percent) intestinal infectious diseases (6.25%) neoplasms (5.36%) and signs symptoms and ill defined conditions (5.36%).

15-44 years: This age group suffered severely from heart diseases (31.08%). The next important cause of death in this age group was accidents, injuries and poisoning (15.99%). This was followed by cerebrovascular diseases contributing 10.13 per cent and neoplasm 9.01 per cent. Viral diseases (5.86%) tuberculosis (5.18%), signs symptoms and ill defined conditions (4.28%) and diseases of the digestive system (3.60%) are some of the other causes of death for this age group.

45 + : The most significant cause of death in this age group was heart disease (43.74%). Cerebrovascular diseases ranked second to this claimed 15.87%. Neoplasms (11.04%) also cannot be ignored. Other noteworthy causes of death in this age group are diseases of the respiratory system (6.10%). Tuberculosis (4.67%) accidents injury and poisoning (3.61%) and diseases of the digestive system (3.34%).

2.5 Details of sex-wise and age-wise deaths are presented in table 1.1 and 1.2 of the appendix.

2.6 Table 1.3 of the appendix presents the details of domiciliary deaths in Cochin corporation. The Deputy Health Officer verified about 82 household deaths during the year 1987. The major portion of deaths occurred due to heart disease. Tuberculosis and Neoplasms of various types are also important causes of household deaths.

2.7 Summary

1. Heart diseases proved the most fatal cause to males and females.
2. The second major cause turned out to be cerebrovascular diseases.
3. Infant deaths came upto 13.69 percent.
4. The 45 + age group suffered most due to all causes particularly heart diseases.

3. Calicut corporation

As per 1981 census, the area of the corporation is 83 sq.km. with a population of 3.94 lakhs. The mid-year population of the city for the year 1987 is estimated as 438300. Causes of death pertaining to 5177 deaths received from the medical institutions were taken up for analysis.

3.2 Sex-wise distribution of leading causes of deaths

Out of the 5177 deaths reported from the medical institutions 3335 (64.42%) occurred to males and 1842 (35.58%) to females.

3.3 Distribution of deaths due to leading causes are given below.

- (i) Intestinal infectious diseases: About 3.40 per cent of deaths was due to intestinal infectious diseases. The percentage of female deaths (4.07%) was higher than that of males (3.03%).
- (ii) Tuberculosis: Nearly 4.64 percent deaths was caused by tuberculosis. This disease was more prevalent among men (5.61%) than women (2.88%).
- (iii) Other bacterial diseases: This cause claimed 5.91 percent of total deaths. Females (6.84%) were found to be more susceptible to other bacterial diseases than males (5.40%).

(iv) Viral diseases: Deaths due to this cause worked out to 4.36 percent affecting females (6.35%) more severely than males (3.27%).

(v) Neoplasms: This proved are of the important causes of death contributing 9.56%. The percentage of male deaths (10.07%) was higher than that of females (8.63%).

(vi) Diseases of the nervous system and sense organs: About 3.26% of total deaths was due to this cause. The percentage of female deaths (4.02%) was higher than males (2.85%).

(vii) Heart disease: This cause proved to be the most dreaded one in Calicut also, claiming 16.18 percent of total deaths. Deaths among males came upto 18.05 percent and among females to 12.76 percent.

(viii) Cerebrovascular disease: This cause ranks second among the leading causes contributing 11.8% of the total deaths. It effected males (11.78%) and females (11.83%) equally.

(ix) Diseases of the respiratory system: Nearly 8.23 percent of total deaths in 1987 is accounted for by this causes. The incidence among females (8.69%) is higher than among males (7.98%).

(x) Diseases of the digestive system: This cause claimed 5.08% lives. The percentage of males and females affected are 5.40 percent and 4.51 percent respectively.

ix Condition originating in the perinatal period: Ranking as third in the list of important causes in Calicut, this cause claimed 11.22 percent with 13.62 percent among females and 9.89 percent among males.

(xii) Signs, symptoms and ill-defined conditions: This cause proved to have only superficial incidence (0.85%).

(xiii) Accidents, injuries and poisoning: This cause cannot be overlooked as 8.36% of deaths was due to this cause. The number of male victims (9.65%) exceeded the number of female victims (6.03%).

(xiv) Others: All other miscellaneous causes not mentioned earlier claimed 7.15 percent of lives.

3.4 Deaths according to age

As in the case of Cochin corporation, in Calicut also the 45+ age group was affected most by all the causes together. Each age group is examined in detail.

5177 deaths in 1987 in Calicut corporation, 1124 (21.71%) pertain to infants.

Majority of the infants died due to certain conditions originating in the perinatal period (51.69%). Other bacterial diseases (13.97%) also proved fatal. Diseases of the respiratory system (13.79%) was also a common ailment among infants. Other significant causes of death in this age group are diseases of the nervous system (4.89%). Intestinal infection diseases (4.51%) and viral diseases (2.31%).

1 - 14 years: Nearly 11.19 percent of total deaths occurred to children in the 1-14 age group. The most fearful cause affecting this age group was viral diseases (23.49%). Secondly, diseases of the respiratory system claimed 12.09%. Nearly 11.05 percent of death was due to the intestinal infectious diseases. Other bacterial diseases (9.67%) and accidents injuries and poisoning (9.85%) rank an equal footing as contributory causes. Diseases of the nervous system claimed 8.12 percent. Diseases of the digestive system (5.36%) neoplasm (4.66%) and tuberculosis (3.97%) also proved significant.

15 - 44 age group: Deaths in this age group constitute 18.87 percent of total deaths during the year 1987. The population in this age group succumbed most to injury and poisoning (22.32%). Heart diseases also claimed a high percentage of 16.27. Nearly 10.85 per cent of deaths was due to neoplasm. Other relevant causes of deaths are tuberculosis (6.24%) diseases of the respiratory system (6.24%). Cerebrovascular diseases (5.94%) other bacterial disease (4.3%) viral diseases (4.2%) and diseases of the nervous system 3.68%.

45 year & above: 48.23% of the deaths reported from the medical institutions in Calicut are in this age group. Heart disease was the major cause of death in Calicut corporation accounting 26.23%. A closely following cause was cerebrovascular diseases (22.03%). Neoplasm also struck heavily (14.26%). Diseases of the digestive system (6.65%) accidents, injuries and poisoning (6.13 percent). Tuberculosis (5.89%) and diseases of the respiratory system (5.60%) also provided significant.

3.5 Details of sex-wise and age-wise distribution of deaths are given in table 2.1 and 2.2 of the appendix.

3.6 Table 2.3 of the appendix gives the major cause of domiciliary deaths in Calicut corporation during 1987. Details of 250 domiciliary deaths were

collected by the Deputy Health Officer. Other than senility and ill-defined conditions the most dreaded one in Calicut corporation is found to be gastro enterities. 51 out of 250 deaths were due to this cause. The other major causes of domiciliary deaths are heart diseases, pneumonia, bronchitis, neoplasm, chronic liver diseases etc.

3.7 Summary

- (i) During the year 1987, heart diseases causing the maximum number of deaths attacked the age groups 45 + mercilessly.
- (ii) Infant deaths mostly occurred due to certain conditions originating in the perinatal period (51.69%).
- (iii) Viral disease (23.49%) was the most dreaded cause of death in the age group 1-14.

4. Quilon municipality

As per the 1981 census, population of Quilon municipality is 1.38 lakhs with an area of 18 sq.km. The mid year population of Quilon for the year 1987 is estimated as 147417. Cause of death regarding 1489 deaths in the municipality are analysed in this report.

4.2 Sex-wise distribution of leading causes of death (table 3.1). Of the 1489 deaths reported 925 (62.12%) are to males and 564 (38.88%) to females.

4.3 Distribution of deaths due to leading causes is given below

- (i) Intestinal infectious diseases: About 4.70 percent of the death was due to this disease. The percentage of female deaths (5.50%) was higher than that of males (4.22%).
- (ii) Tuberculosis: Deaths due to this disease constituted 3.96% of the total deaths. Percentage of deaths due to this cause is higher among males (4.43%) than females (3.19%).
- (iii) Other bacterial diseases: This disease was responsible for 4.90% of total deaths. The percentage of male deaths is higher than the percentage of female deaths.

(iv) Visral diseases: The effect of viral diseases was (1.28%) superficial compared to other causes.

(v) Neoplasms: About 4.03 percent deaths were due to neoplasms.

(vi) Diseases of the nervous system & sense organs: This cause claimed 4.50% of total deaths.

vii. Heart diseases: This was the most rampant cause of deaths reported during the year 1987. About 23.77% deaths were due to this disease (25.73% males and 20.57% females).

(viii) Cerebrovascular disease: This disease also created much distress. 12.29% deaths came under this cause. The percentage of female victims (14.72%) was found to be greater than that of males (10.81%).

(ix) Diseases of the respiratory system: This was the third major cause of death reported during the year 11.35 percent deaths was due to this cause and males and females suffered equally.

(x) Diseases of the digestive system: 3.43% deaths was due to this cause. Male victims (5.08%) found to be more than that of female (0.71%).

(xi) Conditions originating the perinatal period: The deaths due to this cause was about 6.65% of total deaths (6.38% males and 7.09% females).

xii Signs, symptoms & ill defined conditions: 6.78 percent deaths was due to this cause.

xiii. Accidents, injury & poisoning: This cause claimed 3.76 percent of total deaths. Males (3.78%) and females (3.72%) suffered equally due to this cause.

4.4 Deaths according to age

0 - 1 year (infant deaths): Out of 1489 deaths, infant deaths came up to 240 (16.12%). Here again the main cause was certain conditions originating in the perinatal period (41.25%). Other bacterial diseases (14.17%) also proved fatal. Diseases of the respiratory system (12.92%) was a common ailment among infants. Infant deaths due to signs, symptoms and ill-defined conditions worked out to 10.41 percent of total infant deaths. Other significant causes in this age group are intestinal infectious diseases (6.25%) diseases of the nervous system (4.17%) and heart diseases (4.17%).

1 - 14 years: In the age group 1 - 14, the dreaded causes of deaths were intestinal infectious diseases, diseases of the nervous system and diseases of the respiratory system each having the share of 17.93 per cent. About 11.32 per cent deaths was due to the other bacterial diseases. This was followed by viral diseases (6.60%). Other important causes are heart diseases, diseases of the digestive system, signs symptoms and ill-defined conditions and accidents injuries and poisoning each having 3.77 per cent of the total deaths in this age group.

15 - 44 years: The major cause of death in this age group was heart disease (22.17%). This is followed by accidents, injury and poisoning (13.30%). 9.85 percent of deaths was due to tuberculosis, signs, symptoms and ill-defined conditions constituted 8.87 percent of deaths, diseases of the nervous system claimed 5.91 percent, 5.42 percent each was claimed by cerebrovascular diseases and diseases of the respiratory system. Other causes in this age group are intestinal infectious diseases (4.92%) diseases of the digestive system (4.93%) and neoplasm (3.94%).

45 + years: As for the 15 - 44 age group, this group also succumbed severally to heart disease (31.38%). This is followed by cerebrovascular diseases (18.08%). About 11.49% of deaths in this age group are due to diseases of the respiratory system. Other relevant causes proved to be signs, symptoms and ill-defined conditions (5.75%) neoplasms (5.53%) diseases of the digestive system (3.94%) and tuberculosis (3.83%).

4.5 Details of sex-wise and age-wise distribution of deaths are given in table 3.1 and 3.2 of the appendix.

4.6 Domiciliary deaths in Quilon municipality

Table 3.3 gives the details of domiciliary death in Quilon municipality. About 22 deaths were verified by the Deputy Health Officer. Apart from old age deaths, heart diseases and anaemia were the major causes of death in Quilon municipality. Deaths due to allergic diseases of respiratory system also occurred in Quilon municipality.

4.7 Summary

- (i) Heart disease affected the 14 - 44 and 45 + age groups noticeably

- (ii) Males were more prone to all diseases except to viral diseases in Quilon municipality.
- (iii) Certain conditions originating in the perinatal period was the major cause of infant deaths.

5. Comparative study of the leading causes of deaths in the 3 centres

1. In all the three centres, the most dreaded cause of death was heart disease.
2. Cerebrovascular diseases stand second among the leading causes of death in all the centres.
3. Deaths due to respiratory system is highest in Quilon and the lowest in Cochin corporation.
4. The impact of neoplasm is more or less the same in Cochin and Calicut corporation and lowest in Quilon municipality.
5. The damaging effect of perinatal causes was felt in all the three centres noticeably. The highest is in Calicut corporation.
6. Calicut ranked first in the case of death due to bacterial diseases.
7. Tuberculosis affected the three centres more or less the same manner.
8. Intestinal infectious disease also causes its share of death in Quilon and Calicut. Its impact was marginal in Cochin corporation.

6. Sex-wise comparative study of leading causes in the 3 centres

1. Intestinal infectious diseases affected females more severely than males in all the three centres.
2. The impact of tuberculosis was higher in males in all the three centres.
3. Other bacterial diseases claimed more victims from among females than males in Cochin and Calicut corporations.
4. Males suffered more repressively from neoplasm in Cochin and Calicut corporations.
5. Heart disease, the most dreaded cause in all the three centres, claimed more males than females.

6. In all the three centres females were more susceptible to cerebrovascular diseases.
7. The highest percentage of females affected by diseases of respiratory system was in Quilon municipality.
8. Perinatal causes contributed 5 per cent of deaths among males and females in all the three centres.

7. Conclusion

As in the previous years, the most dreaded cause was heart diseases in all the three centres. Cerebrovascular diseases was the next threatening cause in these centres. Diseases of the respiratory system and perinatal cause contributed over 6 per cent of deaths in the three centres.

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Table 1.1 - Sex-wise details of medically certified deaths in Cochin corporation in 1987

Sl.no.	Code No.	Cause of death	Male		Female		Total	
1	2	3	4	5	6	7	8	9
1	I (001-009)	Intestinal infectious diseases	20	1.08	21	2.16	41	1.45
2	I (010-018)	Tuberculosis	97	5.23	14	1.42	111	3.93
3	I (020-041)	Other bacterial diseases	59	3.18	39	4.01	98	3.47
4	I (045-079)	Viral diseases	49	2.64	34	3.50	83	2.93
5	I (140-239)	Neoplasms	170	9.17	85	8.74	255	9.02
6	I (320-389)	Diseases of nervous system and sense organs	33	1.78	17	1.75	50	1.77
7	I (390-429)	Heart diseases	677	36.52	340	34.94	1017	35.97
8	I (430 - 438)	Cerebrovascular diseases	195	10.52	165	16.96	360	12.73
9	I (460-519)	Diseases of the respiratory system	125	6.74	63	6.48	188	6.65
10	I (520-579)	Diseases of the digestive system	75	4.04	8	0.82	83	2.94
11	I (760-779)	Conditions originating in the perinatal period	104	5.61	77	7.92	181	6.40
12	I (780-799)	Signs, symptoms and ill-defined conditions	35	1.89	22	2.26	57	2.02
13	I (800-999)	Accidents, injuries and poisoning	127	6.85	22	2.26	149	5.27
14	I (140-018)	Others	88	4.75	66	6.78	154	5.45
15	I (001-009)	Total	1854	100.00	973	100.00	2827	100.00

Sl. No. Cause No.

Table 1.2 - Statement showing the leading causes of death in Cochin corporation in 1987 according to age group

Sl. No.	Code No.	Causes of death	Below 1 year	% 1-14 15-44 45 + %										Total	%
				4	5	6	7	8	9	10	11	12	13		
1.	I (001-009)	Intestinal infectious diseases	16	4.13	7	6.25	3	0.68	15	0.80	41	1.45			
2.	I (010-018)	Tuberculosis	-	-	-	-	-	23	5.18	88	4.67	111	3.93		
3.	I (020-041)	Other bacterial diseases	51	13.18	8	7.14	12	2.70	27	1.43	98	3.47			
4.	I (045-079)	Viral diseases	7	1.81	16	14.28	26	5.86	34	1.81	83	2.93			
5.	II (140-239)	Neoplasms	1	0.26	6	5.36	40	9.01	208	11.04	255	9.02			
6.	VI (320-390)	Diseases of the Nervous system and sense organs	16	4.13	5	4.46	13	2.43	16	0.85	50	1.77			
7.	VII (390-429)	Heart diseases	35	9.04	20	17.86	138	31.08	824	43.74	1017	35.97			
8.	VII (430-438)	Cerebrovascular diseases	8	2.07	8	7.14	45	10.13	299	15.87	360	12.73			
9.	VIII (460-519)	Diseases of the respiratory system	40	10.34	18	16.07	15	3.38	115	6.10	188	6.65			
10.	IX (520-579)	Diseases of the digestive system	1	0.26	3	2.68	16	3.60	63	3.34	83	2.94			
11.	XV (760-779)	Conditions originating in the perinatal period	181	46.77	-	-	-	-	-	-	181	6.40			
12.	XVI (780-799)	Signs, symptoms and ill-defined conditions	8	2.07	6	5.36	19	4.28	24	1.27	57	2.02			
13.	XVII (800-999)	Accidents, injuries & poisoning	1	0.26	9	8.04	71	15.99	68	3.61	149	5.27			
14.		Others	22	5.68	6	5.36	23	5.18	103	5.47	154	5.45			
		Total	387	100.00	112	100.00	444	100.00	1884	100.00	2827	100.00			

Table 1.3 - Domiciliary death in Cochin corporation

SL.No.	Name of disease	Male	Female	Total
1	2	3	4	5
1.	Amebiasis	-	1	1
2.	Tuberculosis	9	5	14
3.	Viral diseases	1	-	1
4.	Malignant neoplasm	8	2	10
5.	Diabetes mellitus	1	1	2
6.	Anaemias	1	1	2
7.	Diseases of nervous system	2	-	2
8.	Rheumatic fever	2	2	4
9.	Heart diseases	19	3	22
10.	Cerebrovascular diseases	2	1	3
11.	Pneumonia	1	1	2
12.	Ulcer	1	-	1
13.	Appendicitis	3	1	4
14.	Congenital anomalies of heart	1	1	2
15.	Burns	-	1	1
16.	Poisoning	1	-	1
17.	Signs, symptoms and ill defined conditions	8	2	10
	Total	60	22	82

Table 2.1 - Sex-wise details of medically certified deaths in Calicut corporation in 1987.

Sl.no.	Code No.	Cause of death	Male		Female		Total	
			%	%	%	%	%	%
1	2	3	4	5	6	7	8	9
1.	I (001-009)	Intestinal infectious diseases	101	3.03	75	4.07	176	3.40
2.	I (010-018)	Tuberculosis	187	5.61	53	2.88	240	4.64
3.	I (020-041)	Other bacterial diseases	180	5.40	126	6.84	306	5.91
4.	I (045-079)	Viral diseases	109	3.27	117	6.35	226	4.36
5.	II (140-239)	Neoplasms	336	10.07	159	8.63	495	9.56
6.	VI (320-389)	Diseases of nervous system and sense organs	95	2.85	74	4.02	169	3.26
7.	VII (390-429)	Heart diseases	602	18.05	235	12.76	837	16.18
8.	VII (430 - 438)	Cerebrovascular diseases	393	11.78	218	11.83	611	11.80
9.	VIII (460-519)	Diseases of the respiratory system	266	7.98	160	8.69	426	8.23
10.	IX (520-579)	Diseases of the digestive system	180	5.40	83	4.51	263	5.08
11.	XV (760-779)	Conditions originating in the perinatal period	330	9.89	251	13.62	581	11.22
12.	XVI (780-799)	Signs, symptoms and ill-defined conditions	29	0.87	15	0.81	44	0.85
13.	XVII (800-999)	Accidents, injuries and poisoning	322	9.65	111	6.03	433	8.36
14.		Others	205	6.15	165	8.96	370	7.15
		Total	3335	100.00	1842	100.00	5177	100.00

Table 2.2 - Statement showing the leading causes of death in Calicut corporation in 1987 according to age group

Sl. No.	Code No.	Causes of death	Below 1 year											Total	%
			4	5	6	7	8	9	10	11	12	13			
1.	I (001-009)	Intestinal infectious & diseases	51	4.54	64	11.05	29	2.97	32	1.28	176	3.40			
2.	I (010-018)	Tuberculosis	9	0.80	23	3.97	71	6.24	146	5.89	240	4.64			
3.	I (020-041)	Other bacterial diseases	157	13.97	56	9.67	42	4.30	51	2.04	306	5.91			
4.	I (045-079)	Viral diseases	26	2.31	136	23.49	41	4.20	23	0.92	226	4.36			
5.	II (140-239)	Neoplasms	6	0.53	27	4.66	106	10.85	356	14.26	495	9.56			
6.	VI (320-389)	Diseases of the Nervous system and sense organs	55	4.89	47	8.12	36	3.68	31	1.24	169	3.26			
7.	VII (390-429)	Heart diseases	10	0.89	13	2.25	154	16.27	655	26.23	837	16.18			
8.	VII (430-438)	Cerebrovascular diseases	2	0.18	1	0.17	58	5.94	550	22.03	611	11.80			
9.	VIII (460-519)	Diseases of the respiratory system	155	13.79	70	12.09	61	6.24	140	5.60	426	8.23			
10.	IX (520-579)	Diseases of the digestive system	9	0.80	31	5.36	57	5.83	166	6.65	263	5.08			
11.	XV (760-779)	Conditions originating in the perinatal period	581	51.69	-	-	-	-	-	-	581	11.22			
12.	XVI (780-799)	Signs, symptoms and ill-defined conditions	3	0.27	5	0.86	14	1.43	22	0.88	44	0.85			
13.	XVII (800-999)	Accidents, injuries & poisoning	5	0.45	57	9.85	218	22.32	153	6.13	433	8.36			
14.		Others	55	4.89	49	8.46	95	9.73	171	6.85	370	7.15			
		Total	1124	100.00	579	100.00	977	100.00	2497	100.0	5177	100.00			

Table 2.3 - Domiciliary death in Calicut corporation

Sl.No.	Name of disease	Male			Female		Total
		1	2	3	4	5	
1.	Enteritis & gastro enteritis			43	8		51
2.	Tuberculosis (Pulmonary)			8	2		10
3.	Septicaemia			15	4		19
4.	Viral hepatitis			2	2		4
5.	Neoplasm			3	4		7
6.	Anaemias			15	3		18
7.	Heart diseases			28	13		41
8.	Pneumonia - bronchitis			21	11		32
9.	Chronic liver diseases and cirrhosis			11	2		13
10.	Senility and ill defined conditions			37	18		55
	Total			183	67		250

Table 3.1 - Sex-wise details of medically certified deaths in Quilon municipality in 1987

Sl.no.	Code No.	Cause of death	Male		Female		Total				
			1	2	3	4	5	6	7	8	9
1.	I (001-009)	Intestinal infectious diseases				39	4.22	31	5.50	70	4.70
2.	I (010-018)	Tuberculosis				41	4.43	18	3.19	59	3.96
3.	I (020-041)	Other bacterial diseases				46	4.97	27	4.79	73	4.90
4.	I (045-079)	Viral diseases				9	0.97	10	1.77	19	1.28
5.	II (140-239)	Neoplasms				33	3.57	27	4.79	60	4.03
6.	VI (320-389)	Diseases of nervous system and sense organs				42	4.54	25	4.43	67	4.50
7.	VII (390-429)	Heart diseases				238	25.73	116	20.57	354	23.77
8.	VII (430 - 438)	Cerebrovascular diseases				100	10.81	83	14.72	183	12.29
9.	VIII (460-519)	Diseases of the respiratory system				107	11.57	62	10.99	169	11.35
10.	IX (520-579)	Diseases of the digestive system				47	5.08	4	0.71	51	3.43
11.	XV (760-779)	Conditions originating in the perinatal period				59	6.38	40	7.09	99	6.65
12.	XVI (780-799)	Signs, symptoms and ill-defined conditions				59	6.38	42	7.45	101	6.78
13.	XVII (800-999)	Accidents, injuries and poisoning				35	3.78	21	3.72	56	3.76
14.		Others				70	7.57	58	10.28	128	8.60
		Total				925	100.00	564	100.00	1489	100.00

Table 3.2 - Statement showing the leading causes of death in Quilon municipality in 1987 according to age group

Sl. No.	Code No.	Causes of death	Below 1 year										Total	
			4	5	%	1-14	%	15-44	%	45 +	%	Total	%	
1	2	3	4	5	%	6	7	8	9	10	11	12	13	
1.	I (001-009)	Intestinal infectious & diseases	15	6.25	19	17.93	10	4.92	26	2.77	70	4.70		
2.	I (010-018)	Tuberculosis	-	-	3	2.83	20	9.85	36	3.83	59	3.96		
3.	I (020-041)	Other bacterial diseases	34	14.17	12	11.32	6	2.95	21	2.23	73	4.90		
4.	I (045-079)	Viral diseases	2	0.83	7	6.60	3	1.48	7	0.74	19	1.28		
5.	II (140-239)	Neoplasms	-	-	-	-	8	3.94	52	5.53	60	4.03		
6.	VI (320-389)	Diseases of the Nervous system and sense organs	10	4.17	19	17.93	12	5.91	26	2.77	67	4.50		
7.	VII (390-429)	Heart diseases	10	4.17	4	3.77	45	22.17	295	31.38	354	23.77		
8.	VII (430-438)	Cerebrovascular diseases	2	0.83	-	-	11	5.42	170	18.08	183	12.29		
9.	VIII (460-519)	Diseases of the respiratory system	31	12.92	19	17.93	11	5.42	108	11.49	169	11.35		
10.	IX (520-579)	Diseases of the digestive system	-	-	4	3.77	10	4.93	37	3.94	51	3.43		
11.	XV (760-779)	Conditions originating in the perinatal period	99	41.25	-	-	-	-	-	-	99	6.65		
12.	XVI (780-799)	Signs, symptoms and ill-defined conditions	25	10.41	4	3.77	18	8.87	54	5.75	101	6.78		
13.	XVII (800-999)	Accidents, injuries & poisoning	-	-	4	3.77	27	13.30	25	2.66	56	3.76		
14.		Others	12	5.00	11	10.38	22	10.84	83	8.83	128	8.60		
		Total	240	100.00	106	100.00	203	100.00	940	100.00	1489	100.00		

Table 3.3 - Domiciliary death in Quilon municipality

Sl.No.	Name of disease	Male			Female			Total
		1	2	3	4	5	6	
1.	Electric shock	1			-			1
2.	Suicide	1			-			1
3.	Bronchitis	1			-			1
4.	Allergic diseases of respiratory system	2			-			2
5.	Cerebral apoplexy	1			-			1
6.	Anaemia	2			1			3
7.	Congestive heart disease	2			1			3
8.	Ischaemic heart disease	1			-			1
9.	Diabetes	1			-			1
10.	Senility	-			8			8
Total		12			10			22

Table 4 - Comparative study of leading causes of death in the corporation of Cochin, Calicut and in Quilon municipality 1987 (in percentage)

Sl.No.	Causes of death	Cochin	Calicut	Quilon
1	2	3	4	5
1.	Intestinal infectious diseases	1.45	3.40	4.70
2.	Tuberculosis	3.93	4.64	3.96
3.	Other bacterial diseases	3.47	5.91	4.90
4.	Neoplasms	9.02	9.56	4.03
5.	Heart diseases	35.97	16.18	23.77
6.	Cerebrovascular diseases	12.73	11.80	12.29
7.	Diseases of the respiratory system	6.65	8.23	11.35
8.	Perinatal causes	6.40	11.22	6.65

Table 5 - Sex-wise comparison of leading causes of death in Cochin, Calicut and Quilon 1987 (in percentage)

Sl.No.	Causes of death	Cochin		Calicut		Quilon	
		Male	Female	Male	Female	Male	Female
1	2	3	4	5	6	7	8
1.	Intestinal infectious diseases	1.08	2.16	3.03	4.07	4.22	5.50
2.	Tuberculosis	5.23	1.42	5.61	2.88	4.43	3.19
3.	Other bacterial diseases	3.18	4.01	5.40	6.84	4.97	4.79
4.	Neoplasms	9.17	8.74	10.07	8.63	3.57	4.79
5.	Heart diseases	36.52	34.94	18.05	12.76	25.73	20.57
6.	Cerebrovascular diseases	10.52	16.96	11.78	11.83	10.81	14.72
7.	Diseases of the respiratory system	6.74	6.48	7.98	8.69	11.57	10.99
8.	Perinatal causes	5.61	7.92	9.89	13.62	6.38	7.09

