

REPORT ON THE HEALTH CONDITIONS IN MADRAS STATE

FOR THE YEAR 1961

(Including the reports of the Government Analyst and
the Chief Water Analyst for 1961-62)

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1966

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REPORT ON THE HEALTH CONDITIONS IN MADRAS STATE DURING 1961.

CHAPTER I—VITAL STATISTICS.

The 1961 census (Provisional) and 1961 mid-year estimated populations for the various areas in the State are given below :—

Area.	Population as per 1961 census (Provisional.)	Estimated mid year population for 1961.
(1)	(2)	(3)
State	33,650,917	33,769,000
Rural	25,073,032	25,146,000
Urban	8,577,885	8,623,000
Municipal towns	5,776,409	5,808,000
Census towns	2,801,476	2,815,000

A conference for the improvement of vital statistics was held in April 1961 at New Delhi. The conference discussed several important matters relating to vital statistics and the recommendations forwarded to the States for opinion.

COMPILATION OF VITAL STATISTICS.

Annexure 'A' gives the number of birth and death returns due, number received and the number in arrears in respect of rural areas in each district in 1961. The vital statistics for 204 census towns, with a population of 5,000 and above have been compiled separately from the monthly birth and death returns due from these areas. Complete returns for 26 census towns were not received.

BIRTHS.

The recorded and corrected birth rate for the State for the years 1960 and 1961 are given below :—

Year.	Number of births.	Recorded birth rate.	* Corrected birth rate.
(1)	(2)	(3)	(4)
1960	900,069	26.7	27.8
1961	902,454	26.7	28.0

* Corrected for non-receipt birth and death returns.

A straight line fitted to the corrected birth rates ($Y = 0.17x + 28.31$ with 1956 as origin) is shown in Chart I. The birth rates fluctuate round about a mean of 28.5.

During the year 902,454 births were recorded (468,007 boys and 434,447 girls). The ratio of male to female birth was 102:100. Annexure 'B' gives the recorded births in rural and urban areas in different months of the year. There were 577,262 and 325,192 births in rural and urban areas giving birth rates of 23.0 and 37.7 respectively. Highest number of births was recorded in the third quarter.

BIRTHS IN DISTRICTS

Statement I gives the registered births by sex in each district and the birth rates. The corrected birth rates for non-receipt of birth and death returns varied from 23.7 in Salem district to 31.3 in North Arcot district. These are given in Annexure 'I'.

BIRTHS IN MUNICIPAL TOWNS.

There were 255,004 births in all municipal areas including Madras City giving a birth rate of 41.9 as against 40.2 in 1960.

BIRTHS IN CENSUS TOWNS

In all the census towns 79,188 births were recorded giving a rate of 24.9 as against 24.1 in 1960. The rate corrected for non-receipt of birth and death returns works out to 25.8.

STILL BIRTHS.

Particulars are given below :—

Area.	(1)	1960.		1961.	
		Number.	Rate.	Number.	Rate.
State	--	14,506	15.9	14,027	15.3
Rural	--	2,228	3.8	2,067	3.6
Urban	--	12,278	37.3	11,960	35.4
Municipal towns	--	10,965	42.0	10,389	39.1
Census towns	--	1,313	19.4	1,571	21.8

The low rates recorded in rural areas may be due to gross under-registration of births and deaths. The number of still births recorded in non-municipal and municipal areas according to sex are given in Annexure 'D'.

DEATHS.

The number of registered deaths and the recorded and corrected rates for the years 1960 and 1961 are given below :—

Year.	(1)	Deaths registered.	Recorded death rate.	Corrected death rate.
1960	--	408,461	12.1	12.7
1961	--	447,139	13.3	14.0

A straight line fitted to the corrected death rates $Y = -0.44x + 14.84$ with 1956 as origin) shows a declining trend. There is a slight increase in the death rate in 1961 as compared with 1960.

DEATHS IN DISTRICTS.

Statement II of the appendix gives the number of deaths sexwise registered in each district. The death rates for each district corrected for non-receipt of birth and death returns are given in Annexure I.

DEATHS IN MUNICIPAL TOWNS.

The number of deaths recorded in municipal areas was 94,404 giving a rate of 15.5 as compared with 94,125 deaths giving a rate of 15.1 in 1960.

DEATHS IN CENSUS TOWNS.

A total of 25,554 deaths were recorded in census towns giving a rate of 9.1 as against 8.8 in 1960.

DEATHS BY AGES.

The distribution of population as per age groups for the residuary State after separation of Andhra on a ten per cent sample as per 1951 census has been furnished by the Department of Statistics. The mid year estimated population for 1961 for the State has

been distributed in the same ratio as in the above sample population. The age specific death rates for 1961 as compared with 1960 are given below :—

Age group.	(1)	1960.		1961.	
		Number.	Rate.	Number.	Rate.
Under one year	--	82,439	91.6 *	80,749	89.5 *
1 to 4 years	--	83,136	25.4	92,416	28.2
5 to 9 years	--	15,411	3.8	17,825	4.4
10 to 14 years	--	7,189	1.7	7,903	1.9
15 to 19 years	--	9,738	3.1	10,117	3.2
20 to 29 years	--	22,057	4.2	25,053	4.6
30 to 39 years	--	22,578	4.8	25,735	5.5
40 to 49 years	--	25,501	7.0	30,149	8.3
50 to 59 years	--	29,184	11.7	33,742	13.5
60 years and above	--	111,228	50.7	124,159	56.6
Total	--	408,461	12.1	447,839	13.3

* Per 1,000 live births.

It can be seen that the number of deaths under 60 years and above represents 28 per cent of the total recorded deaths.

DEATHS BY CAUSES.

The number of deaths due to principal causes and their mortality rates are given below :—

Cause of death.	(1)	Number of deaths.		Death rate.	
		1960.	1961.	1960.	1961.
Cholera	--	20	28	*	*
Smallpox	--	1,744	3,240	0.05	0.10
Plague	--	14	5	*	*
Malaria	--	637	780	0.02	0.02
Fevers other than Malaria	--	59,982	64,982	1.78	1.92
Dysentery and Diarrhoea	--	31,739	45,026	0.94	1.35
Respiratory diseases	--	40,612	38,527	1.23	1.14
Deaths from child birth	--	3,165	3,298	3.5†	3.60†
Suicides	--	2,253	2,049	0.07	0.06
Wounds and Accidents	--	3,218	3,121	0.10	0.09
Killed by wild animals and snake-bite	--	942	897	0.03	0.03
Hydrophobia	--	246	255	0.01	0.01
All other causes	--	263,889	285,631	7.82	8.46
Total	--	408,461	447,839	12.1	13.3

* Less than 0.01.

† Per 1,000 live and still births.

The percentage of deaths from all other causes to total deaths was 63.8 in 1961 as compared to 64.6 in 1960. In 36 municipalities with a population of 30,000 and above 15.9 per cent of deaths were recorded under 'all other causes'. Annexure 'H' gives details.

CH—1A

CHAPTER II—CONTROL OF COMMUNICABLE DISEASES.

CHOLERA.

The number of deaths and death rate for the year 1961 as compared to 1960 are given below :—

Year.	Number of deaths.	Death rate.
(1)	(2)	(3)
1960	20	Less than 0.01
1961	28	Less than 0.01

Statement VII of the appendix gives the number of deaths from cholera recorded in each month in each district during 1961.

Special staff were employed for preventive and control measures. In all 210,426 inoculations were performed. In the flood affected areas of Thanjavur, Tiruchirapalli, South Arcot, Coimbatore and a small portion of Salem district 451,056 anti-cholera inoculations were conducted.

DYSENTERY AND DIARRHOEA.

The deaths from this group of diseases increased from 31,739 in 1960 to 45,015 representing mortality rates of 0.95 and 1.33 respectively. The number of deaths and death rate from dysentery and diarrhoea registered in the different areas in the State during 1961 as compared with 1960 are given in the following table :—

Area.	Deaths from dysentery and diarrhoea.			
	1960.		1961.	
	Number.	Rate.	Number.	Rate.
(1)	(2)	(3)	(4)	(5)
State	31,739	0.95	45,015	1.33
Rural	19,439	0.78	32,954	1.31
Urban	12,300	1.45	12,061	1.40
Municipal towns	10,308	1.80	9,795	1.68
Census towns	1,992	0.72	2,266	0.80

Statement X of the appendix gives the number of deaths from dysentery and diarrhoea in each month in each district and in the State as a whole and also the death rates. Statement VI gives the deaths and death rates registered in each municipal and census town.

ENTERIC FEVER.

There were 702 deaths from enteric fever in all municipal areas including Madras City with a death rate of 0.12 as against 544 deaths with a rate of 0.10 in 1960.

SMALLPOX.

The number of deaths from smallpox and the death rates registered in the different regions of the State during 1961 as compared with 1960 are extracted below :—

Region.	1960.		1961.	
	Number of deaths.	Death rate.	Number of deaths.	Death rate.
	(2)	(3)	(4)	(5)
(1)				
State	1,744	0.05	3,240	0.10
Rural areas	894	0.04	1,827	0.06
Urban areas	850	0.10	1,613	0.19
Municipal towns	754	0.13	1,407	0.24
Census towns	96	0.05	165	0.07

when compared to 1960 the mortality from smallpox in the State has increased. The disease was not prevalent in an epidemic form and was responsible for only 0.35 per cent of total recorded deaths. The number of deaths, monthwise and districtwise and the death rates from smallpox are given in the Statement VIII of the Appendix. Madras City alone reported 904 out of 3,240 deaths from smallpox.

VACCINATION.

Details of vaccinations performed are given in Statement XIII of the appendix. The particulars for the different regions and agencies for 1961 as compared with 1960 are extracted below :—

(1)	Number of persons who had primary vaccination.		Number of persons re-vaccinated.		Total number of persons vaccinated.	
	1960.	1961.	1960.	1961.	1960.	1961.
	(2)	(3)	(4)	(5)	(6)	(7)
Districts exclusive of municipal towns.	908,802	892,210	3,531,282	3,875,781	4,440,084	4,765,991
Health Unit, Poona-mallee.	2,640	3,117	8,423	6,157	11,063	9,274
Municipalities	226,208	242,897	1,589,319	2,294,720	1,815,527	253,761
Railways	2,114	2,626	55,120	18,390	58,960	21,016
Medical Institutions and Ports.	3,840	24	20,143	32,268	22,257	32,292
Total ..	1,143,604	1,140,874	5,204,287	6,226,316	6,347,891	7,366,190

The percentages of successful vaccination operations performed by different agencies among the cases for which results were known are shown hereunder :—

Agency.	Percentage of success among			
	Primary vaccination.		Re-vaccination.	
	1960.	1961.	1960.	1961.
(1)	(2)	(3)	(4)	(5)
Districts exclusive of municipal towns.	92.6	91.6	12.7	13.1
Health unit, Poona-mallee	96.2	97.3	16.3	15.7
Railways	98.5	97.7	18.9	10.7
Municipal towns	98.0	98.2	9.2	10.0
Medical Institutions and Ports	95.0	91.3	59.4	69.4
Total ..	93.9	93.4	12.1	12.1

SMALLPOX ERADICATION PROGRAMME.

In the year 1959 a National Smallpox Eradication Programme for the whole of India was worked out by the Central Expert Committee jointly with the representatives of the State Expert Committees of Smallpox and Cholera. The pilot project commenced work in April 1960 in Chingleput district and continued till March 1961. The actual vaccination of population was carried out for six months from 1st September 1960 during which period the pilot project staff were able to cover only six out of eight taluks in the district. The total number of vaccinations performed in seven taluks of the district was 11.88 lakhs. During September and October 1961 mopping up of the unvaccinated persons in the already vaccinated areas was undertaken and in the mopping up operations 1.51 lakhs of vaccinations were performed.

PLAGUE.

In Hosur taluk of Salem district there were 21 attacks and 8 deaths from plague. The source of infection was traced to be Mysore State. Prompt preventive measures were taken. The infected and the surrounding villages were immediately treated with

D.D.T. and 56,349 persons were inoculated. Special attention was paid to D.D.T. treatment in the villages bordering Mysore State. One Special Health Officer was deputed to the area for constant supervision of the anti-plague operations. A total of 193,562 houses were treated with D.D.T. and the number of rodent burrows treated was 14,58,272.

FEVERS OTHER THAN MALARIA.

Fevers other than Malaria accounted for 14.5 per cent of the total deaths. Details for different regions in the State for the year 1961 compared to 1960 are given below—

Area.	Deaths from fevers other than Malaria.			
	1960.		1961.	
	Number.	Rate.	Number.	Rate.
(1)	(2)	(3)	(4)	(5)
State	59,982	1.86	64,982	1.92
Rural	49,402	1.98	53,058	2.11
Urban	10,580	1.25	11,924	1.38
Municipal Towns	6,189	1.08	7,249	1.25
Census Towns	4,391	1.58	4,675	1.66

Statement IX of the appendix gives the monthly and annual mortality and mortality rates in each district. The death rates in Kanyakumari, North Arcot, Tirunelveli and South Arcot districts were higher than the average rates for the previous quinquennium.

MALARIA AND MOSQUITO BORNE DISEASES.

The incidence of Malaria in different regions of the State are given below :

Area.	Deaths from Malaria.			
	1960.		1961.	
	Number.	Rate.	Number.	Rate.
(1)	(2)	(3)	(4)	(5)
State	637	0.02	780	0.02
Rural	505	0.02	664	0.03
Urban	132	0.02	116	0.01
Municipal towns	67	0.01	69	0.01
Census towns	65	0.02	47	0.02

Statement IX-A of the appendix shows the monthwise and districtwise figures of mortality recorded.

The Malaria Organisation is shown in chart No. 7.

THE CENTRAL MALARIA LABORATORY AT MADRAS.

The Central Malaria Laboratory was responsible for the preparation and regular supply of J. S. B. Staines required for staining of blood smears by all the units of the State.

NATIONAL MALARIA ERADICATION PROGRAMME.

The Organisation was continued without change. In accordance with the agreement between the State and the Central Government, Pondicherry and Karaikal were included as sub-units of Cuddalore and Mayuram units respectively.

An All-India Mid year conference of the State Malariologists in the country was held in July 1961 at Madras.

ATTACK PHASE.

The endemic malarious areas are classifiable into three categories (1) Endemic areas coming under the influence of *A. Fluviatilis* in the hill and foot hill regions (2) Endemic areas coming under the influence of *A. Culicifacies* in the plains (3) Endemic areas coming under the influence of *A. Stephensii* in certain urban and semi-urban areas. The rest is

considered epidemiologically as hypo-endemic areas. A population of about 6 millions living in endemic areas under the influence of *A. Fluviatilis*, *A. Culicifacies* and *A. Stephensii* including belt areas around the endemic areas, inter-State buffer zones and special tracts in hypo-endemic areas continued to be under complete coverage through two rounds of D.D.T. residual spraying generally and three rounds in specific instances for special reasons. The rest of the population of the State living in hypo-endemic areas under the influence of *A. Culicifacies* was also under complete coverage with a single round of D.D.T. residual spraying during the malaria transmission season.

SURVEILLANCE PHASE.

The surveillance phase of the National Malaria Eradication Programme continued to function. The total number of blood smears taken from persons with fever was 16,14,948 and all were examined.

FILARIA CONTROL.

Filariasis is widely prevalent in the districts of Chingleput, South Arcot, North Arcot and Thanjavur. The species of the parasite worm causing the disease is *Wuchereria Bancrofti* and the vector mosquito transmitting this type of infection is *Culex fatigans*. 'Malayi' type of filariasis has not been recorded in this State though the species of mosquitoes transmitting this type of filariasis, *mansonioides* in association of *Pistia* has been recorded in entomological collections.

STATE SCHEMES.

Anti-mosquito schemes and anti-filariasis schemes have been in operation in several local bodies. The Government sanctioned grants-in-aid to the local bodies that implemented approved schemes of anti-mosquito or anti-filariasis measures in their areas satisfactorily. The work consisted of treatment of *Culex fatigans* breeding place mainly with effective mineral oils and occasionally with synthetic larvicides. Wherever necessary, recommendations were made to the local bodies.

NATIONAL FILARIAL CONTROL PROGRAMME.

The four National Filaria Control Units continued to function in the districts of Thanjavur, South Arcot, Chingleput and North Arcot.

RESPIRATORY DISEASES.

The following statement shows the number of deaths from respiratory diseases and death rates registered in different areas of the State :—

Area.	Deaths from respiratory diseases.			
	1960.		1961.	
	Number.	Rate.	Number.	Rate.
State	40,612	1.22	38,527	1.14
Rural	21,540	0.86	20,803	0.83
Urban	19,072	2.25	17,724	2.06
Municipal towns	17,112	2.99	15,741	2.71
Census towns	1,960	0.71	1,983	0.70

The fall in mortality is noticed in all regions of the State.

TUBERCULOSIS.

The curative and preventive medical care of tuberculosis is under the administrative control of the Medical department.

B.C.G. VACCINATION.

The first round of vaccination was completed in March 1961 and the persons tested for B.C.G. was 5,406,871 and the number vaccinated was 1,740,912. The second round was started in April 1961 with the two units and was completed in Tirunelveli, Nilgiris districts and is being continued in Salem and Coimbatore districts. Towards the end of

the year the campaign was again started in Gobichettipalayam, Bhavani, Erode and Avanashi taluks. 1,180,317 persons were tuberculin tested and 306,842 persons were vaccinated with B.C.G. The units also educated the people on tuberculosis. In municipal areas, 2,955 deaths from pulmonary tuberculosis were recorded giving a mortality rate of 0.52 as against 2,865 deaths with a rate of 0.44 in 1960.

GUINEAWORM ERADICATION PROGRAMME.

This programme continued during the year. From December 1961 onwards it is functioning as one of the Third Five Year Plan Schemes. During the year under report 13,285 villages and hamlets were surveyed and of these 1,085 hamlets were found to be infected with the disease. A total of 10,744 persons were found infected with the disease during the year as against 12,712 cases in 1960.

LEPROSY.

Leprosy institutions and clinics continued to be under the control of the Medical department.

VENEREAL DISEASES.

The venereal disease clinics and institutions in the State are under the control of the Medical department.

YAWS ERADICATION PROGRAMME.

This is one of the schemes included in the Third Five-Year Plan. There are 8 units functioning and each unit is in charge of the activities of an entire taluk or sub-taluk. The plan of work is to visit the villages, survey the populations and detect cases of Yaws and give necessary treatment.

ESTABLISHMENT OF AN EPIDEMIOLOGICAL UNIT.

Collection of correct data is essential in the epidemiological investigation of many diseases. An Epidemiologist was appointed for this purposes. In October 1961 a Statistician and necessary ministerial staff were also appointed to collect statistical data in regard to communicable diseases. A mobile laboratory van is also being constituted for the epidemiological unit to carry out the spot laboratory tests for the correct diagnosis of various diseases.

MOBILE EPIDEMIC UNITS.

The two mobile epidemic units continued to function. They were deputed to work in areas affected with epidemics. The Government sanctioned the constitution of a third unit during the year under the Third Five-Year Plan Schemes. Two jeeps with trailers were purchased for the unit.

INFECTIOUS DISEASES HOSPITALS.

The construction and maintenance of infectious diseases hospital is the primary responsibility of the local bodies. However the Government have offered to meet half the expenditure for their construction in important areas in the State. Proposals were submitted for the construction of 20 isolation sheds in selected primary health centres in the State under the Third Five-Year Plan Scheme.

CHAPTER III—HEALTH SERVICES.

MATERNAL AND CHILD HEALTH.

The 19 main maternity and child welfare centres with 4 sub centres attached to each opened during 1955-56 were continued with the sanctioned staff. Besides 489 maternity and child welfare centres opened under the Second Five Year Plan were continued to be maintained from State Funds.

The sanctioned strength of maternal and child health staff under all agencies in the State is given in Annexure 'J'.

The details of outturn of work are given in Annexure 'K'. Thirty-one per cent of total births were conducted by the Maternity Assistants.

A sum of Rs. 30.79 lakhs was spent on maternal and child health services by local bodies representing 2 per cent of the total income. A sum of Rs. 4.5 lakhs was paid by the Government towards maintenance grant to local bodies exclusive of the Corporation of Madras and Avvai Rural Medical Services.

Thayis Training Scheme.—The total number of Thayis trained in the State was 3,979 upto the end of the year under report.

Health Visitor's Training.—Twenty-seven candidates were recruited in July for Health Visitor's Course under the State Scheme. Besides 21 candidates were recruited in October for the 18 months course.

Family Planning.—Forty-eight health visitors were trained in Family Planning at the Women and Children Hospital, Egmore in 1961 bringing the total number to 115.

UNICEF Drugs and Diet Supplements.—The supply of UNICEF gift of drugs and diet supplements to the primary health centres and maternal and child health centres was continued.

Maternal mortality.—The maternal mortality rate recorded is 3.6 in 1961 as compared with 3.5 in 1960. The number of deaths due to child birth and mortality rates recorded in each district are given in Statement II and those in each municipal and census town in Statement VI of the appendix. Annexure 'G' gives the maternal deaths in municipal and non-municipal areas in each district and in each district as a whole.

Infant mortality.—The infant mortality rate of 89.5 recorded during 1961 is the lowest on record as compared with 91.6 during the previous year.

A straight line fitted to the recorded infant mortality rates $Y = -2.62x + 105.45$ with 1956 as origin shows a perceptible downward trend (vide Chart II). The declining trend in infant mortality rate reveals the progressive improvement in health conditions in the State.

The following table shows the number of infant deaths and infant mortality rates recorded in different areas in the State in 1960 and 1961.

Area.	Infant mortality rate per 1000 live-births.			
	1960		1961	
	Number.	Rate.	Number.	Rate.
(1)	(2)	(3)	(4)	(5)
State	82,439	91.6	80,740	89.5
Rural	55,479	95.1	54,197	93.9
Urban	26,960	85.2	26,543	81.6
Municipal towns	22,213	88.8	21,959	86.1
Census towns	4,727	72.4	4,584	65.3

Reduction in the infant mortality rate is noticed in all the areas of the State in 1961 compared to 1960. The details of infant mortality rates for the age groups under one year in rural and urban areas in the State are extracted below :—

Age group.	Number of infant deaths.			Infant mortality rate per 1000 live-births.		
	Rural.	Urban.	State.	Rural.	Urban.	State.
	(2)	(3)	(4)	(5)	(6)	(7)
Under one week ..	5,585	7,636	13,251	9.7	23.5	14.7
One week and under one month.	18,948	4,586	23,534	32.8	14.1	26.1
One month and under six months.	12,038	6,950	18,988	20.9	21.4	21.0
Six months and under one year.	17,616	7,371	23,987	30.5	22.7	27.7
Total ..	54,197	26,543	80,740	93.9	81.7	89.5

The mortality rate for the age group under one week recorded in rural areas is less than that for urban areas. This may perhaps be due to wrong reporting of age. The neo-natal infant mortality rate in rural areas was 42.5 as against 37.6 in urban areas. The infant deaths represent 18 per cent of the total deaths at all ages in the State.

The infant mortality rates by sex recorded in rural and urban areas in each district and those in each municipality by communities are given in Statement IV and IV (a) of the appendix respectively. Annexure 'E' gives the infant deaths and infant mortality rates in municipal areas, in districts exclusive of municipal areas and in each district as a whole. High infant mortality rates were recorded in the districts of North Arcot (111.0), Tirunelveli (107.4) and Chingleput (103.7).

Industrial Hygiene.—All the Health Officers are Additional Inspectors of Factories and they are required to inspect at least 50 per cent of the factories in their charge in each half year. The number of factories inspected in the first half year was 1,512 out of 3,529 and that inspected in the second half year was 1,358 out of 3,790. The Health Officers forwarded to the Inspectors of Factories their reports for necessary action.

Residential and Industrial Areas.—Under section 89 of the Madras Public Health Act, 49 Municipalities and 117 Panchayats have already notified 'Residential Areas'. 15 municipalities and 74 panchayats which have been declared as urban local authorities have yet to declare residential areas. Most of the municipalities and a large number of panchayats have taken action to set apart industrial areas.

Health Education.—The main objective of the Health Education Bureau is to help the people to recognise their health needs and problems and resolve them with their own efforts. The State Health Education Council met in June and November. The second meeting was held at Poonamallee to provide an opportunity for the members to observe the activities of the Orientation Training Centre, the Health Unit rendering intensified health services in a limited area and the Research Contribution on Rural Sanitation (Latrine) Programme by the Research-cum-Action Project. It was decided that the project staff should have an integrated programme embracing education on all health subjects. Two extension projects of the Research-cum-Action Project have been formed at Thanjavur and Madurai.

In the film library there were 41 copies of films in English, 77 copies of films in Tamil and 19 copies of films in other languages. Films were lent to local bodies and others on hire and non-hire basis.

Leaflets, posters, pamphlets, folders, etc., on health subjects prepared by the Bureau were distributed to the public.

PRIMARY HEALTH CENTRES.

During the year, primary health centres were functioning in 123 Panchayat Unions. The Health Inspectors attached to the primary health centres are treated as Health Inspectors of the Panchayat Unions.

FIVE-YEAR PLAN SCHEMES.

The following 10 schemes were implemented during 1961-62.

- (1) Provision of Mobile Epidemic Unit (Additional Units).
- (2) Training of Health Visitors.
- (3) Training of Thayis.
- (4) National Malaria Eradication Programme.
- (5) National Filaria Control Programme.
- (6) B.C.G. Vaccination Campaign.
- (7) Control of Guinea worm disease.
- (8) Smallpox Eradication Programme.
- (9) Eradication of Yaws disease.
- (10) Establishment of Epidemiological Unit at the Directorate of Public Health, Madras.

The total Third Five Year Plan provision for the department is Rs. 300.00 lakhs. Out of this an expenditure of Rs. 108.67 lakhs is proposed to be incurred during 1961-62.

Health Unit, Poonamallee.—The Unit area comprises 39 revenue villages with a population of 73,937 and is 39 square miles in extent.

The vital statistics recorded in the Health Unit area are shown below ;—

	1960.		1961.	
	Number.	Rate.	Number.	Rate.
(1)	(2)	(3)	(4)	(5)
Births.. .. .	2,801	41.6	2,971	43.0
Deaths	1,199	17.6	1,500	19.0
Infant deaths	315	112.0	349	117.0
Maternal deaths	1	0.3	4	1.3
Still births	89	30.0	80	29.0

The number of primary vaccinations and re-vaccinations done were 3,181 and 6,540 respectively.

During the year 2,025 cases attended the part time tuberculosis clinic and 842 sputum examinations were conducted.

Maternity and Child Health Services.—There are seven maternity homes and a maternity and child welfare centre. The maternal and child health staff conducted 2,430 labour cases while the other qualified Maternity Assistants attended to 117 cases. There is a Family Planning Unit in the Health Unit to carry out Family Planning work.

Orientation Training Centre, Poonamallee.—During 1961 five courses were held and 26 Medical Officers, 56 Sanitarians, 18 Health Visitors and 37 Maternity Assistants received the training.

The States of Madras, Gujarat, Maharashtra, Andhra Pradesh, Mysore and Pondichery participated in the training programme.

Port and Marine Hygiene.—Particulars under this head are shown in Annexure 'M'.

CHAPTER IV—FOOD AND NUTRITION.

RAINFALL AND PRICES OF FOOD STUFFS.

The average monthly district rainfall during the different seasons in 1961 as compared with 1960 and the normal is given below.—

Period.	Average monthly district rainfall in millimeters.		
	1960.	1961.	Normal.
(1)	(2)	(3)	(4)
Intermonsoon (January to May)	33.8	39.4	37.2
South West Monsoon (June to September)	87.3	136.1	93.2
North East Monsoon (October to December)	200.6	108.4	168.1

The total rainfall in 1961 was about normal though the rainfall during North east monsoon period was low.

The average wholesale prices of principal food grains were higher when compared to the previous year as shown below :—

	Prices in rupees per quintal of 100 kilograms.			
	Rice Ind. sort.	Cholam.	Cambu.	Ragi.
(1)	(2)	(3)	(4)	(5)
1960	62.7	41.5	41.7	40.1
1961	65.6	41.8	42.9	40.7

In order to control the steady rise in the price of rice, the fair price shops opened in 1960 continued in 1961. The economic conditions of agricultural labourers were generally satisfactory.

DIET AND NUTRITION SURVEYS.

Sixteen family diet surveys were conducted among 488 families following different occupations in eight districts by the usual method of weighing of raw food stuffs. Besides family diet surveys, diet surveys were conducted in 6 jails, two certified schools and one Rural Extension Training Centre. Sixty-nine per cent of the families surveyed belonged to the income group Rs. 50—100. The details are furnished in Annexures N to R.

NUTRITION LABORATORY.

The analysis of institutional diets conducted by the Nutrition Laboratory is given in the Annexure 'S'. The results of analysis of curry powder, ragi puttu and groundnut toffee are given in Annexure, 'T'.

The Laboratory undertook preparation of cheap recipes with locally available food stuffs. In order to popularise the use of ragi, preparation of food stuffs with ragi was done and demonstration classes conducted.

Animal experiments.—These are designed to estimate the effect on the growth by consumption of different quantities of protein supplied by addition of different pulses. Annexure 'U' gives details of the experiment.

UNICEF milk feeding programme.—Till the end of December 1961 a quantity of 7 lakhs pounds of skim milk powder out of the allotted 15 lakhs pounds for 1961-62 was released by the UNICEF. The plan of operation of this scheme for 1961-62 included a total number of 60,000 beneficiaries. The distribution is done mainly through maternal and child welfare centres and primary health centres in districts. Three meetings of the State Co-ordinating Committee were held in the year.

FOOD ADULTERATION.

Food samples were received from 232 local bodies. The total number of samples received was 13,399 in 1961. Reports on 9,011 samples were sent. Of these 2,504 samples (27.3 per cent) were adulterated. In Madras City 7,163 food samples were analysed by the Public Analyst of the Corporation of Madras. Of these, 1,649 (23 per cent) were adulterated. Details are given in Annexure 'V'.

Research work was carried out during the year on the suitability of a number of solvent systems for chromatographic separation of food colours on paper. A solvent containing ethylene-diamine-hydrate, butanol and water was found to be very useful for this purpose.

Proposals were submitted to the Government for establishing a well-equipped State Food and Drug Laboratory at a cost of Rs. 7 lakhs. The expert committee constituted for the purpose recommended the construction of a Public Health Institute.

HOTEL SANITATION.

Out of 29,738 hotels, restaurants and shops where eatables were sold, fly proof glass cases were provided in 21,929 and in others arrangements were not satisfactory.

FOOD CONTROL.

In order to ensure supply of good quality milk, officers of the Animal Husbandry Department examined the milch animals belonging to jails and co-operative milk supply societies. The Veterinary Assistant Surgeons of the Animal Husbandry Department inspected 127 public slaughter houses and examined 17,72,323 animals for fitness of slaughter.

CHAPTER V.—ENVIRONMENTAL HYGIENE.

RURAL WATER SUPPLY (COMPREHENSIVE) SCHEME.

As per this scheme potable water to rural areas is provided by putting up bore wells, closed wells with overhead tanks and taps and draw wells. A sum of Rs. 116 lakhs has been allotted for the scheme. This sum is merged in the village works grant of Panchayat Unions envisaged in the Panchayat Union development budget.

NATIONAL WATER SUPPLY AND SANITATION (RURAL) SCHEME.

This scheme is intended to provide adequate water supply and sanitation facilities in villages with a population of not more than 5,000 where cholera and other water borne diseases are widely prevalent. In 68 out of 239 villages taken up under this scheme water supply and sanitation facilities have been provided and an expenditure of Rs. 5.67 lakhs has been incurred upto 31st December 1961.

URBAN WATER SUPPLY AND DRAINAGE SCHEME.

During the year under report investigation was in progress for 31 water supply schemes and 8 drainage schemes. Detailed plans and estimates for 42 water supply schemes and 5 drainage schemes in stages were prepared and detailed plans and estimates for 31 water supply schemes and 4 drainage schemes for technical sanction were submitted. Technical sanction was accorded by the Sanitary Engineer for 29 miscellaneous works. Administrative approval of Government was given to 7 water supply schemes. Technical sanction by the Chief Engineer (General) has been accorded to 23 water supply schemes and 3 drainage schemes. Forty one municipal water supply schemes and 17 panchayat water supply schemes were under execution.

(Six pilot water supply schemes have been put into beneficial use during the year. The total estimated cost of all water supply and drainage schemes during the period under review were Rs. 1,374.32 lakhs and Rs. 141.96 lakhs respectively.)

RURAL URBAN SANITATION.

Construction of latrines.—The construction of improved sanitary type of latrines in rural areas was continued till March 1961. Under this scheme 14,679 latrines were constructed during the plan period.

PROVISION OF SANITARY FACILITIES IN SCHOOLS.

This has been included in the Third Five Year Plan. This envisages latrine-cum-urinal and drinking water facilities to 500 selected schools during the plan period. Suitable type design for latrine-cum-urinal was evolved by the Research-cum-Action Project, Poonamallee. The Plan provision for the scheme is Rs. 10 lakhs.

WATER ANALYSIS.

The public water supplies were periodically examined as to their hygienic quality.

The number samples of water tested for bacteriological, chemical, physical and biological characteristics was 10,190 during 1961. 2,701 samples were tested in connection with the research work at the Experimental Station, Madras and other research and investigation schemes. This comprised tests for D.D.T., Flourine, Folidol, Arsenic, available chlorine, etc.

The samples of water taken from 104 rural water supply schemes under investigation were declared as unfit for drinking purposes owing to certain defects.

One important activity of the department is that relating to the examination of industrial wastes and determining suitable methods for their treatment and disposal. One hundred and forty samples were tested in this connection. The pilot plant for the treatment of tannery wastes at Vaniyambadi started functioning at the close of the year and samples from the different experimental treatment units are being examined.

Several important field investigations were also conducted by the department. The Water Analysis Branch has been recognised by the University of Madras for post-graduate research leading upto the degree of Ph.D.

In order to suggest measures towards improvement of Laboratory Services several proposals were recommended by the Expert Committee constituted by the Government.

The Director of Public Health continued as the President of Water and Sewage Purification Committee.

PRODUCTION OF COMPOST.

This scheme is intended to provide cheap organic manure to the ryots for increasing the crop yields by utilising the available urban waste, night soil etc. A total quantity of over 3.5 lakhs tons was produced and distributed to the ryots.

TOWN PLANNING AND HOUSING.

The Director of Town Planning has reported that the enforcement of the provisions of the Madras District Municipalities Act relating to street and building regulations was satisfactory in all the municipal areas.

Lay outs for an area extending over 2,357 acres nearly providing 31,420 house sites were prepared in connection with industrial housing scheme, low income housing scheme, Corporation housing scheme, etc.

The Government sanctioned 23 schemes for construction of 1,700 houses under the Second Five Year Plan and 2 schemes for construction of 200 houses under the Third Five Year Plan.

FAIRS AND FESTIVALS.

During the year 600 fairs and festivals were held. Special sanitary arrangements were undertaken during important festivals like Arokiamatha at Velanganni, Kandooli at Nagoor, Krithigai Deepam at Tiruvannamalai, Vaikunta Ekadasi at Srirangam and Arudra Darsanam at Chidambaram. The returning pilgrims from the Brahmotsavam festival at Kancheepuram brought cholera infection to a few villages in Kancheepuram taluk.

RESEARCH-cum-ACTION PROJECT, POONAMALLUR.

The Ford Foundation Aid for the project ceased on 30th September 1961 and the Government ordered continuance of the project as the research wing of the State Health Education Bureau.

The Government have ordered that the project will work to promote integrated health programmes in the villages.

The main objective of the Engineering section of the project was to evolve a low cost sanitary acceptable type of latrine. Studies on pit cover slabs, flap trap latrines, efficiency of different pans were completed and reports prepared.

GENERAL.

The recurring and non-recurring expenditure incurred during 1961 by the project and extended project was Rs. 1,62,116.

CHAPTER VI.—GENERAL ADMINISTRATION.

Annexure 'W' gives the strength of the officers in the Public Health Department as on 31st December 1961.

During the year a post of Assistant Director of Public Health for Smallpox Eradication Programme, nine posts of Health Officers for Smallpox Eradication Programme for a period of six months, five posts of Health Officers for Yaws Eradication, two posts of Health

Educators, two posts of Assistant Engineers, one post of Assistant Professor of Social and Preventive Medicine, one post of Epidemiologist and one post of Statistician were sanctioned.

The State Malaria Officer was deputed abroad on Travel Fellowship under Point Four Programme and one Health Officer for training in Health Education.

During the year a Health Officer who was under suspension has been dismissed and one Health Officer appointed under emergency provisions expired. Three Health Officers and one Senior Entomologist have retired from service.

Public Health Subordinate Staff.—Annexure 'X' gives details of the strength as on 31st December 1961. Consequent on the formation of Panchayat Unions and abolition of district boards on 2nd October 1961, the Government have sanctioned 364 posts of Health Inspectors for Panchayat Unions. Out of 127 Range Health Inspectors, 121 were withdrawn and posted to the Panchayat Unions. The 4 Health Inspectors in Kanyakumari district, one in Shencottah taluk of Tirupelveli district and one attached to the King Institute, Guindy were retained.

Health Staff under local bodies.—The strength of the Public Health Staff under the local bodies is shown in Annexure 'Y'. In addition to these personnel, a large number of sanitary workers were employed for conservancy and other works.

FINANCE.

The actual expenditure incurred (including adjustment of the Accountant-General, Madras) in the Madras State on 'Public Health' during the year 1960-61 is as detailed below.

I. Under the control of the Director of Public Health :—

(a) Staff:—

	RS.
(i) Pay of Officers	5,85,093
(ii) Pay of Establishment	29,01,886
(iii) Dearness Allowance	9,18,390
(iv) Travelling Allowance and other compensatory allowance.	6,24,219
(v) Fixed Travelling Allowance	1,69,037
(vi) Medical charges	2,848
(vii) Stipends to trainees	31,984
(viii) Honoraria	6,133
Total	52,39,590
(b) Other charges	1,43,71,594
	1,96,11,184

II. Under the control of others:—

1. Sanitary Engineer	(—) 2,47,203
2. Director of Town Planning	1,25,349
3. Director of Medical Services	20,41,840
4. Board of Revenue	56,09,540
5. Charges in England	1,444
	75,30,970
Grants for public Health purposes	11,00,793
GRAND TOTAL	2,82,42,947

Out of the total grants of Rs. 11,00,793 incurred under the head "39. Public Health (b) grants for Public Health purposes", grants amounting to Rs. 6,79,557 relates to this department.

Besides the expenditure of Rs. 1,96,11,184 controlled by the Director of Public Health, expenditure amounting to Rs. 1,89,254 was also incurred by this department during the year 1960-61 (Rs. 15,083 incurred in respect of Vital Statistics Establishment and Rs. 1,74,171 incurred in respect of training of Thayis.)

Statement showing the expenditure and receipts for the year 1960-61 in respect of Corporation of Madras and Municipalities.

Subject.	Expenditure.		Receipts excluding Government grants and contributions.	
	Corporation of Madras.	Municipalities.	Corporation of Madras.	Municipalities.
	RS.	RS.	RS.	RS.
Medical relief	14,85,951	15,03,396	85,184	18,002
Preventive medicine ..	92,79,424	1,55,82,197	3,96,992	34,57,488
Water Supply and Drainage.	1,06,32,542	81,23,728	1,00,34,024	81,37,859
Town Planning	5,42,234	9,59,319	80,000	8,39,714
Total ..	2,19,40,151	2,64,68,640	1,05,96,209	1,24,53,063

The total receipts under Revenue accounts of this State for the year 1960-61 was Rs. 9,20,327 lakhs. Total expenditure incurred in the State during the year under review under the major head "39. Public Health" and "38. Medical" was Rs. 282.43 lakhs and Rs. 548.71 lakhs respectively. The percentage of expenditure (Rs. 202.91 lakhs) incurred by the department to the total expenditure (282.43 lakhs) under the head "39. Public Health" is 71.8.

PUBLIC HEALTH BOARD.

The Public Health Board met twice in June and November 1961. The proceedings of the meetings are given in Annexure 'Z'.

CONCLUDING REMARKS.

The work of the officers and the public health staff continued to be generally satisfactory.

H. M. SHARMA,
Director of Public Health, Madras.

CHART No. 2.
MADRAS STATE
INFANT MORTALITY RATES
(1951-61)

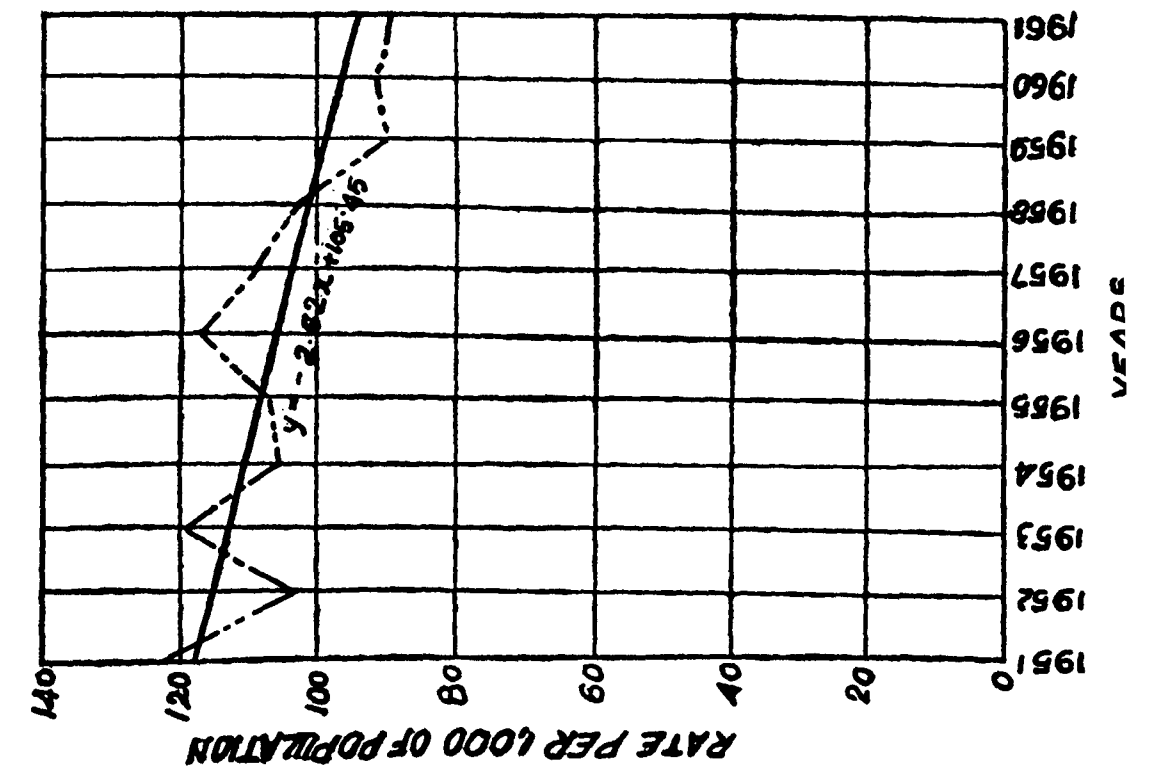


CHART No. 1.
MADRAS STATE
BIRTH AND DEATH RATES (1951-61)

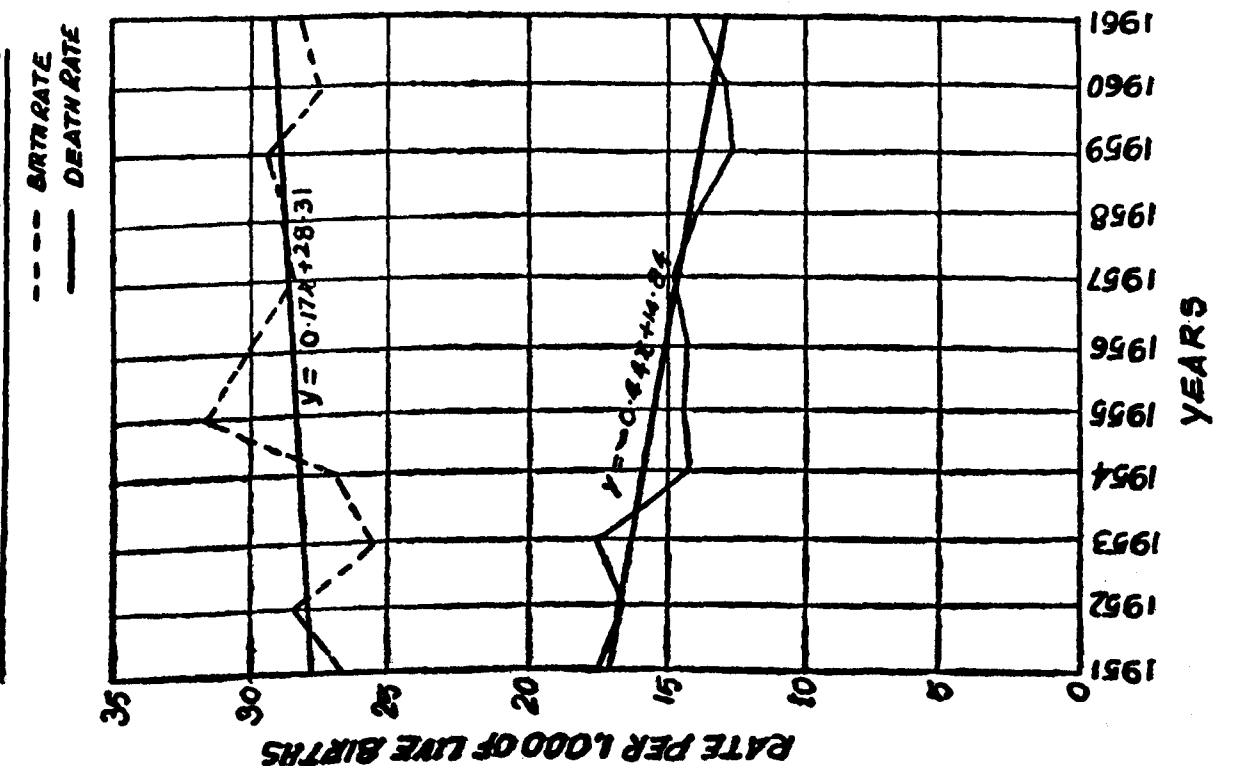
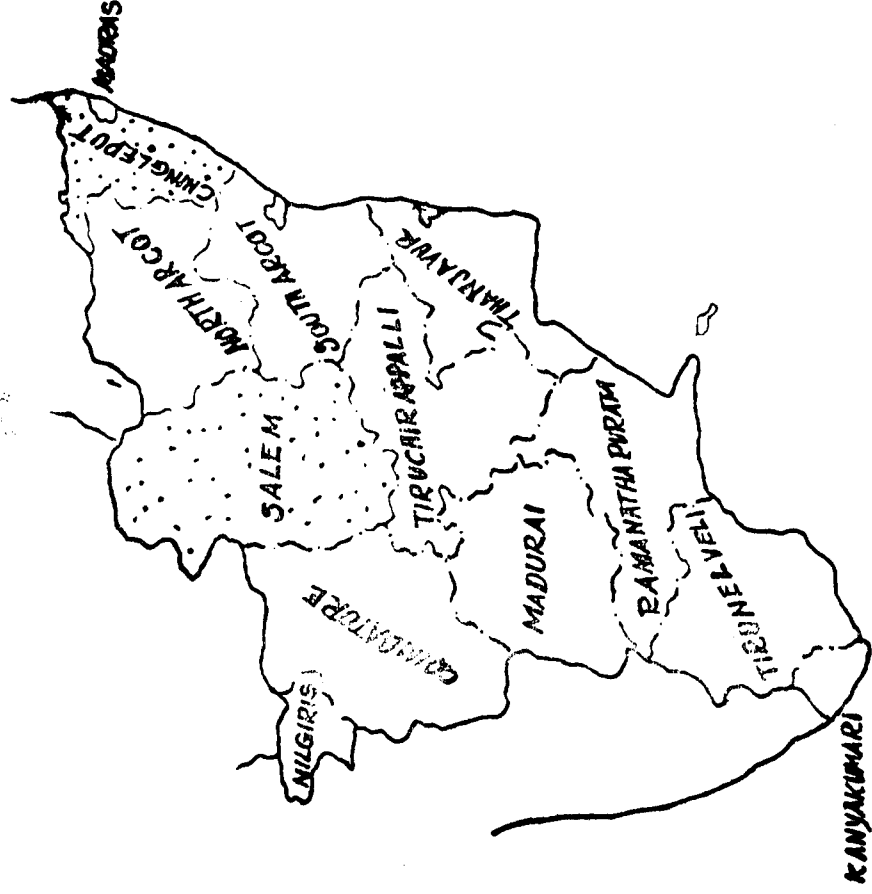


CHART NO. 3.

MADRAS STATE
MAP OF CHOLERA MORTALITY RATES

(1961)



DETH RATES PER 100,000 OF POPULATION

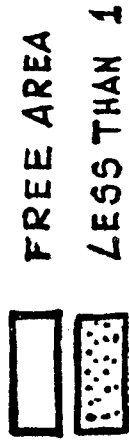
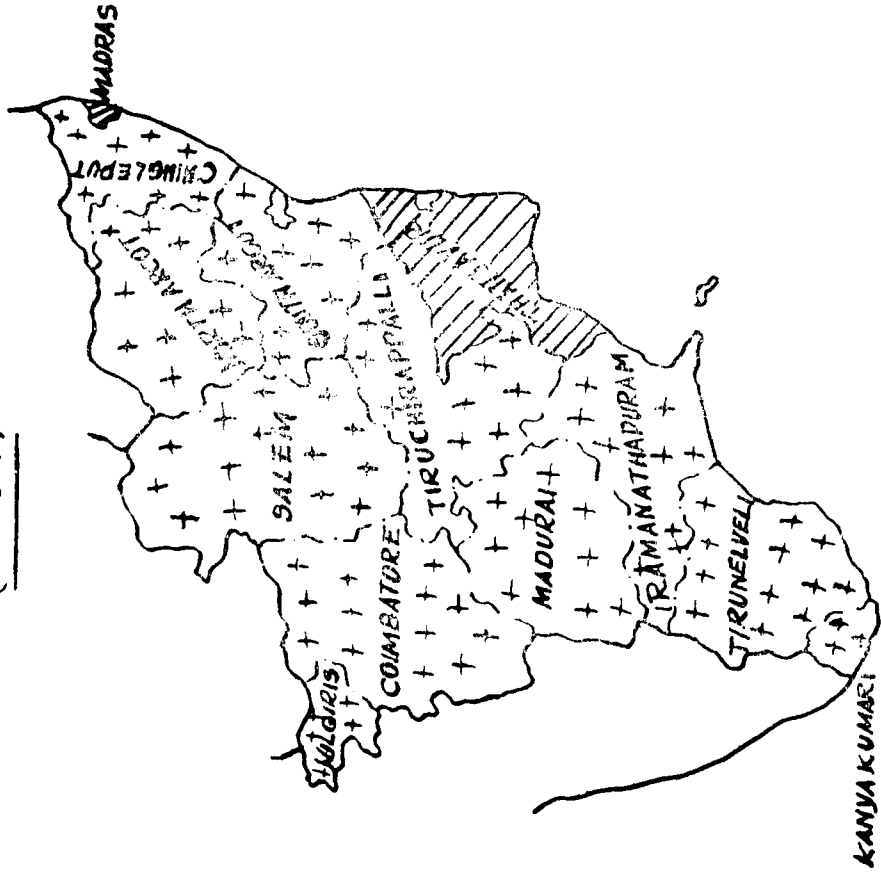


CHART NO. 4.

MADRAS STATE
MAP OF SMALL-POX MORTALITY RATES

(1961)



DEATH RATES PER 100,000 OF POPULATION

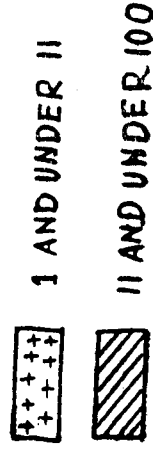


CHART NO. 5.

MADRAS STATE
DEATHS FROM CHOLERA (1951-61)

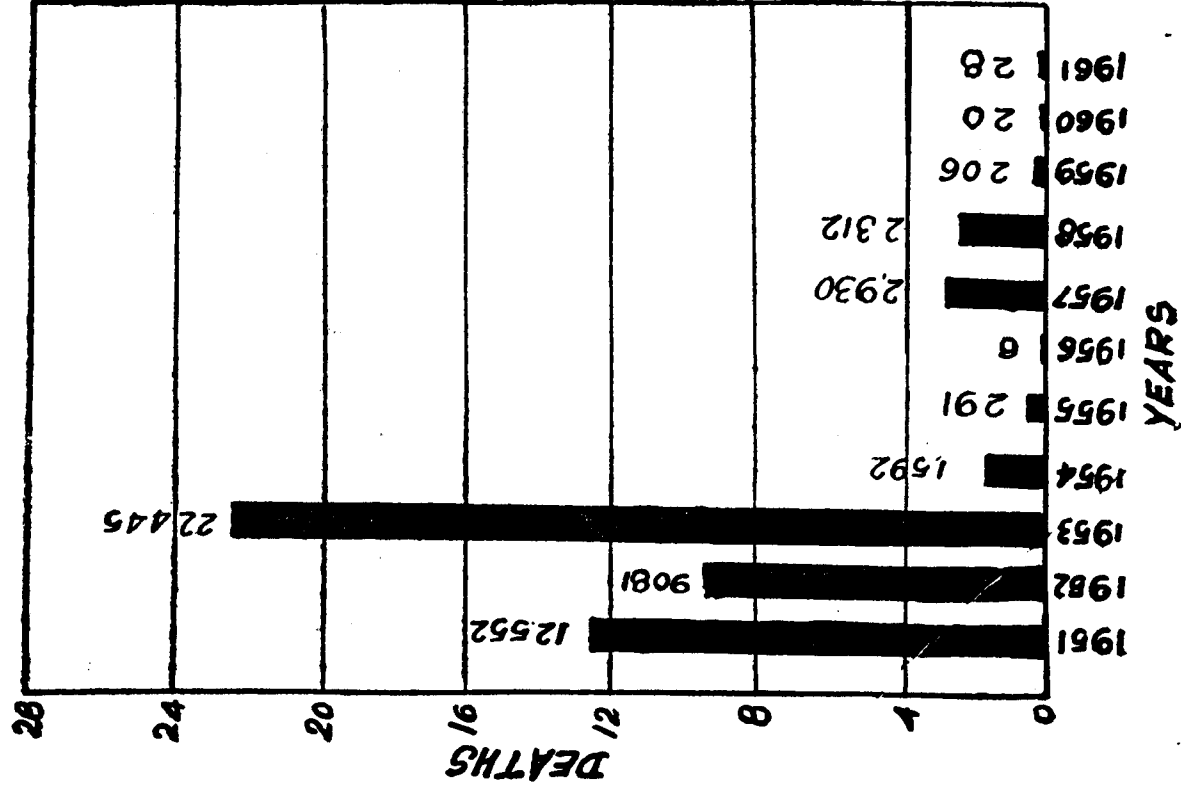
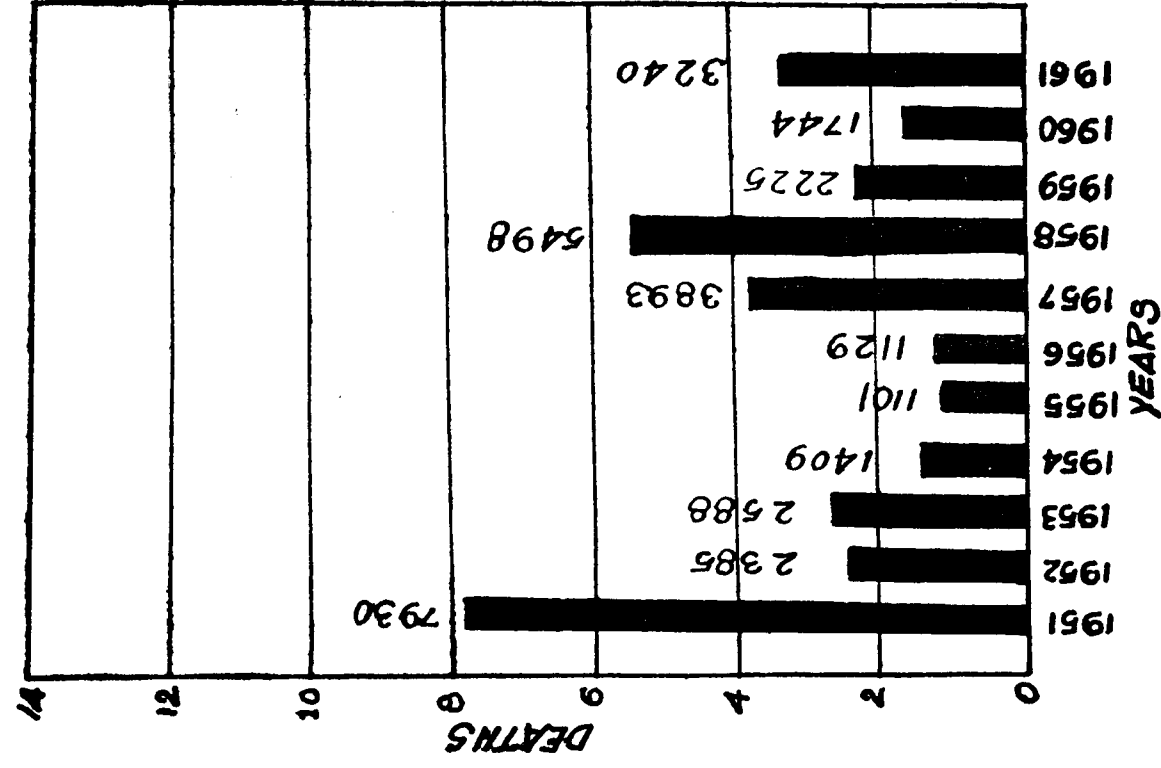


CHART NO. 6.

MADRAS STATE
DEATHS FROM SMALL-POX (1951-61)

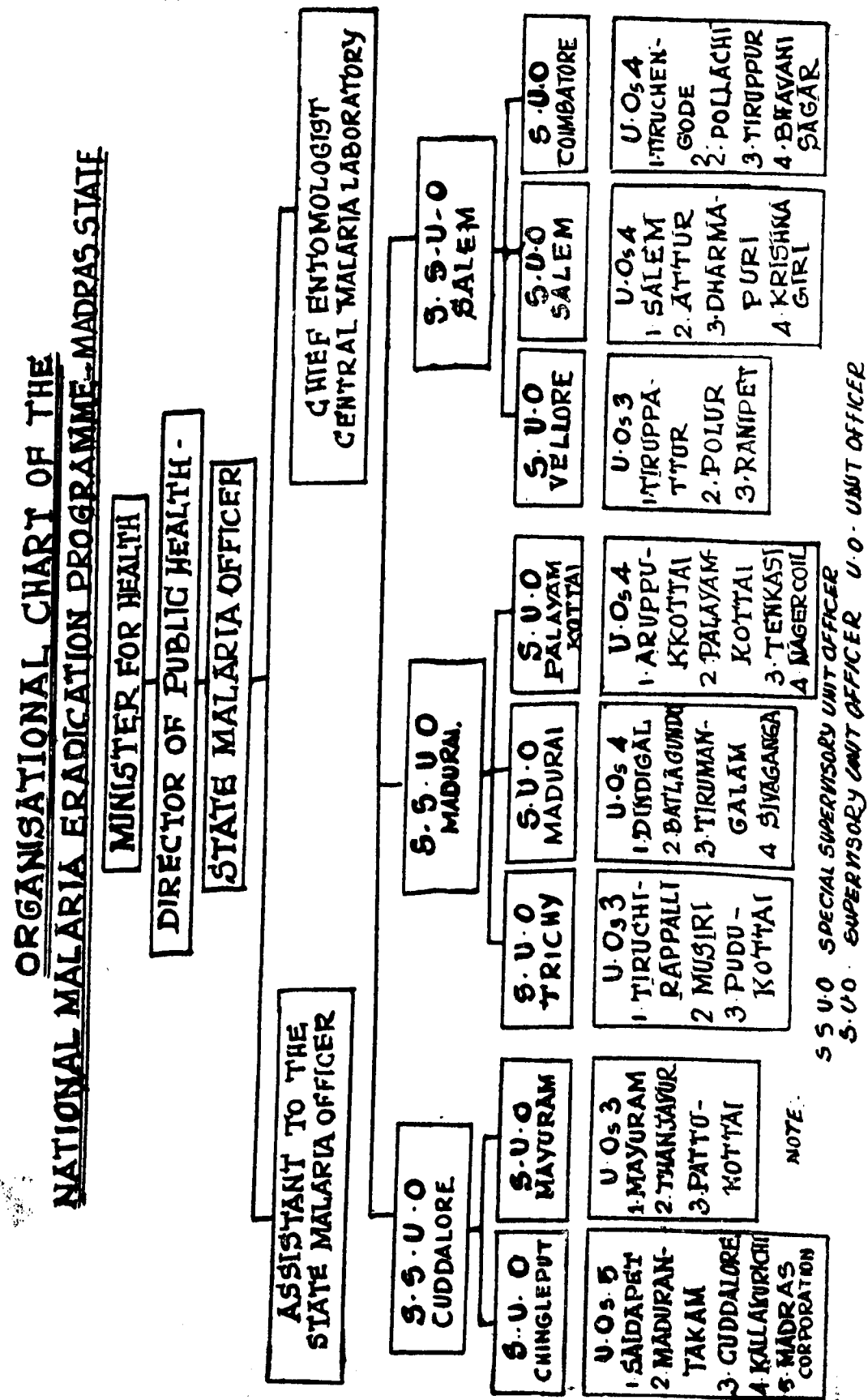


ANNEXURE A.

Statement showing the number of monthly village birth and death returns due from each district and number of returns not received for the year 1961.

Serial number and districts.						Number of returns due for 1961.	Number of returns not received for 1961.	Percentage of returns not received to total number due.
1	Chingleput	..	..	..	..	24,966	2,922	11.70
2	North Arcot	..	..	..	..	24,552	1,015	4.13
3	South Arcot	..	..	..	..	27,204	3,462	12.73
4	Thanjavur	..	..	..	..	29,151	789	2.71
5	Tiruchirappalli	..	..	..	..	18,405	927	5.04
6	Madurai	..	..	..	..	12,816	378	2.95
7	Ramanathapuram	..	..	..	..	18,336	3,024	16.49
8	Tirunelveli	..	..	..	..	13,248	220	1.66
9	Salem	..	..	..	..	19,417	601	3.10
10	Coimbatore	..	..	..	..	13,176	1,091	8.28
11	Nilgiris, The	..	..	..	..	1,872	318	16.99
12	Kanyakumari	..	..	..	..	912	-	-
Total ..						2,04,055	14,747	7.2

CHART NO 7



ANNEXURE B.

Statement showing the live births by months, sex and area in Madras State recorded during the year 1961.

Serial number and month.	Rural.			* Urban.			Total.		
	Males.		Total.	Males.		Total.	Males.		Total.
	(2)	(3)		(5)	(6)		(8)	(9)	
(1)			(4)		(7)			(10)	
1 January	23,854	21,887	45,341	12,159	11,429	23,588	35,813	33,116	68,929
2 February	23,031	21,575	44,606	12,501	11,683	24,184	35,532	33,258	68,790
3 March	25,556	23,206	48,762	14,275	13,599	27,874	39,831	36,805	76,636
4 April	25,259	22,654	48,213	14,531	13,811	28,342	39,790	36,795	76,585
5 May	25,348	23,160	48,514	14,074	13,302	27,433	39,419	36,528	75,947
6 June	25,328	23,817	49,645	13,991	13,315	27,306	39,819	37,132	76,951
7 July	27,793	25,689	53,482	13,870	13,105	26,975	41,663	38,794	80,457
8 August	26,449	24,055	50,504	13,698	12,780	26,478	40,147	36,835	76,982
9 September	25,859	23,884	49,743	13,547	12,890	26,437	39,406	36,774	76,180
10 October	24,984	23,041	48,025	14,067	13,069	27,136	39,051	36,110	75,161
11 November	23,859	21,983	45,842	14,645	13,733	28,378	38,504	35,716	74,220
12 December	23,118	21,467	44,585	15,914	15,147	31,061	39,032	36,814	75,846
Total ..	300,738	276,524	577,262	167,269	157,923	325,192	468,007	434,447	902,454

* Includes Municipal and Census towns with a population of 5,000 and above.

ANNEXURE C.

Statement showing deaths by months, sex and area in Madras State recorded during 1961.

Serial number and month.	Rural.			* Urban.			Total.		
	Males.		Total.	Males.		Total.	Males.		Total.
	(2)	(3)		(5)	(6)		(8)	(9)	
(1)			(4)		(7)			(10)	
1 January	16,487	17,288	33,775	5,669	5,620	11,289	22,156	22,908	45,064
2 February	14,731	15,380	30,111	5,280	5,230	10,510	20,011	20,610	40,621
3 March	14,213	14,803	29,016	5,343	5,291	10,634	19,556	20,094	39,650
4 April	12,187	12,832	25,019	4,918	4,787	9,705	17,105	17,619	34,724
5 May	11,986	12,590	24,576	4,819	4,752	9,571	16,805	17,342	34,147
6 June	12,037	12,986	25,023	4,519	4,591	9,170	16,616	17,577	34,193
7 July	13,479	14,143	27,622	5,219	4,965	10,184	18,698	19,108	37,806
8 August	13,029	13,472	26,501	4,958	4,930	9,888	17,987	18,402	36,389
9 September	12,021	12,299	24,320	4,565	4,575	9,140	16,586	16,874	33,460
10 October	12,375	12,617	24,992	4,491	4,418	8,909	16,866	17,035	33,901
11 November	13,671	13,669	27,340	4,851	4,658	9,509	18,522	18,327	36,849
12 December	14,751	14,835	29,586	5,858	5,591	11,449	20,609	20,426	41,035
Total ..	180,967	186,914	327,881	60,550	59,408	119,958	221,517	226,322	447,839

* Includes Municipal and Census towns with a population of 5,000 and above.

ANNEXURE D.

Still Births recorded in districts exclusive of municipal towns and in districts inclusive of municipal towns in 1961.

Serial number and name of districts.	District exclusive of Municipal Towns.			Municipal Towns.			Districts inclusive of Municipal Towns.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1 Madras	..	..	..	1,124	1,004	2,128	1,124	1,004	2,128
2 Chingleput	203	169	372	198	169	367	401	338	739
3 North Arcot	96	99	195	575	489	1,064	671	588	1,259
4 South Arcot	159	134	293	169	123	292	328	257	585
5 Thanjavur	250	184	434	695	512	1,207	945	696	1,641
6 Tiruchirappalli ..	174	146	320	462	358	820	636	504	1,140
7 Madurai	128	114	242	667	571	1,238	795	685	1,480
8 Ramanathapuram ..	196	163	359	308	248	556	504	411	915
9 Tirunelveli	354	271	625	286	214	500	640	485	1,125
10 Salem	168	117	285	303	368	671	471	485	956
11 Coimbatore	88	68	156	768	623	1,391	856	691	1,547
12 Nilgiris, The .. .	99	76	175	56	55	111	155	131	286
13 Kanyakumari .. .	104	78	182	29	15	44	133	93	226
Total	2,019	1,619	3,638	5,640	4,749	10,389	7,659	6,368	14,027

ANNEXURE E.

Infant deaths and death rates in districts exclusive of municipal towns in municipal towns and in districts inclusive of municipal towns in 1961.

Serial number and name of districts.	Municipal areas.		Districts exclusive of Muni- cipal areas.		Districts inclusive of Muni- cipal areas.	
	Number.	Rate per 1,000 live births.	Number.	Rate per 1,000 live births.	Number.	Rate per 1,000 live births.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1 Madras	8,365	115.8	..	..	8,365	115.8
2 Chingleput	547	76.9	5,213	107.6	5,760	103.7
3 North Arcot	2,064	97.4	8,532	114.9	10,596	111.0
4 South Arcot	442	49.6	5,991	98.8	6,433	92.5
5 Thanjavur	1,349	66.5	5,452	91.2	6,801	84.9
6 Tiruchirappalli ..	859	53.9	5,065	77.8	5,924	73.1
7 Madurai	2,509	88.6	5,251	84.6	7,760	85.9
8 Ramanathapuram ..	998	68.4	2,982	67.1	3,980	67.4
9 Tirunelveli	1,219	98.3	7,459	109.0	8,678	107.4
10 Salem	983	72.2	5,606	74.5	6,589	74.2
11 Coimbatore	2,093	67.2	5,269	90.4	7,362	82.3
12 Nilgiris, The .. .	297	82.1	519	66.1	816	71.2
13 Kanyakumari .. .	234	41.3	1,442	63.0	1,676	58.7
Total	21,959	86.1	58,781	90.8	80,740	89.5

ANNEXURE F.

Infant deaths by age groups in the municipal towns in the State of Madras during the year 1961.

Name of municipalities.	Under one month.		One to six months.		Six to twelve months.		Total under one year.		
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Madras	1,760	1,441	1,257	1,231	1,330	1,346	4,347	4,018	8,365
Kancheepuram	101	79	35	42	39	40	174	161	335
Tiruvallur	8	11	7	6	9	8	24	25	49
Chingleput	40	34	7	6	11	11	58	51	109
Tiruvottiyur	9	7	6	8	15	9	30	24	54
Vellore	208	136	110	95	86	87	404	318	722
Tiruvannamalai .. .	51	41	48	24	37	39	136	104	240
Gudiyatham	77	52	53	56	36	36	166	144	310
Vaniyambadi	29	23	38	41	29	36	96	100	196
Tiruppathur	19	13	18	9	11	17	48	39	87
Walajapet	7	7	4	2	10	5	21	14	35
Ambur	42	29	18	23	24	20	84	72	156
Arni	32	22	35	31	24	26	91	79	170
Arkonam	2	4	3	3	10	9	15	16	31
Arcot	8	5	7	7	10	3	25	15	40
Ranipet	13	15	11	9	13	16	37	40	77
Cuddalore	54	50	37	15	28	23	119	88	207
Chidambaram	21	21	10	13	21	19	52	53	105
Villupuram	32	17	4	10	14	7	50	34	84
Tindivanam	8	9	2	6	11	10	21	25	46
Thanjavur	135	114	31	45	44	57	210	216	426
Kumbakonam	92	75	32	23	38	44	162	142	304
Nagapattinam	50	36	59	36	40	29	129	101	230
Mayuram	47	35	10	16	21	9	78	60	138
Mannargudi	63	32	22	16	14	16	99	64	163
Tiruvarur	22	22	13	8	13	10	48	40	88
Tiruchirappalli .. .	158	111	50	41	77	67	285	219	504
Karur	43	19	15	18	17	8	75	45	120
Srirangam	28	25	8	6	4	6	40	37	77
Pudukkottai	58	40	12	12	23	13	93	65	158
Madurai	497	416	253	233	215	242	965	891	1,856
Dindigul	76	51	26	19	31	34	133	104	237
Bodinayakanur	20	13	4	7	22	16	46	36	82
Periyakulam	51	32	19	15	18	17	88	64	152
Palnni	43	27	11	12	16	14	70	53	123
Cumbum	12	17	8	5	9	8	29	30	59
Rajapalayam	46	25	31	44	38	29	115	98	213
Srivilliputhur	51	37	16	12	11	13	78	62	140

ANNEXURE F—cont.

Infant deaths by age groups in the municipal towns in the State of Madras during the year 1961—cont.

Name of municipalities.	Under one month.		One to six months.		Six to twelve months.		Total under one year.		Total.
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Virudhunagar	36	27	10	15	17	17	63	59	22
Karaikudi	19	16	15	12	14	16	48	44	92
Devakottai	14	13	3	7	11	16	28	36	64
Sivakasi	15	13	3	3	3	12	21	28	49
Aruppukottai	50	52	15	19	22	26	87	97	184
Ramanathapuram	45	50	11	7	13	8	69	65	134
Tuticorin	130	84	69	74	60	79	259	237	496
Tirunelveli	85	72	35	47	34	33	154	152	306
Palayamkottai	101	10	10	11	19	24	130	135	265
Melapalayam	21	17	6	18	19	15	46	50	96
Shencottah	25	9	6	6	7	3	38	18	56
Salem	137	152	145	154	172	164	454	470	924
Rasipuram	16	20	4	5	8	6	28	31	59
Coimbatore	577	472	146	155	102	106	679	578	1,257
Erode	64	45	21	27	35	30	120	102	222
Tiruppur	64	45	16	23	28	17	108	85	193
Pollachi	63	46	26	28	20	15	109	89	198
Dharapuram	11	12	5	4	11	2	27	18	45
Udamalpet	14	11	4	3	7	8	26	22	48
Mettupalayam	24	27	8	7	8	9	40	43	83
Gobichettipalayam	17	16	3	5	4	2	24	23	47
Ootacamund	66	51	22	17	23	12	111	80	191
Coonoor	37	27	10	14	8	10	55	51	106
Nagercoil	43	37	16	27	21	13	80	77	157
Colachel	7	3	6	3	5	5	18	11	29
Kuzhithurai	2	1	2	2	2	5	6	8	14
Padmanabapuram	9	7	7	3	5	3	21	13	34
Total	5,764	4,568	2,934	2,901	3,097	3,056	11,590	10,369	21,959

ANNEXURE G.

Maternal deaths and death rates in districts exclusive of municipal towns, in municipal towns and districts inclusive of municipal towns in the State of Madras for the year 1961.

Serial number and district.	Municipal Towns.		Districts exclusive of Municipal Towns.		Districts inclusive of Municipal Towns.	
	Number.	Rate per 1,000 (live and still births).	Number.	Rate per 1,000 (live and still births).	Number.	Rate per 1,000 (live and still births).
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1 Madras	83	1.1	..	..	83	1.1
2 Chingleput	77	10.3	143	2.9	220	3.0
3 North Arcot	102	4.6	253	3.4	355	5.7
4 South Arcot	64	7.0	242	4.0	306	4.4
5 Thanjavur	115	5.4	300	5.0	415	5.1
6 Tiruchirappalli	67	4.0	248	3.8	315	3.8
7 Madurai	83	2.8	154	2.5	237	2.8
8 Ramanathapuram	65	4.3	84	1.9	149	2.5
9 Tirunelveli	92	7.1	332	4.8	424	5.2
10 Salem	89	6.2	223	3.0	312	3.5
11 Coimbatore	126	3.9	180	3.2	315	3.5
12 Nilgiris, The	12	3.2	17	2.1	29	2.5
13 Kanyakumari	12	2.1	126	5.5	138	4.8
Total	987	3.7	2,311	3.5	3,298	3.5

ANNEXURE H—cont.

Statement showing births and deaths as per detailed causes and as per ages at deaths in municipal towns with a population of 30,000 and above having Health Officers in the State of Madras in 1961—cont.

Municipal towns selected:—Aruppukkottai, Bodinayakanur, Chidambaram, Coimbatore, Cuddalore, Dindigul, Erode, Gudiyatham, Kanchipuram, Karur, Karaikudi, Kumbakonam, Madras, Mayuram, Narsipattinam, Ootacamund, Pudukkottai, Palani, Palayamkottai, Periyakulam, Seviliputhur, Thanjavur, Tiruchirappalli, Tirunelveli, Pollachi, Pudukkottai, Rajapalayam, Salem, Srirangam, Tiruppur, Tiruvannamalai, Tuticorin, Vaniyambadi, Vellore, Villupuram and Virudhunagar—cont.

Serial number and age group.	Venereal diseases.					Diseases of the nervous system.					Accidents of pregnancy and child birth.					Deficiency diseases.				
	Syphilis.	Gonorrhoea.	Others.	Convulsions.	Cerebral haemorrhage (apoplexy).	Tetanus.	Epilepsy.	Others.	Puerperal Sepsis.	Abortion.	Other accidents and diseases of pregnancy and parturition.	Beri-Beri.	Rickets.	Others.						
Under 24 hours ..	1	..	..	45	..	1	..	3	..	..	..	..	..	1	4,929,600					
2 Twenty-four hours and under one week ..	3	..	..	324	5	31	..	38	..	..	11	..	1	3						
3 One week and under one month ..	4	1	..	410	2	57	1	32	..	..	4	..	2	20						
4 One month and under three months ..	..	..	..	397	1	4	..	2	..	..	..	..	4	10						
5 Three months and under six months ..	..	1	..	558	4	4	1	45	..	..	..	2	34	57						
6 Six months and under one year ..	1	4	..	898	1	20	7	46	..	..	1	1	45	60						
Total under one year ..	9	6	..	2,632	13	117	9	166	..	..	16	3	86	151						
1 1 to 5 years ..	..	2	..	1,589	4	70	13	179	..	..	..	3	112	212						
2 5 to 10 years ..	..	..	..	126	5	91	4	76	..	..	..	..	6	40						
10 to 15 years ..	..	..	..	19	5	67	6	32	1	1	14	..	1	21						
4 15 to 20 years ..	..	..	..	15	1	38	8	41	37	8	118	..	1	21						
5 20 to 30 years ..	1	..	..	25	19*	121	18	123	113	52	261	..	..	61						
6 30 to 40 years ..	1	..	1	10	22	109	11	114	56	20	172	..	..	91						
7 40 to 50 years ..	5	..	1	5	32	87	5	142	12	3	25	..	..	99						
8 50 to 60 years ..	1	..	..	16	28	35	5	302	..	..	..	..	..	113						
9 60 years and upwards ..	3	6	..	7	27	20	..	412	..	1	..	..	..	157						
Total of all ages ..	30	14	6	4,444	153	755	88	1,587	219	85	606	6	206	946						
Rate per 1,000 of estimated mid-year population.	*	..	*	0.90	0.03	0.15	0.02	0.32	0.04	0.02	0.12	*	0.04	0.19						

HOB.—5A

REPORT ON HEALTH CONDITIONS IN MADRAS STATE DURING 1961

Serial number and age group.	Malignant diseases.										Congenital debility and malformation, premature birth.					Wounds and accidents.					Snake-bite, scorpion-sting, etc.					Suicides.				
	Alimentary tract.	Genito urinary.	Breast.	Other regions.	Ankylosomiasis.	Diphtheria.	Leprosy.	Alcoholism.	(51)	(52)	(53)	(54)	(55)	(56)	(57)															
1 Under 24 hours ..	..	..	..	..	..	..	..	3	768	..	..	3	..	..	..															
2 Twenty-four hours and under one week ..	..	..	..	..	..	..	..	2	3,617	..	..	4	..	..	..															
3 One week and under one month ..	..	..	..	3	..	..	..	1	1,450	..	..	2	..	..	..															
4 One month and under three months ..	..	..	..	..	..	..	..	2	284	..	..	2	..	..	..															
5 Three months and under six months ..	..	..	..	..	..	..	..	..	282	..	..	7	..	..	..															
6 Six months and under one year ..	1	..	..	1	..	..	..	..	205	..	..	18	1	..	..															
Total under one year ..	1	..	..	4	..	..	..	8	6,606	..	..	36	1	..	..															
1 1 to 5 years ..	1	..	..	14	..	..	..	..	145	10	86	4	..	..	1															
2 5 to 10 years ..	4	..	1	8	1	..	1	..	11	10	95	6	..	..	2															
3 10 to 15 years ..	1	..	1	8	1	..	1	..	3	12	103	9	..	..	11															
4 15 to 20 years ..	1	..	..	12	..	5	6	..	4	6	98	9	..	..	45															
5 20 to 30 years ..	4	3	1	21	2	14	10	..	1	18	216	9	..	..	92															
6 30 to 40 years ..	12	5	7	71	..	19	14	..	12	13	196	6	1	..	42															
7 40 to 50 years ..	11	5	6	79	1	50	23	..	5	12	166	9	..	..	39															
8 50 to 60 years ..	9	7	7	92	..	108	21	..	8	3	130	6	1	..	45															
9 60 years and upwards ..	21	6	3	67	..	116	12	..	100	2	141	3	..	..	23															
Total of all ages ..	65	26	26	376	5	312	83	8	6,295	83	1,267	62	2	..	300															
Rate per 1,000 of estimated mid-year population.	0.01	0.01	0.01	0.06	*	0.06	0.02	*	1.40	0.02	0.26	0.01	*	0.03																

* Less than 0.01

ANNEXURE H—cont.

Statement showing births and deaths as per detailed causes and as per ages at deaths in municipal towns with a population of 30,000 and above having Health Officers in the State of Madras in 1961—cont.

Municipal towns selected :—Aruppukkottai, Bodinayakanur, Chidambaram, Coimbatore, Cuddalore, Dindigul, Erode, Gudiyatham, Kancheepuram, Karur, Karukudi, Kumbakonam, Madras, Madurai, Mayuram, Nagapattinam, Ootacamund Palni, Palayamkottai, Periyakulam, Srivilliputhur, Thanjavur, Tiruchirappalli, Tirunelveli, Pollachi, Pudukkottai, Rajapalayam, Salem, Srirangam, Tiruppur, Tiruvannamalai, Tuticorin, Vaniyambadi, Vellore, Villupuram and Virudhunagar—cont.

Serial number and age group.	Estimated mid-year population for 1961.	Poisons.	Old age.	All other causes.	Total deaths from all causes.	Remarks.	
						(61)	(62)
1 Under 24 hours	4,929,800	..	..	115	1,014		
2 Twenty-four hours and under one week.	..	..	..	751	5,267	Births	
3 One week and under one month	..	..	..	248	2,613	Deaths	
4 One month and under three months	..	..	..	138	1,200	Still-births	
5 Three months and under six months	..	..	..	707	4,127	Birth-rate	
6 Six months and under one year	..	..	..	761	5,551	Death-rate	
Total under one year	..	..	..	2,720	19,774	Still-birth-rate per 1,000 births (live and still).	
1 1 to 5 years	..	9	..	1,943	16,325		
2 5 to 10 years	..	3	..	372	3,884		
3 10 to 15 years	..	8	..	194	1,485		
4 15 to 20 years	..	38	..	264	1,834		
5 20 to 30 years	..	73	..	1,220	5,490		
6 30 to 40 years	..	27	..	1,154	5,374		
7 40 to 50 years	..	38	2	1,220	5,424		
8 50 to 60 years	..	14	207	1,650	6,534		
9 60 years and upwards	..	4	10,816	2,571	17,699		
Total of all ages	..	214	11,025	13,308	83,223		
Rate per 1,000 of estimated mid-year population.	..	0.04	2.24	2.70	16.88		

Serial number and districts.	Birth-rate.		Death-rate.	
	1961.	1960.	1961.	1960.
1 Chingleput	27.9	28.6	14.2	13.7
2 North Arcot	31.3	31.1	21.2	15.5
3 South Arcot	25.5	26.2	17.8	13.4
4 Thanjavur	25.0	24.0	12.1	11.0
5 Tiruchirappalli	26.5	26.6	14.0	12.8
6 Madurai	28.6	27.9	12.5	12.0
7 Ramanathapuram	27.3	30.2	11.7	13.7
8 Tirunelveli	29.9	29.4	15.7	15.5
9 Salem	23.7	23.0	9.8	9.3
10 Coimbatore	26.5	28.5	11.1	10.0
11 Nilgiris, The	31.2	28.6	8.5	8.0
12 Kanyakumari	28.5	25.7	10.3	9.4
Total	28.0	27.8	14.0	12.7

ANNEXURE I.

Birth and death rates corrected for non-receipt of birth and death returns.

Serial number and districts.	Birth-rate.		Death-rate.	
	1961.	1960.	1961.	1960.
1 Chingleput	27.9	28.6	14.2	13.7
2 North Arcot	31.3	31.1	21.2	15.5
3 South Arcot	25.5	26.2	17.8	13.4
4 Thanjavur	25.0	24.0	12.1	11.0
5 Tiruchirappalli	26.5	26.6	14.0	12.8
6 Madurai	28.6	27.9	12.5	12.0
7 Ramanathapuram	27.3	30.2	11.7	13.7
8 Tirunelveli	29.9	29.4	15.7	15.5
9 Salem	23.7	23.0	9.8	9.3
10 Coimbatore	26.5	28.5	11.1	10.0
11 Nilgiris, The	31.2	28.6	8.5	8.0
12 Kanyakumari	28.5	25.7	10.3	9.4
Total	28.0	27.8	14.0	12.7

ANNEXURE J.

Details of National Malaria Eradication Programme.

Serial number.	Jurisdiction of the unit.	Endemicity.	Vector.	Number of structures sprayed.
(1)	(2)	(3)	(4)	(5)
1	Nilgiris district and the taluks of Avanashi, Gobichettipalayam and Bhavani in Coimbatore district.	E & H.	F. & C.	215,480
2	Taluks of Palladam, Dharapuram and Erode in Coimbatore district	E. & H.	C. & S.	262,171
3	Taluks of Coimbatore, Pollachi and Udumalpet in Coimbatore district	E. & H.	F. & C.	254,603
4	Taluks of Tiruchengode and a portion of taluk of Namakkal in Salem district	E. & H.	C.	259,513
5	Taluks of Hosur and Krishnagiri in Salem district	E. & H.	F. & C.	217,271
6	Taluks of Dharmapuri and Omalur in Salem district	E. & H.	F. & C.	228,982
7	Taluks of Salem, Yercaud and Harur in Salem district	E. & H.	F., C. & S.	219,538
8	Taluks of Attur and Rasipuram and a portion of Namakkal taluk in Salem district.	E. & H.	F. & C.	191,187
9	Taluks of Tirupathur, Gudiyattam and Vellore in North Arcot district	E. & H.	F. & C.	196,337
10	Taluks of Chengam, Polur and Tiruvannamalai in North Arcot district and taluk of Gingee in South Arcot district.	E. & H.	F. & C.	299,892
11	Taluks of Ranipet, Arkonam, Cheyyar and Wandiwash in North Arcot district.	H.	..	361,516
12	Taluks of Ponneri, Tiruvallur, Saidapet and Sriperumbudur in Chingleput district and periphery of Madras City.	E. & H.	C.	309,186
13	Taluks of Chingleput, Madurantakam and Kancheepuram in Chingleput district and taluks of Tindivanam in South Arcot district.	H.	..	362,293
14	Taluks of Villupuram and Cuddalore and portions of taluks of Vridhaachalam and Chidambaram in South Arcot district.	H.	..	303,237

ANNEXURE J—cont.

Details of National Malaria Eradication Programme—cont.

Serial number.	Jurisdiction of the unit.	Endemicity.	Vector.	Number of structures sprayed.
(1)	(2)	(3)	(4)	(5)
15	Taluks of Kallakurichi and Tirukkoyilur and a portion of the taluk of Vriddhachalam in South Arcot district.	E. & H.	F.	297,612
16	Taluks of Sirkali, Mayuram, Nannilam and Nagapattinam and a portion of the Mannargudi taluk in Thanjavur district and portion of taluk of Chidambaram in South Arcot district.	H.	..	315,160
17	Taluks of Kumbakonam, Papanasam and Thanjavur and portions of Mannargudi and Orathanad taluks in Thanjavur district.	nH.	..	269,479
18	Taluks of Pattukkottai, Arantangi and Tiruturaipoondi and portions of Mannargudi and Orathanad taluks in Thanjavur district.	H.	..	263,523
19	Taluks of Tiruchirappalli, Lalgudi and Udayarpalayam in Tiruchirappalli district and a portion of Vriddhachalam taluk in South Arcot district.	H.	..	368,323
20	Taluks of Karur, Musiri and Perambalur in Tiruchirappalli district and a portion of Vriddhachalam taluk in South Arcot district.	E. & H.	F. & S.	353,743
21	Taluks of Kulithalai, Kulathur, Alangudi and Tirumayam in Tiruchirappalli district.	E. & H.	C.	338,134
22	Taluks of Palni, Dindigul and Melur in Madurai district	E. & H.	F. & C.	345,152
23	Taluks of Nilakkottai, Kodaikanal and Periyakulam in Madurai district	E. & H.	F. & C.	272,742
24	Taluks of Tirumangalam and Madurai in Madurai district and taluk of Srivilliputhur in Ramanathapuram district.	E. & H.	F. & C.	309,157
25	Taluks of Tirupathur, Tiruvadanai, Sivaganga, Paramakudi and Ramanathapuram in Ramanathapuram district.	E. & H.	C.	344,131
26	Taluks of Sattur, Aruppukottai, and Mudugulathur in Ramanathapuram district and taluk of Koilpatti in Tirunelveli district.	H.	..	352,278
27	Taluks of Tirunelveli, Srivaikuntam, Tiruchendur and Nanguneri in Tirunelveli district.	E. & H.	C. & S.	347,426
28	Taluks of Sankarankoil, Tenkasi, Ambasamudram and Shencottah in Tirunelveli district.	E. & H.	F. & C.	299,343
29	Kanyakumari district	E. & H.	F., C. & S.	254,278
30	Madras City except peripheral areas	E. & H.	S.	..
			Total ..	8,411,687

NOTE.—F. = Anopheline fluviatilis.
S. = Anopheline stephensi.
E. = Endemic.

C. = Anopheline Culicifacies.
H. = Hypo-endemic.

ANNEXURE JJ:

Maternal and Child Health staff sanctioned during 1961.

Serial number.	Name of the institutions.	Woman Medical Officers.				Resident Matrons.				Health Visitors.			
		Number till the end of 1960.	Number sanctioned during 1961.	Number abolished during 1961.	Number at the end of 1961.	Number till the end of 1960.	Number sanctioned during 1961.	Number abolished during 1961.	Number at the end of 1961.	Number till the end of 1960.	Number sanctioned during 1961.	Number abolished during 1961.	Number at the end of 1961.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1	Government	3	..	..	3	3	..	..	3	147	2	..	149
2	District Boards	15	..	15	..	2	..	2	..	17	..	17	..
3	Municipalities	43	2	1	44	13	2	..	15	49	7	1	53
4	Corporation	31	1	..	32	16	..	..	16	88	..	..	88
5	Panchayat Union Councils*	..	..	..	..	..	2	..	..	..	..	..	..
6	Voluntary Organizations.	18	13	..	31	4	..	..	4	4	..	..	4
Total ..		110	16	16	110	38	4	2	40	305	9	18	294

Serial number.	Name of the institutions.	Maternity Assistants.				Ayahs.				Compounders.			
		Number till the end of 1960.	Number sanctioned during 1961.	Number abolished during 1961.	Number at the end of 1961.	Number till the end of 1960.	Number sanctioned during 1961.	Number abolished during 1961.	Number at the end of 1961.	Number till the end of 1960.	Number sanctioned during 1961.	Number abolished during 1961.	Number at the end of 1961.
(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)
1	Government	1,130	12	..	1,142	621	..	..	621	2	..	..	2
2	District Boards	475	2	477	..	294	2	296	..	..	..	..	..
3	Municipalities	453	23	..	476	309	17	..	326	6	1	..	7
4	Corporation	290	..	..	290	79	7	..	86	30	..	1	29
5	Panchayat Union Councils*	..	477	..	477	..	296	..	296	..	..	..	..
6	Voluntary Organizations.	240	3	37	206	87	1	..	88	4	1	..	5
Total ..		2,588	517	514	2,591	1,390	323	296	1,417	42	2	1	43

* Staff transferred to the Panchayat Union Councils from the District Boards.

ANNEXURE K.

Statement showing the Maternal and Child Health Services in 1961.

	Government.	District Boards.	Municipalities.	Voluntary Organizations
1 Brought under care—				
(i) Total number of mothers whether she had pre-natal care or not before confinement.	478,010	158,389	208,723	18,649
(ii) Number of pre-natal cases	369,441	148,944	181,611	16,613
(iii) Number of labour cases	125,252	41,954	103,016	10,442
(iv) Number of infants	167,004	37,257	106,972	36,772
(v) Number of pre-school children	97,411	14,180	50,603	..
2 Home visits by—				
(i) Medical Officers (Maternity and Child Health)—				
(a) Pre-natal	28,654	7,515	14,615	..
(b) Post-natal	653	136	15,903	..
(c) Infants	412	122	16,191	..
(d) Pre-school	388	47	7,802	..
(ii) Health visitors—				
(a) Pre-natal	164,941	27,489	61,531	1,569
(b) Post-natal	103,163	12,064	49,603	3,340
(c) Infants	91,797	13,718	129,902	2,528
(d) Pre-school	29,978	60	41,698	5,052
(iii) Maternity Assistants—				
(a) Pre-natal	949,150	265,054	709,520	5,234
(b) Post-natal	685,879	188,131	272,151	15,337
(c) Infants	338,513	147,222	407,075	19,292
(d) Pre-school	70,852	3,920	6,568	15,820
3 Clinics—				
(i) Number held	51,143	4,629	23,435	153
(ii) Pre-natal	64,324	14,471	231,237	939
(iii) Post-natal	53,078	9,478	84,506	329
(iv) Infants	29,311	20,483	61,719	139
(v) Pre-school	39,872	10,853	62,084	273
4 Other activities—				
(i) Number of mother classes held	20,512	5,435	8,369	1,279
(ii) Attendance	273,243	42,455	216,588	1,195
5 Milk distribution—				
(i) Prenatal mothers	3,051,635	29,395	253,439	16,639
(ii) Post-natal mothers	262,944	53,344	145,012	7,711
(iii) Infants	284,486	56,529	324,252	8,775
(iv) Pre-school (1 to 5 years)	623,817	229,528	309,545	19,725
(v) School (5 to 14 years)	55,570	47,807	393,954	19,795
6 Magic lanterns lectures—				
(i) Number	127	..	13,684	1
(ii) Attendance	60,773	..	26,540	300
7 School Visited for health education—				
(i) Number of schools visited	3,765	403	328	13
(ii) Number of health talks given	7,021	973	3,106	30
i Attendance	157,821	38,043	70,925	900

ANNEXURE L.

Maternity and Child Welfare Centres and Homes maintained and the staff during the year 1961.

Serial number and name of district.	Government.		Local bodies.		Voluntary Organisations.		Woman Medical Officers.	
	Rural.	Urban.	Rural.	Urban.	Rural.	Urban.	Rural.	Urban.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1 Chingleput	90	..	41	8	15	..	2	3
2 Poonamallee	8	..	..	..	..	..	2	..
3 South Arcot	95	..	25	18	1	..	1	3
4 North Arcot	89	..	22	13	9	..	..	4
5 Thanjavur	119	..	38	16	8	2	4	8
6 Tiruchirappalli	92	..	24	20	21	..	1	11
7 Madurai	125	..	27	22	17	..	5	10
8 Ramanathapuram	124	..	59	23	13	..	1	5
9 Tirunelveli	97	..	17	25	67	2	..	6
10 Coimbatore	134	..	23	33	12	..	2	17
11 Salem	105	..	42	14	9	..	2	2
12 Nilgiris	40	..	10	8	5	..	..	3
13 Kanyakumari	46	..	..	7	..	..	..	..
14 Madras	..	..	..	45	..	..	1	32
Total	1,164	..	328	252	177	4	21	104

Serial number and name of the district.	Health Visitors.		Maternity Assistants.		Ayahs.	
	Rural.	Urban.	Rural.	Urban.	Rural.	Urban.
(10)	(11)	(12)	(13)	(14)	(15)	(16)
1 Chingleput	13	1	159	38	97	15
2 Poonamallee	4	..	18	..	18	..
3 South Arcot	13	1	97	27	76	20
4 North Arcot	12	2	120	44	68	38
5 Thanjavur	20	4	153	51	91	38
6 Tiruchirappalli	14	9	122	59	73	33
7 Madurai	22	11	221	100	85	46
8 Ramanathapuram	15	4	183	48	128	34
9 Tirunelveli	12	3	172	37	85	24
10 Coimbatore	22	10	195	95	86	79
11 Salem	11	4	140	27	103	24
12 Nilgiris	5	2	44	16	41	17
13 Kanyakumari	5	3	46	11	7	1
14 Madras	1	88	..	290	..	86
Total	169	142	1,670	843	958	455

ANNEXURE M.
Health of Minor Ports.

REPORT ON HEALTH CONDITIONS IN MADRAS STATE DURING 1961

(1)	(2)	Arriving vessels.						Departing vessels.					
		Foreign ports.			Coastal ports.			Foreign ports.			Coastal ports.		
		(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
		Cargo total vessels.	Cargo vessels inspected.	Cargo crew inspected.	Passenger total vessels.	Passengers inspected.	Passengers crew inspected.	Cargo total vessels.	Cargo inspected.	Cargo crew inspected.	Passenger total vessels.	Passengers inspected.	Passenger crew inspected.
1	Nagapattinam	236	..	..	30	14,132	380	4	..	..	..	..	..
2	Cuddalore	22	22	894	..	..	..	..	..	..	..	..	..
3	Tuticorin	444	107	1,406	..	..	..	276	..	..	309	38,901	45
4	Dhanushkodi	..	..	..	..	..	..	..	..	..	..	..	..
5	Kilakkarai	16	..	124	..	..	..	..	..	..	..	..	..
6	Adirampattinam	..	..	..	..	..	..	..	..	..	..	..	..
7	Porto Novo	14	..	..	..	..	..	7	..	..	..	..	..
8	Kulasekarapatnam	..	..	..	..	..	..	..	..	..	..	..	..
9	Pamban	27	..	..	..	..	..	131	..	..	..	..	..
10	Tondi	..	..	..	..	..	..	..	..	..	..	..	..
11	Colachel	..	..	..	..	..	..	..	..	..	..	..	..

Serial number and
name of the port.

REPORT ON HEALTH CONDITIONS IN MADRAS STATE DURING 1961

		Arriving vessels.						Departing vessels.					
		Foreign ports.			Coastal ports.			Foreign ports.			Coastal ports.		
		(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)
		Cargo total vessels.	Cargo inspected.	Cargo crew inspected.	Passenger total vessels.	Passengers inspected.	Passenger crew inspected.	Cargo total vessels.	Cargo inspected.	Cargo crew inspected.	Passenger total vessels.	Passenger inspected.	Passenger crew inspected.
1	Nagapattinam	212	210	1,985	29	11,591	..	27	23	..	..	..	..
2	Cuddalore	22	22	894	..	..	..	..	..	..	..	..	..
3	Tuticorin	167	..	..	..	..	..	277	..	..	..	..	..
4	Dhanushkodi	..	..	..	..	..	..	..	..	..	..	..	..
5	Kilakkarai	18	643	97	..	..	..	..	..	..	309	..	..
6	Adirampattinam	..	..	..	..	..	..	..	..	..	..	..	..
7	Porto Novo	..	..	..	..	..	..	21	..	..	..	..	..
8	Kulasekarapatnam	..	..	..	..	..	..	..	3	38	..	..	..
9	Pamban	19	..	..	..	..	..	12	..	51	..	..	..
10	Tondi	..	..	..	..	..	..	..	..	..	..	..	..
11	Colachel	..	..	..	..	..	..	..	..	..	..	..	..

* Vaccination.

† Anti-Cholera inoculation.

ANNEXURE N.

Particulars regarding family Diet surveys conducted during the year 1961.

Serial number and name of district.	Name of the village/ town.	Period of survey.	Monthly income group.	Number of families.	Composition of families.				Total consumption unit per week.	Average consumption unit per family per day.	Main occupation.
					Males.		Females.				
					Adults.	Children.	Adults.	Children.			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1 Madras ..	Guindy ..	March 1961 ..	B ..	11	21	5	14	7	282.7	3.7	Skilled workers.
2 South Arcot ..	Marakkanam ..	April 1961 ..	C ..	19	44	12	38	19	689.7	5.2	Do.
3 Chingleput ..	St. Thomas Mount ..	May 1961 ..	B ..	32	69	18	51	33	1,027.6	4.6	Salt pan workers.
4 Chingleput ..	Alandur ..	May 1961 ..	C ..	15	19	11	22	6	340.9	3.2	Miscellaneous workers.
5 Chingleput ..	Tiruvanniyurkuppam ..	June 1961 ..	A ..	17	28	14	39	8	531.6	4.5	Do.
6 North Arcot ..	Vaniyambadi ..	June 1961 ..	B ..	1	1	1	1	1	24.5	3.5	Do.
7 Salem ..	Attur ..	June 1961 ..	B ..	15	27	12	26	11	441.9	4.2	Do.
8 Chingleput ..	Pallavaram ..	September 1961 ..	C ..	14	31	11	34	10	332.6	5.4	Do.
9 Chingleput ..	Chrompet ..	September 1961 ..	B ..	31	65	15	73	38	1149.8	5.3	Fishermen.
10 Salem ..	Mechery ..	October 1961 ..	B ..	28	48	26	47	24	844.8	4.3	Tannery workers.
11 Kanyakumari ..	Manavalakurichi ..	November 1961 ..	C ..	4	14	..	10	6	193.2	6.9	Do.
12 Chingleput ..	Koyambedu ..	November-December 1961.	A ..	25	32	22	40	21	659.1	3.8	Glass factory workers.
13 Madurai ..	Kallupatti ..	December 1961 ..	C ..	5	6	5	8	4	124.3	3.6	Do.
14 North Arcot ..	Kani Illuppai ..	December 1961 ..	B ..	4	4	3	5	1	78.4	2.8	Port Trust Quarry workers.
15 Coimbatore ..	Poongar ..	December 1961 ..	C ..	16	17	21	22	20	447.3	4.0	Do.
16 Salem ..	Periamuthur and Nek-kundhi.	December 1961 ..	A ..	11	22	18	23	13	448.7	5.8	Do.
				21	22	29	26	34	645.4	4.4	Tannery workers.
				9	17	5	9	18	301.7	4.8	Do.
				23	27	23	29	39	609.9	4.2	Soap stone workers.
				7	10	15	9	7	254.1	5.2	Do.
				25	33	45	33	31	785.0	4.5	Workers in a mineral factory.
				5	7	10	9	8	191.1	5.5	Do.
				1	1	..	1	1	18.2	2.6	Workers in a Tiles factory.
				20	26	17	27	9	455.6	3.3	Do.
				9	19	9	21	10	351.1	5.6	Do.
				7	9	2	12	3	165.9	2.6	Miscellaneous workers.
				20	29	17	30	16	544.8	3.9	Do.
				3	4	2	5	..	67.9	3.2	Do.
				3	3	2	3	5	79.1	3.8	Agriculturists.
				12	23	6	25	10	394.7	4.7	Do.
				15	32	10	35	17	560.6	5.8	Do.
				3	4	..	5	3	76.0	3.6	Mostly agriculturists.
				17	24	18	30	16	519.4	4.4	Do.
				10	27	10	22	6	404.9	5.8	Do.
				1	..	..	1	..	6.3	0.9	Agriculturists and coolies.
				24	39	24	34	20	697.8	4.2	Do.
				5	10	3	10	5	175.0	5.0	Do.

A—Less than Rs. 50. B—Rs. 50 to Rs. 100. C—Rs. 100 and above.

A—Less than Rs. 50.

B—Rs. 50 to Rs. 100.

C—Rs. 100 and above.

ANNEXURE O-1.

Average daily intake of foodstuffs in ounces per consumption unit per day by families in the income group "below Rs. 50 per mensem".

	Place of survey.			
	Alandur (Chingleput), Kallupatti (Madurai).	Pallavaram (Chingleput).	Koyambedu (Chingleput).	Kani Illuppai (North Arcot), Poongar (Coimbatore), Periamuthur and Nekkundhi (Salem).
	Periods of survey.			
	May and December 1961.	September 1961.	November to December 1961.	December 1961.
	Occupational group.			
	Miscellaneous workers.	Port Trust Quarry workers.	Workers in a Tiles Factory.	Agriculturists.
(1)	(2)	(3)	(4)	(5)
Total consumption unit per week	190.4	8.4	18.2	161.4
Food Stuffs.				
Rice—raw milled ..	..	..	2.3	..
Rice—boiled milled ..	7.6	8.2	6.9	11.1
Rice—raw handpounded ..	0.7	..	..	..
Rice—boiled handpounded ..	..	..	..	5.6
Cambu ..	3.1	..	..	1.1
Ragi ..	2.7	10.6	5.4	3.6
Wheat ..	..	0.6	..	..
Cholam ..	2.4	..	..	0.8
Total cereals ..	16.5	19.4	14.6	22.2
Redgram dhal ..	0.6	1.0	0.7	0.6
Bengalgram dhal ..	..	0.2	0.2	*
Bengalgram roasted ..	0.2	..	0.1	*
Blackgram dhal ..	..	*	..	..
Greengram dhal ..	..	..	0.1	..
Field Beans dry ..	..	..	..	..
Total pulses ..	0.8	1.4	1.1	0.7
Leafy vegetables ..	..	0.9	0.4	0.2
Other vegetables ..	1.0	2.2	0.6	1.5
Roots and Tubers ..	0.2	1.5	0.7	0.5
Total vegetables ..	1.2	4.6	1.7	2.2
Milk cow's ..	..	..	..	..
Milk buffalo's ..	0.1	..	..	..
Total milk ..	0.1	..	..	..
Fats and oils ..	0.1	0.5	0.3	0.3
Meat/Fish/eggs ..	0.1	2.9	0.7	0.4
Condiments ..	0.5	1.7	1.0	0.6
Fruits ..	..	0.3	0.2	..
Sugar and Jaggery ..	*	..	..	..
Nuts ..	*	0.4	..	..
Other food stuffs ..	0.3	..	..	..

* Less than 0.1

ANNEXURE O-2.

Average daily intake of food stuffs in ounces per consumption unit per day by families in the income group (Rs. 50—100 per mensem).

(1)	Place of survey.					
	Guindy (Madras).	Marakkanam (South Arcot).	St. Thomas Mount and Alandur (Chingleput), Kallupatti (Madurai).	Thiruvanniyur kuppam (Chingleput).	Vaniyambadi (North Arcot) Chromepet (Chingleput).	Mechery (Salem).
	Period of survey.					
	March 1961.	April 1961.	May and December 1961.	June 1961.	June and September 1961.	October 1961.
Occupational group.						
	Skilled workers. (2)	Salt pan workers. (3)	Miscellaneous. (4)	Fisherman. (5)	Tannery workers. (6)	Soap stone workers. (7)
Total consumption unit per week	282.7	1,027.6	1,327.6	1,149.8	1,490.2	669.9
<i>Food stuffs.</i>						
Rice-raw milled	5.0	..	1.2	..	*	..
Rice-boiled milled	8.1	13.0	9.9	18.6	15.1	9.0
Rice-raw handpounded	..	..	0.2	..	..	..
Rice-boiled handpounded	..	..	*	..	..	..
Wheat	2.1	..	0.2	*	..	..
Ragi	..	2.9	0.3	..	1.6	5.9
Cholam	..	..	1.0	..	..	..
Cambu	..	..	0.8	..	..	0.5
Italian millet	..	..	..	..	..	..
Samai	..	..	..	..	..	..
Varagu	..	..	0.1	..	..	..
Kudraivali rice	..	..	0.7	..	..	..
Maize	..	..	0.1	..	..	..
Total cereals	15.2	16.0	14.5	18.6	16.7	15.4
Redgram dhal	1.0	0.2	0.9	0.4	0.6	0.5
Bengalgram dhal	0.1	0.1	0.2	0.1	*	0.2
Bengalgram roasted	0.1	*	0.1	*	*	*
Blackgram dhal	0.3	*	0.4	*	..	*
Greengram dhal	0.1	*	*	*	*	*
Cowgram dhal	0.1	*	..	..	*	*
Field beans dry	*	0.1	*	..	*	*
Total pulses	1.5	0.5	1.6	0.5	0.7	0.8
Leafy vegetables	0.8	0.3	0.3	0.2	0.5	0.6
Other vegetables	2.4	2.0	1.4	1.0	1.2	1.5
Roots and tubers	1.1	0.5	0.7	0.7	0.8	1.3
Total vegetables	4.3	2.8	2.4	1.8	2.5	3.4
Milk cow's	2.0	0.2	1.4	*	..	0.4
Milk buffalo's	2.4	..	0.5	..	..	..
Milk products	0.2	..	0.6	..	..	..
Total milk and milk products	4.6	0.2	2.5	*	..	0.4
Fats and oils	0.4	0.1	0.4**	0.3	0.3**	0.3**
Meat/fish/eggs	0.3	1.0	0.4	2.1	1.3	0.7
Condiments	0.9	0.6	0.9	0.6	0.7	1.0
Fruits	0.2	0.1	0.1	0.1	0.2	0.2
Sugar and jaggery	1.1	0.1	0.3	*	..	0.3
Nuts	0.1	*	0.2	*	*	0.1
Other foodstuffs	0.2	0.2	0.5	*	*	..

* Less than 0.1

** Inclusive of Ghee.

ANNEXURE O-2—cont.

Average daily intake of food stuffs in ounces per consumption unit per day families in the income group (Rs. 50—100 per mensem)—cont.

	Place of survey—cont.				
	Manavalakurichi (Kanyakumari).	Koyambedu (Chingleput).	Attur (Salem).	Pallavaram (Chingleput).	Kani Iluppal (North Arcot) Poongar (Coimbatore) Periyamuthur and Nekkundhi (Salem).
	Period of survey—cont.				
	November 1961.	November- December 1961.	June 1961.	September 1961.	December 1961.
Occupational group—cont.					
	Mineral Factory workers. (8)	Tiles Factory workers. (9)	Glass Factory workers. (10)	Port Trust quarry workers. (11)	Agriculturists. (12)
Total consumption per week	785.0	455.6	659.1	447.3	1,611.9
<i>Food stuffs.</i>					
Rice-raw milled	0.2	0.2	..	*	1.0
Rice-boiled milled	15.1	8.7	12.5	12.4	5.0
Rice-raw handpounded	..	..	..	..	1.3
Rice-boiled handpounded	..	5.1	..	..	1.7
Wheat	0.6	..	*	..	0.2
Ragi	..	1.7	0.3	5.1	4.2
Cholam	..	..	2.7	..	3.3
Cambu	..	..	..	..	0.3
Italian millet	..	..	..	..	*
Samai	..	..	..	..	*
Varagu	..	..	..	..	..
Kudraivali rice	..	..	..	..	..
Maize	..	..	..	..	..
Total cereals	15.9	15.7	15.5	17.6	17.1
Redgram dhal	0.5	0.6	0.4	0.5	0.8
Bengalgram dhal	0.1	0.1	*	0.2	0.1
Bengalgram roasted	0.1	*	0.1	*	*
Blackgram dhal	0.2	*	*	*	*
Greengram dhal	*	0.1	*	*	*
Cowgram dhal	..	..	*	..	*
Field beans dry	*	*	..	..	*
Total pulses	0.9	0.8	0.6	0.8	1.0
Leafy vegetables	0.6	0.6	0.2	0.9	0.4
Other vegetables	1.8	2.0	0.4	2.4	0.8
Roots and tubers	2.2	0.8	0.3	1.8	0.7
Total vegetables	4.5	3.4	0.9	5.1	1.9
Milk cow's	0.6	0.6	0.5	0.3	0.5
Milk buffalo's	0.2	0.1	0.1	..	0.1
Milk products	0.1	*	0.3	..	0.2
Total milk and milk products	0.9	0.7	0.8	0.3	0.8
Fats and oils	0.4**	0.4**	0.1**	0.3**	0.1**
Meat/fish/eggs	0.8	0.8	0.3	2.5	0.5
Condiments	0.7	0.6	0.6	0.9	0.5
Fruits	0.3	0.3	*	0.4	0.1
Sugar and jaggery	0.3	0.4	0.2	*	0.2
Nuts	0.2	0.1	0.1	0.2	0.1
Other foodstuffs	..	0.3	0.2	..	*

* Less than 0.1.

** Inclusive of Ghee.

ANNEXURE O-3.

Average daily intake of foodstuffs in ounces per consumption unit per day by families belonging to the income group "Rs. 100 and above per mensem".

Places of survey.									
	Periods of survey.					Occupational Group.			
	March 1961.	May and December 1961.	June and September 1961.	October 1961.	November and December 1961.	September 1961.	December 1961.	Port Trust quarry workers.	Agriculturists.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Total consumption unit per week									
689.7	1,132.1	494.9	124.3	254.1	191.1	351.1	448.7	1,140.5	
Food stuffs.									
Rice-raw milled	4.9	3.5	0.1	..	..	0.3	1.1	0.5	2.9
Rice-bolled milled	9.1	8.3	13.7	12.0	8.4	12.3	4.7	11.2	3.9
Rice-raw handpounded	..	..	..	..	..	..	..	..	0.6
Rice-bolled handpounded	..	..	..	..	..	..	7.4	..	5.6
Wheat	2.7	1.0	..	0.2	..	1.2	0.7	*	0.2
Ragi	..	*	2.7	1.4	7.1	..	2.7	6.1	4.5
Cholam	..	..	..	..	..	..	..	..	1.4
Camhu	..	..	..	..	0.5	..	..	..	0.5
Vernicelli	..	0.1	..	..	..	..	..	0.1	..
Total cereals	16.7	12.9	16.5	13.6	16.0	13.8	16.6	17.9	19.6
Redgram dhal	0.9	0.8	0.8	0.7	0.4	0.3	0.5	0.5	0.8
Bengalgram dhal	0.1	0.1	*	..	0.2	..	0.1	0.2	0.2
Bengalgram roasted	0.1	0.1	*	0.2	0.1	0.2	0.1	*	*
Blackgram dhal	0.2	0.4	..	0.4	0.1	0.2	0.1	*	*
Greengram dhal	0.1	*	..	..	..	0.1	0.1	*	*
Cowgram dhal	*	*	..	..	..	..	..	..	..
Fried Beans dry	*	*	..	..	..	0.1	*	..	*
Total pulses	1.4	1.4	0.7	1.3	0.8	1.1	0.9	0.8	1.0
Leafy vegetables	0.6	0.5	0.4	0.5	0.2	0.4	0.6	0.7	0.3
Other vegetables	1.8	1.9	1.1	0.7	1.4	1.8	1.4	1.4	1.3
Roots and tubers	1.3	1.3	0.5	0.7	1.0	1.5	0.9	1.0	0.9
Total vegetables	3.7	3.7	2.1	1.9	2.7	3.7	2.9	3.1	2.5
Milk (cow's)	0.9	5.4	..	0.9	0.1	1.3	0.4	0.1	0.4
Milk (buffalo's)	2.5	0.5	..	1.4	..	0.6	0.5	0.3	0.6
Milk products	0.3	1.5	..	0.9	..	0.3	0.2	..	0.6
Total milk and milk products	3.7	7.4	..	3.2	0.1	2.2	1.1	0.4	1.6
Fats and oils	0.4	0.9	0.3	0.3	0.3	0.4	0.3	0.3	0.3
Meat/Fish/Eggs	0.6	2.2	1.1	1.0	0.7	1.1	0.8	1.4	0.6
Condiments	0.8	1.1	0.9	0.9	1.1	0.9	0.5	0.9	0.7
Fruits	0.2	1.0	0.2	0.1	..	0.7	0.2	0.4	0.2
Sugar and jaggery	0.6	1.1	..	0.9	0.1	0.6	0.4	0.1	0.1
Nuts	0.2	0.3	..	0.3	0.1	0.3	0.1	0.2	*
Other food stuffs	0.3	1.6	*	0.9	..	..	0.1	..	..

* Less than 0.1.

† Inclusive of ghee.

ANNEXURE P-1.

Average daily intake of Nutrients per consumption unit per day by families in the income group "below Rs. 50 per mensem".

(1) Nutrients.	Places of survey.			
	Alandur (Chingleput), Kallupatti (Madurai).	Pallavaram (Chingleput).	Koyambedu (Chingleput).	Kani Illupai (North Arcot), Poongar (Coimbatore), Periamuthur and Nekkundhi (Salem).
	Periods of survey.			
	May and December 1961.	September 1961.	November 1961.	December 1961.
	Occupational group.			
	Miscellaneous Workers.	Port Trust quarry workers.	Workers in a Tiles Factory.	Agriculturists.
(2)	(3)	(4)	(5)	
Animal protein (gms.)	0.9	17.3	5.3	4.0
Vegetable protein (gms.)	38.0	54.9	38.3	54.1
Total proteins (gm.)	38.9	72.2	43.6	58.1
Fat (gms.)	11.2	36.8	17.5	24.3
Carbohydrate (gms.)	333.3	483.2	357.7	515.2
Calcium (mgms.)	447.7	1,534.9	791.4	592.0
Phosphorus (mgms.)	999.5	1,708.1	989.9	1,503.4
Iron (mgms.)	24.3	37.4	21.7	26.4
Vitamin A (I.U.)	6.8	109.3	58.8	1.9
Carotene (International Vitamin A Unit)	468.2	2,722.1	1,263.8	810.4
Vitamin A (Unit)	..	..	..	..
Vitamin B1 (mgms.)	1.2	2.1	1.3	1.8
Nicotinic Acid (mgms.)	13.1	17.7	11.8	20.5
Riboflavin (mgms.)	0.1	0.4	0.3	0.5
Vitamin C (mgms.)	11.0	75.2	38.3	20.7
Calories	1,816.5	2,493.0	1,743.3	2,419.5

ANNEXURE P-2.

Average daily intake of Nutrients per consumption units per day by families in the income group "Rs. 50-100 per mensem".

(1) Nutrients.	Places of survey.					
	Guindy (Madras).	Marakkanam (South Arcot).	St. Thomas Mount and Alandur (Chingleput), Kallupatti (Madurai).	Thiruvanniyur Kuppam (Chingleput).	Vaniyambadi (North Arcot), Chrompet (Chingleput).	Attur (Salem).
	Periods of survey.					
	March 1961.	April 1961.	May and December 1961.	June 1961.	June and September 1961.	June 1961.
	Occupational group.					
	Skilled workers.	Salt pan workers.	Miscellaneous.	Fishermen.	Tannery workers.	Glass Factory workers.
(2)	(3)	(4)	(5)	(6)	(7)	
Animal protein (gms.)	6.7	7.1	4.6	15.9	9.0	2.9
Vegetable protein (gms.)	47.5	35.4	43.7	39.5	38.2	37.6
Total protein (gms.)	54.2	42.5	48.3	55.4	47.3	40.5
Fat (gms.)	27.8	7.5	23.5	12.6	10.9	10.4
Carbohydrate (gms.)	420.2	382.6	392.0	442.3	401.0	373.4
Calcium (mgms.)	579.3	527.6	475.1	273.9	402.3	242.9
Phosphorus (mgms.)	1,104.0	984.2	1,025.9	1,039.6	952.8	896.6
Iron (mgms.)	21.6	17.8	24.1	17.0	19.2	18.2
Vitamin A (I.U.)	219.6	16.4	139.4	27.0	15.7	39.1
Carotene (International Vit. A. (Unit)	1,576.7	1,154.7	979.7	525.9	723.8	654.5
Vitamin B1 (mgms.)	1.0	1.3	1.1	1.3	1.3	1.2
Nicotinic Acid (mgms.)	14.2	16.8	14.6	22.6	20.1	16.4
Riboflavin (mgms.)	0.4	0.1	0.5	0.1	0.2	0.4
Vitamin C (mgms.)	58.3	28.7	30.1	20.2	26.3	15.2
Calories	2,177.4	1,960.6	1,888.1	2,069.7	1,910.3	1,744.2

(1) Nutrients.	Places of survey—cont.				
	Pallavaram (Chingleput).	Mechery (Salem).	Manavalakurichi (Kanyakumari).	Koyambedu (Chingleput).	Kani Illupai (North Arcot), Poongar (Coimbatore), Periamuthur and Nekkundhi (Salem).
	Periods of survey—cont.				
	September 1961.	October 1961.	November 1961.	November and December 1961.	December 1961.
	Occupational group—cont.				
	Port Trust quarry workers.	Soap stone workers.	Mineral Factory workers.	Tiles Factory workers.	Agriculturists.
(8)	(9)	(10)	(11)	(12)	
Animal protein (gms.)	15.2	4.9	5.8	8.7	3.9
Vegetable protein (gms.)	43.5	40.0	39.9	41.6	47.6
Total protein (gms.)	58.7	44.9	45.7	50.3	51.5
Fat (gms.)	22.6	20.1	19.5	18.2	15.2
Carbohydrate (gms.)	432.0	386.3	410.0	400.4	408.9
Calcium (mgms.)	891.3	904.6	355.1	539.1	687.0
Phosphorus (mgms.)	1,301.7	1,121.7	957.8	1,167.5	1,297.7
Iron (mgms.)	28.4	26.0	19.9	22.8	27.8
Vitamin A (I.U.)	89.3	44.3	48.5	53.9	43.4
Carotene (International Vit. A. Unit)	1,970.0	1,874.7	1,464.0	1,289.9	1,309.9
Vitamin B1 (mgms.)	1.6	1.5	1.1	1.3	1.8
Nicotinic Acid (mgms.)	19.3	15.3	19.8	17.8	12.7
Riboflavin (mgms.)	0.2	0.2	0.3	0.4	0.7
Vitamin C (mgms.)	63.9	52.4	47.7	46.2	30.3
Calories	2,161.8	1,900.3	1,994.4	1,956.7	1,977.8

Average daily intake of Nutrients per consumption unit per day by families in the income group "Rs. 100 and above per mensem".

Places of survey.	Guindy (Madras).	St. Thomas Mount and Alandur (Chingleput), Kaliupathi (Madurai).	Vaniyambadi (North Arcot), Chrompet (Chingleput).	Attur (Salem).	Pullavaram (Chingleput).	Machery (Salem).	Manavala- kurichi (Kanya- kumari).	Koyanbedu (Chingleput).	Kani Iyappai (North Arcot), Poongar (Coimbatore), Periyar Nuthur and Nekkundi (Salem).
Periods of survey.	March 1961.	May and December 1961.	June and September 1961.	June 1961.	September 1961.	October 1961.	November 1961.	November and December 1961.	December 1961.
Occupational group.	Skilled workers.	Miscella- neous.	Tannery workers.	Glass Factory workers.	Port Trust quarry workers.	Soap stone workers.	Mineral Factory workers.	Tiles Factory workers.	Agricul- turalists.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Animal protein (gms.)	7.9	18.9	7.4	7.9	8.5	4.2	8.2	7.4	6.4
Vegetable protein (gms.)	50.1	44.9	38.5	38.9	43.1	40.7	37.9	45.8	53.3
Total protein (gms.)	58.0	63.8	46.0	46.8	51.6	44.9	46.1	53.2	59.7
Fat (gms.)	28.6	50.7	15.2	24.1	21.3	20.9	24.6	18.8	20.3
Carbohydrate (gms.)	441.9	362.4	395.2	383.7	432.9	388.3	371.5	413.3	474.1
Calcium (mgms.)	546.2	668.7	521.5	562.2	921.4	938.8	373.7	633.5	659.9
Phosphorus (mgms.)	1,208.8	1,172.8	979.1	968.0	1,229.9	1,161.1	975.6	1,343.0	1,515.7
Iron (mgms.)	23.1	22.6	19.9	25.1	26.9	25.6	19.5	22.4	27.2
Vitamin A (I.U.)	193.5	555.2	15.2	138.1	70.0	67.5	160.0	120.2	75.1
Carotene (International Vit. A Unit)	1,266.3	1,333.5	883.2	1,291.8	1,554.8	909.8	962.2	1,269.1	944.1
Vitamin B1 (mgms.)	1.0	1.1	1.3	1.1	1.6	1.5	0.9	1.4	1.6
Nicotinic Acid (mgms.)	15.2	16.0	18.9	17.1	17.3	13.9	18.8	17.0	15.6
Riboflavin (mgms.)	0.5	0.8	0.2	0.3	0.2	0.2	0.3	0.5	0.6
Vitamin C (mgms.)	42.6	52.1	30.9	26.0	45.0	38.8	44.2	47.9	26.8
Calories	2,263.6	2,275.5	1,902.2	1,937.6	2,132.4	1,917.1	1,893.4	2,019.6	2,300.0

ANNEXURE Q-1.

Average consumption of foodstuffs in ounces per consumption unit per day in Institutions.

Periods of survey.	August 1962.	September 1961.	October 1961.	October 1961.
Name of the Institution.	Central Jail, Madras.	Central Jail, Vellore.	Borstal School, Palayamkottai.	Central Jail, Salem.
	B. class.	C. Class.	Punjab diet.	C. class.
(1)	(2)	(3)	Punjab diet.	(5)
Total consumption unit per week	77.0	14,716.5	56.0	18,351.5
Rice—				
Boiled milled	8.0	6.1	7.0	6.3
Raw and milled	..	..	..	..
Boiled homepounded	..	..	..	..
Raw homepounded	..	..	..	..
Maida flour	3.3	1.2	1.0	1.3
Wheat	4.3	8.2	6.0	8.1
Ragi	..	..	..	..
Cholam	0.3	..	..	..
Rava	15.9	15.5	14.0	15.7
Total cereals	5.8	4.6	1.5	4.2
Redgram dhal	..	..	1.5	0.9
Blackgram dhal	..	..	..	0.8
Bengalgram dhal	..	..	0.9	1.1
Greengram dhal	..	..	1.5	0.5
Bengalgram roasted	..	..	4.0	4.0
Total pulses	5.8	4.6	3.9	6.0
Leafy vegetables	..	..	3.2	2.3
Non-leafy vegetables	6.1	6.9	2.1	4.7
Roots and tubers	5.0	2.7	2.0	3.3
Total vegetables	11.1	9.6	7.3	10.3
Milk (cow's)	13.6	2.8	3.7	2.8
Milk products	..	..	..	..
Skimmed milk	..	..	..	..
Skimmed milk powder	0.9	0.5	1.1	0.4
Fats and oils	0.7	0.8	1.8	0.7
Meat/Fish/Eggs	4.9	0.8	0.7	0.3
Condiments	..	..	1.2	0.2
Fruits	1.8	0.5	0.6	1.2
Sugar and jaggery	3.8	2.0	1.2	0.9
Nuts	..	..	..	..
Others	..	..	..	..

* Inclusive of ghee.

ANNEXURE Q-1—cont.

Average consumption of foodstuffs in ounces per consumption unit per day in Institutions—cont.

Periods of survey Name of the Institution.	November 1961.					October 1961.	August 1961.
	Central Jail, Coimbatore.		Central Jail, Tiruchirappalli.			Rural Extension Training Centre, Koilpatti.	Government Senior and Junior Certified Schools.
	B. Class. Vegetarian.	B. Class. Non-vegetarian.	C. Class.	B. Class. Vegetarian.	B. Class. Non-vegetarian.	C. Class.	
Total Consumption unit per week ..	(11)	(12)	(13)	(14)	(15)	(16)	(18)
Rice—	119.0	67.0	26,254.0	118.0	13.0	17,880.5	1,995.0
Boiled milled ..	..	..	..	..	..	..	..
Raw and milled ..	..	..	..	..	..	..	..
Boiled handpounded ..	8.1	8.0	6.1	8.1	2.1	6.7	7.0
Raw handpounded ..	..	..	..	..	..	..	..
Maida flour ..	..	..	..	..	..	..	..
Wheat ..	3.9	5.1	1.7	4.0	13.1	5.0	5.0
Regi ..	..	..	8.0	3.9	2.1	..	..
Cholam ..	4.2	4.2	..	..	..	4.6	..
Ravai ..	..	..	..	..	..	..	..
Total cereals ..	16.2	17.3	15.8	16.8	17.3	16.3	12.0
Redgram dhal ..	6.0	1.3	..	6.0	3.9	5.1	1.4
Blackgram dhal ..	..	..	..	..	..	..	0.1
Bengalgram dhal ..	0.9	0.9	0.9	1.2	1.1	1.2	0.5
Greengram dhal ..	..	..	..	..	..	..	0.4
Bengalgram roasted ..	..	..	..	..	..	..	0.6
Total pulses ..	6.9	2.2	5.6	7.2	5.0	6.3	3.0
Leafy vegetables ..	4.1	3.8	1.9	3.2	3.1	1.8	2.9
Non-leafy vegetables ..	2.9	3.5	5.3	2.0	2.2	4.3	3.8
Roots and tubers ..	6.0	4.1	3.4	6.0	5.9	4.2	1.4
Total vegetables ..	13.0	11.4	10.6	11.2	11.2	10.3	8.1
Milk (cow's) ..	1.1	4.9	2.8	12.4	4.9	2.8	0.2
Milk products ..	..	..	..	..	..	..	..
Skimmed milk ..	..	..	..	..	..	..	..
Skimmed milk powder ..	..	..	..	..	..	..	..
Fats and oils* ..	2.2	1.1	0.5	2.3	0.5	0.5	2.7
Meat/Fish/Eggs ..	..	2.5	..	..	2.8	..	1.1
Condiments ..	3.1	2.9	0.7	2.8	2.6	0.7	1.3
Fruits ..	..	..	..	..	..	..	0.8
Sugar and jaggery ..	1.3	1.6	0.2	1.3	1.6	0.2	0.7
Nuts ..	2.2	2.2	1.2	1.9	2.0	0.9	0.7
Others ..	..	..	..	..	..	..	1.2

* Inclusive of ghee.

ANNEXURE Q-2.

Average daily intake of Nutrients per consumption unit per day in the Institutions.

Periods of survey. Name of the Institution.	August 1961.					September 1961.					October 1961.				
	Central Jail, Madras.		Central Jail, Vellore.			Borsal School, Palayamkottai.		Central Jail, Cuddalore.			Central Jail, Salem.		Salem.		
	B. Class.	C. Class.	B. Class.	C. Class.	(5)	(6)	(7)	C. Class.	(8)	(9)	(10)	(11)	(12)	(13)	(14)
(1) ..	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Animal protein (gms.) ..	16.0	2.5	..	2.6	12.6	2.5	..	13.4	2.5	..	..	..	..	..	..
Vegetable protein (gms.) ..	106.5	84.2	112.1	91.1	78.5	89.5	107.8	111.1	46.1	..	..	..	..	..	..
Total protein (gms.) ..	122.5	86.7	112.1	93.7	91.1	92.0	107.8	124.5	48.6	..	..	..	..	..	..
Fat (gms.) ..	104.4	45.7	53.1	47.1	65.6	40.8	46.7	129.3	39.5	..	..	..	..	..	..
Carbohydrate (gms.) ..	623.3	487.9	508.8	494.0	423.5	500.9	495.6	563.2	202.0	..	..	..	..	..	..
Calcium (mgms.) ..	1,835.4	1,581.6	1,282.6	1,893.2	975.3	1,630.4	849.9	1,534.0	868.9	..	..	..	..	..	..
Phosphorous (mgms.) ..	2,646.5	1,971.6	2,287.3	2,096.6	1,798.9	2,020.5	2,200.9	2,605.4	1,401.0	..	..	..	..	..	..
Iron (mgms.) ..	63.7	42.7	56.9	64.5	56.2	50.5	79.6	70.9	41.7	..	..	..	..	..	..
Vitamin A (I.U.) ..	702.0	141.2	..	144.0	220.1	143.3	..	765.0	141.1	..	..	..	..	..	..
Carotene (International Vitamin A Unit).	1,537.0	697.5	974.1	7,808.3	7,800.1	5,399.4	5,153.7	5,249.4	3,814.2	..	..	..	..	..	..
Vitamin B1 (mgms.) ..	3.2	2.9	2.0	2.9	2.2	2.7	1.4	2.5	1.6	..	..	..	..	..	..
Nicotinic Acid (mgms.) ..	32.2	23.2	13.8	23.1	24.3	20.1	11.3	23.0	16.7	..	..	..	..	..	..
Riboflavin (mgms.) ..	0.2	0.3	1.1	1.3	1.9	1.5	1.8	2.8	1.4	..	..	..	..	..	..
Vitamin C (mgms.) ..	97.3	23.5	84.8	202.8	191.7	116.6	139.8	146.7	96.3	..	..	..	..	..	..
Total Calories ..	3,934.2	2,683.1	2,957.7	2,761.7	2,630.1	2,719.1	2,828.5	4,060.2	1,954.9	..	..	..	..	..	..

C.U. = Consumption unit.

gms. = Grams.

mgms. = Milligrams.

I.U. = International unit.

ANNEXURE Q-2—cont.

Average daily intake of Nutrients per consumption unit per day in the Institutions—cont.

Periods of survey.	Name of the Institution.	District.	November 1961.					October 1961.		August 1961.	
			Central Jail, Coimbatore.		Central Jail, Tiruchirappalli.			Rural Extension Training Centre, Kovilpatti.		Government Senior and Junior Certified School.	
			Coimbatore.		Tiruchirappalli.			Tirunelveli.		Madras.	
			B. Class. Vegetarian.	B. Class. Non-vegetarian.	C. Class.	B. Class. Vegetarian.	B. Class. Non-vegetarian.	C. Class.			
			(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	
Animal protein (gms.)	..	..	0.9	17.7	2.6	11.9	19.1	2.5	10.8	17.6	
Vegetable protein (gms.)	..	..	114.1	108.2	85.9	108.6	107.7	97.6	70.7	69.3	
Total protein (gms.)	..	..	115.0	125.9	88.5	120.5	126.8	100.1	81.5	86.9	
Fat (gms.)	..	..	111.9	91.7	42.4	99.0	72.3	40.3	71.7	59.4	
Carbohydrate (gms.)	..	..	591.4	595.4	489.1	587.2	705.7	503.0	521.9	381.5	
Calcium (mgms.)	..	..	1,135.1	1,465.0	1,632.7	2,038.5	2,145.0	913.5	1,002.3	1,345.5	
Phosphorous (mgms.)	..	..	2,353.7	2,565.1	1,973.7	2,652.5	2,937.0	2,076.0	2,133.8	1,900.4	
Iron (mgms.)	..	..	145.9	77.2	50.5	78.4	81.2	43.0	32.3	49.4	
Vitamin A (I.U.)	..	..	53.9	273.9	144.6	677.0	276.3	143.7	415.1	30.0	
Carotene (International Vitamin A Unit).	..	..	6,188.1	6,458.0	5,054.1	6,815.7	6,450.5	2,470.3	1,353.5	6,331.0	
Vitamin B1 (mgms.)	..	..	2.4	2.5	2.5	2.5	1.8	2.1	1.8	1.3	
Nicotinic Acid (mgms.)	..	..	24.2	29.4	19.4	22.9	20.8	19.3	21.9	18.7	
Riboflavin (mgms.)	..	..	2.0	2.2	1.4	2.3	1.6	1.9	0.6	1.0	
Vitamin C (mgms.)	..	..	133.0	184.4	93.1	181.7	169.1	114.8	33.6	170.2	
Total calories	..	..	3,315.9	3,696.6	2,663.8	3,921.9	3,474.6	2,757.3	3,024.3	2,388.1	

C. U. = Consumption unit.

gms. = Grams.

mgms. = Milligrams.

I.U. = International unit.

ANNEXURE R.

Nutritional status of children examined.

	(1)	(2)	(3)	Boys.			Girls.		
				0	1	2	0	1	2
				(4)	(5)	(6)	(8)	(9)	(10)
I. General	..	..	..	36	109	28	40	56	10
IV. Eyes	..	..	..	151	16	3	92	7	4
A. Conjunctiva	..	..	..	160	12	2	105	..	1
Xerosis	..	..	..	174	..	..	108	..	..
Pigmentation	..	..	..	174	..	..	108	..	..
Discharge	..	..	..	174	..	..	108	..	..
B. Cornea	..	..	..	174	..	..	108	..	..
Xerosis	..	..	..	174	..	..	108	..	..
Vascularisation	..	..	..	174	..	..	108	..	..
C. Lids	..	..	..	174	..	..	108	..	..
Excoriation	..	..	..	174	..	..	108	..	..
Folliculosis	..	..	..	174	..	..	108	..	..
D. Functional	..	..	..	174	..	..	108	..	..
Angular Conjunctivitis	..	..	..	174	..	..	108	..	..
Night blindness	..	..	..	174	..	..	108	..	..
III. Mouth	..	..	..	144	16	14	83	11	6
A. Lips	..	..	..	160	6	6	101	3	3
B. Tongue	..	..	..	174	..	..	108	..	..
Surface	..	..	..	174	..	..	108	..	..
C. Buccal Mucosa	..	..	..	174	..	..	108	..	..
Condition	..	..	..	174	..	..	108	..	..
D. Gums	..	..	..	174	..	..	108	..	..
Condition	..	..	..	174	..	..	108	..	..
E. Teeth	..	..	..	174	..	..	108	..	..
Fluorosis	..	..	..	169	7	4	102	2	2
Caries	..	..	..	174	..	..	106	..	..
Condition	..	..	..	157	16	..	102	3	..
IV. Hair	..	..	..	174	..	..	106	..	..
Condition	..	..	..	174	..	..	106	..	..
V. Skin	..	..	..	174	..	..	106	..	..
A. General	..	..	..	174	..	..	106	..	..
Elasticity	..	..	..	174	..	..	106	..	..
B. Regional	..	..	..	174	..	..	106	..	..
Trunk	..	..	..	174	..	..	106	..	..
Face	..	..	..	174	..	..	106	..	..
VI. Adipose Tissue	..	..	..	174	..	..	106	..	..
Perineum	..	..	..	174	..	..	106	..	..
Extremities	..	..	..	174	..	..	106	..	..
Quantity	..	..	..	46	128	..	49	57	..
VII. Oedema	..	..	..	174	..	..	106	..	..
Distribution	..	..	..	174	..	..	106	..	..
VIII. Bones	..	..	..	174	..	..	106	..	..
Condition	..	..	..	174	..	..	106	..	..
IX. Heart	..	..	..	174	..	..	106	..	..
Size	..	..	..	174	..	..	106	..	..
Appetite	..	..	..	174	..	..	106	..	..
X. Alimentary System	..	..	..	174	..	..	106	..	..
Stools	..	..	..	174	..	..	106	..	..
Liver	..	..	..	174	..	..	106	..	..
Spleen	..	..	..	174	..	..	106	..	..
Calf tenderness	..	..	..	174	..	..	106	..	..
XI. Nervous System	..	..	..	174	..	..	106	..	..
Paresthesia	..	..	..	174	..	..	106	..	..

ANNEXURE S.

Nutrient analysis of special diets.

Dry weight gms.	Nutrients in grams.										Remarks.
	Protein.	Fat.	Carbo- hydrates.	Fibre.	Minerals.	Calcium.	Phos- phorus.	Iron.	Calories.		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	
Women and Children Hospital, Nurses Hostel, Egmore.											
774	..	91.2	70.9	531.0	36.1	40.9	0.8	1.3	302.4	3,123	Vegetarian diet served for an individual per day.
814	..	98.7	61.6	513.6	20.9	27.0	1.4	1.3	327.8	2,999	Non-Vegetarian.
Ozhukka Nilayam Orphanage, Nandambakkam.											
433	..	41.4	11.4	345.0	7.1	27.5	0.5	0.9	177.2	1,658	Diet served for an individual per day.
Hussainabad Orphanage, Hussainabad.											
257	..	26.8	8.6	197.8	6.2	17.8	0.2	0.2	64.8	970	
Kattupakkam School Midday-meal.											
113	..	11.27	4.2	84.6	4.3	8.7	0.2	0.2	18.8	421	
Melachery School Midday-meal.											

ANNEXURE T.

Nutrient analysis of some prepared food stuffs.

Number and name of the item.	Nutrients in grams per cent.									Calories.	Remarks.
	Moisture.	Protein.	Fat.	Carbo- hydrate.	Minerals (Ash).	Calcium.	Phos- phorus.	Iron (mgms.)			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	
1 Curry Powder (Central Jail) ..	10.0	10.2	19.2	52.2	7.4	0.5	0.3	49.5	419		
2 Regi Puttu ..	39.1	2.8	2.6	56.0	2.2	0.1	0.1	2.2	254		
3 Gourdmas Toffee ..	8.5	24.8	38.8	23.9	1.9	0.1	0.1	2.1	547		

ANNEXURE U.

Statement showing the initial weights and the average weekly increase in weights of Albino rats fed at different protein level by addition of different pulses.

Serial number and name of the pulse fed with the rats.	Name of the diet.	Period of experiments (weeks).	Date of birth of rats.	Number of rats fed.	Average initial weights of the rats in grams.	Average final weights of the rats in grams.	Increase in average weights of rats in grams.	Average weekly increase in weights of rats in grams.	Remarks.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
<i>1 Rats fed with Blackgram Dhall..</i>									
Basal diet ..	..	12	7th October 1960.	3	46.3	83.6	37.3	3.11	From 23rd November 1960 to 15th February 1961.
Ten per cent Protein level.	..	12	Do.	3	46.3	103.6	57.3	4.77	..
Twenty per cent Protein level.	..	12	Do.	3	45.0	105.3	60.3	5.03	..
<i>2 Rats fed with Cowgram Dhall ..</i>									
Basal diet ..	..	12	3rd January 1961.	3	55.0	102.6	47.6	3.93	From 4th March to 27th May 1961.
Ten per cent Protein level.	..	12	Do.	3	50.0	132.3	82.3	6.85	..
Twenty per cent Protein level.	..	12	Do.	3	45.0	142.0	97.0	8.06	..
<i>3 Rats fed with Field Beans ..</i>									
Basal diet ..	..	12	14th April 1961.	3	40.0	69.0	29.0	2.41	From 5th June to 28th August 1961.
Ten per cent Protein level.	..	12	Do.	3	40.0	111.0	71.0	5.91	..
Twenty per cent protein level.	..	12	Do.	3	40.0	116.6	76.6	6.39	..

Ingredients for the Basal diet—

GMS.		Total
Boiled rice milled ..	..	89.0
Redgram Dhall ..	..	3.5
Brinjal ..	..	3.0
Green Plantain ..	..	3.0
Groundnut oil ..	..	0.5
Salt ..	..	1.0
Total ..		100.0

ANNEXURE V.

(A) Statement showing the samples received from the districts and analysed by the Government Analyst's Laboratory

Samples.	Total number received.	Number reported.	Number adulterated.	Percentage of adulterated samples.
(1)	(2)	(3)	(4)	(5)
Milk	7,118	5,036	2,158	42.9
Butter	159	104	65	62.5
Ghee	340	193	42	21.8
Gingelly oil	1,841	1,153	90	7.8
Groundnut oil	399	283	28	9.9
Coconut oil	818	533	5	0.9
Coffee	953	641	15	2.3
Tea	236	120	15	12.5
Turmeric	488	344	15	4.4
Dhall and flours	354	74	35	7.1
Sweet	8			0.0
Non-sugary	57	27	2	7.1
Sugary	228	153	33	21.6
	13,399	9,066	2,504	27.6

(B) Statement showing the samples taken in Madras City and analysed by the Public Analyst, Corporation of Madras.

Nature of article.	Number of samples received and analysed.	Number adulterated.	Percentage of adulterated samples.
(1)	(2)	(3)	(4)
Milk	3,793	1,391	36.7
Ghee	762	45	5.9
Butter	553	51	9.2
Gingelly, Coconut and Groundnut oils	1,511	84	5.6
Coffee	265	14	5.3
Tea	71	6	8.5
Miscellaneous samples*	208	58	27.9
Total	7,163	1,649	23.0

* Thoor Dhall, Turmeric, Honey, Maida, Atta, Sooji, Arrowroot, Kanni Powder, Chillies powder, etc.

ANNEXURE W.

Strength of the Officers of the Public Health Department as on 31st December 1961.

1 Director of Public Health	1
2 State Malaria Officer	1
3 Officer-in-charge, Orientation Training Centre, Poonamallee	1
4 Assistant Director of Public Health (including Professors of Social and Preventive Medicine, Medical Colleges, Madurai and Madras).	9
5 Special Supervisory Unit Officers in National Malaria Eradication Programme	3
6 Health Officers	120*
7 Chief Entomologist	1
8 Senior Entomologists (including one post each in the Madurai Medical College and Madras Medical College).	4
9 Unit Officers in the grade of Senior Entomologists (2 posts held by Selection Grade Health Inspectors).	18
10 Statisticians	2
11 Malaria Engineer	1 (Kept in abeyance).
12 Public Health Assistant Engineer, Health Unit, Poonamallee	1
13 Assistant Engineer, Orientation Training Centre, Poonamallee	1
14 Public Health Sanitary Engineer, Research-cum-Action Project, Poonamallee	1
15 Medical Officer (M. & C.H.), Health Unit, Poonamallee	1
16 Publicity Officer, B.C.G. Vaccination Campaign (Non-Medical)	2
17 Research Analyst	1
18 Research Aide	1
19 Manager	1
20 Gazetted Assistant (Non-Technical), N.M.E.P.	1
21 Regional Transport Officer	1
22 Accounts Officer	1
23 Gazetted Assistant (UNICEF)	1
24 Medical Officer (M. & C.H.), Orientation Training Centre, Poonamallee	1
25 Medical Officer (M. & C.H.), Government Training School for Health Visitors, Madras	1
26 Assistant Engineer (Public Health), Research-cum-Action Project, Thanjavur and Madurai	2
27 Government Analyst	1
28 Deputy Government Analyst	1
29 Senior Assistants to Government Analyst	8
30 Chief Water Analyst	1
31 Assistant Water Analysts	6
32 Medical Biologist	1

* These include two posts of Regional Malariologists; one post of Health Officer to assist State Malaria Officer; 15 posts of Supervisory Unit Officers; 8 posts of Health Officers in National Filariasis Control Units; one post of Nutrition Officer; one post of Health Educator Training Officer; 2 posts of Supervising Public Health Officers, BCG Vaccination Campaign; one post of Assistant Officer-in-charge, Orientation Training Centre; 5 posts of Assistant Professors of Social and Preventive Medicine in Medical Colleges; one post of Lecturer in Social and Preventive Medicine, Kilpauk Medical College; one post of Health Officer, Health Unit, Poonamallee; one post of Health Officer, Rameswaram Panchayat Board; one post of Research Health Officer; one post of Health Educator (Indian), Poonamallee; nine posts of Health Officers (Small-pox Eradication Programme); 2 posts of Health Educators, Research-cum-Action Project, Madurai and Thanjavur; one post of District Health Officer, Kanyakumari; one post of Epidemiologist (Health Officer); five posts of Health Officers, Yaws Eradication Programme and 3 posts of Assistant Municipal Health Officers.

ANNEXURE X.

Strength of Public Health Subordinate Service as on 31st December 1961.

Category.	Permanent posts.	Temporary posts.	Total.
(1)	(2)	(3)	(4)
(a) Health Inspectors—			
Ranges in districts	127	..	127
Hydro Electric scheme	2	5	7
Regional Malaria Organisations	2	..	2
Nutrition Bureau	3	1	4
Health Unit, Poonamallee	4	1	5
Public Health Scheme	9	..	9
Leave and Epidemic Reserve	58	..	58
Cholera epidemic reserve	..	32	32
Research schemes	..	2	2
Research-cum-Action Project	..	12	12
Orientation Training Centre, Poonamallee	..	1	1
BCG Vaccination Campaign	..	61	61
National Malaria Eradication Programme	..	225	225
National Filaria Control Programme	..	24	24
Guinea-worm Eradication Programme	..	19	19
Anti-Plague work	..	12	12
Mobile Epidemic Unit	..	6	6
Yaws Surveillance Unit	..	8	8
Water Analysis, King Institute	..	1	1
Primary Health Centres (National Extension Scheme Projects, Community Development Blocks).	..	180	180
Total ..	205	590	795
Health Inspectors under Other Departments—			
T.B. Sanatorium, Tambaram	1	..	1
Government Leprosy Subsidiary Centres	..	29	29
Rural Extension Training Centre	..	7	7
National Water Supply and Sanitation	..	16	16
T.B. Sanatorium, L.A. Committee	..	1	1
Mobile Medical Unit	..	8	8
Government Cinchona Plantation	..	1	1
Vaigai, Sandynalla Reservoir, Parambikulam-Aliyar Projects	..	6	6
Lower Palani Hills, Madurai	..	1	1
Health and Rural Sanitation Project	..	4	4
Malaria—			
Technician	1	..	1
Entomological Assistants	6	21	27
Laboratory Assistants	7	120	127
Drivers	4	169	173

ANNEXURE X—cont.

Strength of Public Health Subordinate Service as on 31st December 1961—cont.

Category.	Permanent posts.	Temporary posts.	Total.
(1)	(2)	(3)	(4)
Peons	4	131	135
Field Assistants	16	195	211
Maistries	..	6	6
Cleaners	..	4	4
Filaria—			
Entomological Assistants	..	4	4
Laboratory Assistants	..	16	16
Peons	..	20	20
Drivers	..	8	8
Research—			
Entomological Assistant	..	1	1
Laboratory Attendant	1	..	1
Trained Attenders	..	2	2
Peons	..	2	2
Guinea-worm Eradication Programme—			
Entomological Assistants	..	6	6
Cinema operator	..	1	1
Peons	..	6	6
Drivers	..	4	4
Field Assistants	..	55	55
Vital Statistics—			
Statistical Assistant	1	..	1
Draughtsman	1	..	1
Health Education Bureau—			
Statistical Assistant	..	1	1
Artist and Photographer	1	..	1
Technician	1	..	1
Cinema Operator	1	..	1
Driver Mechanic	..	1	1
Home Science Assistant	..	1	1
Sub-Editor	..	1	1
Craftsman	..	1	1
Silk Screen Technician	..	1	1
Duplicating Technician	..	..	..
Social Worker	..	..	1
Cleaner	..	1	1
Driver	..	1	1

ANNEXURE X—cont.

Strength of Public Health Staff Subordinate Service as on 31st December 1961—cont.

Category.	Permanent posts.	Temporary posts.	Total.
(1)	(2)	(3)	(4)
Unicef—			
Packer-cum-carpenter	..	1	1
Packers	..	2	2
Nutrition—			
Statistical Assistant	1	..	1
Chemical Assistant	1	..	1
Laboratory Assistants	3	..	3
Laboratory Attendants	2	..	2
Technician	1	..	1
Drivers	2	..	2
Maintenance Organisation for the Motor Vehicles of the Public Health and Medical Departments—			
Foreman	..	1	1
Mechanic	..	1	1
Electrician	..	1	1
Foremen, Grade II	..	5	5
Mechanics, Grade II	..	10	10
Electricians, Grade II	..	5	5
Cleaners	..	12	12
Stores Organisation for the Motor Vehicles of the Public Health and Medical Departments—			
Store Superintendent	..	1	1
Store Purchase Clerk	..	1	1
Store-Keepers	..	2	2
Cleaners	..	4	4
B.C.G. Vaccination—			
Driver-cum-Mechanic	..	2	2
Peons	..	22	22
Drivers	..	15	15
Cleaners	..	13	13
Epidemic—			
Draughtsman	..	1	1
Peons	..	21	21
Drivers	..	7	7
Miscellaneous—			
Entomological Assistant	..	1	1
Statistical Assistant	..	1	1
Librarian	..	1	1

ANNEXURE X—cont.

Strength of Public Health Subordinate Service as on 31st December 1961—cont.

Category.	Permanent post.	Temporary post.	Total.
(1)	(2)	(3)	(4)
Health Assistants	44	15	59
Pharmacists	..	2	2
Artist	..	1	1
Sanitary Inspectors	9	4	13
Drivers	2	28	30
Peons	126	24	150
Laboratory Technician	..	1	1
Health Educator	..	1	1
Laboratory Attendant	..	1	1
Vaccinators	6	..	6
Observer	..	1	1
Health Education Assistant	..	1	1
Mason-cum-maistry	..	13	13
Mason	..	1	1
Carpenter	..	1	1
Fitters	2	..	2

ANNEXURE Y:

Strength of Public Health Staff employed under Local Bodies as on 31st December 1961.

Serial number and designation of the posts.	Municipalities.	Township Committees.	Corporation of Madras.	Panchayat unions.	Total.
(1)	(2)	(3)	(4)	(5)	(6)
1 Lady Superintendent in charge (Maternity and Child Welfare)	1	..	1	..	2
2 Medical Officers (Maternal and Child Health)	43	..	31	6	80
3 Health Visitors	52	..	107	16	175
4 Resident Matrons	15	..	..	1	16
5 Maternity Assistants	515	8	294	525	1,342
6 Compounders	7	..	109	5	121
7 Ayahs	329	8	98	419	854
8 Sanitary Inspectors (Selection Grade)	15	..	..	..	15
9 Sanitary Inspectors	309	7	69	6	391
10 Health Assistants	258	2	93	452	805
11 Field Assistants	65	2	..	1	68
12 Nursing Orderlies	4	..	35	10	49

ANNEXURE Z.

PROCEEDINGS OF THE MEETING OF THE STATE PUBLIC HEALTH BOARD HELD AT 3-00 p.m. ON WEDNESDAY, THE 21ST JUNE 1961 AT THE CABINET ROOM OF THE SECRETARIAT, FORT SAINT GEORGE, MADRAS-9.

The following members of the Public Health Board and other invitees were present at the meeting:—

1. Sri M. A. Manickavelu, B.A., B.L., Minister for Health and Revenue—President.
2. Sri K. Srinivasan, I.A.S., Secretary to Government, Education and Public Health Department.
3. Sri S. Krishnaswami Pillai, Inspector of Municipal Councils and Local Boards.
4. Dr. V. R. Thayumanaswamy, M.S., F.R.C.S., M.Ch. (Ortho.), Director of Medical Services.
5. Vidwan T. Muthukannappan, M.L.C.
6. Sri S. Ranganatha Mudaliar, B.A., B.L., M.L.A.
7. Sri S. Subrahmanyam, B.A., Deputy Secretary to Government, Education and Public Health Department.
8. Sri S. Moni, Sanitary Engineer to Government.
9. Sri K. Subrahmanyam, I.A.S., Deputy Secretary, Rural Development and Local Administration Department.
10. Sri N. Parthasarathy, B.A., Assistant Secretary to Government, Education and Public Health Department.
11. Dr. N. Parthasarathy, L.M. & S., B.S.Sc., Director of Public Health—Secretary.
12. Sri A. S. Hariharan, Senior Assistant to Chief Water Analyst.
13. Dr. I. Gopalakrishnan, Assistant Health Officer-in-charge of Small-pox Eradication Programme in the City of Madras.

The Hon'ble Minister for Health presided over the meeting.

The proceedings commenced with a discussion on the action taken over the resolutions passed at the last meeting of the Board held on 5th December 1960.

At the outset, the question of appointment of Senior-most Health Inspectors and Sanitary Inspectors as Personal Assistants to the Municipal Commissioners in III Grade municipalities was taken up. The Secretary to Government, Health Department, informed the members that this question was under the consideration of Government. He added that the Madras Public Service Commission had been entrusted with the task of recruiting Health Officers. The Minister for Health at this stage, suggested that the Madras Public Service Commission might be requested to expedite the recruitment of Health Officers. Sri T. Muthukannappan M.L.C., observed that the question of appointment of Personal Assistants was pending with the Government for a long time and that the posts of Health Officers in Grade III municipalities were also vacant for over three years. The Secretary to Government pointed out that every effort was being made to fill up these vacant posts of Health Officers.

With regard to the nuisance caused to the people of Avadi Panchayat by the effluent water discharged from the Fertilizer Factory of Messrs. Shaw Wallace and Company Limited, the Board considered the report furnished by the Director of Public Health and the Sanitary Engineer on the investigations conducted in this regard. The Director of Public Health explained to the members that the Chief Water Analyst had been directed to conduct field investigations and analyse samples of raw and treated wastes at various stages in the process and that if the results showed that the effluent continued to be injurious to health, necessary alternative methods of treatment and disposals of these wastes would be suggested to the factory authorities.

The President at this stage wanted to know something about the method of treatment of effluent water. The Director of Public Health and Sri A. S. Hariharan, Senior Assistant to the Chief Water Analyst, explained that through biological filters the harmful reaction of the effluent water was removed. The Minister suggested that the Chief Water Analyst might be requested to expedite the field investigations.

The progress of the scheme of Small-pox Eradication Programme in Madras City was then reviewed by the Board. Sri T. Muthukannappan, M.L.C., considered that there was not proper supervision over the work of the vaccination staff in the City and complained that none turned up to verify the re-vaccinated cases even in his own family. The Secretary to Government explained that there were about 200 vaccinators who were engaged in the scheme and that their work had been supervised by the Corporation Sanitary Inspectors. The Director

of Public Health at this stage observed that only about 20 to 30 per cent of the vaccinations done by the vaccinators were checked up by the Corporation Inspectors and that cent per cent check-up was not, however, possible. The Secretary to Government informed that about one-third of the total population of the City had been vaccinated so far. The President desired to know whether the entire population would be covered by 1st of September 1961. The Director of Public Health replying observed that the aim of the scheme was to vaccinate at least 80 per cent of the population in the City. The Secretary to Government said that the number of vaccinators had since been increased from 200 to about 300 to achieve the target.

The Minister stressed that it would be better if the vaccination staff concentrated their attention in slums and Harbour areas where a good number of labour population lived, inasmuch as the response from them appeared to be quite good when compared to educated people.

In regard to the grant of a uniform subsidy of Rs. 25 each to villages for latrine construction, Sri T. Muthukannappan, wanted to know the exact number of latrines that would be subsidised in each village. The Secretary to Government, replying said that the intention was to persuade each villager to provide a latrine for his house. Sri Ranganatha Mudaliar wanted to know whether the type design will be an old one, to which the Director of Public Health replied that it was not so and explained the present type of latrines under construction. The Secretary to Government also explained to the members that the scheme of popularisation of latrines in villages was closely watched in several villages coming under the jurisdiction of the Research-cum-Action Project at Poonamallee and that a suitable type design had been evolved.

The Minister for Health suggested that the Rural Development and Local Administration Department should take up the matter seriously in their hands and sanction the subsidy for constructing latrines only after ensuring that these latrines are really put to use. The Deputy Secretary to Rural Development and Local Administration Department replied that even though a subsidy of Rs. 25 per latrine was available, the response from the villagers to put up latrines was not encouraging. The President therefore suggested that the matter might be taken up slowly and steadily ensuring at the same time that much money was not wasted on research schemes like this. The Secretary to Government however stated that the aim of the scheme of construction of latrines was only to make the people latrine conscious.

The President said that necessary preparatory work by way of propaganda should be taken up in advance. Sri Muthukannappan, M.L.C. stated that atleast the women folk at home would use the private latrines. Sri Ranganatha Mudaliar observed that people have not become latrine minded and desired that much propaganda was necessary to educate the public. The President once again emphasised that health education and sufficient propaganda should be done in this direction. The Inspector of Municipal Councils and Local Boards observed that in local bodies the latrine construction programme was being vigorously pushed through.

The next item relating to the issue of an order by Government to the effect that the Health Education Council should serve as an advisory committee to the Research-cum-Action Project was discussed. The Secretary to Government suggested that instead of making the Health Education Council advisory committee to the Research-cum-Action Project, a small sub-committee of the Council might be constituted to serve as an advisory body to the Research-cum-Action Project and that the question of formation of this sub-committee might be decided at the next meeting of the State Health Education Council.

He stated that the Health Education Council consisted of experts a sort of steering body to the Health Education Bureau and that a small sub-committee could go into the affairs of the Research-cum-Action Project. Sri Ranganatha Mudaliar wanted to know the details about the work of the Research-cum-Action Project, at Poonamallee. The Secretary to Government explained to him that the Research-cum-Action Project was charged with the work of evolving suitable types of latrines for rural areas.

Sri T. Muthukannappan, M.L.C., wanted to know as to how the Health Education Council came into being. The Secretary to Government explained in detail that at the instance of the Central Health Education Bureau, a Health Education Bureau in this State had been formed to deal with health education matters in an intensive manner with an Assistant Director of Public Health heading it and that a Health Education Council had been formed to advise the Health Education Bureau in this regard.

With regard to the question of merger of the Town Planning department with that of the Public Works Department it was said that question was under the consideration of Government.

The minutes of the last meeting were then confirmed.

Item 2 of the agenda—Scheme for the eradication of flies.—A note on the role played by houseflies in the transmission of several diseases such as Typhoid, paratyphoid, bacillary dysentery, cholera, typhus fever, anthrax, diarrhoea, etc., and the wages and means

of controlling them, viz., elimination of fly-breeding places, destruction of larvae and adults, application of good sanitary practices, environmental sanitation, proper use of the insecticides and good house-keeping prepared by the Director of Public Health was circulated to the members previously.

The Director of Public Health explained the measures undertaken to prevent fly nuisance. He said that elimination of fly-breeding primarily rested on environmental sanitation and on the proper use of insecticides, etc. Sri Ranganatha Mudaliar, M.L.A., observed that everyone has to take adequate effort in putting down the fly nuisance particularly during the mango season. Mention in this connection was made by the Minister for Health and the Director of Public Health about the celebration of the anti-fly week in the City and in the State. The Secretary to Government observed that to ensure good sanitation, animals like cows, etc., should be kept away from human habitation.

To a question raised by Sri Ranganatha Mudaliar, the Secretary to Government said that insecticides were available in the market. Sri Ranganatha Mudaliar wanted to know the names of these insecticides. The Director of Medical Services said that these were DDT, pyrethrum, etc. The Minister for Health desired that there should be intensive propaganda to focus public attention in this direction. Sri Ranganatha Mudaliar observed that in China it was stated that fly nuisance had been fully eradicated, and that it should be possible to do so in this country also.

The Director of Public Health and Secretary to Government together remarked that a detailed circular had already been issued to all District Medical Officers, District Health Officers, etc., in regard to the celebration of the anti-fly week and also as to how fly nuisance can be eliminated. The President once again reiterated that only through propaganda they could overcome the fly nuisance and the co-operation of the non-officials and the other Government departments might be sought.

It was finally resolved by the Board that the Director of Public Health should arrange for the issue of a detailed circular to all the District Collectors, Panchayat Union Commissioners and Director of Public Instruction detailing the measures to be taken to prevent fly nuisance and to observe anti-fly week.

Item 3 of the agenda—Preparation of a State-wide scheme for the draining of cess-pools.—Sri Ranganatha Mudaliar, M. L. A., suggested the construction of pucca open drains. The Inspector of Municipal Councils and Local Boards Sri Krishnaswami Pillai said that if open drains were constructed, it would prove a breeding place for mosquitoes and added that majority of the municipalities were unable to construct drains due to paucity of funds. The Sanitary Engineer observed that though it was the responsibility of the Panchayat Union Councils as per the Madras Panchayats Act of 1958, to construct drains and arrange for disposal of the sullage, etc. Finance stood in the way of its construction in most of the cases. The Minister for Health at this stage suggested that a little work for about 10 minutes each day in raising kitchen gardens, etc., in every body's home with the help of the wash-water will solve the problem of sullage nuisance.

Sri Ranganatha Mudaliar observed that the villagers should be impressed in matters of raising of such kitchen gardens since in his opinion the response from them was very poor. The Sanitary Engineer said that drains should be let off far away from the towns.

The Board resolved that construction of underground drainage should be undertaken by big municipalities and the scheme extended to the rural areas and small municipalities later on.

Item 4 in the agenda—Statewide intensive Vaccination in every town, village and hamlet.—A note on the implementation of the National Smallpox Eradication Programme to be launched in the State by the end of this year was circularised to the members of the Board. Mention was made by the Secretary to Government, of the scheme of eradication of smallpox going on in the city of Madras. He said that on the completion of the programme in the city, the scheme would be extended to the entire Madras State and that within a period of 2 years, smallpox would become a thing of the past.

Sri Ranganatha Mudaliar wanted to know whether vaccination was compulsory and if so whether necessary provisions existed for prosecuting the offenders. He was informed that with reference to section 93 of the Madras Panchayats Act, 1958, vaccination was compulsory. The Minister for Health hoped that the experiences gained from the implementation of the smallpox eradication pilot project scheme in Chingleput district would be fully utilised in solving similar difficulties in the implementation of the National Smallpox Eradication Programme. Sri Ranganatha Mudaliar wanted to know whether the Panchayat Unions now formed would co-operate with the Public Health Department in carrying out the National Smallpox Eradication Programme. The Secretary to Government replied that the Director of Public Health and the Inspector of Municipal Councils and Local Boards have sufficient powers in this regard.

Sri Muthukannappan, M.L.C., wanted to know the details of staff, etc., sanctioned under the National Smallpox Eradication Programme and the Secretary to Government gave him the details. Sri Ranganatha Mudaliar wanted to know why unprotected persons registers should be got printed. The Director of Public Health replied that these registers which were prepared departmentally were most useful in finding out information of persons who have got vaccinated and those were not, and also added that such registers were in use in the Chingleput district pilot scheme.

The subject was discussed and no resolution was passed.

Item 5 in the agenda—Extension of Tiruttani Water-supply scheme during 1961-62.—In the note relating the execution of Water-Supply Scheme for Tiruttani Panchayat, it was stated that the investigation of a Water-Supply Scheme had been sanctioned at a cost of Rs. 5,000 and that the Sanitary Engineer had been entrusted with the work. The Sanitary Engineer observed that necessary investigation had already been taken up and that it was doubtful whether it would be completed before the end of the year.

Sri Ranganatha Mudaliar observed that the Tiruttani Panchayat was willing to give some contribution towards the cost of execution of the water-supply scheme. The Minister for Health enquired whether the Tiruttani Devasthanam was prepared to contribute a substantial amount for the execution of the water-supply scheme, to which Sri Ranganatha Mudaliar replied that this devasthanam was not as rich as the Tirumalai Tirupathi Devasthanam to liberally contribute towards the execution of this scheme. The President desired that the Tiruttani Devasthanam should be asked to contribute their mite towards the cost of the scheme.

The Board finally resolved that the work of investigation of this water-supply scheme should be accelerated.

Item 6 in the agenda—Extension of rural water supply scheme and national water-supply scheme to every village.—A detailed note on the above two schemes was already circulated. The Secretary to Government, Health Department, said that it would take some more time for the Government to take up the execution of the National Water Supply Scheme and Rural Water-supply scheme. The Sanitary Engineer to Government observed that in the case of panchayats having a population of 10,000 and over, 2 or 3 panchayats put together might take up the water-supply scheme as has been done in Cumbum valley and Kayalpatnam panchayats. The Inspector of Municipal Councils and Local Boards observed that in these cases the joint committee of the panchayats would function as the local authority to execute the scheme.

Sri Ranganatha Mudaliar, M.L.A., wanted to know whether Government would come to the rescue of poorer panchayats in executing such schemes, in their areas. The Secretary to Government observed that such panchayats would have their turn of executing water-supply schemes in their areas probably by the end of the Fourth Plan.

The Board resolved that contiguous panchayats which were desirous of having water-supply schemes for their areas should formulate proposals in consultation with the Sanitary Engineer.

Item 7 in the agenda—Establishment of maternity and child welfare centres at the rate of one for every 10,000 population and undertaking the family planning work.—A note prepared by the Director of Public Health was circulated among the members of the Board.

It had been explained therein that it was the duty of every panchayat union to establish and maintain Maternity and Child Welfare Centres including maintenance of thali service and offering advice and assistance to mothers in Family Planning. The note also stated that some of the defunct panchayat boards were maintaining Maternity and Child Welfare centres and getting maintenance grant from the Government that there were 1,138 such institutions under Government, 535 under local bodies (excluding Corporation of Madras) and 229 under voluntary organisations. The note also indicated that the staffing pattern of a Primary Health Centre was one Medical Officer, one Health Inspector, one Health Visitor, one Compounder and four Maternity Assistants. That the Government of India contemplates trebling the number of units in each block as and when funds and personnel become available and that the aim of the member of providing a Maternity and Child Welfare centre for every 10,000 population would then be achieved. The Board took note of the contents of the note and passed on to the next item.

Sri Muthukannappan wanted to know whether Sanitary Inspectors in the city of Madras were doing propaganda in the family planning work and whether they were paid Rs. 20 for such work and if so, why such benefits were not extended to Sanitary Inspectors in the mofussil. The Secretary said that it was not so. He informed the members that the persons employed

in the "Father Information Centres" in the city were paid Rs. 20 for part-time work between 6 p.m. and 8 p.m. and that retired Sanitary Inspectors were employed for this work. The Secretary to Government hoped that in panchayats the members constituting the panchayat would also take up propaganda work on family planning for the benefit of the community of their areas. To a query from Sri Ranganatha Mudaliar, the Secretary to Government said that only advice was given in the father information centres and that there were 43 centres where advice was given to women also. To a query by Sri Ranganatha Mudaliar, the Secretary answered that in the mofussil areas, the health visitors were doing family planning work. The subject was discussed and no resolution was passed.

Item 8 in the agenda—Starting of a maternity and child welfare centre at Aranam, Thanjavur district.—This subject had been proposed for discussion at the Public Health Board meeting by Sri Srinivasan Iyer, who was absent. The Secretary to Government observed that the matter was under correspondence with the Collector.

The president finally thanked all those who were present and took part in the deliberations of the meeting and then dissolved the meeting.

APPENDIX.

STATEMENT 1.—Vital Statistics of the General Population Births registered in the districts and in the State during the year 1961.

Serial number and district.	Estimated mid-year population for 1961.			Estimated mid-year population for 1961 for which births and deaths returns were received.		
	Males.	Females.	Total.	Males.	Females.	Total.
	(2)	(3)	(4)	(5)	(6)	(7)
1 Madras	913,000	8,23,000	1,736,000	9,13,000	8,23,000	1,736,000
2 Chingleput	1,124,000	1,077,000	2,202,000	1,124,000	1,077,000	2,202,000
3 North Arcot	1,584,000	1,566,000	3,150,000	1,584,000	1,566,000	3,150,000
4 South Arcot	1,539,000	1,511,000	3,050,000	1,539,000	1,511,000	3,050,000
5 Thanjavur	1,618,000	1,641,000	3,259,000	1,618,000	1,641,000	3,259,000
6 Tiruchirappalli	1,584,000	1,593,000	3,177,000	1,584,000	1,593,000	3,177,000
7 Madurai	1,612,000	1,603,000	3,215,000	1,612,000	1,603,000	3,215,000
8 Ramanathapuram	1,182,000	1,250,000	2,432,000	1,182,000	1,250,000	2,432,000
9 Tirunelveli	1,335,000	1,402,000	2,737,000	1,335,000	1,402,000	2,737,000
10 Salem	1,955,000	1,887,000	3,842,000	1,955,000	1,887,000	3,842,000
11 Coimbatore	1,810,000	1,744,000	3,554,000	1,810,000	1,744,000	3,554,000
12 Nilgiris, The	216,000	197,000	413,000	216,000	197,000	413,000
13 Kanyakumari	507,000	496,000	1,003,000	507,000	496,000	1,003,000
Total for the State	16,979,000	16,789,000	33,769,000	16,979,000	16,789,000	33,769,000
Urban areas	4,392,000	4,231,000	8,623,000	4,392,000	4,231,000	8,623,000
Rural areas	12,587,000	12,558,000	25,146,000	12,587,000	12,558,000	25,146,000

Districts.	Number of births registered (excluding still births).			Birth rate per 1,000 of estimated mid-year population.			Average of the rates published for the previous five years (1956-60).		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Madras	36,807	35,430	72,237	21.20	20.41	41.61	18.05	19.04	38.88
Chingleput	28,660	26,885	55,545	13.02	12.21	25.22	14.40	13.52	27.92
North Arcot	49,479	45,961	95,440	15.71	14.59	30.30	17.87	15.76	32.54
South Arcot	36,392	33,164	69,556	11.93	10.87	22.81	12.91	11.86	24.77
Thanjavur	41,424	38,661	80,085	12.71	11.86	24.57	12.60	11.79	24.39
Tiruchirappalli	42,049	39,020	81,069	13.24	12.28	25.52	12.99	12.20	25.19
Madurai	47,103	43,269	90,372	14.65	13.46	28.11	14.15	13.17	27.32
Ramanathapuram	30,708	28,345	59,053	12.63	11.66	24.28	14.46	13.37	27.83
Tirunelveli	42,055	38,766	80,821	15.37	14.16	29.53	15.68	14.62	30.28
Salem	46,341	42,501	88,842	12.06	11.06	23.12	11.70	10.84	22.34
Coimbatore	46,385	43,028	89,413	13.05	12.11	25.16	13.60	12.72	26.32
Nilgiris, The	5,923	5,542	11,465	14.34	13.42	27.76	14.70	13.99	28.69
Kanyakumari	14,681	13,875	28,556	14.64	13.83	28.47	13.76	12.34	25.50
Total for the State	468,007	434,447	902,454	13.86	12.87	26.72	14.14	13.21	27.35
Urban areas	167,269	157,923	325,192	19.40	18.31	37.71	..	..	34.61
Rural areas	300,738	276,524	577,262	11.96	11.00	22.96	..	..	24.80

REPORT ON HEALTH CONDITIONS IN MADRAS STATE DURING 1961

STATEMENT I-A.—Still births registered according to classes and sex in the Municipal towns in the State during the year 1961.

Serial number and Municipal Towns.	Hindus.		Muslims.		Christians.		Other Classes.		Total.		Still birth rate per 1,000 live and still birth.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1 Madras	1,000	874	95	97	29	33	..	..	1,124	1,004	2,128	28.6
2 Kancheepuram	114	114	..	..	..	..	..	..	114	114	228	55.7
3 Tiruvallur	17	12	2	1	..	..	..	..	19	13	32	33.2
4 Chingleput	58	38	2	2	..	..	..	..	60	40	100	50.1
5 Tiruvotiyur	4	2	..	..	1	..	..	..	5	2	7	16.5
6 Vellore	153	154	24	20	4	5	..	..	181	179	360	49.3
7 Tiruvannamalai	62	35	4	8	1	1	..	..	67	44	111	56.9
8 Gudiyatham	28	23	11	10	..	..	..	..	39	33	72	30.3
9 Vaniyambadi	32	26	14	14	3	..	..	..	49	40	89	48.9
10 Tirupathur	44	42	7	2	..	..	..	..	51	44	95	50.8
11 Walajpet	11	21	3	..	..	..	1	..	15	21	36	42.4
12 Ambur	24	12	14	12	3	2	..	..	41	26	67	39.8
13 Arni	56	41	6	1	1	..	..	..	63	42	105	64.8
14 Arkonam	23	17	5	2	2	2	..	..	30	21	51	52.5
15 Ranipet	33	22	2	2	1	2	..	..	36	26	62	57.4
16 Arcot	3	11	..	2	..	..	..	..	3	13	16	22.2
17 Cuddalore	53	29	3	4	..	1	1	1	57	35	92	24.9
18 Chidambaram	65	55	6	7	1	..	..	..	72	62	134	60.3
19 Villuppuram	35	20	3	2	2	1	..	..	40	23	63	34.1
20 Tindivanam	..	1	..	1	..	1	..	..	..	3	3	2.1
21 Thanjavur	109	72	12	5	9	8	..	..	130	85	215	33.9
22 Kumbakonam	184	166	23	11	12	7	..	..	219	184	403	70.9
23 Nagapattinam	54	44	6	6	2	2	..	..	62	52	114	43.0
24 Mayuram	92	65	4	9	3	1	..	..	99	75	174	40.9
25 Mannargudi	113	82	8	4	1	..	..	..	122	86	208	82.8
26 Tiruvavur	61	25	2	5	..	..	..	..	63	30	93	61.9
27 Tiruchirappalli	178	133	25	23	10	18	..	..	213	174	387	39.1
28 Karur	82	52	4	2	2	2	..	..	88	56	144	65.5
29 Srirangam	40	28	..	..	..	..	..	..	40	28	68	36.5
30 Pudukkottai	112	92	7	6	2	2	..	..	121	100	221	79.7
31 Madurai	464	390	28	15	13	24	..	..	505	429	934	45.2
32 Dindigul	25	30	5	8	4	7	..	..	34	45	79	24.8
33 Bodinayakanur	18	9	1	..	..	1	..	..	19	10	29	23.4
34 Periyakulam	54	37	5	8	3	1	..	..	62	46	108	54.9
35 Palni	43	33	1	6	2	1	..	..	46	40	86	48.4
36 Cumbum	1	1	..	..	..	..	..	..	1	1	2	2.8
37 Rajapalayam	35	32	..	..	3	1	..	..	38	33	71	30.8
38 Srivilliputhur	32	28	1	2	3	..	..	..	36	30	66	40.6
39 Virudhunagar	88	68	3	2	2	2	..	..	93	72	165	55.9
40 Karaikal	22	11	..	..	..	..	..	..	22	11	33	19.1

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41 Devakottai	..	..	..	36	22	3	1	1	1	..	..	..	40	23	63	60.4
42 Sivakasi	..	..	..	8	9	..	..	1	1	2	..	..	9	11	20	17.9
43 Aruppukkottai	..	..	..	38	32	..	..	..	..	..	..	..	38	32	70	30.5
44 Ramanathapuram	..	..	..	27	28	3	6	2	2	..	..	..	32	36	68	32.7
45 Tuticorin	..	..	..	43	36	1	..	6	7	..	..	..	50	43	93	20.0
46 Tirunelveli	..	..	..	54	43	8	10	1	..	..	..	..	63	53	116	34.7
47 Palayamkottai	..	..	..	108	67	11	10	7	6	..	..	..	126	83	209	62.1
48 Melapalayam	..	..	..	1	..	4	5	..	..	..	..	..	5	5	10	14.1
49 Shencottah	..	..	..	37	23	5	4	..	..	..	..	..	42	30	72	83.8
50 Salem	..	..	..	197	248	68	81	26	28	..	..	..	291	357	648	49.1
51 Rasipuram	..	..	..	12	10	..	1	..	..	..	..	..	12	11	23	21.0
52 Coimbatore	..	..	..	389	318	19	16	14	15	..	..	..	402	349	751	45.8
53 Erode	..	..	..	55	47	5	4	2	6	..	..	..	62	57	119	29.8
54 Tiruppur	..	..	..	65	39	5	3	..	1	..	..	..	70	43	113	33.2
55 Pollachi	..	..	..	78	55	1	..	..	..	..	..	..	79	55	134	48.1
56 Dharapuram	..	..	..	30	21	2	2	2	5	..	..	..	34	28	62	42.4
57 Udumalpet	..	..	..	47	52	4	4	..	..	..	..	..	51	56	107	67.0
58 Mettupalayam	..	..	..	41	21	7	1	1	1	..	..	..	49	23	72	38.1
59 Gobichettipalayam	..	..	..	20	12	..	..	1	..	..	..	..	21	12	33	32.7
60 Ootacamund	..	..	..	28	30	4	4	2	6	..	..	..	34	40	74	31.7
61 Coonoor	..	..	..	16	10	2	3	4	2	..	..	..	22	15	37	26.5
62 Nagercoil	..	..	..	11	6	..	..	4	..	..	..	..	15	6	21	5.2
63 Colachel	..	..	..	2	..	1	..	1	..	..	..	..	4	..	4	8.6
64 Kuzhithurai	..	..	..	7	5	..	..	2	2	..	..	..	9	7	16	28.1
65 Padmanabhapuram	..	..	..	1	2	..	..	..	..	..	..	..	1	2	3	4.9
Total	..	..	..	4,953	4,086	489	454	196	208	2	1	..	5,640	4,749	10,389	39.1

FCR. I-10

STATEMENT II.—Showing deaths registered in the district in the State of Madras during the year 1961.

STATEMENT II.—Showing deaths registered in the district in the State of Madras during the year 1961.													
Serial number and districts.	Area in square miles.	Population per square mile as per 1951 census.	Number of deaths registered			Death rate per 1,000 of estimated mid-year population.			Average of published rates for the previous five years.			Number of maternal deaths.	Materna death rate per 1,000 births (live and still).
			Males	Females	Total.	Males.	Females.	Total.	Males.	Females.	Total.		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	
1 Madras	49	35,208	16,553	15,941	32,494	18.13	19.37	18.72	19.04	19.76	19.38	83	1.12
2 Chingleput	3,065	716	14,365	13,732	28,097	12.78	12.76	12.76	14.91	14.72	14.81	220	3.91
3 North Arcot	4,674	672	30,917	33,597	64,514	19.52	21.45	20.48	15.89	15.38	15.64	355	3.67
4 South Arcot	4,204	723	23,504	24,357	47,861	15.27	16.12	15.69	12.37	11.69	12.13	306	4.36
5 Thanjavur	3,740	869	18,943	19,670	38,613	11.71	11.99	11.85	12.38	12.64	12.55	415	5.08
6 Tiruchirappalli ..	5,514	575	21,032	21,454	42,486	13.28	13.47	13.37	13.34	13.41	13.37	315	3.83
7 Madurai	4,910	653	19,567	19,715	39,282	12.14	12.30	12.22	12.30	12.12	12.22	237	2.58
8 Ramanathapuram ..	4,849	499	12,313	12,680	24,993	10.42	10.14	10.28	13.42	12.56	12.97	149	2.48
9 Tirunelveli	4,419	618	20,884	21,553	42,437	15.64	15.37	15.50	15.72	15.07	15.37	424	5.17
10 Salem	7,063	542	18,273	18,319	36,592	10.35	9.71	9.52	9.75	9.86	9.80	312	3.47
11 Coimbatore	6,018	588	18,397	18,612	37,009	10.16	10.67	10.41	10.90	10.91	10.90	315	3.46
12 Nilgiris, The	984	416	1,695	1,453	3,148	7.85	7.38	7.62	8.89	8.75	8.78	29	2.47
13 Kanyakumari	643	1,550	5,074	5,239	10,313	10.01	10.56	10.28	9.39	9.18	9.20	138	4.79
Total for the State ..	50,132	671	221,517	226,322	447,839	13.05	13.48	13.26	..	..	12.99	3,298	3.60
Urban areas	..	..	60,550	59,408	119,958	13.79	14.04	13.91	..	..	14.22	1,282	3.80
Rural areas	..	..	160,967	166,914	327,881	12.79	13.29	13.04	..	..	12.55	2,016	3.48

STATEMENT III.—Statement showing the deaths registered in the State of Madras during each month of the year 1961.

Serial number and districts inclusive of Municipal Towns.

January. February. March. April. May. June. July. August. September. October. November. December. Total.

(1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14)

1 Madras	2,540	2,885	2,831	2,741	2,755	2,422	2,080	2,586	2,595	2,425	2,543	3,491	32,494
2 Chingleput	2,382	2,390	2,436	2,045	1,983	2,116	2,408	2,354	2,352	2,545	2,587	2,499	28,097
3 North Arcot	6,811	6,033	5,758	5,097	5,219	5,116	5,533	5,327	4,785	4,655	5,030	5,240	64,514
4 South Arcot	5,060	4,851	4,817	4,157	3,843	3,715	3,945	3,609	3,191	3,450	3,682	3,541	47,861
5 Thanjavur	3,649	3,645	3,826	3,165	3,074	2,683	2,824	2,965	2,791	2,996	3,320	3,075	38,613
6 Tiruchirappalli ..	4,406	3,891	3,404	3,186	3,214	3,272	3,613	3,431	3,208	3,333	3,539	3,989	42,486
7 Madurai	4,427	3,749	3,394	2,971	2,767	2,967	3,424	3,211	2,691	2,686	3,113	3,882	39,282
8 Ramanathapuram ..	2,652	2,377	2,178	1,800	1,714	1,732	1,901	2,096	1,925	1,882	2,200	2,536	24,993
9 Tirunelveli	5,163	4,200	3,945	3,013	2,843	2,836	3,074	3,001	2,839	3,050	3,714	4,759	42,437
10 Salem	3,116	2,745	2,913	2,761	2,850	3,266	3,499	3,257	2,961	2,988	2,955	3,281	36,592
11 Coimbatore	3,624	2,788	2,948	2,744	2,895	2,989	3,927	3,391	3,006	2,769	3,030	3,198	37,009
12 Nilgiris, The	199	184	253	292	295	302	336	245	255	276	267	251	3,148
13 Kanyakumari	1,035	883	947	752	787	777	940	916	861	846	876	693	10,313
Total for the State ..	45,064	40,621	39,650	32,724	34,149	34,193	37,804	36,389	33,480	33,901	36,849	41,035	447,839
Rate per 1,000 of estimated population for the State.	15.7	15.7	13.8	12.5	11.9	12.3	13.2	12.7	12.1	11.8	13.3	14.3	13.3
Total for Urban areas ..	11,289	10,510	10,634	9,705	9,571	9,170	10,184	9,888	9,140	8,909	9,509	11,449	119,958
Rate per 1,000 of estimated population.	15.4	15.9	14.5	13.7	13.1	12.9	13.9	13.5	12.9	12.2	13.4	15.6	13.9
Total for Rural areas.	33,775	30,111	29,016	25,019	24,574	25,023	27,622	26,501	24,320	24,992	27,340	29,586	327,881
Rate per 1,000 of estimated population.	15.8	15.6	13.6	12.1	11.5	12.1	12.9	12.4	11.8	11.7	13.2	13.9	13.0

STATEMENT IV.—Deaths registered according to ages in the State of Madras during the year 1961.

Serial number and municipal towns and census towns in the districts.	Not exceeding one month					Over one month and not exceeding six months.				
	Males.		Females.		Total of columns (4) and (7).	Males.		Females.		Total.
	Under one week.	Over one week.	Under one week.	Over one week.		Under one week.	Over one week.	Under one week.	Over one week.	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1 Madras ..	1,233	527	1,760	929	512	1,441	3,201	1,257	1,231	2,488
2 Chingleput ..	128	95	223	121	178	309	401	93	102	195
3 North Arcot ..	329	208	537	224	162	386	923	384	352	736
4 South Arcot ..	98	74	172	81	45	258	298	99	80	179
5 Thanjavur ..	338	145	483	283	111	394	877	197	186	383
6 Tiruchirappalli ..	247	171	418	171	118	289	707	128	114	242
7 Madurai ..	551	250	801	428	251	679	1,480	383	343	726
8 Ramanathapuram ..	192	211	403	171	163	334	737	149	146	295
9 Tirunelveli ..	395	345	740	318	284	602	1,342	288	320	608
10 Salem ..	106	112	218	117	117	234	140	183	190	373
11 Coimbatore ..	506	247	753	391	187	578	1,331	254	276	530
12 Nilgiris, The ..	91	27	118	67	17	84	202	36	34	70
13 Kanyakumari ..	77	65	142	44	62	106	243	59	66	125
Total for municipal towns and census towns ..	4,291	2,477	6,768	3,345	2,109	5,454	12,222	3,510	3,440	6,950
	25-65	14-81	40-46	21-18	13-35	34-54	37-58	20-98	21-78	21-37
Total for the State ..	7,340	13,136	20,476	5,891	10,398	16,289	36,765	9,752	9,236	18,988
	15-68	28-07	43-75	13-56	23-93	37-49	40-74	20-54	21-36	21-01

Serial number and municipal towns and census towns in the districts.

Serial number and municipal towns and census towns in the districts.	Over six months and not exceeding twelve months			Total under one year			One and under five years.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1 Madras ..	1,330	1,346	2,676	4,347	4,018	8,365	3,822	3,225	7,047
2 Chingleput ..	123	109	232	439	389	828	325	354	679
3 North Arcot ..	358	351	709	1,279	1,089	2,368	978	1,016	1,994
4 South Arcot ..	109	112	221	380	318	698	319	333	652
5 Thanjavur ..	228	209	437	908	789	1,697	587	604	1,191
6 Tiruchirappalli ..	182	157	339	728	580	1,288	534	562	1,096
7 Madurai ..	379	385	764	1,563	1,407	2,970	1,128	1,264	2,392
8 Ramanathapuram ..	183	190	373	1,308	1,037	2,345	657	736	1,393
9 Tirunelveli ..	280	315	595	1,237	1,244	2,481	1,067	1,172	2,239
10 Salem ..	206	190	396	607	637	1,244	261	275	536
11 Coimbatore ..	243	222	465	1,250	1,076	2,326	867	930	1,797
12 Nilgiris, The ..	34	29	63	188	147	335	120	108	228
13 Kanyakumari ..	54	47	101	255	219	474	192	245	437
Total for municipal towns and census towns ..	3,709	3,662	7,371	13,987	12,556	26,543	10,857	11,864	22,721
	22-17	23-19	22-67	83-62	79-51	81-62	44-855	47,561	92,416
Total for the State ..	12,611	12,376	24,987	42,839	37,901	80,740	44,855	47,561	92,416
	26-95	28-49	27-69	91-54	87-24	89-47	21-36	21-01	21-18

Serial number and municipal towns and census towns in the districts.

Serial number and municipal towns and census towns in the districts.	Five and under ten years.		Ten and under fifteen years.		Fifteen and under twenty years.		Twenty and under thirty years.		Thirty and under forty years.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1 Madras ..	682	672	215	232	242	276	803	953	822	819
2 Chingleput ..	83	84	44	43	43	82	117	179	109	135
3 North Arcot ..	213	217	83	92	108	152	309	465	318	413
4 South Arcot ..	91	88	30	38	39	64	94	219	124	186
5 Thanjavur ..	160	163	91	95	86	107	268	390	303	359
6 Tiruchirappalli ..	132	146	78	68	74	118	223	347	292	320
7 Madurai ..	218	203	131	127	156	193	376	474	404	418
8 Ramanathapuram ..	134	137	71	77	78	79	206	260	187	237
9 Tirunelveli ..	242	253	114	143	117	149	286	474	309	432
10 Salem ..	120	113	73	74	115	126	215	234	272	276
11 Coimbatore ..	220	215	110	105	95	153	289	484	333	403
12 Nilgiris, The ..	30	24	14	9	12	19	36	37	29	40
13 Kanyakumari ..	56	71	44	29	20	22	81	88	72	115
Total for municipal towns and census towns ..	2,381	2,386	1,098	1,132	1,185	1,540	3,303	4,604	3,574	4,152
	8-640	9-185	3-683	4-220	4-386	5-731	9-718	15-335	11-184	14-551
Total for the State ..	8,640	9,185	3,683	4,220	4,386	5,731	9,718	15,335	11,184	14,551

Serial number and municipal towns and census towns in the districts.	Forty and under fifty years.		Fifty and under sixty years.		Sixty years and upwards.		Total of all ages.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1 Madras ..	1,113	725	1,430	941	3,077	3,040	16,553	15,941
2 Chingleput ..	146	118	183	100	527	455	2,016	1,939
3 North Arcot ..	402	271	450	323	1,228	1,269	5,368	5,307
4 South Arcot ..	180	115	237	154	602	587	2,096	2,102
5 Thanjavur ..	402	285	547	317	1,129	1,209	4,481	4,318
6 Tiruchirappalli ..	320	231	439	296	965	937	3,785	3,585
7 Madurai ..	469	333	575	422	1,315	1,420	6,335	6,261
8 Ramanathapuram ..	278	217	298	207	809	883	3,453	3,503
9 Tirunelveli ..	418	375	545	373	1,512	1,551	5,919	6,159
10 Salem ..	273	239	333	295	857	853	3,126	3,121
11 Coimbatore ..	411	298	469	273	1,231	1,231	5,275	5,168
12 Nilgiris, The ..	69	37	139	44	140	139	711	604
13 Kanyakumari ..	110	74	165	125	437	412	1,432	1,400
Total for municipal towns and census towns ..	4,591	3,318	5,744	3,870	13,830	13,986	60,550	59,408
	16-027	14-123	18-427	15-315	61-758	62-401	2-21,517	2-26,322
Total for the State ..	16,027	14,123	18,427	15,315	61,758	62,401	2,21,517	2,26,322

REPORT ON HEALTH CONDITIONS IN MADRAS STATE DURING 1961

Serial number and district (exclusive of municipal towns and census towns.)	Not exceeding one month.				Over one month and not exceeding six months.					
	Males.		Females.		Males.		Females.			
	Under one week.	Over one week.	Total.	Under One week.	Over One week.	Total.	Total of columns (4) & (7).			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1 Chingleput	303	893	1,196	250	664	914	2,110	584	551	1,135
2 North Arcot	387	1,226	1,613	367	964	1,331	2,944	1,091	1,054	2,145
3 South Arcot	240	751	991	196	584	780	1,771	786	713	1,499
4 Thanjavur	280	1,025	1,305	222	813	1,035	2,340	619	577	1,196
5 Tiruchirappalli .. .	228	1,064	1,292	178	823	1,001	2,293	438	370	808
6 Madurai	250	1,072	1,322	172	824	996	2,318	524	435	959
7 Ramanathapuram .. .	126	647	773	118	493	611	1,384	214	191	405
8 Tirunelveli	308	1,438	1,746	237	1,098	1,335	3,081	659	669	1,318
9 Salem	380	1,061	1,441	378	871	1,249	2,690	575	553	1,128
10 Coimbatore	386	1,192	1,578	306	906	1,212	2,790	523	476	999
11 Nilgiris, The	35	154	189	29	117	146	335	33	29	62
12 Kanyakumari	126	136	262	93	132	225	487	196	188	384
Total of district (exclusive of municipal towns and census towns.)	3,049	10,659	13,708	2,546	8,289	10,835	24,543	6,242	5,796	12,038
Total of district (exclusive of municipal towns and census towns.)	10-14	35-44	45-58	9-21	29-38	39-48	42-52	20-76	20-96	20-85

Serial number and district (exclusive of municipal towns and census towns.)	Over six months and not exceeding twelve months.				Total under one year.				One and under five years.			
	Males.		Females.		Males.		Females.		Males.		Females.	
	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)
1 Chingleput ..	883	804	1,687	2,663	2,269	4,932	2,495	2,642	33,998	35,697	71,695	71,695
2 North Arcot ..	1,565	1,574	3,139	4,269	3,959	8,228	6,615	7,157	2,495	2,642	5,147	5,147
3 South Arcot ..	1,208	1,257	2,465	2,985	2,750	5,735	4,976	5,198	2,495	2,642	5,147	5,147
4 Thanjavur ..	780	788	1,568	2,704	2,400	5,104	2,285	2,256	2,495	2,642	5,147	5,147
5 Tiruchirappalli ..	773	762	1,535	2,503	2,133	4,636	3,500	3,567	2,495	2,642	5,147	5,147
6 Madurai ..	747	766	1,513	2,593	2,197	4,790	3,018	3,147	2,495	2,642	5,147	5,147
7 Ramanathapuram ..	395	391	786	1,382	1,193	2,575	2,239	2,259	2,495	2,642	5,147	5,147
8 Tirunelveli ..	860	874	1,734	3,265	2,868	6,133	3,473	3,795	2,495	2,642	5,147	5,147
9 Salem ..	838	689	1,527	2,854	2,491	5,345	2,623	2,705	2,495	2,642	5,147	5,147
10 Coimbatore ..	642	605	1,247	2,743	2,293	5,036	2,032	2,144	2,495	2,642	5,147	5,147
11 Nilgiris, The ..	51	33	84	273	208	481	178	169	2,495	2,642	5,147	5,147
12 Kanyakumari ..	160	171	331	618	584	1,202	504	658	2,495	2,642	5,147	5,147
Total of districts (exclusive of municipal towns and Census Towns.)	8,902	8,714	17,616	28,852	25,345	54,197	33,998	35,697	2,495	2,642	5,147	5,147
Total of districts (exclusive of municipal towns and Census Towns.)	29-60	31-51	30-52	95-94	91-66	93-89	33,998	35,697	2,495	2,642	5,147	5,147

Serial number and districts (exclusive of municipal towns and census towns.)

Serial number and districts (exclusive of municipal towns and census towns.)	Five and under ten years.		Ten and under fifteen years.		Fifteen and under twenty years.		Twenty and under thirty years.		Thirty and under forty years.	
	Males.		Females.		Males.		Females.		Males.	
	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)
1 Chingleput ..	507	530	212	234	283	307	475	709	574	645
2 North Arcot ..	1,132	1,282	358	419	360	560	881	1,339	1,042	1,712
3 South Arcot ..	897	1,019	293	325	292	446	773	1,574	1,199	1,554
4 Thanjavur ..	532	566	241	269	307	378	635	1,004	791	1,087
5 Tiruchirappalli ..	495	506	271	354	426	555	631	1,051	815	1,063
6 Madurai ..	557	508	193	275	300	383	589	846	672	801
7 Ramanathapuram ..	284	279	130	180	204	247	298	412	439	589
8 Tirunelveli ..	654	694	268	273	326	326	598	952	568	858
9 Salem ..	507	580	280	309	355	465	697	1,098	745	958
10 Coimbatore ..	514	539	287	355	352	422	660	957	564	834
11 Nilgiris, The ..	27	21	12	21	25	27	33	77	47	64
12 Kanyakumari ..	153	215	60	74	49	75	145	212	154	234
Total of district (exclusive of municipal towns and census towns.)	6,259	6,799	2,585	3,088	3,201	4,191	6,415	10,731	7,610	10,399

Serial number and districts (exclusive of municipal towns and census towns.)

Serial number and districts (exclusive of municipal towns and census towns.)	Forty and under fifty years.		Fifty and under sixty years.		Sixty and upwards.		Total of all ages.	
	Males.		Females.		Males.		Females.	
	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)
1 Chingleput ..	808	655	878	723	3,454	3,079	12,349	11,793
2 North Arcot ..	1,627	1,634	1,936	2,067	7,279	7,661	25,549	22,290
3 South Arcot ..	1,121	1,087	1,230	1,222	4,616	5,083	21,408	22,255
4 Thanjavur ..	1,552	1,417	1,226	1,120	5,828	6,043	14,462	15,352
5 Tiruchirappalli ..	829	802	903	840	3,578	3,655	17,247	17,869
6 Madurai ..	857	852	613	554	2,414	2,612	13,232	13,454
7 Ramanathapuram ..	826	775	1,063	858	4,002	3,995	8,860	9,177
8 Tirunelveli ..	967	883	1,302	1,090	4,817	4,619	14,965	15,394
9 Salem ..	733	792	829	687	4,428	4,421	15,147	15,198
10 Coimbatore ..	77	54	68	33	244	175	13,122	13,444
11 Nilgiris, The ..	242	217	391	284	1,266	1,286	984	840
12 Kanyakumari ..	11,436	10,804	12,683	11,445	47,928	48,415	3,642	3,839
Total of districts (exclusive of municipal towns and census towns.)	11,436	10,804	12,683	11,445	47,928	48,415	160,967	166,914

STATEMENT IV-A.—Infant deaths according to communities in the Municipal towns in the State of Madras during the year 1961.

Municipal towns.	Hindus.		Muslims.		Christians.		Others.		Total.	
	Number.	Rate per 1000 live births.	Number.	Rate per 1000 live births.	Number.	Rate per 1000 live births.	Number.	Rate per 1000 live births.	Number.	Rate per 1000 live births.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1 Madras	7,273	114.9	802	145.1	287	85.9	3	73.2	8,365	115.8
2 Kancheepuram ..	324	88.2	10	73.0	1	19.6	..	..	335	86.7
3 Tiruvallur	46	53.9	1	16.7	2	100.0	..	..	49	52.5
4 Chingleput	100	57.3	7	86.4	2	29.4	..	..	109	57.5
5 Tiruvotthiyur ..	50	13.0	1	43.5	3	333.3	..	..	54	129.5
6 Vellore	560	101.4	148	136.3	14	42.0	..	..	722	103.9
7 Tiruvannamalai ..	215	133.0	20	107.0	5	135.1	..	..	240	130.4
8 Gudiyatham	250	133.0	60	145.3	..	..	..	..	310	134.7
9 Vaniyambadi	65	71.4	130	164.8	1	32.3	..	..	196	113.2
10 Tirupathur	47	34.5	39	97.5	1	76.9	..	..	87	49.0
11 Walajapet	30	41.0	5	63.3	..	..	..	..	35	43.0
12 Ambur	71	75.5	83	134.5	2	34.5	..	..	156	96.5
13 Arni	162	114.7	8	89.9	..	..	..	..	170	112.1
14 Arcot	29	47.5	11	122.2	..	..	..	..	40	56.7
15 Arkonam	24	30.6	7	88.6	..	..	..	..	31	33.7
16 Ranipet	60	72.5	9	66.7	8	142.9	..	..	77	75.6
17 Cuddalore	185	56.2	11	72.4	5	83.3	6	61.9	207	57.5
18 Chidambaram	97	49.6	8	69.6	..	..	..	..	105	50.3
19 Villupuram	70	47.1	8	50.6	6	42.3	..	..	84	47.0
20 Tindivanam	44	34.2	2	17.9	..	..	..	..	46	31.5
21 Thanjavur	375	70.0	22	67.5	29	64.9	..	..	426	59.5
22 Kumbakonam	282	59.5	17	48.3	5	27.5	..	..	304	57.6
23 Nagapattinam	118	59.9	102	221.3	10	92.6	..	..	230	90.6
24 Mayuram	127	52.0	8	64.0	3	65.2	..	..	138	52.8
25 Mannargudi	154	72.7	8	58.0	1	20.8	..	..	163	70.7
26 Tiruvarur	72	56.3	16	130.0	..	..	..	..	88	62.4
27 Tiruchirappalli ..	415	58.0	56	46.3	33	28.4	..	..	504	52.9
28 Karur	108	57.1	9	84.9	3	51.7	..	..	120	58.4
29 Srirangam	76	43.3	..	..	1	50.0	..	..	77	42.9
30 Pudukkottai	136	61.3	11	47.6	11	107.8	..	..	158	61.9
31 Madurai	1,725	98.0	82	68.9	49	52.7	..	..	1,856	94.1
32 Dindigul	196	87.0	20	46.8	21	48.8	..	..	237	76.2
33 Bodinayakanur	79	70.1	2	33.4	1	40.0	..	..	82	67.7
34 Periyakulam	133	90.2	13	53.3	6	42.9	..	..	152	81.8
35 Palni	108	70.9	10	70.4	5	200.0	..	..	123	72.7
36 Cumbum	52	85.5	5	61.7	2	70.1	..	..	59	82.4
37 Rajapalayam	208	99.2	3	44.8	2	29.0	..	..	213	95.4
38 Srivilliputtur	127	87.6	3	107.1	10	125.0	..	..	140	89.9
39 Virudhunagar	107	40.9	14	130.2	1	15.0	..	..	122	43.8

STATEMENT IV-A.—Infant deaths according to communities in the Municipal towns in the State of Madras during the year 1961—cont.

Municipal towns.	Hindus.		Muslims.		Christians.		Others.		Total.	
	Number.	Rate per 1000 live births.	Number.	Rate per 1000 live births.	Number.	Rate per 1000 live births.	Number.	Rate per 1000 live births.	Number.	Rate per 1000 live births.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
40 Karaikudi	87	56.7	5	36.8	..	..	..	..	92	54.1
41 Devakottai	56	64.1	7	107.7	1	23.8	..	..	64	65.3
42 Sivakasi	41	40.6	7	118.6	1	37.0	..	..	49	44.7
43 Aruppukottai	176	82.3	6	82.2	2	166.7	..	..	184	82.7
44 Ramnathapuram ..	98	62.3	27	75.2	9	111.1	..	..	134	66.6
45 Tuticorin	361	113.1	25	123.8	110	94.7	..	..	496	109.0
46 Tirunelveli	270	99.1	33	77.8	3	39.0	..	..	306	94.0
47 Palayamkottai ..	228	90.1	17	57.8	20	60.4	..	..	265	84.0
48 Melapalayam	32	147.5	64	137.0	..	..	..	..	96	139.3
49 Shencottah	47	71.6	8	76.2	1	38.5	..	..	56	71.2
50 Salem	811	71.8	77	73.5	36	173.1	..	..	924	73.6
51 Rasipuram	50	50.5	3	73.2	..	..	6	193.5	59	55.1
52 Coimbatore	1,094	80.5	109	95.6	54	60.5	..	..	1,257	80.4
53 Erode	195	57.2	18	59.1	9	59.2	..	..	222	57.2
54 Tiruppur	177	59.8	14	62.5	2	18.2	..	..	193	58.6
55 Pollachi	184	76.1	8	46.0	6	100.0	..	..	198	74.7
56 Dharapuram	33	28.7	6	39.0	6	63.1	..	..	45	32.1
57 Udumalpet	44	32.6	4	32.0	..	..	..	..	48	32.1
58 Mettupalayam	75	49.7	8	31.3	..	..	..	..	83	45.7
59 Gobichettipalayam	47	51.6	..	..	..	..	..	..	47	48.2
60 Ootacamund	135	84.5	23	81.0	33	87.3	..	..	191	84.5
61 Coonoor	64	74.5	14	88.1	28	83.1	..	..	106	78.1
62 Nagercoil	112	41.5	15	51.7	30	28.6	..	..	157	38.9
63 Colachel	5	40.3	11	86.6	13	61.3	..	..	29	62.6
64 Kuzhithurai	10	29.8	..	..	4	19.2	..	..	14	25.3
65 Padmanabhapuram.	26	68.1	3	46.9	5	31.1	..	..	34	54.4
Total	1,876	85.9	228	101.9	903	64.1	15	75.0	21,959	86.1

STATEMENT V.—Deaths registered to classes in the State of Madras during the year 1961.

Districts.	(1)	Number of deaths registered.										Death rate per 100 of estimated mid-year population.					
		Christians.					Muslims.					Hindus.*		Muslims.*		Other classes.*	
		Males.	Females.	Males.	Females.	Males.	Males.	Females.	Males.	Females.	Males.	Males.	Females.	Males.	Females.	Males.	Females.
		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1 Madras	..	809	806	1,645	1,488	14,08	13,639	18	8	..	..	..	..	..	..	..	..
2 Chingleput	..	255	263	318	263	1,3656	13,083	136	123	..	..	..	..	..	..	..	..
3 North Arcot	..	467	495	1,356	1,264	28,896	31,606	198	232	..	..	..	..	..	..	..	..
4 South Arcot	..	588	577	514	431	22,106	23,073	296	276	..	..	..	..	..	..	..	..
5 Thanjavur	..	537	609	977	985	17,372	18,019	57	57	..	..	..	..	..	..	..	..
6 Tiruchirappalli	..	622	630	492	508	19,900	20,295	18	21	..	..	..	..	..	..	..	..
7 Madurai	..	628	618	662	649	18,247	18,414	30	34	..	..	..	..	..	..	..	..
8 Ramanathapuram	..	305	314	465	429	11,518	11,910	25	27	..	..	..	..	..	..	..	..
9 Tirunelveli	..	1,961	1,948	996	1,031	17,885	18,521	42	53	..	..	..	..	..	..	..	..
10 Salem	..	176	168	382	325	17,638	17,743	77	83	..	..	..	..	..	..	..	..
11 Coimbatore	..	341	348	576	491	17,433	17,714	47	59	..	..	..	..	..	..	..	..
12 The Nilgiris	..	189	169	122	99	1,375	1,169	9	16	..	..	..	..	..	..	..	..
13 Kanyakumari	..	1,736	1,731	164	198	3,166	3,302	8	8	..	..	..	..	..	..	..	..
Total for the State	..	8,614	8,676	8,669	8,161	2,03,273	2,08,488	961	997	..	..	..	..	..	..	..	..

* 1961 Census Population in each community is not available. Hence the rates are not calculated.

STATEMENT VI.

STATEMENT VI.—Births and deaths from different causes registered in the State of Madras during the year 1961.

Serial number.	Districts and Towns.	Births.			Total.	Birth rate per 1,000 of estimated population.	Deaths.				
		Males.	Females.	Total.			Smallpox.	Plague.	Malaria.	Fever.	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
A. RURAL DISTRICTS.											
(DISTRICTS EXCLUSIVE OF MUNICIPAL TOWNS AND CENSUS TOWNS.)											
1	Chingleput	17,99,000	23,157	21,083	44,840	24.92	10	174	..	41	3,013
2	North Arcot	25,71,000	36,811	34,328	71,139	27.67	..	146	..	153	10,086
3	South Arcot	26,76,000	29,218	26,758	55,976	20.92	..	173	..	48	6,106
4	Thanjavur	26,35,000	27,098	25,146	52,244	19.83	..	289	..	20	2,286
5	Tiruchirappalli	25,30,000	30,126	27,964	58,090	22.96	..	101	..	41	6,068
6	Madurai	22,72,000	29,078	26,269	55,347	24.30	..	151	..	25	4,083
7	Ramanathapuram	18,56,000	19,636	17,991	37,627	20.27	..	117	..	32	4,590
8	Tirunelveli	18,52,000	28,004	25,513	53,517	28.90	..	132	..	14	6,414
9	Salem	32,73,000	35,429	31,796	67,225	20.54	18	150	5	245	3,619
10	Coimbatore	27,14,000	28,569	26,227	54,796	20.19	..	159	..	44	..
11	The Nilgiris	3,03,000	3,379	3,355	6,904	22.79	..	8	..	1	2,079
12	Kanyakumari	6,65,000	10,033	9,554	19,537	29.41	..	27	..	4	..
	Total for Rural areas	2,51,46,000	3,00,738	2,76,524	5,77,262	22.96	28	1,627	5	664	33,058
DISTRICTS AND TOWNS, B. TOWNS, MUNICIPAL TOWNS AND CENSUS TOWNS.											
1	Madras	17,36,000	36,807	35,430	72,237	41.61	..	304	..	6	2,121
CHINGLEPUT DISTRICT											
2	M.T.C. Kancheepuram	93,000	2,002	1,861	3,863	41.54	..	..	..	..	50
3	M.T.C. Tiruvallure	19,800	455	478	933	47.12	..	..	..	..	51
4	M.T.C. Chingleput	26,300	989	906	1,895	72.05	..	..	..	..	16
5	M.T.C. Tiruvottiyur	38,000	208	212	420	11.05	..	..	..	..	67
	Total	1,77,100	3,654	3,457	7,111	40.15	..	1	..	1	184
6	T.C. Poonamallee	11,900	309	300	609	31.18	..	..	..	..	44
7	" Uthiramerur	13,900	82	105	187	13.45	..	..	..	..	19
8	" Alandur	22,100	188	195	383	17.33	..	..	..	..	27
9	" Pallavaram	16,100	143	157	300	18.63	..	..	..	..	41
10	" Tirukalikundram	13,000	129	112	241	18.54	..	5	..	..	2
11	" Maduranthakam	14,100	40	33	73	5.18	..	..	..	..	20
12	" Walajabad	8,300	261	211	472	56.87	..	..	..	..	..
13	" Cheyyur	6,700	63	73	136	20.30	..	..	..	..	..
	Total	2,25,700	1,849	1,745	3,594	15.92	..	7	..	7	262
	Total Urban areas	4,02,900	5,503	5,202	10,705	26.58	..	8	..	8	446
NORTH ARCOT DISTRICT.											
23	M.T.C., Vellore	1,13,800	3,564	3,384	6,948	61.05	..	1	..	2	8
24	" Tiruvannamalai	46,600	945	895	1,840	39.48	..	..	..	..	11
25	" Gudiyatham	50,500	1,218	1,084	2,302	45.58	..	..	..	..	5
26	" Vaniyambadi	42,100	880	831	1,731	41.12	..	2	..	..	8
27	" Tirupathur	30,900	943	872	1,774	57.41	..	..	..	..	5
28	" Walajapet	13,200	442	372	814	61.67	..	..	..	..	3
29	" Ambur	40,000	847	769	1,616	40.40	..	7	..	1	4
30	" Arni	31,600	791	725	1,516	47.97	..	2	..	1	8
31	" Arkonam	30,900	481	439	920	29.77	..	16	..	..	4
32	" Arcot	25,100	375	330	705	28.09	..	3	..	..	6
33	" Ranipet	23,100	530	489	1,019	44.11	..	1	..	..	7
	Total	4,47,000	11,016	10,169	21,185	47.39	..	33	..	4	7
34	T.C. Tiruvottiyur	15,400	256	226	482	31.30	..	5	..	..	1
35	" Polur	14,800	183	123	306	20.68	..	..	..	..	..
36	" Visharam	14,500	169	137	326	22.48	..	4	..	4	..
37	" Pernampet	19,600	143	129	272	13.88	..	..	..	..	1
38	" Sholinghur	11,500	141	126	267	23.22	..	..	..	2	..
39	" Palikona	10,600	161	131	292	27.55	..	..	..	1	..
40	" Wandiwash	12,600	145	156	301	23.89	..	1	..	..	1
41	" Kalambur	9,300	155	134	289	31.08	..	..	..	..	..
42	" Chevpet	10,900	117	135	252	23.12	..	..	..	..	..
43	" Kaveripakkam	7,900	108	81	189	23.92	..	..	..	..	..
44	" Panapakkam	5,400	74	66	140	25.93	..	..	..	..	..
	Total	1,32,300	1,652	1,464	3,116	23.55	..	10	..	9	4
	Total urban areas	5,79,300	12,668	11,633	24,301	41.95	..	43	..	13	1,121
South Arcot District.											
45	M.T.C. Cuddalore	79,500	1,851	1,747	3,598	45.26	..	23	..	..	..
46	" Chidambaram	40,900	1,071	1,017	2,088	51.05	..	2	..	..	..
47	" Villupuram	43,500	941	846	1,787	40.80	..	..	..	..	..
48	" Tindivanam	34,500	810	633	1,443	41.83	..	..	..	..	..
	Total	1,98,700	4,673	4,243	8,916	44.87	..	25	..	..	2

REPORT ON HEALTH CONDITIONS IN MADRAS STATE DURING 1961

Serial number.	Districts and towns.	Deaths—cont.												Total deaths from all causes.							
		Injuries.						Hydrophobia.													
		Dysentery and Diarrhoea.		Respiratory Diseases.		Suicides.		Wounds and accidents.		Snake bite and killed by wild beasts.		Total.		All other Causes.		Males.		Females.		Total.	
		(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)								
1	Chingleput	2,593	1,703	33	38	108	83	11	273	16,335	12,349	11,793	24,142								
2	North Arcot	11,517	3,165	97	110	229	68	29	533	28,239	23,549	22,290	53,839								
3	South Arcot	8,099	2,332	55	49	139	78	15	336	26,569	21,408	22,255	43,663								
4	Thanjavur	847	1,280	132	103	153	90	6	484	24,608	14,462	15,352	29,814								
5	Tiruchirappalli	1,565	1,331	75	89	115	53	13	345	25,665	17,247	17,869	35,116								
6	Madurai	1,489	2,693	58	52	158	78	8	384	17,861	13,232	13,454	26,686								
7	Ramanahapuram	723	1,080	22	38	49	23	3	135	11,680	8,860	9,177	18,037								
8	Tirunelveli	1,487	1,776	52	42	131	41	17	283	22,077	14,965	15,394	30,359								
9	Salem	2,088	1,881	124	144	204	117	25	614	18,930	15,147	15,198	30,345								
10	Coimbatore	1,793	2,526	81	110	193	135	8	527	17,902	13,122	13,444	26,566								
11	The Nilgiris	78	204	4	5	5	2	..	16	1,082	984	1,833	1,833								
12	Kanyakumari	686	832	19	14	66	19	4	122	3,731	3,642	3,839	7,481								
Total for Rural areas		32,965	20,803	752	824	1,550	787	139	4,052	214,679	160,967	166,914	327,881								

B. TOWNS—MUNICIPAL TOWNS AND CENSUS TOWNS.

1	Madras	4,506	7,656	63	53	280	16	30	442	16,859	10,553	15,941	32,494
Total		4,506	7,656	63	53	280	16	30	442	16,859	10,553	15,941	32,494

CHINGLEPUT DISTRICT.

2	M.T.C. Kancheepuram	129	275	..	1	26	2	2	31	923	692	716	1,401
3	" Tiruvallur	34	9	1	..	1	1	..	3	142	122	119	266
4	" Chingleput	39	122	..	..	20	2	..	22	343	150	164	314
5	" Tiruvotiyur	61	33	..	..	3	..	..	3	130	150	164	314
Total		263	439	1	1	50	5	2	59	1,558	1,240	1,265	2,503

T.C. Poonamallee

6	T.C. Poonamallee	48	18	1	1	1	1	..	4	76	101	89	190
7	" Uthiramerur	40	13	1	1	2	..	..	3	52	64	64	128
8	" Alandur	36	14	1	..	1	..	..	2	108	105	82	187
9	" Pallavaram	1	4	..	..	..	..	..	..	51	38	18	56
10	" Tirukalikundram	26	15	..	1	..	1	..	2	70	85	74	159
11	" Maduranthakam	3	1	..	..	..	..	..	..	27	20	13	33
12	" Walsajabad	27	14	..	..	..	..	..	..	41	51	51	102
13	" Cheyyur	5	..	..	..	..	..	..	..	42	26	28	54
Total		291	141	2	4	7	2	..	15	727	776	674	1,450

Total urban areas ..

Total urban areas		554	580	3	5	57	7	2	74	2,285	2,016	1,939	3,955
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NORTH ARCOT DISTRICT.

23	M.T.C. Vellore	218	571	1	1	4	3	..	94	2,000	1,620	1,353	2,973
24	" Tiruvannamalai	126	294	3	..	1	1	..	24	846	614	787	1,401
25	" Gudiyatham	152	158	..	..	..	..	..	12	625	508	499	1,007
26	" Vaniyambadi	71	105	1	1	1	1	..	3	287	268	289	557
27	" Tirupathur	34	110	3	..	1	..	..	8	245	237	213	450
28	" Walajpet	14	10	..	..	1	..	..	1	164	112	110	222
29	" Ambur	95	105	1	..	..	..	..	2	284	308	267	575
30	" Anri	175	108	1	..	4	1	..	6	400	386	451	787
31	" Arkonam	34	13	..	..	3	..	..	4	100	122	95	217
32	" Arcot	22	14	..	..	..	..	..	..	88	108	82	190
33	" Ranipet	30	41	..	..	..	..	..	6	299	217	199	416
Total		971	1,527	10	6	127	7	10	160	5,338	4,450	4,345	8,795

Total urban areas ..

Total urban areas		1,378	1,620	12	7	131	8	11	169	6,193	5,248	5,307	10,675
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SOUTH ARCOT DISTRICT.

45	M.T.C. Cuddalore	61	75	4	1	1	..	..	46	793	561	507	1,068
46	" Chidambaram	28	20	1	1	1	1	..	20	504	284	305	589
47	" Villupuram	52	35	2	..	..	2	..	15	368	249	326	575
48	" Tindivanam	53	50	..	..	..	2	..	7	143	149	155	304
Total		199	180	7	3	66	6	88	88	1,808	1,243	1,293	2,36

REPORT ON HEALTH CONDITIONS IN MADRAS STATE DURING 1961											
Districts and towns.	(1)	(2)	Mid-year population for which returns are to be received.	Births.		Total.	Birth rate per 1,000 of estimated population.	Deaths.			
				Males.	Females.			Cholera.	Smallpox.	Plague.	Measles.
South Arcot District—cont.											
49 T.C. Paruti ..	..	..	18,900	570	498	1,068	56.51	..	..	..	68
50 " Porto Novo ..	..	..	15,200	257	198	455	29.93	..	..	..	24
51 " Nellikuppam ..	..	..	22,100	336	307	643	29.10	..	..	..	40
52 " Tirukoilar ..	..	..	13,700	413	364	777	56.72	..	..	..	30
53 " Pennadam ..	..	..	7,300	95	66	161	22.05	..	..	..	8
54 " Kurinjipadi ..	..	..	12,200	75	62	137	11.23	..	..	..	2
55 " Mannargudi ..	..	..	11,900	91	78	169	14.20	..	..	..	..
56 " Virudhachalam ..	..	..	14,500	102	79	181	12.48	..	..	..	32
57 " Bhuvanagiri ..	..	..	11,400	146	121	266	23.33	..	..	..	41
58 " Kallakurichi ..	..	..	13,400	76	71	147	10.97	..	..	..	5
59 " Chinnai Salem ..	..	..	10,500	74	72	146	13.60	..	..	..	8
60 " Valavanur ..	..	..	10,300	104	89	193	28.74	..	..	..	41
61 " Srinivasan ..	..	..	7,200	104	109	213	29.58	..	..	..	15
62 " Ulundurpet ..	..	..	7,100	59	49	108	15.21	..	..	..	..
Total ..	..	..	1,75,400	2,501	2,163	4,664	26.59	..	13	..	314
Urban Areas total ..	..	..	3,74,100	7,174	6,406	13,580	36.39	..	38	..	550
Thanjavur District.											
63 M.T.C. Thanjavur ..	..	..	1,11,300	3,191	2,938	6,129	55.07	..	33	..	83
64 " Kumbakonam ..	..	..	92,600	2,651	2,629	5,280	57.52	..	16	..	107
65 " Nagapattinam ..	..	..	59,100	1,336	1,204	2,540	42.98	..	12	..	148
66 " Mayuram ..	..	..	51,700	1,355	1,259	2,614	50.56	..	25	..	40
67 " Mannargudi ..	..	..	33,700	1,177	1,127	2,304	68.37	..	1	..	71
68 " Tiruvarur ..	..	..	30,200	720	690	1,410	49.69	..	..	..	..
Total ..	..	..	3,78,600	10,430	9,847	20,277	53.56	..	117	..	495

H.C.P. 12A

Tiruchirappalli District.										
90	M.T.C.	Tiruchirappalli	..	..	2,51,000	5,005	4,518	9,523	37.94	11
91	"	Karur	..	..	50,900	1,062	994	2,056	40.39	13
92	"	Srirangam	..	..	42,100	891	904	1,795	42.64	..
93	"	Pudukottai	..	..	50,700	1,323	1,230	2,553	50.36	..
Total			..	..	3,94,600	8,281	7,046	15,927	40.36	24
94	T.C.	Golden Rock (RC)	..	..	19,500	393	367	750	38.46	21
95	"	Do. (PB)	..	..	23,700	7	5	12	0.51	..
96	"	Thattayangarpettai	..	..	9,000	104	95	199	22.11	..
97	"	Turaiyur	..	..	16,000	222	201	423	26.44	5
98	"	Lalgudi	..	..	13,900	473	474	947	68.13	..
99	"	Thottiyam	..	..	9,800	161	142	303	31.56	..
100	"	Ariyalur	..	..	12,700	223	232	455	35.82	2
101	"	Perambalur	..	..	11,200	278	264	532	47.50	..
102	"	Palapatti	..	..	11,400	160	152	312	27.87	..
103	"	Kulithalai	..	..	13,800	93	113	206	14.93	..
104	"	Udayarpalayam	..	..	7,600	123	121	244	32.58	..
105	"	Morupatti	..	..	6,600	189	111	250	37.88	..
106	"	Musiri	..	..	13,100	270	241	511	39.01	..
107	"	Jayakondacholapuram	..	..	13,600	162	130	282	20.74	..
108	"	Manachanallur	..	..	10,100	65	64	129	12.77	2
109	"	Manapparai	..	..	11,700	195	169	364	31.11	..
110	"	Varapattu	..	..	5,300	37	48	85	16.04	..
111	"	Ponnamaravathi	..	..	9,100	174	179	353	38.79	..
112	"	Aravakurichi	..	..	5,700	91	82	173	30.33	..
113	"	Punjaipugalur	..	..	10,100	34	33	67	6.63	..
114	"	Kattuputhur	..	..	7,600	158	125	283	37.73	..
115	"	Poovalur	..	..	6,200	49	51	100	16.13	..
116	"	Lubbaikudikadu	..	..	4,700	41	31	72	15.32	..
Total			..	..	2,52,000	3,642	3,410	7,052	27.98	4
Urban areas total			..	..	6,46,700	11,923	11,056	22,979	35.54	28
Madurai District.										
117	M.T.C.	Madurai	..	..	4,27,100	10,020	9,706	19,726	46.19	40
118	"	Dindigul	..	..	93,100	1,604	1,507	3,111	33.42	9
119	"	Bodinayakanur	..	..	45,200	628	588	1,211	26.79	..
120	"	Periyakulam	..	..	36,500	959	900	1,859	50.98	..
121	"	Palni	..	..	40,000	864	828	1,692	42.80	5
122	"	Cumbum	..	..	32,700	368	348	716	21.90	2
Total			..	..	6,74,600	14,443	13,872	28,315	41.97	53
1,050										

STATEMENT VI.—Births and Deaths from different causes registered in the State of Madras during the year 1961—cont.

Death rate per 1,000 of estimated Midyear population.														
District and towns.														

Madurai District--cont.														
Serial number.	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	
	Cholera.	Smallpox.	Plague.	Malaria.	Revere.	Dysentery.	Respiratory diseases.	Injuries.	All other causes.	Total deaths.	Average of published ratio for the previous five years.	Number of Maternal deaths.	Rate per 1,000 births have not been reported, which complete births.	
50 T.C. Pauruti ..	..	0.11	..	..	3.60	0.69	0.63	0.21	6.14	11.38	11.46	1	0.88	
51 " Portonovo ..	..	0.13	..	..	1.58	0.66	0.59	0.26	6.97	10.20	7.67	1	4.37	
52 " Nellikuppam ..	..	0.41	..	..	1.81	1.10	0.86	0.18	4.80	9.46	6.88	1	1.54	
53 " Tirukollur ..	..	..	..	..	2.19	2.77	0.44	0.15	16.61	22.19	12.14	..	..	
54 " Pennadam ..	..	..	..	..	1.10	1.51	0.82	..	6.16	9.59	10.81	..	..	
55 " Kurujipadi ..	..	..	..	..	0.16	..	0.16	..	0.90	1.23	4.62	..	..	
56 " Manargudi ..	..	..	..	..	..	..	..	..	5.29	5.29	7.17	1	5.83	
57 " Virudachalam ..	..	..	..	..	3.21	1.93	0.69	..	1.66	5.59	8.69	2	10.39	
58 " Bhuvanagiri ..	..	..	..	..	3.60	0.35	0.18	..	3.51	7.63	8.43	..	..	
59 " Kallakurichi ..	..	..	..	..	0.37	1.49	0.82	..	9.40	12.09	6.95	1	6.50	
60 " Chinaselem ..	..	..	..	..	0.76	0.86	0.43	..	3.05	5.24	7.13	..	..	
61 " Valavanur ..	..	..	..	..	0.10	0.10	0.10	..	6.41	6.60	8.58	..	..	
62 " Srirangam ..	..	..	..	..	5.69	2.78	0.83	0.14	6.39	15.83	13.83	..	9.69	
63 " Uludirpet ..	..	..	..	..	2.11	1.69	1.55	0.14	3.52	9.01	10.14	..	..	
Total	..	0.07	..	..	1.79	1.05	0.57	0.10	5.90	9.48	..	10	2.67	
Urban areas total	..	0.10	..	..	1.47	1.02	0.75	0.28	7.60	11.22	..	74	3.27	
Thanjavur District.														
64 M.T.C. Thanjavur ..	..	0.30	..	0.01	0.75	0.86	1.81	0.66	14.55	18.94	15.52	25	3.94	
65 " Kumbakonam ..	..	0.17	..	..	1.16	0.79	1.08	0.30	11.47	14.97	16.37	30	5.28	
66 " Nagapattinam ..	..	0.71	..	..	2.50	1.29	0.80	0.07	12.03	17.39	17.10	22	8.26	
67 " Mayuran ..	..	0.48	..	..	0.77	0.17	0.61	0.34	12.57	15.09	13.98	22	7.89	
68 " Mannargudi ..	..	..	..	..	1.36	1.01	1.19	0.50	17.27	21.34	19.70	11	4.38	
69 " Tiruvarur ..	..	0.03	..	..	2.35	1.66	0.46	0.23	9.40	14.14	13.01	5	3.36	
Total	..	0.31	..	*	1.31	0.89	1.16	0.40	12.96	17.03	..	115	5.35	
69 T.C. Vedaranyam ..	..	..	..	..	..	0.06	0.11	..	8.84	9.01	9.80	1	3.13	
70 " Shiyali ..	..	0.05	..	..	1.22	1.17	0.71	0.05	6.29	9.49	14.84	2	1.88	
71 " Papanasam ..	..	..	..	..	0.52	0.31	0.31	0.41	8.97	10.52	12.10	..	..	
72 " Tranquebar ..	..	..	..	..	3.06	0.12	0.27	..	4.76	8.54	8.54	..	..	
73 " Kuttalam ..	..	..	..	..	0.82	0.12	0.24	0.12	5.76	6.71	14.60	3	6.20	
74 " Thiruvadamardhur ..	..	..	..	..	1.74	0.76	0.43	0.11	10.41	19.46	8.02	1	2.03	
75 " Pattukottai ..	..	0.12	..	..	0.16	..	..	0.12	3.56	3.96	5.81	1	5.10	
76 " Adirampattinam ..	..	0.46	..	..	3.33	..	0.07	0.07	12.29	16.21	10.27	3	7.44	
77 " Ayyampettai ..	..	0.10	..	..	1.15	..	..	..	6.56	7.81	11.41	2	..	
78 " Tiruvaiyaru ..	..	..	..	..	0.54	..	0.09	0.09	9.55	10.27	9.73	1	5.81	
79 " Vallam ..	..	0.31	..	..	0.42	0.21	0.83	0.31	15.31	17.40	13.34	2	18.07	
80 E. " Thiruthuraiipoondi ..	..	..	..	..	0.81	0.51	0.59	0.22	5.88	8.01	9.69	2	13.51	
81 " Muthupet ..	..	0.09	..	..	0.62	0.27	0.71	0.27	7.36	9.29	8.86	1	5.00	
82 " Thirukattappalli ..	..	..	..	..	..	..	0.12	..	3.88	3.95	5.00	1	1.80	
83 " Kuthanallur ..	..	..	..	..	0.07	..	0.11	0.14	5.32	5.67	9.23	..	..	
84 " Thirumullaivasal ..	..	..	..	..	2.87	1.35	0.81	..	7.30	12.43	19.11	..	19.46	
85 " Valanginan ..	..	..	..	..	4.93	0.14	0.87	0.29	5.07	11.36	14.12	2	7.19	
86 " Arantangi ..	..	1.26	..	..	0.68	0.19	0.39	0.29	6.31	9.13	6.23	..	..	
87 " Namilam ..	..	0.13	..	..	0.64	0.26	0.64	0.13	15.26	17.03	14.41	3	4.98	
88 " Kodavasal ..	..	..	..	..	0.12	..	..	0.24	10.36	10.73	11.68	..	..	
89 " Orethanad ..	..	..	..	..	..	..	..	0.28	3.75	4.03	7.14	1	2.62	
Total	..	0.12	..	..	1.06	0.25	0.32	0.14	7.69	9.58	..	32	4.13	
Urban areas total	..	0.24	..	*	1.21	0.64	0.33	0.29	10.89	14.10	..	147	5.03	

Tiruchirappalli District.															
90	M.T.C.	Tiruchirappalli	..	..	0-04	..	0-50	0-82	1-21	0-13	10-20	12-90	13-78	40	4-04
91	"	Karur	..	..	0-26	..	1-53	0-28	1-12	0-29	9-06	13-44	11-54	3	1-36
92	"	Srirangam	..	..	..	..	0-21	0-52	0-64	0-17	8-27	12-10	12-10	1	0-54
93	"	Pudukottai	..	..	..	..	1-20	1-24	1-08	0-51	12-39	16-43	16-11	23	8-29
		Total	..	..	0-06	..	0-69	0-77	1-12	0-21	10-24	13-10	..	67	4-00
94	T.C.	Golden Rock (BC)	..	..	..	..	1-08	0-77	0-72	..	8-46	11-03	9-92	..	..
95	"	Do (PB)	..	..	..	..	..	..	..	..	0-42	0-42	1-54	..	..
96	"	Thattayangurpettai	..	..	..	..	4-44	0-35	0-89	0-11	6-56	12-33	11-89	..	..
97	"	Turaiyur	..	..	..	..	0-31	0-25	1-31	0-13	7-56	9-56	12-92	1	2-34
98	"	Lalgudi	..	..	..	0-07	..	..	0-85	0-29	4-29	7-57	11-25	..	..
99	"	Thottiyam	..	..	0-16	..	0-52	0-94	1-38	0-19	3-55	6-67	8-56	3	6-47
100	"	Ariyalur	..	..	..	0-18	1-02	0-94	1-38	0-08	3-78	6-61	11-72	3	7-07
101	"	Perambalur	..	..	..	..	3-21	1-25	0-45	0-18	6-79	12-93	13-19	4	..
102	"	Palapatti	..	..	..	..	2-37	1-93	0-44	..	7-89	12-93	10-66	..	..
103	"	Kulithalai	..	..	..	..	0-65	0-65	..	0-22	3-55	3-07	3-61	..	..
104	"	Udayarpalayam	..	..	..	..	5-07	2-13	3-33	0-40	8-33	19-47	21-19	7	4-45
105	"	Morupatti	..	..	..	..	4-02	0-36	0-30	..	10-61	13-60	13-60	1	4-09
106	"	Musiri	..	..	..	..	1-37	0-84	0-23	..	9-26	8-76	19-03	..	..
107	"	Jayamkondacholapuram	..	..	0-20	..	0-96	0-22	1-03	0-07	4-78	7-28	7-33	3	..
108	"	Manchanallur	..	..	..	..	0-79	0-20	0-56	0-30	3-94	7-61	13-21	2	10-60
109	"	Manapparai	..	..	..	..	4-10	1-62	0-68	0-09	8-83	19-37	20-89	3	7-92
110	"	Varpettu	..	..	..	..	2-83	..	..	..	10-19	13-62	10-66	..	..
111	"	Pomanaravathi	..	..	..	..	0-33	..	..	..	1-18	4-61	5-83	..	..
112	"	Aravankurichi	..	..	..	..	0-35	..	0-32	..	10-35	11-65	12-32	..	..
113	"	Punjapugalur	..	..	..	..	1-78	0-69	0-99	0-40	0-79	4-55	2-50	1	14-93
114	"	Kattupalur	..	..	..	..	3-33	0-80	..	0-13	6-89	9-87	12-13	..	..
115	"	Poovalur	..	..	..	..	1-29	0-97	2-90	..	4-19	9-35	3-87	1	9-00
116	"	Lubbaikudikadu	..	..	..	..	0-64	1-06	..	..	5-96	7-66	12-15	..	..
		Total	..	..	0-02	..	0-16	0-67	0-70	0-11	5-65	8-74	..	21	2-91
		Urban areas total	..	..	0-04	..	1-04	0-73	0-96	0-17	8-44	11-39	..	88	3-67
Madurai District.															
117	M.T.C.	Madurai	..	..	0-09	..	1-59	1-07	2-01	0-34	11-81	15-92	18-32	55	2-66
118	"	Dindigul	..	..	0-10	..	2-28	1-47	1-07	0-21	6-66	11-78	10-82	13	4-08
119	"	Bodinayakanur	..	..	..	0-01	0-01	1-75	0-27	0-27	4-51	7-50	8-54	..	..
120	"	Periyakulam	..	..	..	0-02	0-88	2-49	2-03	0-25	13-01	18-66	19-32	4	2-03
121	"	Palni	..	..	0-5	0-13	0-43	1-88	3-75	0-43	9-98	16-63	15-41	7	3-94
122	"	Cumbum	..	..	0-06	..	1-87	1-28	0-80	0-06	4-56	8-72	5-84	4	5-57
		Total	..	..	0-08	..	1-56	1-31	1-82	0-31	10-21	15-29	..	83	2-81
* Less than 0-01															

Serial number.	District and Town.	Births.			Deaths.						
		Males.		Females.	Total.	Birth rate per 1,000 of estimated population.	Cholera.	Smallpox.	Plague.	Malaria.	Fever.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
<i>Tirunelveli District—cont.</i>											
205	T.C. Kadambar	6,900	125	92	217	32.88	..	..	..	..	2
206	" Kalakad	18,600	73	75	148	7.96	..	..	..	..	10
207	" Panagudi	13,700	170	165	335	24.45	..	..	..	..	20
208	" Sawyerpuram	8,100	99	112	211	26.05	..	..	..	..	15
209	" Arumuganeri	14,900	80	97	177	11.88	..	..	..	..	1
210	" Achenputhur	6,800	148	149	297	43.68	..	..	..	..	61
211	" Samboor Vadarai	9,800	181	176	357	36.43	..	..	..	..	77
	Total ..	560,400	7,631	7,267	14,898	26.58	..	48	..	4	1,221
	Urban areas total ..	884,900	14,051	13,253	27,304	30.86	..	122	..	4	1,589
<i>Salem District.</i>											
212	M.T.C. Salem	250,600	6,115	6,437	12,552	50.09	..	13	..	39	358
213	" Resipuram	23,900	552	518	1,070	44.77	..	..	..	..	16
	Total ..	274,600	6,667	6,955	13,622	49.61	..	13	..	39	374
214	T.C. Edappadi	24,400	411	353	764	31.31	..	..	..	..	15
215	" Dharmapuri	28,200	416	363	779	27.62	..	..	..	1	11
216	" Komarapalayam	25,200	325	257	582	23.10	..	..	..	..	5
217	" Tiruchengode	21,500	445	396	841	39.12	..	3	..	1	37
218	" Mettur Township	27,700	518	467	985	35.56	..	..	..	..	16
219	" Taramangalam	9,700	192	151	343	35.36	..	..	..	..	3
220	" Attur	29,300	645	584	1,229	41.95	..	13	..	..	69
221	" Kaveripatnam	9,500	106	95	201	21.16	..	..	..	..	1
222	" Sendamangalam	15,400	126	119	245	15.91	..	..	..	..	12
223	" Harur	9,200	64	69	133	16.22	..	..	..	..	22
224	" Namakkal	20,000	272	235	507	25.35	..	1	..	..	7
225	" Hosur	11,800	141	125	266	22.54	..	..	..	..	5
226	" Jalakandapuram	9,200	85	72	157	17.07	..	..	..	..	6
227	" Krishnagiri	23,900	274	243	517	21.63	..	..	..	2	9
228	" Omalur	7,200	17	12	29	4.03	..	..	..	..	..
229	" Deankottai	11,200	125	128	253	22.59	..	..	..	..	75
230	" Mallasandram	10,700	83	81	164	15.33	..	1	..	..	19
	Total ..	293,000	4,245	3,750	7,995	27.20	..	18	..	4	312
	Urban areas total ..	568,400	10,912	10,705	21,617	38.02	..	31	..	43	686

<i>Coimbatore district.</i>											
231	M.T.C. Coimbatore	289,400	8,088	7,546	15,634	54.02	..	10	..	2	70
232	" Erode	74,700	1,956	1,922	3,878	51.91	..	4	..	4	31
233	" Tiruppur	80,700	1,700	1,595	3,295	40.83	..	3	..	..	26
234	" Pollachi	55,000	1,358	1,293	2,651	48.20	..	26	..	..	39
235	" Dharmapuri	26,600	725	675	1,400	52.63	..	3	..	..	16
236	" Udumalpet	28,500	763	728	1,491	52.32	..	2	..	..	53
237	" Mettupalayam	36,800	960	858	1,818	49.40	..	..	..	4	22
238	" Gobichettipalayam	27,000	494	482	976	36.15	..	..	..	..	28
	Total ..	618,500	16,044	15,099	31,143	50.35	..	48	..	10	305
<i>The Nilgiris district.</i>											
239	T.C. Kuriichi	28,700	185	200	385	13.41	..	..	..	..	20
240	" Kotur	20,000	175	140	315	15.75	..	1	..	..	27
241	" Palladam	9,700	44	49	93	9.59	..	..	..	..	2
242	" Busavani	18,000	241	217	458	28.63	..	..	..	..	53
243	" Vellalore	13,300	134	131	265	19.92	..	..	..	..	14
244	" Avasanali	9,900	104	107	211	21.31	..	2	..	..	25
245	" Singanailur	24,900	69	75	144	5.78	..	..	..	..	23
246	" Sathyamangalam	19,300	194	196	390	20.21	..	..	..	..	18
247	" Sulur	10,000	144	129	273	27.30	..	..	..	..	14
248	" Kuniamuthur	17,500	61	66	127	7.26	..	..	..	2	9
249	" Peelamedu	18,600	51	49	100	5.38	..	..	..	..	17
250	" Annur	8,900	120	104	224	25.17	..	..	..	..	23
251	" Annanali	10,900	161	171	332	30.46	..	7	..	..	5
252	" Vettikarapudur	14,400	89	68	157	10.90	..	3	..	3	15
	Total ..	222,100	1,772	1,702	3,474	15.64	..	13	..	5	265
	Urban areas total ..	840,600	17,816	16,801	34,617	41.18	..	61	..	15	570
<i>Kanyakumari district.</i>											
253	M.T.C. Ootacamund	50,400	1,145	1,115	2,260	44.84	..	..	..	..	99
254	" Coonoor	31,000	700	657	1,357	43.77	..	..	..	..	19
	Total ..	81,400	1,845	1,772	3,617	44.43	..	..	..	..	28
255	T.C. Kotagiri	15,600	304	225	529	35.83	..	..	..	..	8
256	" Wellington	12,400	195	190	385	31.05	..	..	..	..	28
	Total ..	28,000	499	445	944	33.71	..	..	..	..	36
	Urban areas total ..	109,400	2,344	2,217	4,561	41.78	..	..	..	..	47
257	M.T.C. Nagercoil	107,400	2,052	1,985	4,037	37.59	..	2	..	..	99
258	" Colachel	15,800	242	221	463	29.30	..	17	..	..	19
259	" Kuthithurai	13,800	293	260	553	40.07	..	1	..	..	28
260	" Padmanabhapuram	14,600	305	302	607	41.58	..	..	..	..	53
	Total ..	151,500	2,892	2,768	5,660	37.36	..	20	..	..	199

STATEMENT VI—Births and Deaths from different causes registered in the State of Madras during the year 1961—cont.

Serial number.		Districts and Towns.		Deaths—cont.												Total deaths from all causes.								
				Injuries.						All other causes.														
				(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)									
				Dysentery and diarrhoea.		Respiratory diseases.		Suicides.		Wounds and accidents.		Snake bite and killed by wild beasts.		Hydrophobia.		Total.		Male.		Female.		Total.		
				(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)									
Kanyakumari District—cont.																								
205	T.C. Kadambur	..	..	2	..	..	..	..	..	..	..	..	98	56	46	102								
206	" Kalakad	..	..	10	2	1	..	..	..	..	..	..	69	47	45	92								
207	" Panagudi	..	..	43	21	..	1	4	..	2	7	118	103	106	106	209								
208	" Sawyerpuram	..	..	1	16	2	..	..	..	..	2	32	36	30	30	66								
209	" Arumuganeri	..	..	2	4	..	..	..	..	..	..	76	37	46	46	83								
210	" Achampathur	..	..	9	33	..	1	1	..	..	2	135	113	127	127	240								
211	" Samboorvadakkari	..	..	40	24	2	2	1	1	..	6	114	140	121	121	261								
Total		..	..	436	645	17	7	34	4	3	65	4,479	3,357	3,541	3,541	6,898								
Urban areas total		..	..	843	1,458	35	16	127	5	5	188	7,874	5,919	6,159	6,159	12,078								
Salem district.																								
212	M.T.C. Salem	..	..	368	890	37	32	165	..	..	234	2,184	2,018	2,068	2,068	4,086								
213	" Rasipuram	..	..	26	17	..	..	..	..	..	..	208	129	138	138	267								
Total		..	..	394	907	37	32	165	..	..	234	2,392	2,147	2,206	2,206	4,353								
214	T.C. Edappadi	..	..	10	3	2	1	1	..	..	4	153	93	92	92	185								
215	" Dharmapuri	..	..	4	13	..	..	5	..	..	5	107	79	62	62	141								
216	" Komarapalayam	..	..	15	20	..	..	..	..	..	..	34	32	42	42	74								
217	" Tiruchengode	..	..	12	9	..	1	..	..	..	1	52	61	54	54	115								
218	" Mettur Township	..	..	21	28	..	2	3	..	..	7	100	85	87	87	172								
219	" Taramangalam	..	..	1	7	..	1	1	..	..	1	24	17	12	12	29								
220	" Attur	..	..	..	..	..	1	5	2	1	9	134	127	105	105	232								
221	" Kaveripattanam	..	..	..	35	..	1	2	1	..	3	55	23	31	31	59								
222	" Sendamangalam	..	..	37	..	..	..	..	1	..	1	81	83	83	83	166								
223	" Harur	..	..	1	..	1	..	2	..	..	3	18	29	15	15	44								
224	" Namakkal	..	..	..	..	..	..	4	..	..	4	146	88	70	70	158								
225	" Hosur	..	..	3	1	..	..	..	..	..	..	117	60	66	66	126								
226	" Jalakandapuram	..	..	..	1	..	..	..	..	..	..	23	14	16	16	30								
227	" Krishnagiri	..	..	22	14	1	1	2	..	..	4	132	95	88	88	183								
228	" Omalur	..	..	..	6	1	1	1	..	..	2	11	4	9	9	13								
229	" Denkanikottai	..	..	4	..	1	1	1	..	..	3	29	67	50	50	117								
230	" Mallasamundram	..	..	1	1	..	..	1	..	..	1	27	17	33	33	50								
Total		..	..	131	138	5	9	30	3	1	48	1,243	979	915	915	1,894								
Urban areas total		..	..	525	1,045	42	41	195	3	1	282	3,635	3,126	3,121	3,121	6,247								

Coimbatore district.

231	M.T.C. Coimbatore ..	..	..	6	6	118	6	12	148	3,434	2,552	2,370	4,922		
232	" Erode ..	490	136	1	..	23	1	..	25	760	481	519	1,000		
233	" Tiruppur ..	40	175	1	..	104	1	..	21	521	409	441	850		
234	" Pollachi ..	69	96	3	3	12	..	2	20	613	467	426	893		
235	" Dharpuram ..	17	34	2	..	7	3	2	14	260	182	162	344		
236	" Udumalpet ..	14	29	..	2	10	2	..	14	239	167	184	351		
237	" Mettupalayam ..	41	51	1	1	21	1	1	24	225	201	186	387		
238	" Gobichettipalayam ..	6	34	1	1	7	2	..	11	221	138	162	300		
	Total ..	781	1,323	15	12	217	16	17	277	6,303	4,597	4,450	9,047		

HCR—14

239	T.C. Kurichi ..	..	..	3	..	..	..	..	..	63	51	46	97		
240	" Kottur ..	11	14	..	2	1	1	..	5	78	56	74	130		
241	" Palladam ..	3	3	..	..	..	2	..	2	19	14	15	29		
242	" Bhavani ..	26	6	..	..	1	..	..	2	132	106	113	219		
243	" Vellalore ..	12	7	1	2	1	..	..	4	85	58	64	122		
244	" Avanaeshi ..	4	7	..	..	..	..	..	..	41	38	41	79		
245	" Singanailur ..	27	6	..	..	7	1	..	7	115	92	86	178		
246	" Satyamangalam ..	4	14	1	..	..	1	1	3	77	56	50	116		
247	" Sulur ..	9	6	..	..	1	..	..	..	16	24	21	45		
248	" Kuniamuthur ..	3	9	..	..	1	..	..	1	29	34	19	53		
249	" Peelamedu ..	6	7	2	3	..	1	..	6	37	34	39	73		
250	" Annur ..	8	10	..	1	..	..	..	1	50	45	47	92		
251	" Ananalai ..	9	3	..	..	2	..	..	2	72	48	50	98		
252	" Vettaikaranpudur ..	2	8	1	..	..	..	..	1	33	22	43	65		
	Total ..	138	94	6	8	14	5	1	34	847	678	718	1,393		
	Urban areas total ..	919	1,417	21	20	231	21	18	311	7,150	5,275	5,168	10,443		

The Nilgiris district.

253	M.T.C. Ootacamund ..	66	226	1	1	21	..	..	23	365	395	201	686		
254	" Coonoor ..	33	65	1	1	10	..	3	15	319	214	223	437		
	Total ..	99	291	2	2	31	..	3	38	684	609	514	1,123		
255	T.C. Kotegiri ..	9	13	1	..	1	..	..	2	89	77	64	141		
256	" Wellington ..	2	7	..	..	..	..	..	..	34	25	26	51		
	Total ..	11	20	1	..	1	..	..	2	123	102	90	192		
	Urban areas total ..	110	311	3	2	32	..	3	40	807	711	604	1,315		

Kanyakumari district.

257	M.T.C. Nagercoil ..	74	161	4	3	16	..	2	25	731	516	570	1,092		
258	" Colachel ..	13	..	..	..	..	..	..	..	118	91	76	167		
259	" Kuzhithurai ..	16	2	..	..	2	..	..	2	99	71	77	148		
260	" Padmanabapuram ..	16	18	1	2	2	..	..	5	112	109	95	204		
	Total ..	119	181	5	5	20	..	2	32	1,080	787	824	1,611		

STATEMENT VI A—(Optional) Deaths registered from certain causes in the municipal towns in the State of Madras during 1961.

Serial number and Municipal towns.													
		Deaths.		Rate per mille.		Deaths.		Rate per mille.		Deaths.		Rate per mille.	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	
1 Madras	6	*	209	0.12	7	*	..	..	..	..	8	*	
Chingleput District.													
2 Kancheepuram	..	..	7	0.08	..	..	..	..	..	..	..	..	
3 Tiruvellore	..	..	4	0.20	1	0.05	..	..	..	..	..	..	
4 Chingleput	..	..	14	0.53	..	..	..	..	..	..	..	..	
5 Tiruvotiyur	..	..	..	..	..	..	..	..	..	..	..	..	
North Arcot District.													
6 Vellore	2	0.02	29	0.25	..	..	..	..	..	..	..	..	
7 Tiruvannamalai	..	..	9	0.19	..	..	..	..	..	..	..	..	
8 Gudiyatham	..	..	7	0.14	..	..	..	..	..	..	..	..	
9 Vaniyambadi	..	..	..	..	..	..	..	..	..	..	..	..	
10 Tirupathur	..	..	4	0.18	..	..	..	..	..	..	..	..	
11 Walajpet	..	..	2	0.08	..	..	..	..	..	..	..	..	
12 Ambur	1	0.03	12	0.30	6	0.16	..	..	..	..	..	..	
13 Arni	..	..	1	0.03	2	0.06	..	..	..	..	..	..	
14 Arkonam	1	0.03	3	0.10	..	..	..	..	..	..	..	..	
15 Arcot	..	..	..	..	..	..	..	..	..	..	..	..	
16 Ranipet	..	..	6	0.26	..	..	..	..	..	..	..	..	
South Arcot District.													
17 Cuddalore	..	..	10	0.13	..	..	..	..	..	..	..	..	
18 Chidambaram	..	..	2	0.05	1	0.02	..	..	..	..	..	..	
19 Villupuram	..	..	3	0.09	..	..	..	..	..	..	..	..	
20 Tindivanam	..	..	..	..	..	..	..	..	..	..	..	..	
Thanjavur District.													
21 Thanjavur	1	0.01	13	0.12	..	..	..	..	..	..	..	..	
22 Kumbakonam	..	..	6	0.06	..	..	..	..	..	..	..	..	
23 Nagapattinam	..	..	16	0.27	..	..	..	..	..	..	..	..	
24 Mayuram	..	..	5	0.10	..	..	..	..	..	..	..	..	
25 Mannargudi	..	..	6	0.18	..	..	..	..	..	..	..	..	
26 Tiruvarur	..	..	7	0.23	..	..	..	..	..	..	..	..	
Thiruchirappalli District.													
27 Tiruchirappalli	..	..	18	0.07	..	..	..	..	..	..	..	..	
28 Karur	..	..	8	0.16	..	..	..	..	..	..	..	..	
29 Srirangam	..	..	4	0.10	..	..	..	..	..	..	..	..	
30 Pudukottai	..	..	7	0.14	..	..	..	..	..	..	..	..	

* Less than 0.01

* Less than 0.01.

Madurai District.

31 Madurai	1	*	62	0.15	1	*	..	..	..	..	..	..
32 Dindigul	1	0.01	9	0.10	..	..	..	..	..	..	..	..
33 Bodinayakanur	1	0.02	6	0.13	..	..	..	..	..	..	..	..
34 Periyakulam	..	..	1	0.03	..	..	..	..	..	..	..	..
35 Pehi	5	0.13	8	0.20	..	..	..	..	..	..	..	..
36 Cumbum	..	..	1	0.03	..	..	..	..	..	..	..	..

Ramanathapuram District.

37 Rajapalayam	..	..	8	0.11	..	..	..	..	..	..	..	..
38 Srivilliputhur	..	..	3	0.06	..	..	..	..	..	..	..	..
39 Virudhunagar	..	..	4	0.07	..	..	..	..	..	..	..	..
40 Karaikudi	..	..	..	..	..	..	..	..	..	..	..	..
41 Devakottai	..	..	2	0.08	..	..	..	..	..	..	..	..
42 Sivakasi	..	..	1	0.03	..	..	..	..	..	..	..	..
43 Aruppukottai	..	..	9	0.18	..	..	..	..	..	..	..	..
44 Ramanathapuram	..	..	6	0.22	..	..	..	..	3	0.11	..	..

Tirunelveli District.

45 Tuticorin	..	..	10	0.08	..	..	..	..	..	..	..	..
46 Tirunelveli	..	..	2	0.02	..	..	..	..	..	..	..	..
47 Palayamkottai	..	..	5	0.10	..	..	..	..	..	..	..	..
48 Melapalayam	..	..	..	..	..	..	..	..	..	..	..	..
49 Shencottah	..	..	1	0.05	..	..	..	..	..	..	..	..

Salem District.

50 Salem	39	0.16	25	0.10	..	..	..	..	..	..	..	..
51 Resipuram	..	..	..	..	..	..	..	..	..	..	..	..

Coimbatore District.

52 Coimbatore	2	0.01	43	0.15	..	..	..	..	..	..	1	*
53 Erode	4	0.05	7	0.09	..	..	..	..	..	..	1	0.01
54 Tiruppur	..	..	6	0.07	..	..	..	..	..	..	..	..
55 Pollachi	..	..	14	0.25	..	..	..	..	..	..	..	..
56 Dharmapurem	..	..	6	0.23	1	0.04	..	..	..	..	..	..
57 Udumalpet	..	..	4	0.14	..	..	..	..	..	..	..	..
58 Mettupalayam	4	0.11	6	0.16	..	..	..	..	..	..	..	..
59 Gobichettipalayam	..	..	1	0.04	..	..	..	..	..	..	..	..

The Nilgiris District.

60 Ootacamund	..	..	5	0.10	..	..	..	..	..	..	..	..
61 Coonoor	..	..	5	0.16	..	..	..	..	..	..	..	..

Kanyakumari District.

62 Nagercoil	..	..	22	0.20	..	..	..	..	..	..	..	..
63 Colachel	..	..	5	0.32	..	..	..	..	..	..	..	..
64 Kuzhithurai	..	..	2	0.14	..	..	..	..	..	..	..	..
65 Padmanabhapuram	..	..	2	0.14	..	..	..	..	..	..	..	..
Total	69	0.01	702	0.12	18	*	..	..	3	*	10	*

* Less than 0.01.

STATEMENT VII.—Deaths from cholera registered in the districts in the State of Madras during each month of the year 1961.

Districts.	Number of Circles of registra- tion (taluks and municipal towns).	Number of villages or groups of villages and towns from each of which a monthly birth and death return is received.	January	February.	March.	April.	May.	June.	July.	August.
			(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1 Madras ..	1	1	..	..	..	..	..	..	..	..
2 Chingleput ..	12	2,328	..	..	..	..	..	..	..	..
3 North Arcot ..	22	2,067	..	..	..	..	..	..	..	..
4 South Arcot ..	12	2,271	..	..	..	..	..	..	..	..
5 Thanjavur ..	18	2,435	..	..	..	..	..	..	..	..
6 Tiruchirappalli ..	14	1,615	..	..	..	..	..	..	..	..
7 Madurai ..	14	1,074	..	..	..	..	..	..	..	..
8 Ramanathapuram ..	17	1,536	..	..	..	..	..	..	..	..
9 Tirunelveli ..	14	1,109	..	..	..	..	..	..	..	..
10 Salem ..	14	1,620	..	..	..	..	..	..	1	..
11 Coimbatore ..	17	1,106	..	..	..	..	..	..	..	..
12 The Nilgiris ..	5	158	..	..	..	..	..	..	..	..
13 Kanyakumari ..	8	80	..	..	..	..	..	..	..	..
Total ..	168	17,390	..	..	..	..	..	..	6	1

Districts.	September.	October.	November.	December.	Total.			Death rate per 1,000 of estimated mid-year population.			Average of the ratio publi- shed for the previous five years.
					Total.			Total.			
					Males.	Females.	Total.	Males.	Females.	Total.	
1 Madras ..	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
1 Madras ..	..	..	..	..	..	..	..	..	..	..	0.06
2 Chingleput ..	2	1	..	1	3	7	10	..	..	..	0.02
3 North Arcot ..	..	..	..	..	..	..	..	..	..	..	0.02
4 South Arcot ..	..	..	..	..	..	..	..	..	..	..	0.05
5 Thanjavur ..	..	..	..	..	..	..	..	..	..	..	0.08
6 Tiruchirappalli ..	..	..	..	..	..	..	..	..	..	..	0.05
7 Madurai ..	..	..	..	..	..	..	..	..	..	..	0.03
8 Ramanathapuram ..	..	..	..	..	..	..	..	..	..	..	0.01
9 Tirunelveli ..	..	..	..	..	..	..	..	..	..	..	0.05
10 Salem ..	6	11	..	..	12	6	18	0.01	..	..	0.02
11 Coimbatore ..	..	..	..	..	..	..	..	..	..	..	0.02
12 The Nilgiris ..	..	..	..	..	..	..	..	..	..	..	..
13 Kanyakumari ..	..	..	..	..	..	..	..	..	..	..	0.01
Total ..	8	12	..	1	15	13	28	..	..	..	0.04

*Less than 0.01.

*Less than 0.01.

STATEMENT VIII.—Deaths from Smallpox registered in the districts in the State of Madras during each month of the year 1961.

Districts.	Number of circles of registration (taluk and municipal towns).	Number of villages of or groups of villages and towns from each of which a monthly birth and death return is received.	Death rate per 1000 of estimated mid year population.												Average of the rate published for the previous five years.			
			Number of deaths as per ages.															
			Total.			Under one years.			1-10 years.			10 years and above.						
			Males.	Females.	Total.													
January.	February.	March.	April.	May.	June.	July.	August.	September.	October									
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)						
1 Madras ..	1	1	68	101	146	182	110	81	74	50	34	23						
2 Chingleput ..	12	2,328	18	23	20	17	16	17	8	16	7	16						
3 North Arcot ..	22	2,067	16	11	8	21	16	13	23	27	13	20						
4 South Arcot ..	12	2,271	16	19	32	12	16	22	15	12	28	16						
5 Thanjavur ..	18	2,435	7	32	53	25	26	33	22	30	35	16						
6 Tiruchirappalli ..	14	1,615	9	4	1	8	14	1	3	33	15	18						
7 Madurai ..	14	1,074	3	10	12	10	5	18	10	43	13	13						
8 Ramanathapuram.	17	1,536	13	9	15	1	..	5	78	22	45	47						
9 Tirunelveli ..	14	1,109	5	5	15	6	5	9	38	35	36	41						
10 Salem ..	14	1,620	26	15	25	13	12	4	3	8	23	17						
11 Coimbatore ..	17	1,106	15	15	37	25	8	33	26	11	7	12						
12 The Nilgiris ..	5	168	..	3	..	..	..	..	..	2	1	2						
13 Kanyakumari ..	8	80	2	..	..	..	..	..	..	1	4	..						
Total ..	168	17,390	200	247	364	320	228	236	300	290	261	287						

Districts.	November.	December.	Total.				Number of deaths as per ages.				Death rate per 1000 of estimated mid year population.		Average of the rate published for the previous five years.		
			Males.		Females.		Total.		Under one years.		1-10 years.			10 years and above.	
			(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)		(24)	(25)
1 Madras ..	7	28	434	470	904	136	485	283	0.48	0.57	0.52	0.32			
2 Chingleput ..	13	11	94	88	182	78	78	26	0.08	0.08	0.08	0.16			
3 North Arcot ..	13	8	84	105	189	56	84	49	0.05	0.07	0.06	0.07			
4 South Arcot ..	13	10	123	88	211	55	103	53	0.08	0.06	0.07	0.10			
5 Thanjavur ..	74	41	206	230	436	106	149	181	0.13	0.14	0.13	0.09			
6 Tiruchirappalli ..	8	15	61	68	129	31	64	34	0.04	0.04	0.04	0.05			
7 Madurai ..	22	31	117	141	258	74	101	83	0.07	0.09	0.08	0.05			
8 Ramanathapuram	23	31	113	108	221	36	100	85	0.10	0.09	0.09	0.06			
9 Tirunelveli ..	30	27	129	125	254	58	100	96	0.10	0.09	0.09	0.04			
10 Salem ..	12	23	81	100	181	38	100	70	0.07	0.05	0.07	0.08			
11 Coimbatore ..	16	15	119	101	220	67	92	61	0.04	0.06	0.06	0.07			
12 The Nilgiris ..	..	..	6	2	8	4	1	3	0.03	0.01	0.02	0.06			
13 Kanyakumari ..	5	31	30	17	47	7	21	19	0.06	0.03	0.05	0.05			
Total ..	286	271	1,597	1,643	3,240	746	1,451	1,043	0.09	9.10	0.10	0.09			

H.O.E.--15A

H.O.B.--15A

Serial number and name of districts.	Death rate per 1,000 of estimated mil-year population.										Average of the ratio published for the previous five years.
	Septem- ber.	October.	Novem- ber.	Decem- ber.	Total.		Males.	Females.	Total.		
					Males.	Females.					
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	
1 Madras ..	389	366	302	417	2,178	2,328	4,506	2-39	2-83	2-60	2-81
2 Chingleput ..	239	290	278	238	1,554	1,598	3,147	1-38	1-48	1-43	1-71
3 North Arcot ..	826	842	868	818	5,922	6,973	12,895	3-74	4-45	4-09	1-78
4 South Arcot ..	473	662	661	664	4,219	4,263	8,482	2-82	2-74	2-78	1-00
5 Thanjavur ..	70	70	81	89	603	644	1,247	0-37	0-39	0-38	0-50
6 Tiruchirappalli ..	200	160	267	211	1,051	1,051	2,040	0-62	0-66	0-64	0-70
7 Madurai ..	142	119	164	148	1,244	1,327	2,571	0-77	0-83	0-80	0-78
8 Ramanathapuram ..	111	70	137	107	656	731	1,387	0-55	0-58	0-57	0-82
9 Tirunelveli ..	105	165	269	269	1,106	1,224	2,330	0-83	0-87	0-85	0-89
10 Salem ..	191	167	165	190	1,279	1,334	2,613	0-65	0-77	0-68	0-56
11 Coimbatore ..	206	168	194	172	1,258	1,454	2,712	0-70	0-83	0-76	0-84
12 Nilgiris, The ..	11	13	12	9	103	85	188	0-48	0-43	0-46	0-59
13 Kanyakumari ..	58	65	52	44	403	505	908	0-79	1-02	0-91	0-88
Total ..	3,021	3,047	3,235	3,366	21,514	23,512	45,026	1-27	1-40	1-33	1-00

	Septem- ber.	October.	Novem- ber.	Decem- ber.	Total.			Death rate per 1,000 of estimated mid-year population.			Average of the ratio published for the previous five years.									
					(12)	(13)	(14)	(15)	Total.			(16)	(17)	(18)	Males. Females.		(19)	(20)	(21)	(22)
									Males.	Females.					Males.	Females.				
1 Madras ..	590	583	586	867	3,907	3,749	7,656	4.28	4.56	4.41	4.86									
2 Chingleput ..	166	188	180	223	1,235	1,048	2,283	1.09	0.97	1.04	1.50									
3 North Arcot ..	339	345	377	417	2,555	2,230	4,785	1.61	1.42	1.52	1.38									
4 South Arcot ..	160	180	175	209	1,348	1,264	2,612	0.88	0.84	0.86	0.91									
5 Thanjavur ..	138	173	152	171	996	801	1,797	0.62	0.49	0.55	0.62									
6 Tiruchirappalli ..	195	174	222	227	1,046	903	1,949	0.66	0.57	0.61	0.90									
7 Madurai ..	309	313	327	388	2,206	2,003	4,209	1.37	1.25	1.31	1.53									
8 Ramanathapuram ..	170	157	187	206	774	748	1,522	0.85	0.60	0.63	1.11									
9 Tirunelveli ..	204	226	257	304	1,738	1,496	3,234	1.30	1.07	1.18	1.25									
10 Salem ..	241	227	242	251	1,638	1,388	2,926	0.79	0.74	0.76	0.76									
11 Coimbatore ..	300	308	335	345	1,061	1,882	3,943	1.14	1.08	1.11	1.28									
12 Nilgiris, The ..	49	50	51	40	314	201	515	1.45	1.02	1.25	1.81									
13 Kanyakumari ..	112	109	111	76	569	527	1,096	1.12	1.06	1.09	0.79									
Total ..	2,973	3,033	3,202	3,724	20,287	18,240	38,527	1.19	1.09	1.14	1.32									

STATEMENT XII.—Deaths from plague registered in the districts in the State of Madras during each month of the year 1961.

Serial number and districts.	(1)	Number of villages or groups of towns from each of which a monthly birth and death return is received.		January.	February.	March.	April.	May.	June.	July.	August.
		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1 Madras ..	..	1	1	..	..	..	..	..	..	..	..
2 Chingleput ..	..	12	2,328	..	..	..	..	..	..	..	..
3 North Arcot ..	..	22	2,057	..	..	..	..	..	..	..	..
4 South Arcot ..	..	12	2,271	..	..	..	..	..	..	..	..
5 Thanjavur ..	..	18	2,435	..	..	..	..	..	..	..	..
6 Tiruchirappalli ..	..	14	1,615	..	..	..	..	..	..	..	..
7 Madurai ..	..	14	1,074	..	..	..	..	..	..	..	..
8 Ramanathapuram ..	..	17	1,536	..	..	..	..	..	..	..	..
9 Tirunelveli ..	..	14	1,109	..	..	..	..	..	..	..	..
10 Salem ..	..	14	1,620	..	..	..	..	..	..	..	..
11 Coimbatore ..	..	17	1,106	..	..	..	..	..	..	..	..
12 Nilgiris, The ..	..	5	158	..	..	..	..	..	..	..	..
13 Kanyakumari ..	..	8	80	..	..	..	..	..	..	..	..
Total ..	..	168	17,390	..	..	..	..	..	..	..	4

Serial number and districts.	(1)	(2)	(3)	Septem-ber.	October.	Novem-ber.	Decem-ber.	Total.			Death rate per 1,000 of estimated mid-year population.		Average of the ratio published for the previous five years.
								Males.	Females.	Total.	Males.	Females.	
1 Madras ..	..	..	..	..	..	..	..	..	..	..	..	..	..
2 Chingleput ..	..	..	..	..	..	..	..	..	..	..	..	..	..
3 North Arcot ..	..	..	..	..	..	..	..	..	..	..	..	..	..
4 South Arcot ..	..	..	..	..	..	..	..	..	..	..	..	..	..
5 Thanjavur ..	..	..	..	..	..	..	..	..	..	..	..	..	..
6 Tiruchirappalli ..	..	..	..	..	..	..	..	..	..	..	..	..	..
7 Madurai ..	..	..	..	..	..	..	..	..	..	..	..	..	..
8 Ramanathapuram ..	..	..	..	..	..	..	..	..	..	..	..	..	..
9 Tirunelveli ..	..	..	..	..	..	..	..	..	..	..	..	..	..
10 Salem ..	..	..	..	..	..	..	..	..	..	..	..	..	..
11 Coimbatore ..	..	..	..	..	..	..	..	..	..	..	..	..	..
12 Nilgiris, The ..	..	..	..	..	..	..	..	..	..	..	..	..	..
13 Kanyakumari ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total ..	..	1	..	..	..	..	..	2	3	5	*	*	..

* Less than 0.01

STATEMENT XIII

STATEMENT XIII.—Showing the particulars of Vaccination in the State of Madras for the year 1961.

Serial number and name of Municipal Towns.	Mid-year estimated population for 1961.	Total number of persons vaccinated.			Primary vaccinations.								Un- successful, known.
		Males.	Females.	Total.	Total of operations.	0—1 year.	1—5 years.	5—10 years.	10 years and above.	Total successful of all ages.			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	
1 Madras ..	1,735,500	382,876	408,067	790,943	64,406	43,064	19,738	1,535	11	64,348	..	58	
2 Kancheepuram ..	93,000	4,978	4,813	9,791	3,068	2,359	709	..	..	3,068	..	..	
3 Tiruvellore ..	19,800	8,242	9,940	18,182	1,529	603	806	..	..	1,409	..	120	
4 Chingleput ..	26,300	3,327	1,487	4,814	686	468	120	12	..	600	2	84	
5 Tiruvottiyur ..	38,000	4,300	4,394	8,694	968	351	371	24	..	746	132	90	
6 Vellore ..	113,800	9,884	12,118	22,002	4,350	2,670	1,258	45	..	3,973	1	376	
7 Tiruvannamalai ..	46,600	7,979	5,861	13,840	1,500	1,020	433	47	..	1,500	..	..	
8 Gudiyatham ..	50,500	6,476	3,904	10,380	2,211	1,656	363	71	..	2,039	62	59	
9 Vaniyambadi ..	42,100	10,727	9,423	20,150	2,005	1,436	354	50	..	1,840	111	54	
10 Tirupattur ..	30,900	3,597	2,544	6,141	1,403	916	349	39	..	1,304	..	99	
11 Walajah ..	13,200	1,574	825	2,399	497	351	69	41	1	462	11	24	
12 Ambur ..	40,000	10,015	7,393	17,408	2,095	1,301	508	91	..	1,900	66	129	
13 Arni ..	31,600	15,706	15,083	30,789	1,463	999	384	61	1	1,445	6	18	
14 Arkonam ..	30,900	9,752	8,580	18,332	946	771	133	..	..	904	39	12	
15 Ranipet ..	23,100	3,043	3,476	6,519	961	739	185	8	..	932	7	22	
16 Arcot ..	25,100	10,460	6,925	17,385	1,129	615	342	20	1	978	3	148	
17 Cuddalore ..	79,500	15,226	17,515	32,741	3,490	1,789	1,701	..	..	3,490	..	..	
18 Chidambaram ..	40,900	5,133	2,688	7,821	1,017	745	219	18	..	982	..	35	
19 Villupuram ..	43,800	5,767	4,278	10,045	1,015	558	449	..	..	1,007	3	5	
20 Tindivanam ..	34,500	6,617	5,502	12,119	1,454	610	551	31	..	1,192	134	128	
21 Thanjavur ..	111,300	38,152	33,782	71,934	3,941	1,933	1,374	104	7	3,418	42	431	
22 Kumbakonam ..	92,600	14,621	12,296	26,917	3,296	1,888	903	164	24	2,979	9	348	
23 Nagapattinam ..	59,100	18,727	30,263	48,990	4,586	1,982	1,845	759	..	4,586	..	..	
24 Mayuram ..	51,700	18,164	14,661	32,825	1,943	1,112	623	82	..	1,817	..	126	
25 Mannargudi ..	33,700	5,945	7,919	13,864	1,464	784	436	80	..	1,300	19	145	
26 Tiruvarur ..	30,200	6,566	8,398	14,964	1,102	284	334	249	3	870	56	176	
27 Tiruchirappalli ..	251,000	38,210	28,418	66,628	10,942	3,461	5,333	1,091	12	9,897	21	1,024	
28 Karur ..	50,900	24,498	71,716	42,214	3,108	909	1,760	438	1	3,108	..	..	
29 Srirangam ..	42,100	2,765	3,041	5,806	1,541	770	624	57	..	1,451	..	90	
30 Pudukkottai ..	50,700	5,830	3,708	9,538	1,884	691	859	129	..	1,679	35	170	
31 Madurai ..	427,100	60,718	17,759	132,477	20,505	12,873	3,526	496	37	16,932	1,567	2,006	
32 Dindigul ..	93,100	17,774	18,209	35,983	3,720	2,272	1,285	150	..	3,707	..	13	
33 Bodinayakanur ..	45,200	2,588	2,520	5,108	1,600	1,122	310	4	..	1,436	124	40	
34 Periyakulam ..	36,500	1,792	1,464	3,256	1,384	1,265	113	6	..	1,384	..	..	
35 Paldi ..	40,000	4,401	3,055	7,456	1,317	936	319	16	..	1,271	1	45	
36 Cumbum ..	32,700	3,952	4,372	8,324	4,168	2,309	621	..	..	2,930	166	1,072	
37 Rajapalayam ..	71,600	68,365	64,462	132,827	6,117	3,621	1,861	272	..	5,754	137	226	
38 Srivilliputtur ..	47,006	10,312	9,861	20,173	1,427	1,062	365	..	..	1,427	..	..	

HOR.—16A

39 Virudhunagar ..	55,200	15,069	12,391	27,460	2,200	1,315	721	164	..	2,200	..	..
40 Karaikudi ..	43,900	8,708	6,315	15,023	2,421	1,617	243	99	41	2,000	7	414
41 Devakottai ..	25,500	4,144	3,551	7,695	484	217	231	35	..	483	1	..
42 Sivakasi ..	31,000	8,494	7,172	15,666	894	531	323	..	..	854	40	..
43 Aruppukottai ..	50,300	13,864	18,748	32,612	2,813	1,835	700	217	..	2,802	2	9
44 Ramanathapuram ..	27,000	1,537	1,265	2,802	1,478	882	287	86	..	1,255	181	42
45 Tuticorin ..	125,100	30,193	41,381	71,574	5,127	3,615	794	519	46	4,974	21	132
46 Tirunelveli ..	88,400	49,837	35,363	85,200	3,291	1,894	892	148	..	2,934	110	247
47 Palayamkottai ..	51,400	35,018	30,049	65,067	4,276	2,598	1,573	..	..	4,171	81	24
48 Melapalayam ..	38,900	15,639	18,201	33,840	1,653	886	535	64	..	1,435	1	217
49 Shencottah ..	20,600	1,158	1,029	2,187	693	75	411	44	..	530	62	101
50 Salem ..	250,600	62,288	54,153	116,441	13,444	9,648	3,492	279	2	13,411	13	20
51 Rasipuram ..	23,900	2,428	1,575	4,003	1,216	398	634	64	..	1,096	48	72
52 Coimbatore ..	289,400	68,147	52,493	130,640	9,726	6,621	2,613	17	1	9,252	166	308
53 Erode ..	74,700	11,587	7,425	19,012	2,055	1,295	686	3	..	1,984	47	24
54 Tiruppur ..	80,700	18,929	12,200	31,129	2,888	1,776	955	101	..	2,832	4	52
55 Pollachi ..	55,000	25,194	23,210	48,404	4,371	2,066	1,406	761	..	4,233	30	108
56 Dharapuram ..	26,600	6,406	5,735	12,141	1,389	729	516	51	..	1,296	80	13
57 Udumalpet ..	28,500	4,186	4,659	8,845	1,194	572	499	89	..	1,160	..	34
58 Mettupalayam ..	36,800	3,550	3,352	6,902	1,133	745	307	8	..	1,060	28	45
59 Gobichettipalayam ..	27,000	1,062	751	1,813	1,393	860	391	18	3	1,272	..	121
60 Ootacamund ..	50,400	4,611	3,414	8,025	1,382	1,001	360	21	..	1,382	..	..
61 Coonoor ..	31,100	2,697	2,229	4,926	843	485	118	16	7	625	23	199
62 Nagercoil ..	107,400	12,697	10,661	23,358	6,021	1,713	2,824	1,115	..	5,652	302	67
63 Colachel ..	15,800	4,781	5,387	10,168	1,007	420	432	..	..	852	155	..
64 Kuzhithurai ..	13,800	4,494	3,806	8,300	840	321	184	124	26	655	87	98
65 Padmanabhapuram ..	14,600	2,397	2,208	4,605	501	123	262	62	14	461	49	..
Total ..	6,091,500	1,288,174	1,249,443	2,537,617	244,982	146,533	73,022	10,295	238	230,938	4,271	9,720

REPORT ON HEALTH CONDITIONS IN MADRAS STATE DURING 1961

Rural area (Non-Municipal).

Districts.	Health Officers.										Other Health Staff.
	With Public Health qualification.					Without Public Health qualification.					
	Medical Graduates.		Medical Licentiates.		(5)	Medical Graduates.		Medical Licentiates.		(10)	
	(2)	(3)	(4)	(5)		(6)	(7)	(8)	(9)		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1 Madras ..	3	1	1	1	..	7	57	..	..	..	32
2 Chingleput ..	1	1	1	1	..	7	66	..	..	..	46
3 North Arcot ..	3	..	..	1	1	5	40	51	1	..	3
4 South Arcot ..	1	..	..	..	..	9	39	..	..	..	89
5 Thanjavur ..	2	1	1	1	10	7	..	..	..	..	2
6 Tiruchirappalli ..	1	..	..	1	..	16	53	43	..	..	7
7 Madurai ..	2	..	..	1	6	9	24	33	1	..	..
8 Ramanathapuram ..	..	..	..	..	..	15	49	..	..	..	48
9 Tirunelveli ..	1	1	..	..	1	13	69	..	..	..	10
10 Salem ..	1	2	..	..	50	8	25	..	..	..	3
11 Coimbatore ..	2	2	1	1	7	3	4	9	..	..	..
12 Nilgiris, the ..	..	..	..	1	1	14	5	4	..	..	72
13 Kanyakumari ..	..	..	1	..	..	..	..	..	..	..	..
Total ..	17	8	5	7	85	113	431	140	2	..	312

Urban areas (Municipal).

	Health Officers.										Other Health Staff.
	With Public Health qualification.					Without Public Health qualification.					
	Medical Graduates. (13)	Medical Licentiates. (14)	Medical Graduates. (15)	Medical Licentiates. (16)	Inspectors of vaccination. (17)	Sanitary Inspectors. (18)	Health Inspectors. (19)	Males. (20)	Females. (21)	School Medical Officers. (22)	
1 Madras ..	4	..	..	..	..	..	..	..	..	..	..
2 Chingleput ..	..	..	..	2	..	12	3	9	1	..	1
3 North Arcot ..	1	..	..	1	..	36	..	9	..	..	18
4 South Arcot ..	1	..	1	1	..	17	1	..	..	..	13
5 Thanjavur ..	..	..	1	3	..	38	..	7	..	..	23
6 Tiruchirappalli ..	..	..	1	1	..	34	..	17	1	1	5
7 Madurai ..	1	1	..	2	..	48	11	34	3	1	14
8 Ramanathapuram ..	..	..	..	1	..	23	..	3	1	..	22
9 Tirunelveli ..	..	1	..	1	..	28	..	..	..	..	..
10 Salem ..	..	1	..	..	..	22	48	19	..	..	36
11 Coimbatore ..	..	1	..	2	..	49	40	6	1	..	5
12 Nilgiris, the ..	..	..	..	2	..	8	2	3	..	..	3
13 Kanyakumari ..	..	..	1	..	..	3	..	2	..	..	..
Total ..	7	4	4	16	..	318	118	91	7	2	145

REPORT OF THE GOVERNMENT ANALYST

ADMINISTRATION REPORT OF THE GOVERNMENT ANALYST FOR THE YEAR 1961-62.

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REPORT OF THE GOVERNMENT ANALYST FOR THE YEAR 1961-62.

GENERAL.

The work of this Department is concerned with :—Analysis of food, drugs, cosmetics and miscellaneous products under the various penal statutes and control orders, toxicological examination for traces of poisons, pesticide residues, etc., in contaminated foods and investigation into cases of food poisoning; scientific advisory service to Government Departments, Institutions and private parties; and research.

In the majority of prosecutions under the Act certificate of the Government Analyst and the Public Analyst is accepted by courts as evidence of the facts stated therein, but in a few instances the Government Analyst and the Deputy Government Analyst have been summoned by trying Magistrates to give evidence in support of their reports.

During the year under review a total of 26,249 samples of various categories were analysed. There has been a progressive increase in the number of drug samples received from various sources—553 were received in 1961-62 as against 438 in 1960-61 and 370 in 1959-60.

The Madras State Prevention of Food Adulteration Rules under section 24 of the Prevention of Food Adulteration Act, were published in the final form during the year. The Prevention of Food Adulteration Rules issued under Section 23 of the Prevention of Food Adulteration Act and the Drugs Rules have undergone amendments and they have been republished in the *Fort St. George Gazette*.

FINANCE.

The total estimated income is Rs. 2,48,518 and the estimated expenditure Rs. 1,50,460 showing a profit of Rs. 98,058. The working of the Act has also resulted in a profit of Rs. 1,29,957 being Government's share of the fines realized for offences under the Act credited to the Judicial Budget.

PREVENTION OF FOOD ADULTERATION ACT.

Samples under the Prevention of Food Adulteration Act were received from 238 local bodies. Seventy-five new Local Bodies in Madras State were permitted to send samples from 1st July 1961. Twenty-four Municipalities and 11 Panchayats were permitted to increase their monthly quota of samples. The total number of samples analysed during the period under report was 14,353. 23.8 per cent of the samples reported were adulterated.

ENFORCEMENT IN LOCAL AREAS.

Many Municipalities and Panchayats wanted the quota of samples allotted to them to be increased. Suggestions have been made by some panchayats that the quota may be fixed for a quarter instead of a month.

ADVISORY SERVICE TO TRADE.

In a number of instances, where the infringement of the labelling rules, came to our notice particularly with respect to sale of Coffee-Chicory mixtures, the manufacturer or trader concerned was advised to modify the labels to meet legal requirements. In 42 cases where such advice was given, the violation consisted in describing the product which is a coffee-chicory mixture as 'Coffee', printing the words 'blended with chicory' in small and comparatively inconspicuous letters; or making a declaration of the composition by rubber stamp instead of by print.

WORK UNDER THE DRUGS ACT.

This Department continued to analyse all samples of Drugs taken by Drug Inspectors under the Drugs Act except items 1 to 7, 11 and 15 of Schedule-C of the Act.

During the year under review 212 samples of Drugs comprising 123 Pharmacopoeial drugs and 89 proprietary preparations sent by Drugs Inspectors were analysed and reported upon. About 27 per cent of these were found to be sub-standard or misbranded. There were also a few glaring instance of deliberate fraud.

ANALYSIS UNDER OTHER PENAL STATUTES AND CONTROL ORDERS PROHIBITION ACT.

Thirty-nine bottles of a product labelled as "Tincture Zingiberis Mittis B.P." were seized by the Police on suspicion and sent for analysis through the Sub-Magistrate, Mayuram. Fourteen were genuine and the rest contained little or no ginger. They were only coloured alcohol suitably diluted.

TRADE AND MERCHANDISE MARKS ACT.

Two packets of "Guru Tooth Powder" suspected to be spurious were sent for analysis and comparison with an authentic specimen sent by the Additional First-Class Magistrate, Salem. The suspected samples were identical with the authentic specimen.

INDIAN PENAL CODE.

Cases of Cheating A self styled representative of Messrs. Imperial Chemical Industries, London, was trying to sell a product stated to be a detergent under a label 'Teepal I.C.I.' to the Polytechnic College, Nagercoil. When somebody in the College identified him as a cheat, he bolted away leaving his wares. The sample was sent through the Sub-Magistrate, Nagercoil and it was found on analysis to be 12 per cent Caustic Soda solution containing a proprietary detergent powder. Similar such sample received were traced to the same source.

Three bottles labelled "Three Flag Brand Olive Oil" were received from the Deputy Commissioner of Police, Crime Branch, Madras, for analysis. The product was found to consist of groundnut oil coloured yellow with coal tar dye.

Another sample "Super-10 Cattle Food" was also analysed. This product was analysed and found to be not a cattle food.

Vegetable Oil Products Control Order.—Eleven samples of Vanaspathi taken by the Assistant Director of Industries and Commerce under Vegetable Oil Products Control Order, were examined during the year. All of them were found to conform to the prescribed specifications.

Toxicological Analysis—Food poisoning.—With a view to eliciting necessary information in cases of suspected food poisoning two questionnaires have been drawn up by this Department, one for the use of Health Inspectors and one for the use of medical attendant.

A diarrhoea epidemic known locally as Ubbumariyayi was reported in South Arcot. The cases studied a nutritional deficiency and malabsorption syndrome like tropical sprue and called for investigation from point of view of some specific vitamin deficiency.

In a case of food poisoning in the canteen of a chemical factory in Tiruchendur, samples of groundnut oil used in making the food preparation came to be suspected; the oils were found to be highly acidic and gave a strong positive Kries reaction indicating high rancidity, which was evidently the cause of the poisoning.

General Analytical and Advisory Service—Hospital Diet Articles.—During the year samples of diet articles numbering 9,919 were received from Government hospitals in the State for opinion as to their quality and conformity to tender specifications. The samples consisted of milk, toned milk, dal, coffee powder, bread, sugar, rice, butter, ghee, gingelly oil, coconut oil, biscuits arrowroot flour, barley and tamarind. Six hundred and forty-nine of the samples were reported as adulterated or otherwise unsatisfactory.

Hospital Lactometers.—Sixty-seven lactometers used in hospitals for checking milk supplies were tested and 38 were found to be unfit for use.

Hospital Drugs.—Three hundred samples of drugs and stock mixtures from Government hospitals were analysed. Over 70 per cent of stock mixtures were found to be inaccurately dispensed.

Samples from other State Institutions.—Seven samples of food articles from certified Schools were analysed. Out of 50 samples of milk powder from Primary Health Centres as many as 45 were found to be unfit for human consumption.

Samples from Central Government Institutions.—A number of samples of wheat, rice, sugar, etc., alleged to be contaminated or damaged were received from the Railways. Likewise the Regional Directorates of Food at Bombay, Calcutta and Rampur sent samples of imported wheat and rice suspected to be contaminated during transit.

Research.—A paper chromatographic method of separation of food colours worked out by Sri P. S. Nataraja Sarma and Sri V. Kondal Rao was published under the title "Paper Chromatography of Food Colours" in Vol. 21, D (1962), No. 2 pp. 61-63 of the Journal of Scientific and Industrial Research.

Office of the Government Analyst,
King Institute, Guindy, Madras-32,
3rd September 1965.

K. NARAYANASWAMY,
Government Analyst.

STATEMENT

PREVENTION OF FOOD ADULTERATION ACT.

TABLE-I.

Samples received from the Local Bodies in Madras State.

Nature of samples.	Total number of samples received and analysed.	Number Adulterated.	Percentage of Adulteration.
(1)	(2)	(3)	(4)
Milk	7,415	2,729	36.8
Gingelly oil	1,393	163	8.2
Coffee powder	1,011	47	4.6
Coconut oil	937	10	1.0
Dhall and Flours	752	70	9.3
Turmeric	536	35	6.5
Groundnut oil	436	36	8.3
Ghee	363	86	23.4
Tea	243	25	10.3
Butter	145	94	64.8
Honey	71	3	4.2
Sweet	49	1	2.0
Aerated water	40	12	30.0
Asafoetida	32	27	84.4
Miscellaneous	302	77	25.5
Total ..	14,353	3,415	23.8

REPORT OF THE DEPARTMENT OF WATER AND SEWAGE EXAMINATION.

TABLE-II.

Samples received from the Local Bodies in Andhra Pradesh for 3 months from 1st April 1961 to 30th June 1961.

Nature of samples.	Total number of samples received and analysed.	Number Adulterated.	Percentage of Adulteration.
(1)	(2)	(3)	(4)
Milk	659	453	69.5
Ghee	64	30	46.9
Butter	15	12	80.0
Gingelly oil	106	23	21.7
Coconut oil	134	2	1.5
Groundnut oil	98	7	7.1
Coffee powder	74	1	1.4
Tea	3	Nil.	Nil.
Turmeric	41	1	2.4
Dhall	182	20	11.0
Honey	5	Nil.	Nil.
Vegetable oil products	6	1	16.7
Miscellaneous	63	4	6.3
Total ..	1,450	559	38.6

**REPORT OF THE DEPARTMENT OF WATER AND SEWAGE
EXAMINATION FOR THE YEAR 1961-62.**

STAFF.

Sri K. G. Veeraraghavan, B.A., M.Sc., Chief Water Analyst was in charge of the Department.

An Accountant (Upper Division Clerk) was appointed in G.O. Ms. No. 1793, Health, dated 21st July 1961 which in some measure helped in carrying out the additional work consequent on the transfer of administrative control to the Director of Public Health.

The temporary posts of two Junior Water Analysts, one Laboratory Assistant, one Technical Assistant one I Sample Taker, one Technician, two Laboratory Attendant Grade I, three Laboratory Attendant Grade II and one Typist were made permanent.

Sri A. S. Hariharan, Assistant Water Analyst was awarded the degree of M.Sc., for his thesis on "The Treatment and Disposal of Tannery Wastes" by the University of Madras.

The Department comprises the following Sections :—

1. *Bacteriology Section*.—Bacteriological Examination of water, milk, aerated water, foods, etc.,—testing of disinfectant, sewage, industrial wastes, etc.,
2. *Chemical Section*.—Chemical examination of water for drinking, industrial and other non-domestic purposes, testing of water treatments chemicals, etc.,
3. *Biology Section*.—Biological assay of water pipe and filter growths, aquatic weeds, etc.
4. *Rural Water Supply Section*.—analysis of samples of water from Rural Water Supply Schemes.
5. *Sanitary Micro Biology Section*.—Environmental Sanitation Hotel Sanitation, investigation on food poisoning, etc.

Proposals have been submitted for constituting the following Sections :—

- (a) Sewage and Industrial Waste.
- (b) Air Pollution.
- (c) Field Investigation Section with Mobile Laboratory.

DRINKING WATER SUPPLIES.

The Water supplies at 47 municipalities, 18 panchayat boards, 25 railway stations, 14 jails and certified schools, 7 townships and project camps and 14 other institutions were under periodical analytical examination at the beginning of the year. During the year the water supplies to 43 Government hospitals and water supplies at the Indian Institute of Technology, Guindy, Central Jail, Madras, Madhavaram Milk Colony, and Madras Christian College, Tambaram, were added to this list. From each supply samples were taken from the source, treatment works and the distribution system and tested bacteriologically and chemically, and microscopically. Reports on the quality of the samples and the hygienic condition of the supply were furnished to the Director of Public Health, the Sanitary Engineer, the Municipal Engineer and Health Officer and other concerned officers.

During the year under report 10,855 samples of water were tested. Out of this 5,174 samples were taken from the protected water supplies and 1,803 were from Rural Water Supply Schemes and 189 Samples were tested for industrial purposes. The number of samples of sewage and industrial effluent tested was 141.

One hundred and seventy-two samples of milk were tested from the Government Milk Factory at Teynampet.

The water supplies to the Municipal towns were of fair hygienic quality during the year under report. Ninety-one per cent of the samples taken from the Headworks were of approved sanitary quality while the percentage of good samples from the consumer taps was eighty-six per cent due to some deterioration in transit through the pipe lines and contamination from leaks, etc. Only eighty-six per cent of the samples taken from the Panchayat Board water supplies met the required hygienic standard of quality. There is need for improving the quality of these supplies. More efficient chlorination, provision for stocking bleaching powder and avoiding interruptions in chlorination and installation of stand-by chlorinating units are called for.

Out of the one thousand eight hundred and three samples of water tested from Rural Water supply Schemes, one hundred and thirty-five samples had to be rejected as unsuitable for drinking owing to the presence of excessive salinity, hardness, fluorine, iron and other undesirable constituents. In some instances it was found that totally undrinkable water has been declared 'satisfactory' to taste and for cooking purposes by some local authorities. Instances were also met with where there was strong grounds to believe that the sample sent for analysis was not taken from the source under examination, but from a different one in order to obtain a favourable report. Such instances and also the fact that the presence of toxic elements in water cannot be detected by taste or odour points out the imperative necessity to subject all Rural Water Supply Schemes to proper analytical examination before commissioning.

The Railway Station water supplies are in good order as judged by the results of the test carried out during the year under report. Eighty-four per cent of the samples conform to approved sanitary standards.

FIELD INVESTIGATIONS.

Field investigations on problems relating to Water supplies, Industrial Wastes, etc., form a normal part of the routine duties of this department. The more important investigations carried out during the year were on :—

1. The outbreak of diarrhoea in North and South Arcot Districts with special reference to the quality of drinking water supplies.
2. The chemical and biological characteristics of the effluent from sago factories in Salem District for devising satisfactory treatment and disposal measures.
3. The Sattur Water-Supply Scheme.
4. Water-supply Scheme to High Pressure Boiler Plant at Tiruchirappalli.
5. The iron problem in the proposed water supply to Tambaram and Villivakkam.
6. The plating waste from the Needle Industries at Ketti.

In February 1962 a Field Unit was stationed at Vedaranyam and Point Calimero for assisting the authorities in carrying out purification of the drinking water supplies during a festival and conducting required spot tests.

TECHNICAL ASPECTS.

The procedure of dechlorinating with Hypo of samples of water taken from chlorinated water supplies for Bacteriological examination has been made a routine practice. All the positive cultures in the presumptive coliform test using MacConkey Bile Salt lactose broth are subjected to a confirmatory test. During the year under report no false presumptive positive reaction was encountered.

This laboratory lays considerable value on the Eijkmann test for detecting coli I organisms which are indicative of faecal pollution. This is especially because in the present rather under-developed state of general sanitation, evaluation of water quality on the basis of test for the coliform group may entail the outright condemnation of a

large number of supplies which are in sound condition as ascertained from critical sanitary surveys. Differential tests were carried out on two thousand six hundred and thirty-four coliform colonies grown on MacConkey agar and on Eosin Methylene Blue agar.

Five persons who got into a well in Solayampatti village of Vilathikulam taluk were died. A sample taken from this well contained very high amounts of hydrogen sulphide. The cause of death may have been Anoxemia and sulphide poisoning both of which are known to cause almost instantaneous death.

The occurrence of toxic amounts of fluorine in drinking water is one of the main problems. A sample of water taken from Manjanaikanur in Pollachi taluk, Coimbatore gave the highest figure of 5 parts per million of fluorine for all the samples tested during the year. A sample from Tirumalarayanpuram in Kulathur taluk, Tiruchirappalli district was a close second with 4.4 parts per million of fluorine.

TRAINING.

The following four electricians deputed by the Executive Engineer, Mettur Township were trained for two weeks on control of water treatment methods especially the determination of chlorine, alum dose, etc., and testing of residuals.

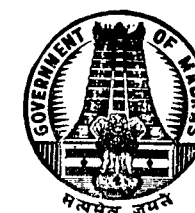
1. Sri V. Panchaksharam.
2. Sri V. P. Masilamani.
3. Sri Chellamuthu.
4. Sri Veeraraghavan.

Miss Kasthuri, B.Sc., Chemical Assistant and Mr. A. Murugappan, B.A. Entomological Assistant (Research) of the Nutrition Laboratory of the Office of the Director of Public Health underwent training for ten days in methods for the estimation of residual D.D.T in water.

Department of Water Analysis,
King Institute, Guindy,
Madras-32.

K. G. VEERARAGHAVAN,
Chief Water Analyst.

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GOVERNMENT OF MADRAS
1965



EDUCATION AND PUBLIC HEALTH DEPARTMENT
(Health.)

G.O. No. 936, 27th April 1964

Public Health—Public Health Administration Report for 1961—Reviewed.

READ—the following papers :—

From the Director of Public Health, dated 6th, 20th August and 17th September 1962, No. 103906/VS/62.

From the Director of Public Health, dated 6th November 1962, No. 242/UN/3/62.

From the Director of Public Health, dated 27th June 1963, No. 169/UN/4/63.

Order—No. 936, Health, dated 27th April 1964.

Recorded.

2. The registration of births and deaths has been made compulsory throughout the State. The vital statistical indices for the year 1961 reveal the following salient features :—

- (a) The birth rate for 1961 was 26.7 which was the same as in 1960.
- (b) There was a slight increase in the death rate from 12.1 in 1960 to 13.3 in 1961.
- (c) The State was free from plague except a few villages in the Salem district.

The Government are glad to note that infantile and maternal mortality rate showed a downward trend.

3. *Communicable diseases control*—(i) *Cholera*.—The State was practically free from cholera infection during 1961. The total number of deaths due to cholera during the year was only 28 as against 58 attacks.

Some of the districts were affected by floods due to unprecedented rains in the year. The Department took all precautions required to prevent the outbreak of cholera and other infectious diseases in that district.

(ii) *Dysentery and Diarrhoea*.—An epidemic of a peculiar type of diarrhoea broke out in the last part of 1960 in a few taluks of North and South Arcot districts and continued to persist in 1961 also. The disease prevailed widely in Wandiwash, Tiruvannamalai, Chengam and Polur taluks of North Arcot district and in Kallakurichi, Vriddachalam and Tirukoilur taluks of South Arcot district. The other parts of the two districts were comparatively free from this disease. Though it was not possible to diagnose the disease conclusively effective steps were taken by the Department to control the disease and for treating the affected persons.

(iii) *Enteric fever*.—There were 702 deaths under this category in the Municipal areas including Madras City as against 544 deaths reported in 1960. Though there was a small increase in the number of deaths, the disease was not prevalent in an epidemic form.

Smallpox.—The Government have launched upon a scheme for the eradication of smallpox in this State. Vigorous steps have been taken to implement the programme with the assistance promised by the Government of India. It is hoped that this disease will be wiped out from this State within two or three years.

Plague.—During the year under report, 10 villages in Hosur taluk in Salem district were affected with plague and there were 21 attacks and 8 deaths. The source of infection was traced to the Mysore State. Necessary anti-plague measures were carried out in all the infected and in the neighbouring villages.

Malaria.—The National Malaria Eradication Programme was being implemented during 1961 and it has been adjudged as the best in the country.

Filaria.—Filaria control operations were continued by the Public Health Department. Anti-filarial schemes were carried out by local bodies with financial assistance from the Government. The four National Filaria Control Units established under the National Filaria Control Programme functioned effectively during the year.

Respiratory diseases.—There was a decrease in the number of deaths under this item from 40,612 in 1960 to 38,527 in 1961. The death rate continued to be higher in the urban areas than in rural areas.

Tuberculosis.—During the year, 11,80,317 persons were tuberculin tested and 3,06,842 persons were vaccinated with B.C.G. The total number tested for B.C.G. was 54,06,871 and the number vaccinated was 17,40,912.

Influenza.—During the year, there was no epidemic of influenza. A few deaths however occurred in some parts of the State.

Guineaworm disease.—The department has taken up a special programme to eradicate the Guineaworm disease. Under the programme, villages and hamlets were surveyed and persons affected by the disease treated promptly. The infection of the disease showed a decline during the year under review.

Leprosy.—During 1961, Leprosy survey was continued by the Health staff in the usual manner.

Venereal diseases.—The Venereal Disease Control Scheme started by the Madurai Municipal Council was implemented this year also.

Yaws.—The Government sanctioned a centrally sponsored Yaws Control Scheme in April 1960. Eight Units have been established in the State. These Units examined 2,47,536 persons and detected 2,107 cases of Yaws. The disease is easily curable and it is hoped that by systematic work Yaws can be completely eradicated.

4. *Health Services—Maternity and Child Welfare*.—The Maternity and Child Welfare services in rural areas were further augmented in 1961. Consequent on the abolition of the District Boards, the centres maintained by District Boards were transferred to Panchayat Union Councils which are responsible for provision of Maternal and Child Health services under the Madras Panchayat Act. The number of Government Centres has increased from 1,138 in 1960, 1,164 Centres in 1961. The number of Centres maintained by voluntary agencies decreased from 299 in 1960 to 181 in 1961.

The UNICEF continued their free gift of drugs and diet supplements for distribution in the Centres in this State.

Industrial Hygiene.—The Health Officers inspected the factories in their areas and their observations were reported to the respective Inspectors of Factories for further action under the "Factories Act". Adequate steps were taken to mitigate the dust nuisance, and prevent inhalation of dust by employees working in textile mills, decortivating factories and coffee curing factories.

Health, Education and Publicity.—A Health Education Bureau on the lines suggested by the Government of India was established in the State under the overall charge of an Assistant Director of Public Health by upgrading the Health Education and Publicity section in the office of the Director of Public Health. The State Health Education Council met twice in the year. Health propaganda was carried on in this State through the usual channels of publicity.

The Research-cum-Action Project was continued after September 1961 as the Research wing of the Health Education Bureau and that all Health problems were studied in the field and the results were applied over wider areas.

Health Unit, Poonamallee.—This unit continued to serve as a field training centre for all categories of health workers as in the previous year.

Orientation Training Centre, Poonamallee.—The Centre continued to give training to doctors and auxiliary Health personnel in the philosophy of rural health work, and equip them for the better discharge of their duties in the rural health centres.

5. *Food and Nutrition*.—During the year, the diets of 488 families of different occupational groups were surveyed. Free distribution of gift skim milk from UNICEF was continued for children and expectant and nursing mothers through Maternity and Child Welfare Centres and Hospitals during the year.

The Prevention of Food Adulteration Act, 1954 was in force in the State and the provisions of the Act were duly enforced. Food samples under the Prevention of Food Adulteration Act were received from 232 local bodies (65 municipalities and 167 panchayats), as against 159 local bodies (63 municipalities and 96 panchayats) in 1960.

Prosecutions were launched in a number of cases and 2,548 prosecutions ended in conviction. Fines to the extent of Rs. 3,69,271 were collected; besides sentences of imprisonment ranging up to 2 years were also imposed.

6. *Environmental Hygiene*.—(i) *Water-supply and drainage*.—During the year under review thirty-one water-supply schemes and 8 drainage schemes in urban areas were under various stages of investigation and detailed plans and estimates were prepared for 42 water-supply and 5 drainage schemes. Loans are granted to local bodies for the implementation of the water-supply schemes in accordance with a phased programme. The schemes are executed by the Department of Public Health Engineering and Municipal Works. Rural Water-supply Schemes are being implemented out of village works grants.

(ii) *Rural and Urban Sanitation*.—During the year, improved sanitary type latrines were provided in a number of cases in rural areas.

(iii) *Compost manufacture*.—Sixty-four municipal councils and 882 panchayats besides Township Committees and the Corporation of Madras manufactured compost during the year.

(iv) *Building and Town-Planning Schemes*.—Eighty-three town planning schemes were sanctioned and they were at various stages of execution.

(v) *Fairs and Festivals*.—As usual, necessary sanitary arrangements were provided during fairs and festivals and all the festivals except the Brahmotsavam at Kanchipuram passed off without any outbreak of epidemic. The cholera outbreak at Kanchipuram was immediately brought under control by the prompt measures adopted by the Public Health Department.

7. *Training*.—The Research-Aide, Research-cum-Action Project, Poonamallee functioned effectively during the year under review.

