



GOVERNMENT OF KERALA



**RESIDENTIAL VITAL RATES
2003**

Directorate of Economics & Statistics
Thiruvananthapuram
2006

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DEPARTMENT OF HEALTH

PHYSICIAN'S REPORT

1917

REPORT OF PHYSICIAN
TREATMENT

PHYSICIAN'S REPORT

PREFACE

This report presents the adjusted vital rates of births and deaths in the selected Municipalities and Corporations for the year 2003. The rates have been estimated from the registered births and deaths of the normal residents after making adjustments for under registration and for the same occurring outside the Municipal/Corporation areas, using the results of spot check survey in the selected Municipalities and Corporations. Details of twenty-nine Municipalities and four Corporations are included in this report. Since the study has not been started in Thrissur Corporation, it's data is not included in this report. The vital statistics unit of the Department of Economics and Statistics has prepared the report under the supervision of Sri. D Rajan, Additional Director, Smt. Leelamony.S, Deputy Director and Sri. Roy Thomas, Assistant Director and Smt. M.Kannambal, Research Assistant have contributed substantially in bringing out the report.

Thiruvananthapuram,
Date : 20.12.2006

M.R.Bala Krishnan
DIRECTOR

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MEMORANDUM

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FROM : [Illegible]

SUBJECT: [Illegible]

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RESIDENTIAL VITAL RATES 2003

Introduction

The Civil Registration System was introduced in India under the Births and Deaths Registration Act chartered by parliament in 1969. The Act stipulates that every event should be registered in the respective registration units based on the place where the events occurred. As per the existing rule every event should be registered within 21 days from the date of its occurrence. Even though the Act stipulates both fine and punishment, under registration of events exists to a certain extent. This causes inaccuracy in the total data available. In order to ward off such inaccuracies, a corrective measure is devised, the spot check survey. More over the act stipulates that registration is to be carried out in the place of occurrence of the event. This may not provide a true disaggregate picture. The present set up of spot check survey is to tide over that.

One of the important classifications in population data is the rural-urban breakup. In Kerala the number of vital events happening in urban areas is always higher than that in the rural areas. It shows that the rate of registration of vital events in urban area is always higher than that in the rural area. Health facilities of higher order are generally available in the urban areas. Rural people, because of their knowledge on health activities and access to such facilities usually resort to urban areas to avail the modern medical facilities. Usually the under registration in rural areas is higher than that in urban area especially in the case of deaths. This is because, most of the deaths in rural areas happened in the house and the people are not interested to register deaths due to unawareness about the importance of registration. Another important fact is that both rural and urban population tends to hide incidence of suicide and illicit termination of pregnancy due to sociological reasons. Similarly, there exists gross under registration of vital events such as Infant deaths and Still births in the State.

Objectives of the survey

1. To estimate the extent of under registration of vital events in the selected Municipalities/Corporations and to work out the actual vital rates in these areas.
2. To estimate the residential vital rates of these Municipalities/Corporations
3. To find out the major diseases that lead to deaths in the selected urban areas of the state

Coverage of the survey

The scheme is designed to strengthen the Vital Statistics in the selected Municipalities and corporations. It is implemented in five Corporations and twenty-nine Municipalities in the State. The fieldwork pertaining to the survey was carried out in all centers except Thrissur Corporation. For conducting fieldwork of the survey fifteen wards have been randomly selected from each unit except Alappuzha Municipality. 25 wards have been selected from Alapuzha Municipality. The statistical staff posted in the Municipalities/Corporations have visited all houses of the selected wards and collected the required data in the prescribed schedules.

Limitations of the survey

The most striking limitation of the survey is that the wards covered are a few and far between. One of the main objectives of the survey is to find out the under registration of vital events. However, the data derived from the survey is partial. In order to obtain a total picture of the rate of under -registration in urban areas, the remaining urban areas of the state should also be brought under the purview of the survey. If this survey is extended to rural areas, a comparative study between urban and rural level of under registration could also be made possible. Similarly the State level under registration can be estimated only if this survey is further extended to rural areas and the remaining Municipalities of the State.

Findings of the Survey

Table 1

This table provides the estimated midyear population of the selected Municipalities and Corporations. It is obvious from the table that the population of all Municipalities/Corporations shows an increasing trend. Out of 34 selected centers, the higher midyear population is recorded in Thiruvananthapuram Corporation, and the lowest in Guruvayur municipality. Among municipalities, it is the highest in Alappuzha.

Table 2

This table presents the number of Educational Institutions both in the government and private sector existing in these municipalities/corporations. Among all that centers, Thiruvananthapuram corporation has the maximum number of institutions in almost all categories namely, primary, upper primary, high schools, colleges etc. The total number of institutions in Thiruvananthapuram Corporation is 231. It is followed by Kozhikkode Corporation with 180 numbers. In the case of municipalities, the maximum number of institution 55 is in Vadakara municipality followed by Alappuzha municipality with 53 numbers.

Table 3

This table shows the number of hospitals and other facilities both in the public and private sector existing in these Municipalities/Corporations. Number of hospitals is higher in the private sector than in the Government sector. All centers have at least one government hospital. Among all centers, Thiruvananthapuram Corporation has the highest number of government hospitals, nineteen followed by Cochin Corporation with eighteen. In the case of Municipalities Alappuzha has the highest number of government hospitals. Considering the bed strength in government hospitals, Thiruvananthapuram Corporation stood first with 7077

numbers followed by Kozhikkode Corporation with 4072. The number of private hospitals is the maximum in Cochin Corporation with 76 followed by Thiruvananthapuram and Kozhikkode with 47 and 37 numbers respectively.

In the case of government dispensaries and other institutions it is the maximum in Thiruvananthapuram Corporation i.e. twenty-one followed by Kozhikkode Corporation with sixteen. In the case of private dispensaries and other institutions, it is the maximum in Alappuzha with 127 followed by Kozhikkode Corporation and vadakara municipality with 99 and 97 numbers respectively.

The number of maternity and child health centers in public sector stands at 24 in Kozhikkode Corporation followed by 14 numbers in Cochin Corporation. Among all centers 6 centers have got one maternal and child health center each. In the private sector such facilities do not exist anywhere else in the entire state except in Thiruvananthapuram Corporation..

Table 4

This table furnishes the details regarding the number of registration units, area and population of the selected centers. Based on the area-wise classification, Thiruvananthapuram Corporation is the largest among them with 141.71sq.km followed by Kochi Corporation with an area of 94.88 sq.km. Among Municipalities, it is Alappuzha that covers the largest area 46.77 sq.km. followed by Punalur with 34.60 sq.km. Considering the density of population the highest is recorded in Kollam Corporation,i.e. 6419 people / sq.km. followed by Kochi Corporation with 6356 people/ sq.km. In the case of Municipality, it is the highest in Kannur with 5882/ sq.km.and lowest is in Punalur Municipality with 1372/sq.km.

Table 5

This table presents the number of burial grounds and cremation grounds in the selected centres. Regarding the municipal burial grounds, it is the maximum in Cochin Corporation with 8 followed by Palakkad Municipality and Thiruvananthapuram Corporation with 4 each. There are Private burial grounds in all centers. The number of private burial grounds is higher than the municipal burial grounds in almost all centres. The Cochin Corporation has the maximum number of private burial grounds, i.e. 40 followed by Kollom Corporation with 37.

Table 6

This table shows the total number of vital events registered in the respective Municipality/Corporation and, the number of vital events of the usual residents registered in their respective registration units. The maximum number of Live births 39258 was registered in Kozhikkode Corporation of which 6270 events were pertaining to the usual residents. Thiruvananthapuram Corporation stood in the second place with 38286 live births. In the case of Municipalities, it was the maximum in Palakkad Municipality with 13331 followed by Alappuzha municipality with 11881. The lowest number of live births, 200 was registered in Chittoor Municipality of which the events related to usual residents were seven only.

The maximum number of stillbirths 651 was registered in Kozhikkode Corporation of which 253 events pertained to the events of usual residents, Thiruvananthapuram Corporation stood in the second place with 226.

In the case of infant deaths, the highest registration was recorded in Kozhikkode Corporation with 830. The male and female breakup stood at 467 and 363 respectively. Of this, Infant deaths in respect of normal residents were 249. The Thiruvananthapuram Corporation stood at the second place with 450 numbers. In the case of Municipalities, infant deaths was registered highest in Alappuzha with 160 numbers and it followed by Palakkad Municipality with 123. Infant death was not registered in Attingal, Vaikom, and Chittoor-Thathamangalam Municipalities during the year under survey.

The number of deaths registered during the year under report was the highest in Kozhikkode corporation with 9311, followed by Thiruvananthapuram Corporation with 8950. In the case of Municipalities, it was the highest in Alappuzha with 2632 of which that relates to usual residents was 1106. Next it was Thalasserry municipality with 1873 numbers. The lowest number of deaths 139 were registered in Guruvayoor Municipality followed by Attingal with 197 numbers.

Table No.7

The survey results reveals that the major causes of death were respiratory diseases, cancer, heart failure, pulmonary diseases, tuberculosis and others. The highest incidence of death 9311 was registered at Kozikkode Corporation of which

1483(15.93%) deaths were due to Heart failure, 838(9.00%) due to cancer, 463(4.96%) due to tuberculosis 398(4.27%) due to Accident, 278(2.99%) due to Diabetics and the remaining were due to other diseases or causes. Deaths due to AIDS have been reported from Kozhikkode and Cochin Corporation and North Paravur Municipality. No specific cause of death has been reported from 6 Municipalities ,Thiruvananthapuram and Kollam Corporations

Table No.8

This table presents the results of the spot check survey of these selected registration units. The data shows that all live birth events were registered in the respective registration units. Infant deaths were enumerated by the staff concerned in the municipalities of Neyyattinkara Thiruvannanthapuram, Kollam, Kayamkulam ,Mavelikkara Alappuzha, Cherthala ,Changanassery,Perumbavur, Chalakudy,Guruvayur, Kunnamkulam, Palakkad, Tirur, Malappuram, Vadakara, Kannur and Kasaraagod.All infants deaths were either registered in these respective Municipalities or occurred outside.

In the case of deaths, all enumerated deaths had been registered in all centers except Thiruvananthapuram and Kozhikkode corporations, Punalur, Kayamkulam, Alappuzha, Cherthala, Changanasserry, Muvattupuzha, Chalakkudy, Guruvayur, Vadakara and Kannur Municipalities.The percentage of under registration in these Municipalities are shown in table 9. As such, the survey result shows that out of the deaths, death enumeration occurred inside area were higher in most of the centers except in Kottayam municipality.

Table 9

This table presents the percentage of under registration and the percentage of outside events in the selected units. As for the registration of births, cent percent registration was done. As regards deaths, cent percent death registration was reported from twenty centers while under registration of events reported from the remaining centers. The highest under registration 17.14% was reported from Kayamkulam followed by Guruvayoor municipality with 14.5%. The Survey conducted during 2002 also revealed under registration of vital events in these municipalities. Special awareness camps may be conducted by the Municipalities to increase the level of registration of vital events

The percentage of outside events of births has been the highest in Chittur Thathamangalam Municipality with 93.45%. And lowest in Thiruvananthapuram Corporation with 3.75%. In the case of deaths, outside events that occurred have been the highest in Kottayam Municipality with 67.95 % followed by Aluva with 41.46% and outside events that occurred have been the lowest in Thiruvanthapuram Corporation with 0.71%.

Table No.10

This table shows that the registered vital rates and Adjusted Residential vital rates in the Municipalities/Corporations.

The registered birth rate is the highest in Thalassery municipality with 32.48% followed by Cochiin Corporation with 20.32%. At the same time, it is the lowest in Chittur Thathamangalam Municipality with 0.21%. As regards registered death rates, it is highest in Kochin Corporation with 7.60% followed by Vaikom Municipality with 6.82% and the same have been the lowest in Kottayam Municipality with 0.97%.

Adjusted residential vital rates of Births are reported the highest in Neyyattinkara municipality with 35.80% followed by Thalassery Municipality with 34.84%. The same is reported the lowest in Chittur Thathamangalam Municipality with 3.21%. As regards the adjusted residential vital rates of deaths, it is the highest in Kayamkulam Municipality with 9.36% followed by Vaikom Municipality with 9.13% and the same is the lowest in Malappuram Municipality with 1.53%.

Conclusion

The survey was successfully completed in four city Corporations and in twenty-nine selected Municipalities during the year 2004. The survey result reveals that under registration of vital events still exists to a certain extent in urban areas of Kerala. In the case of deaths, under registration was still there and hence cent percentage of civil registration was not achieved during the year under report also. Spot-check Survey helps to find out the unregistered events and thereby the concerned authorities can take necessary steps to minimize the extent of under registration.

Table 1 - Estimated Mid-year Population of Municipalities and Corporations: 2003 (as on 1st July)

Sl. No.	Municipality/ Corporation	2001 Census Population	Population as on 2003 1st July	Percentage of Growth
1	Neyyattinkara	69467	71041	2.27
2	Thiruvananthapuram Corporation	744983	761852	2.26
3	Attingal	35693	36447	2.11
4	Kollam Corporation	361560	367684	1.69
5	Punalur	47235	47461	0.48
6	Kayamkulam	68585	68923	0.49
7	Mavelikkara	28439	28472	0.12
8	Alappuzha	177029	177584	0.31
9	Cherthala	45105	45531	0.94
10	Thiruvalla	56837	57328	0.86
11	Changanacherry	51967	61752	1.68
12	Kottayam	60728	52847	1.69
13	Palai	22640	23023	1.69
14	Vaikom	22641	23024	1.69
15	Muvattupuzha	29246	29644	1.36
16	Kochi Corporation	595575	603050	1.25
17	Aluva	24110	24655	2.26

Table 1 Contd.

Sl. No.	Municipality/ Corporation	2001 Census Population	Population as on 2003 1 st July	Percentage of Growth
18	Paravur	30059	30584	1.75
19	Perumbavoor	26547	27005	1.73
20	Irinjalakkuda	28873	29206	1.15
21	Kodungallur	33539	34097	1.66
22	Chalakkudy	48380	49188	1.67
23	Thrissur corpn.	317526	323809	1.98
24	Guruvayoor	21186	21419	1.09
25	Kunnamkulam	51592	52613	1.97
26	Palakkad	130767	132577	1.38
27	Chittoor-Thathamangalam	31886	32607	2.26
28	Thirur	53654	54685	1.92
29	Malappuram	58491	60760	3.87
30	Kozhikkode Corpn.	436556	440557	0.92
31	Vadakara	75847	76666	1.08
32	Thalassery	99387	102207	2.83
33	Kannur	63797	64877	1.69
34	Kasaragod	52634	53237	1.15

Table-2, Number Of Educational Institutions-2003

Sl.No	Municipality/Corporation	Primary School			Upper Primary Schools			High Schools			VHSC/HSS			Colleges				Grand Total		
		Govt.	Pvt.	Total	Govt.	Pvt.	Total	Govt.	Pvt.	Total	Govt.	Pvt.	Total	General		Technical				
														Govt.	Pvt.	Total	Govt.		Pvt.	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	Neyyattinkara	5	7	12	4	3	7	-	-	-	-	-	-	-	-	-	1	2	3	22
2	Thiruvanthapuram	40	32	72	27	16	43	17	23	40	18	18	36	5	4	9	4	27	31	231
3	Attingal	4	4	8	3	3	6	1	4	5	3	-	3	1	-	1	2	-	2	25
4	Kollam Corpn.	7	30	37	4	8	12	4	4	8	13	10	23	1	5	6	4	33	37	123
5	Punalur	7	6	13	2	4	6	-	3	3	1	6	7	-	1	1	-	-	-	30
6	Kayamkulam	7	9	16	3	5	8	-	4	4	3	2	5	-	1	1	2	4	6	40
7	Mavelikkara	2	7	9	2	4	6	3	3	6	2	2	4	2	-	2	1	3	4	31
8	Alappuzha	8	14	22	3	3	6	4	16	20	-	-	-	-	2	2	2	-	3	53
9	Cherthala	3	1	4	1	1	2	-	1	1	2	1	3	1	-	1	1	-	1	12
10	Thiruvalla	4	15	19	4	6	10	2	9	11	-	6	6	-	2	2	-	-	-	48
11	Changanassery	7	12	19	3	7	10	2	6	8	1	5	6	-	3	3	-	1	1	47
12	Kottayam	2	17	19	3	2	5	2	12	14	-	-	-	-	4	4	-	-	-	42
13	Palai	3	3	6	-	3	3	-	-	-	1	4	5	-	-	-	-	-	-	14
14	Vaikom	3	3	6	1	1	2	3	4	7	-	-	-	-	-	-	-	-	-	15
15	Muvattupuzha	2	6	8	3	3	6	3	5	8	-	-	-	1	1	2	-	2	2	26
16	Cochi Corppn	15	55	70	6	22	28	16	12	28	-	-	-	2	8	10	-	-	-	136
17	Aluva	3	4	7	-	2	2	2	5	7	-	-	-	-	2	2	-	-	-	18

Table-2 Contd

Sl.No	Municipality/Corporation	Primary School			Upper Primary Schools			High Schools			VHSC/HSS			Colleges						Grand Total
		Primary School			Upper Primary Schools			High Schools			VHSC/HSS			General			Technical			
		Govt.	Pvt.	Total	Govt.	Pvt.	Total	Govt.	Pvt.	Total	Govt.	Pvt.	Total	Govt.	Pvt.	Total	Govt.	Pvt.	Total	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
18	N.Paravur	4	2	6	1	1	2		2	2	2	2	4							14
19	Perubavur	3	6	9				3	3	6	2	3	5	1	1	1				14
20	Irinjalakuda	2	8	10	2	9	11	2	6	8	2	5	7	2	2	2	2	4	4	21
21	Kodugallur	3	4	7		1	1	2		2	2	-	2	1	2	3			4	42
22	Chalakkudy	3	2	5		1	1	3	3	6	1	1	2	1	1	2	3	2	2	17
	Trissur Corp.													1	1	2			5	21
	Voor				1	1	2	1	2	3	1	1	2							
	Kulam	2	11	13	1	3	4	3	4	7	4	2	6	1	1	1	1	2	3	8
	thamangalam	13	9	22	6	8	14	1	1	2	3	1	4	1	1	2	1	1	3	37
	amangalam	3	1	4	3	3	6	3	3	6	4	1	5	1	1	1			1	45
	Trur	3	15	18	1	7	8	2	5	7				2	2	2				22
	Malappuram	5	9	14	1	3	4	3	7	10				1	1	1	2	7	9	35
	ode-Corpn.	26	37	63	17	24	41	10	21	31	13	17	30	2	4	6	5	4	9	38
			27	27	4	12	16	3	4	7	2	2	4				1		1	180
		4	32	36	4	12	16	6	7	13								4	4	55
		3	2	5	6	5	11	3	3	6										138
	od	6	6	12	4	4	8	3	1	4				1	1	1	1			22
																				26

Table 3 - Number of Hospitals and other Institutions 2003

Sl. No.	Municipality/ Corporation	Hospitals						Dispensaries & other Institutions						Maternity & Child Health Center								
		Public			Private			Total			Public			Private			Total					
		No.	Beds		No.	Beds		No.	Beds		No.	Beds		No.	Beds		No.	Beds		No.	Beds	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20			
1	Neyyattinkara	2	436	7	80	9	516	1	-	11	12	13	14	15	16	17	18	19	20			
2	Thiruvananthapuram corpn.	19	7077	47	2097	66	9174	21	-	57	-	78	-	2	-	3	-	2	-			
3	Attingal	2	84	8	450	10	534	3	-	23	-	26	-	4	-	4	-	7	-			
4	Kollam corpn.	9	1485	31	1874	40	3359	11	-	92	-	103	-	13	-	-	-	4	-			
5	Punalur	2	169	13	286	15	455	2	-	18	-	20	-	6	-	-	-	13	-			
6	Kayamkulam	4	180	11	450	15	630	-	-	26	-	26	-	-	-	-	-	4	-			
7	Mavelikkara	2	267	7	315	9	582	-	-	10	-	10	-	-	-	-	-	-	-			
8	Alappuzha	8	1780	8	140	16	1920	2	-	127	-	129	-	6	-	-	-	6	-			
9	Cherthala	3	286	5	513	8	799	-	-	36	-	36	-	5	-	-	-	5	-			
10	Thiruvalla	3	200	6	1250	9	1450	-	-	15	-	15	-	-	-	-	-	-	-			
11	Changanacherry	2	214	13	205	15	419	-	-	38	-	38	-	4	-	-	-	4	-			
12	Kottayam	4	503	12	1009	16	1512	-	-	-	-	-	-	-	-	-	-	-	-			
13	Palai	4	194	11	575	15	769	-	-	30	-	30	-	1	-	-	-	1	-			
14	Vaikom	2	298	1	52	3	350	1	24	25	-	26	24	1	-	-	-	1	-			
15	Muvattupuzha	3	298	11	438	14	746	1	-	36	-	37	-	2	-	-	-	2	-			
16	Kochi	18	2012	76	5165	94	7177	6	-	78	-	84	-	14	-	-	-	14	-			
17	Aluva	2	237	10	720	12	957	-	-	34	-	34	-	-	-	-	-	-	-			

Table 3 (Contd...)

Sl. No	Municipality/ Corporation	Hospitals						Dispensaries & other Institutions						Maternity & Child Health Centre					
		Public			Private			Public			Private			Public			Private		
		No.	Bed s	Total	No.	Bed s	Total	No.	Bed s	Total	No.	Bed s	Total	No.	Bed s	Total	No.	Bed s	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
16	Paravur	3	199	8	436	11	635	10	-	13	-	23	-	2	-	-	-	2	-
17	Perumbavoor	2	231	6	463	8	694	1	-	24	-	25	-	6	-	-	-	6	-
18	Irinjalakuda	2	236	5	124	7	360	3	-	5	-	8	-	-	-	-	-	-	-
19	Kodungallur	2	158	7	448	9	606	-	-	32	-	32	-	-	-	-	-	-	-
20	Chalakudy	1	144	9	571	10	715	2	-	25	-	27	-	2	-	-	-	-	-
21	Thrissur corp.																		
22	Guruvayur	1	30	5	184	6	214	-	-	-	-	-	-	-	-	-	-	-	-
23	Kunnamkulam	1	128	5	565	6	689	7	-	-	-	7	-	1	-	-	-	1	-
24	Palakkad	4	739	21	612	25	1351	4	-	15	-	19	-	4	-	-	-	1	-
25	Chittoor- Thathamangalam	2	128	1	10	3	138		-	15	6	15	6	6	-	-	-	4	-
26	Thirur	6	199	-	300	6	499	1	-	-	-	1	-	3	-	-	-	3	-
27	Malappuram	4	187	5	486	9	673	1	-	27	-	28	-	-	-	-	-	-	-
28	Kozhikode Corpor.	9	4072	37	2093	46	6165	16	-	99	-	115	-	24	-	-	-	24	-
29	Vadakara	2	240	14	440	16	680	1	-	97	-	98	-	1	-	-	-	1	-
30	Thalassery	2	556	23	839	25	1395	3	-	14	-	17	-	-	-	-	-	-	-
31	Kannur	2	125	29	773	31	898	1	16	-	-	1	16	1	5	-	-	-	-
32	Kasaragod	2	236	11	540	13	776	1	-	21	-	22	-	-	-	-	-	1	5

Table 4- Registration units with Area and Population 2003

SL no	Municipality \ Corporation	No of Reg units	Area in sq/km	Area Per Reg units	Mid year population	Population per Reg units	Density per Sq km
1	2	5	6	7	8	9	10
1	Neyyattinkara	1	28.78	28.78	71041	71041	2468
2	Thiruvananthapuram	20	141.71	7.09	761852	38093	5376
3	Attingal	1	14.775	14.775	36447	36447	2467
4	Kollam	1	57.28	57.28	367684	367684	6419
5	Punalur	1	34.60	34.60	47461	47461	1372
6	Kayamkulam	1	21.79	21.79	68923	68923	3163
7	Mavelikara	1	12.65	12.65	28472	28472	2251
8	Alappuzha	2	46.77	23.38	177584	88792	3797
9	Cherthala	1	16.18	16.18	45531	45531	2814
10	Thiruvalla	1	27.52	27.52	57328	57328	2083
11	Changanacherry	1	13.50	13.50	52847	52847	3915
12	Kottayam	2	16.45	8.22	61752	30876	3755
13	Palai	1	16.06	16.06	23023	23023	1434
14	Vaikom	1	8.73	8.73	23024	23024	2637
15	Muvattupuzha	1	13.18	13.18	29644	29644	2249
16	Kochi Corporation	2	94.88	47.44	603050	301525	6356
17	Aluva	1	7.18	7.18	24655	24655	3434
18	Paravur	1	9.02	9.02	30584	30584	3391
19	Perumbavoor	1	13.61	13.61	27005	27005	1984
20	Irinjalakuda	1	11.24	11.24	29206	29206	2598
21	Kodungallur	1	17.40	17.40	34097	34097	1960
22	Chalakydy	1	25.23	25.23	49188	49188	1950
23	Thrissur				323809		
24	Guruvayoor	1	7.47	7.47	21419	21419	2867
25	Kunnamkulam	1	34.18	34.18	52613	52613	1539
26	Palakkad	1	26.60	26.60	132577	132577	4984
27	Chittoor- Thathamangalam	1	14.71	14.71	32607	32607	2217
28	Thirur	1	16.55	16.55	54685	54685	3304
29	Malappuram	1	33.69	33.69	60760	60760	1804
30	Kozhikode Corp.	14	84.25	6.02	440557	31468	5229
31	Vadakara	1	21.34	21.34	76666	76666	3593
32	Thalasserry	3	23.98	7.99	102207	34069	4262
33	Kannur	1	11.03	11.03	64877	64877	5882
34	Kasaragod	1	16.69	16.69	53237	53237	3190

Table 5 - Number of Burial Grounds, Cremation Grounds and Civil Registration Units

Sl. No	Municipality/ Corporation	Burial Grounds			Cremation Grounds			Total no. of Registration units	
		Mun/ Corp	Private	Total	Mun/ Corp.	Private	Total	No. of wards	No. of units
1	2	3	4	5	6	7	8	9	10
1	Neyyattinkara	1	4	5	-	3	3	37	1
2	Thiruvananthapuram	4	30	34	1	3	4	81	20
3	Attingal	1	1	2	-	5	5	24	1
4	Kollam	2	37	39	2	1	3	50	1
5	Punalur	1	20	21	-	-	-	30	1
6	Kayamkulam	1	14	15	1	2	3	38	1
7	Mavelikara	1	9	10	-	1	1	23	1
8	Alappuzha	3	2	5	-	19	19	50	2
9	Cherthala	-	5	5	1	4	5	28	1
10	Thiruvalla	2		2	1	-	1	32	1
11	Changanacherry	1	12	13	-	1	1	32	1
12	Kottayam	1	15	16	1	3	4	37	2
13	Palai	1	6	7	1	-	1	20	1
14	Vaikom				1		1	20	1
15	Muvattupuzha	1	8	9	-	-	-	23	1
16	Kochi Corporation	8	40	48	5	11	16	66	2
17	Aluva	-	7	7	-	3	3	21	1
18	N.Paravur	1	5	6	-	1	1	23	1
19	Perumbavoor	1	8	9	-	1	1	21	1
20	Irinjalakuda	1	5	6	-			22	1
21	Kodungallur	-	2	2	1	1	2	24	1
22	Chalakydy	2	8	10	-	1	1	28	1
23	Thrissur								
24	Guruvayoor	1	4	5	1	1	2	20	1
25	Kunnamkulam	2	11	13	-	-	-	31	1
26	Palakkad	4	7	11	3	1	4	50	1
27	Chittoor- Thathamangalam		1	1	-	-	3	24	1
28	Thirur	2		2				28	1
29	Malappuram	1	10	11	-	1	1	24	1
30	Kozhikode Corpor.	2	9	11	4	2	6	39	14
31	Vadakara	1	8	9	-	-	-	40	1
32	Thalasserry	1	15	16	1	11	12	50	3
33	Kannur	1	13	14	1	-	1	38	1
34	Kasaragod	-	12	12	2	1	3	32	1

Table 6 - Vital events registered during the year 2003

Sl. No	Municipality/ Corporation	Live Births										Still Births					
		Total Events			Events to normal residents						Events to normal residents			Total Events			
		Male	Female	Total	Male	%	Female	%	Total	%	Male	Female	Total	Male	Female	Total	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
1	Neyyattinkara	579	541	1120	210	36.27	213	39.37	423	37.77	-	-	-	-	-	-	-
2	Thiruvananthapuram	18799	19487	38286							120	106	226				
3	Attingal	736	685	1421	85	11.55	81	11.82	166	11.68	-	-	-	-	-	-	-
4	Kollam	8044	7519	15563	2723	33.85	2413	32.09	5136	33.00	39	32	71	11	10	21	
5	Punalur	1822	1811	3633	215	11.80	194	10.71	409	11.26	-	-	-	-	-	-	-
6	Kayamkulam	2494	2556	5050	407	16.32	391	15.30	798	15.80	2	2	4	-	-	-	-
7	Mavelikara	1756	1529	3285	148	8.43	132	8.63	280	8.52	3	1	4	-	-	-	-
8	Alappuzha	6076	5805	11881	1259	20.72	1215	20.93	2474	20.82	98	67	165	16	14	30	
9	Cherthala	1479	1493	2972	144	9.74	179	11.99	323	10.87	7	9	16	1	-	1	
10	Thiruvalla	2332	2239	4571	232	9.95	220	9.83	452	9.89	20	13	33	1	2	3	
11	Changanacherry	999	1001	2000	172	17.22	189	18.88	361	18.05	2	-	2	1	-	1	
12	Kottayam	1680	1781	3461	95	5.65	97	5.45	192	5.55	4	3	7	-	-	-	
13	Palai	-	-	2599	76		71		147	5.66	-	-	8	1	-	1	
14	Vaikom	690	736	1426	86	12.46	91	12.36	177	12.41	2	1	3	-	-	-	
15	Muvattupuzha	1759	1673	3432	223	12.68	213	12.73	436	12.70	1	2	3	1	-	1	
16	Kochi Corporation	10056	9417	19473	6237	62.02	6019	63.92	12256	62.94	102	91	193	71	62	133	
17	Aluva	1956	1965	3921	75	3.83	48	2.44	123	3.14	3	9	12	-	-	-	

Table 6 - Contd.

Sl. No	Municipality/ Corporation	Live Births										Still Births					
		Total Events			Events to normal residents						Total Events			Events to normal residents			
		Male	Female	Total	Male	%	Female	%	Total	%	Male	Female	Total	Male	Female	Total	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
18	Paravur	1668	1639	3307	102	6.11	96	5.86	198	5.99	1	4	5				
19	Perumbavoor	1428	1272	2700	115	8.05	91	7.15	206	7.63	4	2	6				
20	Irinjalakuda	909	878	1787	67	7.37	51	5.81	118	6.60	4	-	4	1		1	
21	Kodungallur	2672	2639	5311	120	4.49	112	4.24	232	4.37	7	11	18				
22	Guruvayour	189	172	361	9	4.76	11	6.39	20	5.54	-	-	-				
23	Thrissur																
24	Chalakkudy	1802	1763	3565	221	12.26	195	11.06	416	11.67	8	10	18	1	-	1	
25	Kunnankulam	2096	2022	4118	205	9.78	232	11.47	437	10.61	7	10	17		3	3	
26	Palakkad	5559	7772	13331	531	9.35	735	9.46	1266	9.49	10	16	26	3	2	5	
27	Chittoor- Thathamangalam	106	94	200	4	3.77	3	3.19	7	3.50	-	1	1				
28	Thirur	4352	4016	8368	395	9.08	373	9.29	768	9.18	12	5	17		1	1	
29	Malappuram	3766	3584	7350	233	6.19	215	5.99	448	6.09	34	30	64				
30	Kozhikode Corporation	20128	19130	39258	3270	16.25	3000	15.69	6270	15.97	350	301	651	106	147	253	
31	Vadakara	1170	1167	2337	220	18.80	243	20.82	463	19.81	6	5	11	3	1	4	
32	Thalasserry	5697	5276	10973	1706	29.95	1614	30.59	3320	30.26	44	33	77	4	5	9	
33	Kannur	3041	2960	6001	403	13.25	417	14.09	820	13.66	14	9	23	4	2	6	
34	Kasaragod	4059	3785	7844	361	8.89	337	8.90	698	8.89	51	30	81	5	3	8	

Table 6cont.

Sl. No	Municipality/ Corporation	Infant Death						Other Deaths						Total Death								
		Total Events			Events to normal residents			Total Events			Events to normal residents			Total Events			Events to normal residents					
		Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	Neyyattinkara	1	2	3				240	214	454	150	113	263	241	216	457	150	62.24	113	52.31	263	57.55
2	Thiruvananthapuram	235	215	450				4456	4044	8500	1129	836	1965	4691	4259	8950	1129	24.07	836	19.63	1965	21.96
3	Attingal	-	-	-			108	89	197	197	73	61	134	108	89	197	73	67.59	61	68.54	134	68.02
4	Kollam	48	41	89	12	14	26	1707	952	2659	856	518	1374	1755	993	2748	868	49.46	532	53.58	1400	50.95
5	Punalur	10	2	12	2	-	2	294	187	481	134	106	240	304	189	493	136	44.74	106	56.08	242	49.08
6	Kayamkulam	7	1	8	2	-	2	308	189	497	217	176	393	315	190	505	219	69.52	176	92.63	395	78.22
7	Mavelikara	11	7	18	1	-	1	319	275	594	97	64	161	330	282	612	98	29.69	64	22.69	162	26.47
8	Alappuzha	93	67	160	20	8	28	1493	979	2472	620	478	1098	1586	1046	2632	620	39.09	486	46.46	1106	42.02
9	Cherthala	1	1	2	-	1	1	368	344	712	105	82	187	369	345	714	105	28.46	83	24.06	188	26.33
10	Thiruvalla	3	1	4	1	-	1	191	123	314	114	96	210	194	124	318	115	59.28	96	77.42	211	66.35
11	Changanacherry	44	22	66	3	1	4	736	439	1175	194	168	362	780	461	1241	197	25.27	169	36.66	366	29.49
12	Kottayam	1	3	4	-	-	-	384	338	722	21	39	60	385	341	726	21	5.45	39	11.44	60	8.26
13	Palai	-	-	9	-	-	-	-	-	361	78	38	116	-	-	370	78	-	38	-	116	31.35
14	Vaikom	-	-	-	-	-	-	180	126	306	94	63	157	180	126	306	94	52.22	63	50.00	157	51.31
15	Muvattupuzha	3	5	8	1	1	2	236	133	369	79	41	120	239	138	377	80	33.47	42	30.43	122	32.36
16	Kochi Corporation	223	135	358	109	72	181	4115	2376	6491	2739	1664	4403	4338	2511	6849	2848	65.65	1736	69.14	4584	66.92
17	Aluva	5	3	8	-	-	-	324	209	533	41	41	82	329	212	541	41	12.46	41	19.34	82	15.16

Table 6 - Contd.

Sl. No	Municipality/ Corporation	Infant Death						Other Deaths						Total Death								
		Total Events			Events to normal residents			Total Events			Events to normal residents			Total Events			Events to normal residents					
		Male	Fem ale	Total	Ma le	Fem ale	Tot al	Ma le	Fem ale	Tot al	Ma le	Fem ale	Tot al	Ma le	Fem ale	Tot al	Ma le	Fem ale	Tot al			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
18	Paravur	3	2	5	6	7	8	328	232	560	42	31	73	331	234	565	42	12.69	31	13.25	73	12.92
19	Perumbavoor	12	3	15	-	1	1	208	99	307	48	42	90	220	102	322	48	21.82	43	42.16	91	28.26
20	Irinjalakuda	5	3	8				181	99	280	82	58	140	186	102	288	82	44.09	58	56.86	140	48.61
21	Kodungallur	7	4	11				303	160	463	66	58	124	310	164	474	66	21.29	58	35.37	124	26.16
22	Chalakyudy	13	5	18	4	1	5	306	204	510	145	124	269	319	209	528	149	46.71	125	59.81	274	51.89
23	Thrissur																					
24	Guruvayoor	3		3				85	51	136	35	33	68	88	51	139	35	39.77	33	64.70	68	48.92
25	Kunnammkulam	15	15	30	4	-	4	318	274	592	172	178	350	333	289	622	176	52.85	178	61.59	354	56.91
26	Palakkad	66	57	123	7	4	11	926	788	1714	278	236	514	992	845	1837	285	28.73	240	28.40	525	28.58
27	Chittoor- Thathamangalam							167	106	273	104	85	189	167	106	273	104	62.28	85	80.19	189	69.23
28	Thirur	25	10	35	4	2	6	315	211	526	134	96	230	340	221	561	138	40.59	98	44.34	236	42.07
29	Malappuram	31	29	60	2	-	2	266	194	460	46	45	91	297	223	520	48	16.16	45	20.18	95	17.88
30	Kozhikode Corporation.	467	363	830	143	106	249	5314	3167	8481	1419	1092	2551	5781	3530	9311	1602	27.71	1198	33.94	2800	30.07
31	Vadakkara	3	3	6	2	1	3	428	295	723	189	138	327	431	298	729	191	44.32	140	46.98	331	45.40
32	Thalassery	57	49	106	4	4	8	1037	780	1817	314	291	605	1094	779	1873	318	29.07	295	37.87	613	32.73
33	Kannur	32	23	55	-	-	-	378	292	670	146	117	263	410	315	725	146	35.61	117	37.14	263	36.28
34	Kasaragod	25	21	46	1	2	3	283	271	554	104	109	213	308	292	600	105	34.09	111	38.01	216	36.00

Table 7 - Deaths according to causes 2003

Sl. No	Municipality/ Corporation	Suicide	Accident	Pneumonia	B.P	T.B	Diabetes	Aids	Tetanus	Dysentery & Diarrhea	Respiratory Diseases	Enteric fever	Diphtheria	Cancer	Gastro Enteritis	Heart Failure	Pulmonary Diseases	Hydrophobia/Rabies	Denki/wells disease	Others	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
	Neyyattinkkara										78			87						293	458
	Thiruvananthapuram																				8950
1.	Attingal						12				16	6		24		92				47	197
2.	Kollam																				2748
3.	Punalur																				493
4.	Kayamkulam																				505
5.	Mavelikara																				612
6.	Alappuzha									2		5		394			318			1913	2632
7.	Cherthala					2				2	42	2		9	2	158	17			480	714
8.	Thiruvalla	23	33				77					8		57		225				818	1241
9.	Changanacherry					15					69	21		55			70			88	318
10.	Kottayam									14				16	9			8		679	726
11.	Palai										18	1		29		45	1			276	370
12.	Vaikom	2	2	1	4	26	10			2				7		13				239	306
13.	Muvattupuzha										203									174	377
14.	Kochi Corpora.					117		2		2						1903		2		4823	6849
15.	Aluva				6	1	16			1	93			64		54				306	541

Table 7 (Contd...)

Sl. No	Municipality/ Corporation	Suicide	Accident	Pneumonia	BP	TB	Diabetes	Aids	Tetanus	Dysentery & Diarrhoea	Respiratory Diseases	Enteric fever	Diphtheria	Cancer	Gastroenteritis	Heart Failure	Pulmonary Diseases	Hydrophobia/Rabies	Denki/wells diseases	Others	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
14	Paravur															303				161	565
15	Perumbavoor									4				48		115	14			141	322
20	Irinjalakuda																				
21	Kodungallur											2									288
22	Chalakudy	20	16	1						4	175			27			67			378	474
23	Thrissur													48		103	38			123	528
24	Guruvayoor	20	8		5						13	11		7		46				29	139
25	Kunnamkulam					15					27			48	12	115				405	622
26	Palakkad									2				19		7				180	1837
27	Chittoor-Thathamangalam																			9	273
28	Thirur									4		55		42		168	5			287	561
29	Malappuram																				520
30	Kozhikode Corpo.	263	398	169		463	278	12	9	16				838		1483		2	3	537	9311
31	Vadakara																			7	
32	Thalassery															133				500	729
33	Kannur									2											1893
34	Kasaragod					16				14		34				144				529	725
35	Total																39			456	600

Table 8 - Results of Spot Check Survey - 2003

Sl. No	Municipality/ Corporation	No. of wards selected	Total no. of House holds	No. of House holds visited	No. of events detected to normal residents											
					Live Births				Infant Deaths				Other deaths			
					Enume rated	Regis- tered	N.R	occurred outside	Enume rated	Regis- tered	N.R	occurred outside	Enume rated	Regis- tered	N.R	occurred outside
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1.	Neyyattinkara	15	9107	9107	355	69		296	2	1	-	1	167	121	-	46
2.	Thiruvanantha- puram	15	35782	22570	774	745	--	29	3	3	-	-	420	402	15	3
3.	Attingal	15	6924	6924	241	83		158	-	--	-	-	116	74	-	42
4.	Kollam	15	23085	16664	967	867		100	1	-	-	1	298	256	-	42
5.	Punalur	15	5482	5482	213	159		54	-	-	-	-	105	74	8	23
6.	Kayamkulam	15	6037	6037	377	255		122	2	1	-	1	140	86	18	36
7.	Mavelikara	15	4244	4244	111	66		45	1	1	-	-	74	60	-	14
8.	Alappuzha	25	19911	19911	1177	973		204	2	-	-	2	517	482	10	25
9.	Cherthala	15	6686	5669	69	34		35	1	1	-	-	76	62	1	13
10.	Thiruvalla	15	6610	6610	131	101		30	-	-	-	-	86	66	-	20
11.	Changana- cherry	15	7217	5620	223	87		136	2	1	-	1	103	61	2	40
12.	Kottayam	15	8559	8559	134	77		57	-	-	-	-	78	25	-	53
13.	Palai	15	5969	3571	147	65		82	-	-	-	-	116	99	-	17
14.	Vaikom	15	6502	4166	149	69		80	-	-	-	-	75	56	-	19
15.	Muvattupuzha	15	4259	4259	208	122		86	-	-	-	-	78	51	2	25
16.	Kochi Corporation	15	24609	24609	816	688		128	-	-	-	-	433	429	-	4
17.	Aluva	15	4278	4278	123	47		76	-	-	-	-	84	48	-	36

Table 8 (Contd....)

Sl. No.	Municipality/ Corporation	No. of wards selected	Total no. of House holds	No. of House holds visited	No. of events detected to normal residents											
					Live Births				Infant Deaths				Other deaths			
					Enume rated	Regi- stered	N.R	Occurred outside	Enume rated	Regi- stered	N.R	occurred outside	Enume rated	Regis- tered	N.R	occurred outside
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
18.	N.Paravur	15	4510	4510	198	104	-	94	-	-	-	-	73	68	-	5
19.	Perumbavoor	15	4393	4393	193	94	-	99	2	1	-	1	89	63	-	26
20.	Irinjalakuda	15	8021	4297	143	44	-	99	-	-	-	-	87	56	-	31
21.	Kodungalur	15	4771	4771	232	206	-	26	-	-	-	-	124	108	-	16
22.	Chalakudy	15	5513	6283	310	192	-	118	1	-	-	1	153	123	6	24
23.	Thrissur	15														
24.	Guruvayoor	15	3700	3700	178	14	-	164	1	-	-	1	97	53	9	35
25.	Kunnamkulam	15	9351	5778	283	130	-	153	1	1	-	-	172	142	-	30
26.	Palakkad	15	7113	7147	532	488	-	44	1	1	-	-	167	141	-	26
27.	Chittoor- Thathamangalam	15	4634	4634	168	11	-	157	-	-	-	-	107	75	-	32
28.	Thirur	15	4717	4717	558	383	-	175	2	1	-	1	97	81	-	16
29.	Malappuram	15			448	364	-	84	2	2	-	-	91	91	-	-
30.	Kozhikode Corpo.	15	17418	17418	1025	935	-	90	-	-	-	-	385	344	20	21
31.	Vadakara	15	4863	4863	298	92	-	206	2	2	-	-	138	108	3	27
32.	Thalassery	15	5315	5315	310	289	-	21	-	-	-	-	149	134	-	15
33.	Kannur	15	4728	4257	409	297	-	112	1	-	-	1	139	83	8	48
34.	Kasaragod	15	5971	5971	178	156	-	22	3	3	-	-	65	61	-	4

Table 9 - Under Registration and Occurrence of outside events

Sl. No	Municipality/ Corporation	% Of under registration		% of outside registration	
		Births	Deaths	Births	Deaths
1	2	3	4	5	6
1	Neyyattinkara	-	-	83.38	27.81
2	Thiruvananthapuram	-	3.47	3.75	0.71
3	Attingal	-	-	65.56	36.21
4	Kollam	-	-	10.34	14.38
5	Punalur	-	9.8	25.35	21.90
6	Kayamkulam	-	17.14	32.36	26.05
7	Mavelikara	-	-	40.54	18.67
8	Alappuzha	-	2.03	17.33	5.20
9	Cherthala	-	1.3	33.65	4.60
10	Thiruvalla	-	-	22.9	23.26
11	Changanacherry	-	3.13	60.99	39.05
12	Kottayam	-	-	42.53	67.95
13	Palai	-	--	55.78	14.66
14	Vaikom	-	-	53.69	25.33
15	Muvattupuzha	-	3.77	41.35	32.05
16	Kochi Corporation	-	-	15.69	0.92
17	Aluva	-	-	61.78	41.46
18	N.Paravur	-	-	47.47	6.85
19	Perumbavoor	-	-	51.29	29.67
20	Irrinjalakuda	-	-	69.23	35.63
21	Kodungallur	-	-	11.21	12.90
22	Chalakydy	-	4.65	38.06	16.23
23	Thrissur	-	-	-	-
24	Guruvayoor	-	14.5	92.1	36.7
25	Kunnamkulam	-	-	54.06	17.34
26	Palakkad	-	-	8.27	15.47
27	Chittoor-Thathamangalam	-	-	93.45	29.91
28	Thirur	-	--	31.36	17.17
29	Malappuram	-	-	18.75	-
30	Kozhikode Corp.	-	5.49	8.78	5.45
31	Vadakara	-	2.65	69.13	19.29
32	Thalasserry	-	-	6.77	10.06
33	Kannur	-	9.78	27.38	34.29
34	Kasaragod	-	-	12.36	5.88

Table 10 - Registered Vital Rates and Adjusted Residential Vital rates 2003

Sl. No.	Municipality/ Corporation	Registered vital rates		Adjusted residential vital rates	
		Births	Deaths	Births	Deaths
1	2	3	4	5	6
1	Neyyattinkara	5.95	3.70	35.80	5.13
2	Thiruvananthapuram *				
3	Attingal	4.55	3.68	13.21	5.77
4	Kollam Corpn.	13.97	3.81	15.58	4.45
5	Punalur	8.62	5.10	11.55	7.14
6	Kayamkulam	11.57	5.73	17.11	9.36
7	Mavelikara	9.83	5.69	16.53	7.00
8	Alappuzha	13.93	6.34	16.85	6.82
9	Cherthala	7.1	4.2	10.70	4.92
10	Thiruvalla	7.88	6.38	10.22	8.31
11	Changanacherry	6.83	3.99	17.51	6.76
12	Kottayam	3.11	0.97	5.41	3.03
13	Palai	6.38	5.04	14.42	5.91
14	Vaikom	7.68	6.82	16.58	9.13
15	Muvattupuzha	14.72	4.12	25.09	6.29
16	Kochi Corporation	20.32	7.60	24.10	7.67
17	Aluva	4.99	3.33	13.13	5.9
18	Paravur	6.47	2.39	12.32	2.57
19	Perumbavoor	7.62	3.37	15.64	4.79
20	Irrinjalakuda	4.04	4.79	13.13	7.44
21	Kodungallur	6.80	3.64	7.65	4.18
22	Chalakkudy	8.46	5.57	13.66	6.97
23	Thrissur				
24	Guruvayoor	0.93	3.17	11.77	5.86
25	Kunnankulam	8.31	6.65	18.09	8.06
26	Palakkad	9.55	3.96	10.41	4.68
27	Chittoor- Thathamangalam	0.21	5.8	3.21	8.28
28	Thirur	14.04	4.32	20.45	5.22
29	Malappuram	7.37	1.53	9.07	1.53
30	Kozhikkode Corpn.	14.23	6.36	15.60	7.11
31	Vadakara	6.04	4.32	19.57	5.50
32	Thalasserry	32.48	6.00	34.84	6.67
33	Kannur	12.64	4.05	17.40	6.83
34	Kasaragod	13.11	4.06	14.96	4.31

*Due to the non availability of events to normal residents, the figures could not be worked out.

APPENDIX

Method of calculation of adjusted residential vital rates

Residential vital rates can broadly be defined as the rate of occurrence of vital events among the normal residents of an area in a year. In order to calculate the percentage of under registration, the events occurring among persons coming to the town/city to avail themselves of better medical facilities are excluded and those of normal residents who are going outside the town are included.

1. Percentage of under registration	$\frac{\text{Number of events occurred to normal residents inside the town but not registered} \times 100}{\text{Number of events occurred among normal residents inside the town registered and not registered}}$
2. Percentage of events occurred outside the town to normal residents	$\frac{\text{Number of events occurred among normal residents outside the town registered and unregistered} \times 100}{\text{Number of events enumerated and occurred among normal residents inside and outside the town}}$
3. Registered birth/death rate to normal residents	$\frac{\text{Total no of birth/death occurred to normal residents and registered in the town} \times 1000}{\text{Mid year population of the town}}$
4. Residential birth/death rate to normal residents occurred inside the town (weighted for under registration)	$\frac{\text{Registered birth/death rate} \times 100}{(100 - \text{percentage of under registration})}$
5. Adjusted Residential birth/death rate (weighted for outside events)	$\frac{\text{Residential birth/death rate to normal residents occurred inside the town (weighted for under registration)} \times 100}{(100 - \text{Percentage of events occurred outside the town to normal residents})}$

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