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PART IV—EDUCATION, SCIENCE AND ART (B)

Administration Report of the Director of Health Services for 1957

(Dr. D. L. J. Kahawita.)

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ADMINISTRATION REPORT OF THE DIRECTOR OF HEALTH SERVICES FOR 1957

INTRODUCTION

THE Administrative set-up of the Department in the year 1957 remained as it was in the previous year.

The year was one of struggle in the country against economic adversity with the threat of strikes by all types of Government employees, with the sole exception of the nurses as far as this Department was concerned, with increasing unemployment, with the difficulties that accompany inadequate housing and the continued dependence on imports for half the food consumed by the people in the face of the rising cost of living.

In the shadow of this gloom the 24th of December and the two subsequent days experienced the heaviest rainfall in living memory in the dry zone of the Island and the worst floodings the country has known. Thousands of acres of agricultural lands in the North, North-Western, North-Central and the Eastern Provinces were submerged by excess water from breached irrigation tanks and hundreds of people were either marooned for days without food or were rendered homeless practically in a night. Great damage was done to buildings and cultivated lands and many thousands of live-stock perished.

The Department was called upon to deal with two hazards arising from such a disaster. During the inundation and the period of rescue medical relief had to be provided for thousands of victims of exposure to floods and inclement weather, and before the people who had left the flooded areas returned to their homes a general cleaning up had to be given, to minimise the risk of outbreaks of malaria and of acute gastro-intestinal diseases.

It speaks volumes for the efficacy of the preventive measures instituted that no epidemic took place.

In this tragedy the resources of many friendly nations in the form of personnel skilled in rescue work, drugs, food, textiles, transport and money were directed with our own towards the task of relieving immediate distress.

The Department has been aware that on a national basis the country's approach to health problems has been piece-meal. It must be admitted that spotty programmes for categories of diseases and categories of persons have been established, but there is nothing which can be pointed to as our "National Health Programme".

Such a programme with comprehensive objectives and clear statements of the logical steps by which the objective may be obtained was prepared during the year on the lines of policy laid down by the Hon'ble Minister of Health, who has directed that the Plan should have some flexibility and provision for varying the speed at which the objectives might be reached.

It is also her view that a National Health Programme must deal not only with the financing of medical care of sickness by the construction and operation of suitable hospitals but also with health promotion, disease-prevention at the various levels, rehabilitation of those recovered with residual disabilities and the provision of substantial facilities for medical research.

The vital occurrences (birth rate of 36.5 ; general death rate of 10.1 ; infant death rate of 68 ; and the maternal death rate of 3.7 for 1957 show no material change from the previous year's figures which were the lowest ever recorded.

The mean birth rate for the eight-year period 1946 to 1953 was 39.0. The decline of the birth rate now experienced can be attributed partly to there being less females in the child-bearing age as a result of the high infant mortality that occurred during the malaria epidemics between 1934 and 1945.

The country in the past 25 years, partly as a result of somewhat of an improvement in its socio-economic status and partly to an improvement in the Health Services to obtain the benefit of recent advances in medicine for the average citizen and the development of the personal health services, has seen not only a reduction in deaths but also a dramatic change in the pattern of mortality from disease. A whole range of infectious diseases has ceased to be a major cause of death. A great saving of life in early years has received a shift in the age distribution so that cancer, diseases of the heart, arterio-sclerotic hypertensive and coronary artery diseases and vascular lesions of the central nervous system affecting the middle aged and the elderly have taken the predominant place in the mortality tables formerly occupied by infectious diseases with the notable exception of tuberculosis. Even here deaths from it have been reduced in number in each succeeding year.

One of the essential, if not the main, objects of the establishment of 15 Divisional Administrative Health Areas was to secure a more even distribution of services throughout the country, particularly in the Division of Medical Services. But largely because of financial stringency, lack of trained personnel in adequate numbers, and the agitation of the members of the public, mostly through the Press, to get for the Colombo Group of Hospitals the maximum and the best, there still continued to be wide disparities in the provision of medical facilities between the different divisions.

In spite of the extensive building programme in recent years the need for more hospital beds in many areas is still acute as the people do not use the indoor treatment in hospitals with understanding even though the cost of hospitalisation is high and grows continually higher.

The number of beds now available in hospitals including the specialised institutions is 28,994, i.e., one bed per 316 of the population. These beds were occupied during the year by 1,352,720 patients who were treated by 854 Medical Officers. In 1957 Government employed one doctor per 10,700 of population.

Numerical data on physicians and hospital beds have only a potential significance as regards "treatments" given to the population. This latter aspect of the hospital is important as the public attitude in Ceylon towards hospitals has changed amazingly in one generation. Originally hospitals were considered as asylums for vagrants or places of isolation of communicable diseases or homes for the sick-poor where no one with decent home facilities for treatment would think of going. Today improvement in treatment, child birth being made safer, operations being undertaken upon inaccessible parts of the body, development of methods and instruments for rapid and precise diagnosis, and improved nursing care have made the Ceylon hospital not only the safest place to go when ill, it has also become fashionable to do so.

As a result of this demand for hospital treatment a competition has arisen between those who have different schemes for hospitals and medical facilities in the country. This has ended up in the Colombo Hospitals having got at the taxpayers' expense lines of treatment so much more expensive than the recipients or most people could afford if a charge is made. This has denied at the same time for the people far removed from Colombo even the minimum of hospital facilities in most areas.

Whatever improvements the country hopes to attain in its hospitals they cannot rise above the competence of the individuals who participate in the service to maintain proper physician-patient-hospital relations. This competence leaves much to be desired in the opinion of the average person who has been a patient in Ceylon's hospitals. The reason for this is that it has not been possible to inculcate in the medical education of today that the practice of medicine is an art and a professional service as well as a science and a way to make a living.

There is also a tendency, particularly true of the specialists, to rely too much upon the tools and tests and not enough upon intelligence and reason for the making of a quick diagnosis to meet a situation in an emergency. When working under conditions of inadequate staffing and equipment this attitude has been to the detriment of something being done to the patient expeditiously. There are also instances where due to present day methods of medical education the medical men become so impressed with their importance or attainment as to become highly critical to mar the good relations that should exist in the great family of medicine that runs a hospital.

Time and again Medical Officers have brought to the notice of the Department the enormous amount of non-technical work that devolves on them in their day to day management of hospitals. In the light of this in the administration of the larger hospitals the Hospital Secretary has now become an indispensable officer. In order to attract its fair share of recruits to the Hospital Secretaries' Service and to provide a satisfactory career, proposals for a reform of its salary scale and the grading structure were placed before the Treasury during the year.

Since the beginning there has been a series of complaints by the Hospital Committee of the Colombo Group of Hospitals that the measure of its independence and of its power of action has been restricted. The Committee that functioned in 1957, as was expected of it, undertook a complete review of the establishment of the entire group with a view to seeing whether better use cannot be made of the available resources in the group of hospitals. This was very necessary as the services rendered by technical personnel are by far the most difficult in medical treatment considerably out-stripping material requirements. The Committee has felt that this review is worth its while as evident from some of the recommendations it made to the Hon'ble Minister.

Apart from those with well recognized preventable diseases, their number being 20.9 per cent. of the total that occupied hospital beds in 1957 as against 21.2 per cent. in the previous year, the returns of diseases treated as in-patients focus attention on four major disease groups. They are, malignant neoplasms, diabetes melitus, cardio-vascular diseases, rheumatic disease and asthma. These diseases offer a particular problem on account of obscure aetiology, insidious onset and multifarious symptoms. Since the aetiology is largely obscure primary prevention is not a practical proposition as in most of the infectious diseases. Yet there is much that can be done in these diseases by preventive health measures based mainly on secondary prevention. This implies early detection and diagnosis followed by prompt treatment and rehabilitation. We have to go a long way before most of our doctors and nurses, geared to diagnosis and therapy alone, are made to recognize that on either side of the care of the acute ill there is preventive medicine and rehabilitative medicine. In this combination of the three concepts of medicine lies the ambit of the future physician and the hospital.

There are welcome signs of social responsibility that the needs of the elderly are becoming recognized and provision is being made to a varying extent to meet the diversity of problems which arises in association with old age. A high proportion of beds in hospitals are occupied by old people.

with no place to go to or no relatives to receive them. This move on the part of the Department of Social Services will release almost 10 per cent. of the beds now occupied by the aged in Government hospitals.

Every hospital has a number of chronic sick on its hands as well. The proper care of bedfast patients with long-term illnesses is sufficiently complex and varied to require a wide range of services. Because of this the Department of Health Services has recommended that buildings available at Horahena, recently evacuated by the Navy, be utilized for the purpose of housing the chronically ill. In planning this service it has to be kept in mind that a large portion of such are indigent. This proposal was before the Ministries of Health and Social Services at the end of the year and was receiving consideration.

Except for the original diagnostic study and for acute exacerbations the general hospitals are neither the best nor the most economical places to care for long-term illness. The cases of this kind are rheumatism, heart diseases, hernia, haemorrhoids, varicose veins, high blood pressure, chronic bronchitis, asthma, nephritis, diabetes, chronic skin diseases, &c. These require no skilled nursing service but only medical supervision and personnel for rehabilitation.

The necessity for convalescent homes in association with all large general hospitals for those recovering from acute illness has been accepted. The first of such homes was constructed for reception of patients from the General Hospital, Colombo, and put into use at Talagolla with accommodation for 94 patients at the end of the year.

There was a public demand to regulate the fees charged by Private Nursing Homes. The Department, with the help of the Private Nursing Homes Advisory Committee, framed draft regulations to control the fees charged by these Nursing Homes and submitted them to the Ministry for necessary action. It is difficult for private nursing homes to provide even the minimum standards without charging rates that are so high that few in the middle class can meet with equanimity.

No country however socialistic can ignore that the practice of medicine has been and should continue to be a part and parcel of the competitive system of free enterprise. The physician must be encouraged to give his patients the best possible care dictated by his knowledge and conscience, not exclusively by the rules of a state medical service. The people must be encouraged to provide for themselves in their illness too, their own hospitals on modern methods of business and industrial management so that when they are patients in them they will feel that they are not just ward cases but individuals.

The Government's free hospital service is also becoming an expensive annual budgetary provision quite out of keeping with the national income of this country and its population growth. In the face of these hard facts hope of progress in the years to come must depend upon the strengthening of the hands of the private practitioner and the co-operative medical relief movement to treat more patients at home, where most people prefer to be or in non-state Hospitals.

Government took the policy decision in 1957 of giving monetary aid to co-operative societies formed for the medical care of the sick. No decision has been taken as yet as to the form or method of assistance the private practitioner should receive for shouldering the responsibility for the sick in a welfare state.

Both the co-operative movement and the private practitioner need from government the service of consultants for help and advice and much more comprehensive arrangements for X-ray and pathological investigations than are available at present for them to give a complete and competent service.

Under the present circumstances their patients are being admitted to the Government hospitals merely for investigation and "check up". It is a costly process which should be the exception rather than the rule.

The great drawback to improvements in the Mental Hospital at Angoda continues to be its overcrowding though the year ended with 215 less inmates than the 3,994 it housed at the end of 1956.

Due to various causes beyond the control of this Department the work at the Mulleriyawa new Psychopathic Hospital and the House of Observation and the extensions planned for the Pelawatte Mental Hospital were not completed during the year as anticipated in the last Administration Report.

A great change has taken place in the attitude of the public in Ceylon towards mental diseases. These diseases have been brought out of the darkness, when mental and emotional problems are now freely discussed. The stigma of mental sickness is slowly fading and patients are beginning to go for voluntary treatment to the Angoda Mental Hospital.

There were 1,466 temporary and voluntary admissions to this hospital as compared with 124 in the previous year; while the admissions through the courts were 1,920 as against 2,843 in 1956.

There was also an increase by 819 in the number discharged as cured over the last year's figure. However, the vegetative and purposeless lives of the chronic mental cases in this hospital make us aware that we though seem to know so much about maintaining physical life and prolonging it but as yet know proportionately so little about maintaining and developing psychological life.

The report of the Royal Commission on Mental Illness and Mental Deficiency published in England in June, 1957, has paved the way for a drastic reform of the law in that country. If Ceylon is to benefit from the recommendation in this report the indications are that there should be a single comprehensive piece of legislation with simple procedures suitable, as far as possible, for the care of every mental abnormality and a variety of institutions to meet the needs of different types whose existence in this country has been already recognized. This report is currently under consideration in connection with the proposed new laws relating to mental disorder in this country.

Though it is too early to speculate how far the recommendations in this report can be adapted to suit conditions here, it is clear that the prison-like appearance of a former age which the Mental Hospital at Angoda still retains, has to relax its routine to allow friends, relations and the community at large to co-operate in caring for the mentally ill and their rehabilitation. When the voluntary workers were invited this year for the first time to the Mental Hospital, Angoda, to attend to the welfare of the patients through an Association for the Care of the Psychiatric Patients, a long felt need was satisfied. The valuable work done by this body of workers is recorded elsewhere in this report.

The majority of the mentally ill on our hands are victims of schizophrenia striking in early adult-hood and during the prime of life with disastrous consequences. Our hospital records are inadequate to understand the conditions which produced it or to indicate whether its incidence is stationary or changing, but the evidence strongly suggests that its distribution is unequal with different living conditions.

Admissions of cases due to senile and cerebral arterio-sclerotic psychoses are also increasing probably due to smaller homes and more crowded living conditions in which the care of the elderly relation in his dotage is becoming increasingly difficult.

Out-patient psychiatry is now confined to the General Hospital, Colombo, and the Angoda institution. It is hoped to develop this service, with indoor accommodation as well, in all the Provincial Hospitals with the gradual return of a number of medical officers now abroad for post-graduate psychiatric training. This arrangement will give service to individual patients who need psychiatric diagnoses and treatment and to

that large group now suffering from conditions as neurasthenia, behaviour disorders and border-line psychoses not regarded as yet as psychiatric problems in this country.

It is possible to report that the position with regard to tuberculosis is very encouraging. Though the mortality from it has been reduced, it is still the greatest killer of all the infectious and parasitic diseases with 1,372 registered cases of deaths (154 per million of population) in 1956 which was, as reported by the Registrar-General, the lowest on record. The figures for 1957 are still not available but there is reason to expect that deaths have been further reduced this year.

This favourable trend in the death rate from tuberculosis has been primarily due to the discovery of cheap drugs for therapeutic and prophylactic purposes. Just a few years ago the best prospect of controlling tuberculosis was B. C. G. vaccination, when housing and nutrition could not be expedited overnight and hospitalisation of all the infectious cases was economically impracticable. Since then the treatment of tuberculosis has been radically changed and now it is possible to reduce the disease by the wide-spread use of these new found drugs even in the face of poor living conditions and little money for discovering and segregating the infectious patient.

Definite information regarding the incidence and distribution of tuberculosis in the country is now available as per results of the random sample survey of 1956. The survey was in a population of 10 years of age and over. This survey has indicated that the total number of estimated tuberculous cases in Ceylon is 63,000—36.4 thousand males and 26.6 thousand females. The estimated prevalence rate for all pathology was 1.55% for all Ceylon. It was found that the incidence of the disease is high among older persons particularly males and specially in rural areas.

The relationship between the distribution of the disease and occupation was studied in the pilot survey which preceded the sample survey. The main features found in rural Ceylon are higher rates for farmers and agricultural workers and lower rates for students than the average. Household workers mainly women showed slightly higher rates than the overall prevalence in the population X-rays.

The random sample survey also brought out that in the cities and towns particularly in Colombo, the T. B. Service was efficient and provided facilities and effected diagnoses quite as well or better than in some of the more developed countries. The number of cases found in Colombo which had not been diagnosed already was small. In rural areas opposite was the case. The adequacy of the control of tuberculosis hinges on the question how soon the Colombo type of T. B. Service can be multiplied in rural Ceylon.

The total number of beds for tuberculosis patients was practically the same as in the previous year—3,450 and approximately 9,700 patients were received into them in 1957. The average number of days a patient was hospitalised ranged from 75, in one institution to 264 at another.

Of the provincial clinics programmed to be put up all but two (Badulla and Batticaloa) have been completed and were in use. A total of 132,788 first-visits have been paid by patients to these clinics where 7,480 have been diagnosed as having pulmonary tuberculosis and 1,374 non-pulmonary tuberculosis.

With the attainment in 1957 of the target figure of $3\frac{1}{2}$ million of the Island's population tested by the B. C. G. teams it has been found uneconomical for these teams to operate from Colombo. This activity will be decentralised in 1958, when each provincial clinic will become the headquarter of one or more B. C. G. teams.

The amount paid out annually by way of social assistance to tuberculous patients has been mounting progressively. It reached 6 million rupees in the 1956/57 Financial Year and was only 1½ million rupees less than what it cost the Department to run the entire T. B. Campaign itself. A good many patients in receipt of this allowance, preferring to remain as patients, skipped taking the drugs given to them particularly those undergoing domiciliary or ambulatory treatment in order to prolong their ailment and to resist any move on the part of the doctor to stop the allowance or to reduce it. They do not like their cases to be pronounced as cured or arrested and fit for work. The cost of this assistance can be reduced if a substantial portion of the money is diverted to a well organised scheme for rehabilitating the cured patient and for securing him employment suited to his physical disability.

In December, 1957, the Anti-V. D. Campaign completed its 4th year of activity after it was handed over to national personnel by the W. H. O. Team that set it up. Since then in addition to the Colombo Central Clinic, 8 other outstation clinics in charge of full time officers have been established. Seven more are planned during 1958/59 Financial Year.

The number of patients attending the clinics has shown no diminution indicating that fresh infections are continuing and in 1957 the number of such cases was the highest in the Colombo Clinic since 1952. This was also the experience in nearly all the full time clinics that functioned during the year.

Ante-natal blood test, which is a very important pre-requisite for the control of congenital syphilis, has become a routine activity in most of the clinics run by Maternal and Child Health Officers. In Colombo the tests in ante-natal cases gave 1.4% positive results indicating that congenital syphilis is a problem to be reckoned with in the eradication of venereal diseases.

Fresh infections with yaws (Parangi) are still being discovered in some of the villages in the undeveloped areas of all the provinces except Western. However, their numbers are steadily declining. The total number of known cases of yaws is 625 of which 315 were infectious. Eradication of yaws on an Island-wide basis with mass blood surveys is under way by a special officer in the Galle and Matara Divisions to be followed by similar action systematically in those Health Divisions where residual infection is still found.

The two sections of the Campaign against leprosy—institutional and field—worked in the closest co-operation. Of a total of 2,299 cases of leprosy discovered by the Island Survey and known beforehand, 966 of them are in the 3 institutions of the Department though all at two of the latter are not the infected cases that need segregation. These two institutions still accommodate a large number of non-infectious cases who have been there for decades. This has forced the Department to allow, for want of additional accommodation, infectious cases to circulate in the population. The changes that are now taking place in the social structure of the community in the country outside these institutions have made the inmates restive causing difficulties to the administration. This can be reduced a great deal if the burden of at least the non-infective is lifted by putting them back into the community outside. It has not been possible to do this as they would be destitute and helpless without the means to sustain themselves.

A stage has been reached where sufficient accommodation is now available in the existing Leprosoria maintained by the Department to segregate the Island's entire total of 901 infectious cases if only Government could be persuaded to act on the suggestion to discharge the non-infective and maintain them outside the institutions with the payment of an allowance for their subsistence. This would enable segregation of

all the infective cases now at large in the community so that the control of the disease to the point of eradication in the not too distant future will become a practicable possibility with the aid of the newer drugs and the newer concept of their use.

The action of the modern drugs being mainly bacteriostatic to arrest progress of the disease, the aim of the Campaign has been to detect the cases as early as possible in order to render under segregation the infective cases non-infective by intensive treatment.

Once this is done it has been found that segregation is not an essential procedure for the control of the disease provided these non-infective cases are maintained as such by effective treatment. Some authorities yet believe that closed cases could transmit the disease but the risk hardly exists with a good public health organization.

The field work of this Campaign is now closely integrated with the Public Health Division's routine activities which include surveys, treatment of the non-infective cases, health education, arrangement for periodical examination of contacts and rehabilitation of the cured where possible. An attempt is being made to treat leprosy not as a disease apart but as a general public health problem. The aim of this public health approach is to lower the incidence of leprosy by mass operations carried out by the staff of the Division of Public Health in conformity with generally accepted control principles.

The construction of the Maharagama Cancer Institute was completed during the year except for the installation of the deep ray therapy apparatus which was in hand at the end of the year. Until these buildings are occupied early in the ensuing year the General Hospital, Colombo, will continue to be severely strained by cases of cancer.

The number of cancer cases treated in all the hospitals of the Department has ranged between 4,339 and 4,909 for the last 7 years. It was 4,239 in 1957 of which 23.9% cases were oral cancer. Ceylon is a country of oral cancer. Public ignorance which is the primary cause of this cancer should not be an obstacle to its virtual elimination if health education of the public to ensure early diagnosis and radical treatment, the essential means of its control, is seriously and persistently taken up. In this the voluntary organisations have an important part to play.

The Registrar-General reports that cancer as a registered cause of death has more than doubled in Ceylon during the last three years. Still the death rate per million of the population is low as compared with other countries. This is due to the fact that the standard of accuracy of the cause of deaths registered in Ceylon is not the same in every part of the country and also as a good proportion of the cancer cases still have faith in Ayurvedic medicine and go undiagnosed.

Recent work confirmed that there is an association between cigarette smoking and lung cancer though its nature has not been established. If this is so, lung cancer as a public health problem is also unique, in that in its control health education can play an important part by preventing young people from smoking and by encouraging the non-addicted to give it up altogether.

Hospital returns show that leukaemias are also increasingly diagnosed in this country as in all others. This needs much further investigation.

The achievements of the Division of Public Health during the year have been disappointing. Many reverses in its various branches of activities are mentioned in the section dealing with this Division in the Report.

This experience resulted from the depletion of its cadre and the ever increasing insistence on the part of Medical Officers of Health impressed into this division to do clinical medicine without replacements voluntarily

to take their place. Any work worth the while could not be had from the reluctant and the uninterested.

If we want to see the burden of costly treatment of the sick lightened, not only or even mainly for economy sake but for the best of all reasons that 'prevention is better than cure', then the Public Health Division has to be manned by a contented and dedicated band of medical men. Such medical men are hard to come by until the basic philosophy of medical education in this country emphasises the social and economic aspects of medical care, while medical education is neither diluted nor diverted from the meticulous and accurate training of the physician as a result of pressure groups clamouring for more medical graduates of any sort.

There is no need for this report to mention that the hospital services of the country are becoming expensive. The per capita expenditure reached the high water mark of Rs. 11/82 cents per head of population in 1957. In the face of this hard economic fact hope of progress will depend largely upon the efforts made to keep people out of hospitals. This entails the strengthening of the preventive service by capable and devoted personnel.

An idea that may now approach a trifle futuristic is to have a department of preventive medicine in every hospital with suitably trained specialists in charge responsible for advising on the co-relation of the preventive work of wards and departments. The officer should be one who is capable to stimulate and himself undertake research into the causative factors for diseases in the area and the means of their elimination and avoidance.

This idea will take practical shape on an experimental basis when some of the Medical Officers of Health as such will be appointed to the staff of the hospital of the towns they are stationed so that in addition to their public health work for the Local Authorities they will take charge of the preventive aspect of diseases in the hospitals. Hitherto the approach to preventive medicine has been through latrines, sewers, drains and water pipes of local authorities which in themselves are really necessary. This is still the concept of the sum total of public health and preventive medicine of the Department's Medical Officers of Health working for local authorities.

The attempt now made is to make a new approach from the local hospital to the total challenge of preventive medicine arising from diseases due to nutritional failures, hereditary factors, mental disorders, occupational hazards and chronic degenerative diseases as a result of the interaction of the human host, the agent and the social environment.

The medical sanitarian of the pioneer days divorced from clinical medicine should now become, as a result of this contact with the local hospital, a medical sociologist interested in the pathogenesis and epidemiology of our diseases.

The infectious diseases incidence in 1957 was not uneventful due to the epidemic of influenza in June, an outbreak of smallpox introduced to the country, probably from India, resulting in 19 cases with 8 deaths and to two outbreaks of typhoid fever—one of which was definitely food-borne. The last two outbreaks are described in detail elsewhere in the report.

In April the epidemic of influenza in the Far East received world-wide and even alarming newspaper publicity. The disease spread rapidly in various directions. Influenza began to be diagnosed in large numbers in Ceylon from the beginning of June in spite of an attempt made to quarantine the Island by refusing pratique to all infected ships and to isolate ill persons arriving by air. However, there was only a two months' lag

between the epidemic in the Indian sub-continent and Ceylon. The epidemic swept the country and for nearly three months sizeable outbreaks were occurring in various parts of the land. The total number treated as in-patients was 181,290 and the number of visits at out-door dispensaries was 4,259,000.

The virus responsible for the influenza outbreak was isolated and sent to the World Influenza Centre for typing and was reported to be unrelated to those of earlier epidemics or those in the epidemic of "Asian Flu".

As far as Ceylon was concerned the outbreak remained a benign disease lasting a week at most with no complications or fatalities than seasonal influenza. However, the infection rate was high and was independent of age, sex and race.

The history of the diagnosis of influenza by the clinicians in Ceylon even in normal times is very interesting. The figures for influenza had dominated any statistical study on infectious diseases in the country in the same way that "malaria" did prior to 1947. The diagnosis of malaria and influenza seem to have been very largely interchangeable and either of these terms has been used according to the fashion of the moment in dealing with the vast mass of undiagnosed pyrexias that occur in the country.

Before 1947 when the very successful anti-malaria residual spraying campaign was launched nearly 40 per cent. of the total diagnoses for all attendance at hospitals and dispensaries was diagnosed as malaria and only 5 to 10 per cent. as influenza. From that year afterwards owing to the demands of the Malaria Campaign for blood smears to support diagnosis the incidence of influenza jumped to 20 per cent.

It must be concluded that perhaps one half the cases diagnosed as malaria prior to 1947 were in fact of diverse aetiology as much as those diagnosed as "influenza" after 1947. Various diseases which can be diagnosed as pyrexias of unknown origin must have been among them. Some of them may be brucellosis, infectious hepatitis, murine typhus, scrub typhus, pneumonia, and in fact any infection that is liable to cause an elevation of temperature without any obvious signs or symptoms to make a diagnosis without adequate laboratory aid. In the absence of malaria as a common disease now in the country the total of 4,440,290 visits diagnosed as "influenza" in this outbreak is fairly accurate.

Two diseases, namely infectious hepatitis and anterior poliomyelitis, are gaining epidemiological importance in the country.

Ever since infectious hepatitis was made notifiable the number of reported cases is mounting. The figure of 285 in the previous year went up to 647 cases in 1957 with an outbreak in the Wariyapola Health Area.

The number of poliomyelitis cases reported is the highest since 1948. This cannot be due as in the other parts of the world to general improvement in housing and sanitation. Probably the introduction of a more virulent strain of the virus might be the course for this increase in incidence. It has been reported as an epidemiological experience in other countries that when infant mortality falls below 75 per 1,000 live births in a country having low incidence of poliomyelitis, it is common to find poliomyelitis rates increasing to about three or four per thousand of the population in that country. If this is true then an incidence of 647 in Ceylon in the present population with a drop of infant death rate to 68 in 1,000 live births bears out this fact. It is also reported that poliomyelitis under such a change appears not only in infants but also in older children as well. A change of the age distribution, when more cases will undoubtedly be reported in the country in the years to come, should provide the Health Officer here an important warning. The way how to give heed to such a warning is still doubtful as the current formaline killed vaccine (Salk Vaccine) provides protection only against the paralytic forms of poliomyelitis but does not prevent the immunized from having inapparent infection and spreading the virus around them.

No case of plague—human or rat—has occurred for very many years. The Cheopis index in Colombo rose to 4.3 during the year and as the introduction of plague through the Port of Colombo is always still here, though remote with the anti-plague measures that are being taken with the food cargoes landed in Ceylon, the Colombo Municipality was advised during the year to intensify anti-rat measures in the city.

Following the interruption of regular residual insecticidal spraying at the commencement of the year 1955 against malaria, the malarial parasite rate in the population, clinically diagnosed as malaria, has been rising. In 1955 it was 3.7 per cent. and in the two subsequent years 5.8 per cent. and 6.4 per cent. respectively.

In fact a wave of malaria transmission which commenced towards the end of the last quarter of 1956 was continued into the year reported on reaching its peak at the beginning of the year. This made it necessary to reinstitute residual spraying in the dry zone of the Island. In time of potential danger residual spraying continues to be the sheet anchor.

However, the recent reports which have made out that certain types of mosquitoes are showing a varying degree of resistance to insecticides portends a danger when adverse climatic conditions in the country make it necessary to resort to residual spraying. The complacency that the incidence of malaria is so low that for practical purposes a break in malaria transmission has been achieved is unsound.

That the eradication of malaria as a disease is feasible through the combination of suppression of mosquito population by insecticidal spraying and mass therapy of malarial carriers with the newer drugs has been proved in several parts of the world. Ceylon too has decided on to embark on an eradication campaign early in 1958 with technical advice from the W. H. O. on the programme formulated by Ceylon, and substantial aid from the U. S. O. M. for transport, insecticides and equipment.

The consultations with the W. H. O. have helped to standardise the methods of operation and reporting in order to achieve maximum efficiency and comparability of results.

Elimination of malaria as a public health problem is insufficient. Malaria should be eradicated as a disease with an Island-wide programme carried out systematically and urgently.

While rural filariasis has been almost eradicated from the endemic areas the progress made in the control of filariasis occurring in towns has not been as satisfactory as one would desire. The towns most affected are the thickly populated and congested ones in the coastal belt from Chilaw to Tangalla to a width of roughly one mile from the sea board.

These towns provide ample facilities for mosquito breeding in latrines, in their catchpits and in huskpits. These sources for breeding have been further increased by the extensive building activities now going on giving rise to more catchpits and innumerable burrowpits for retaining collections of water. Surface drainage is also faulty in the towns so that the rain water not finding an easy outlet to the sea stagnates in them.

Even within this coastal belt for unexplainable reasons the distribution of filaria infection is uneven. Foci with large number of cases intervene within this area with those where there are few or none.

In this belt approximately 750,000 inhabitants live of whom 460,349 have been blood filmed and 18,766 cases of microfilaria infection have been detected.

The measures now adopted in all the towns to control filariasis are essentially of a temporary nature. Even for such purposes the Central Government has to help the Local Authorities as in Dehiwala-Mount Lavinia Urban Council area.

The reduction of the mosquito population depends on the continual application of insecticides on breeding places. This involves much money on personnel, larvicides and equipment without permanent benefit as far as the problem is concerned. Once such control is slackened or removed, breeding occurs again almost to the same degree. Moreover, the *Culex fatigans* mosquito in these areas has already acquired resistance to insecticides. Even the change over to the organophosphate group of larvicides in the face of this increasing resistance to the chlorinated hydrocarbon insecticides has had no appreciable improvement in dealing with the larvae.

The permanent solution to this menace, which no doubt is causing individual alarm but curiously enough no organised public concern, is a pipe-borne water supply and water carried sewerage and under-ground drainage which none of the civic authorities are able to provide without substantial financial assistance from the Central Government.

The Public Health Veterinary Section gave particular attention to two of its activities during the year, viz., control of rabies and the sanitary improvement of the meat supplies in the country.

Rabies is a scourge that a country like Malaya has entirely eradicated in recent times within a short period of four years. Following these favourable reports an attempt was made to undertake, with a vaccine of high potency and long lasting immunity, which alone can give results that Malaya has had, a similar campaign to inoculate dogs and destroy the unwanted ones. But the scheme did not materialise for want of three lakhs of rupees to finance it. Assistance was sought from foreign sources as well without success.

The continued occurrence of deaths from hydrophobia (31 in 1957) and the pain and inconvenience inflicted on those bitten by rabid dogs by anti-rabies inoculations (11,548 persons in 1957) make it still possible for the Department to convince that the price asked to banish this disease from the Island is worth it.

The Registrar-General reports that the maternal and infant mortality rates for urban areas have improved considerably from 1952.

Both the infant death rate which has been reduced by half in the course of a decade, and the death rate of children under five years, the group in which a reduction in mortality during the same period is not discernable, are high when compared with rates reported by many advanced countries. Several of them have returned infant death rates less than a third of Ceylon.

As for causes of infant deaths there have been a notable reduction during the 7 years—1950 to 1956—from two major causes—convulsions and debility. The hard core of the problem is still prematurity, gastro-enteritis, infection of the new born and “rathe”.

It is common knowledge that the infant welfare services in Ceylon originated from the decline of breast-feeding and the consequent high mortality among the artificially fed children. At that time the most common reason for early weaning was an unexplained failure or insufficiency of the breast supply. Mothers having to seek employment or to return to work early was not an important cause of early weaning. It was this artificially fed child who was commonly the victim of gastro-enteritis. If the welfare services did make any impression by its health education activities the reduction of mortality from this condition should have been the phenomenal experience. The fact that it is still the killer of infants points to some measure of failure of the service.

Despite this blot it cannot be gain-said that the last 25 years have yielded outstanding improvements in the saving of infant life after the neo-natal period, an improvement in which the paediatric, child and social welfare services have all played their part. Further advances rest in the main in the

reorientating of the Department's maternal and child health services to minimise the risk of unborn and new born life and to improve the health of the pre-school child.

A committee consisting of University experts and Departmental medical officers are examining this question to report on what changes are needed in this activity of the Department to achieve these.

The maternal death rate for 1957 was 3.7 as compared to 3.8 per 1,000 live births in 1956. This rate had improved steadily from 1953.

While there has been a great improvement in the number of deaths from sepsis and toxæmia as causes of maternal deaths, haemorrhage still exacts a heavy toll.

There has been a tremendous increase (nearly 50 per cent. of the total births in the Island) in hospital deliveries which are both problems and opportunities. The problem seems to centre around the quantity and quality of medical care, problems which might be accentuated in the face of increasing birth rate. The opportunity is to further reduce the maternal death rate by trained domiciliary care and hospital preparation for delivery of the abnormal as some countries record maternal death rates less than 1 per 1,000 live births.

The basic function of the School Health Programme was determining the health status of pupils by medical inspections, counselling pupils and informing teachers and parents of the findings, assisting disease control, providing emergency care for sick children, maintaining health records of pupils and sanitation of school buildings.

A major criticism of the School Health Service has been directed at the expenditure of energy in finding out the same thing year after year without devoting enough time to solve the difficulties. This criticism is still true as the type of school health programme depends to a large extent upon the willingness of the Department of Education to lend support to the programme. This support is purely a personal matter of the school authorities. As a result of this the health services for school children have not kept pace with recent progress in medicine and public health and with the changing times and needs. The service has concentrated only on the finding of defects of the child at the school ; his home being often neglected. Health Service at high school level for the adolescents at the critical period of rapid growth and development is also at present neglected. It is hoped to establish this service in the ensuing year with the recruitment of trained psychologists.

Moreover, the teacher in the school health team had not received any importance in this work. Teacher orientation and specially a programme of indoctrination and observation for student teachers were indicated for sometime. This has been met during the year with the assistance of a Health Educator from the U. S. O. M. at the request of this Department taking up duties at the teacher training schools of the Department of Education.

The commonest defect detected continues to be malnutrition—18.54 per cent. of the total defects detected. Defects of teeth and gums, anaemia—the result of nutritional deficiency—and hookworm infestations are also high. Malnutrition has been manifested among boys in the clinical picture of angular stomatitis and Bitot's spots, while most girls had phrynoderma.

The wide spread prevalence of general malnutrition has not been adequately dealt with except in the reported cases where the condition has progressed to cause severe symptoms to be encountered by the clinicians. A variety of diseases, the outcome of poor diet, have been met with as usual in the hospitals and dispensaries. An adequate diet is necessary here not only to prevent nutritional diseases per se but other diseases as well.

There are two Government Milk feeding programmes which are likely to make a notable impression in the years to come on the widespread prevalence of malnutrition in the different population groups, provided they receive no setback by difficulties of State finance.

One is the midday meal which includes a glass of milk provided by the Department of Education to the school child and the other is the free distribution of milk particularly to the pre-school child at the 3,193 milk feeding centres that catered to them in 1957.

The "Free Milk Feeding Scheme" of the Department of Food was taken over by the Department of Health Services in January, 1957, and was run as the "Milk Distribution Scheme" to pre-school children and mothers. The scheme is being operated by this Department as a measure to counteract malnutrition and not just as a feeding scheme for the needy though this aspect of it is not being overlooked.

During the course of the year as many as 1,352 centres were distributing fresh milk instead of skimmed milk for which most have a prejudice. This change-over has encouraged the local dairy industry which will help the people to become a milk drinking nation as the present consumption of milk is the lowest per head of population for any country in this region.

A vast amount of information is lacking in this country in the field of nutrition as the relation between the available local foods and the requirements of the body have not been so far examined by food experts. The nutritional aspects of growth and development of infants and children, pregnancy, lactation, aged, periodontal diseases and dental caries remain uninvestigated as yet, in relation to foods available locally and consumed by the people and their food habits.

Government invited during the year Dr. F. W. Clements through the W. H. O. and Mrs. D. L. Bocobo of the F. A. O., who were here during the greater part of three months in the latter half of the year, for an overall appraisal of the nutritional problem in the country and the means of correcting any deficiency by locally produced food, processed if necessary. Their report had not reached the Department up to the time of going to press but their preliminary observations indicate that processed coconut kernel promises to be a satisfactory source of protein rich food for the pre-school group.

The Local Government Authorities continued to carry out their accustomed role in the prevention and control of communicable diseases, milk-food-water sanitation, excreta disposal and housing within their limited resources.

For these services the Health Department supplied the know-how and the personnel; but, it must be pointed out that not a single of the local authorities can give good water in sufficient quantity and efficient drainage and sewerage, the very elementary measures of health protection of the public at large, unless and until their financial resources are improved.

Good water is the bulwark of the sanitarian. Valuable hospital beds (one out of every six available beds) were occupied in 1957 by the victims of preventable diseases due to insanitary environments.

If this mass of preventable illness that the country is now groaning under, both physically and economically, is to be stemmed the development of water resources for domestic use as well as for other uses by the proposed National Water Board should receive the same urgent attention of the Government that the nationalisation of Bus Transport has received.

The construction works for the supply of a pipe-borne water to the towns around the city of Colombo have progressed to the extent that by the end of 1959 a domestic supply on tap has been assured.

The experiment in Kurunegala District as a pilot project to construct wells and latrines on a self-help basis was continued under UNICEF financial assistance with W. H. O. technical guidance. Progress has been steady though slow. Even if the number of latrines and wells constructed has benefited only a population of 22,736 the training the Public Health Inspectors get there as a part of the programme has been very valuable. The principal purpose of the training was to stir them to think, to help them to develop judgment about sanitary problems, and to stimulate them to initiate solution of these problems on a self-help basis in the areas from which they came for training.

Food hygiene having an important place in preventive medicine has engaged the attention of the Department as seen from the legislation enacted and the mass of food sampling that has taken place during the year. Laws and regulations and codes of practice have their part to play in raising the standards of food hygiene but none of them can really do the job without the backing of an educated and fastidious public.

Here health education of the public has to play an important part to create the public opinion for an insistent demand for clean and unadulterated food from the purveyor and the restaurateur. If only the would-be diners visit the kitchens of the eating houses even in our principal cities many would go without their meals. The stomach does not revolt at what the eye does not see.

The Departmental Advisory Committee on Poisons, Opium and Dangerous Drugs completed its work to compile a consolidated draft Act to control the sale of poisons and dangerous drugs. The sale of sulpha preparations, biological pharmaceutical products and antibiotics, now freely available without a prescription, will be controlled by the draft enactment now before the Legal Draftsman. This is a much overdue piece of legislation to prevent the prevailing illicit sale of numerous addiction forming drugs and self-medication with tranquillisers and antibiotics.

The sanitation of plantations scheduled under the Medical Wants Ordinance to maintain the high standard they once had is becoming difficult in the face of fragmentation of large well controlled estates into smaller uneconomical units. Another health problem on estates is the high infant mortality rate in them among the Indian labourers, who form the bulk of the population. This rate was only a trifle less than twice that for the rural areas of Ceylon according to the latest figures published by the Registrar-General. Disease incidence and the availability of medical aid on estates compare favourably with that of the rest of the country.

Medical aid to the staff of estates has become a sore point with government medical officers after the abolition of their private practice. They hold that they should not be called upon to render this service which had been regulated under the ordinance.

The work of the Division of Public Health Services in the Land Development and Colonization Schemes areas has improved the health conditions in them and kept down the incidence of malaria and other communicable diseases thus making a valuable contribution to the opening up of nearly 386 square miles in the once malarious and inhospitable zones of the country without any set-back.

The Division of Public Health Engineering has been utilised principally up to now for the improvement of urban sanitation and the execution of a building construction programme for the hospital services. It paid scant attention to the amelioration of the standards of rural health in the environment by improvement of living conditions generally.

Though environmental health has no precise definition, accepted even by the professional groups who use it most frequently, the water problem and soil pollution are the two needs in the environment that dominate with us. The engineering and technical aspects of water provision and pollution control are not less difficult in rural areas.

The work of the Public Health Engineers of the Department was reviewed by a Committee during the year on a Cabinet directive in order to relieve the division as much as possible of urban work and entirely of hospital building construction and to divert its services more to improvement of sanitation of rural areas and of hospital buildings of the Department.

Education of the public to re-awaken in the individual personal responsibility for his own life and health and for all the needs of the human community has been an activity which the Public Health Division has striven to develop with some measure of success in the last three years.

Health Education programmes are long-range ones to get the people to learn themselves by changing their attitudes the control and prevention of disease problems. So much ignorance and carelessness prevail on the part of the public that even many anti-bacterial agents developed to conquer infectious diseases are refused in this country.

The simple rules of healthy living to maintain positive health, essentials of a balanced diet that can prevent malnutrition, the danger of self-medication in certain diseases and the desirability of seeking medical aid early particularly in cancer, and that even vitamins, diets and the wonder drugs must be used with knowledge, have to be taught continually and persistently, by a properly organised public health education programme.

The influence of the World Health Organization's International Sanitary Regulations in moulding the policy of the Quarantine Services has been considerable in Ceylon as in other countries that have acceded to these regulations.

The decision to close the quarantine camps at Mandapam and Tattaparai was, primarily among other epidemiological reasons, due to the necessity to conform to the letter and spirit of the International Sanitary Regulations which do not permit Ceylon to maintain quarantine camps on Indian soil without the consent of India. Tattaparai Camp was closed and handed over to the Government of India in December, 1957.

The reduced passenger traffic arriving along the railway route from India as a result of the ban on immigration of estate labour imposed by India and the citizenship legislation by Ceylon has also reduced the risk of introduction of quarantinable diseases into Ceylon.

There has also been a considerable relaxation in the procedural requirements for persons entering Ceylon relating to disinfection at Mandapam Camp, visits to Medical Officers by passengers under surveillance in Ceylon and segregation of crews coming from India to join ship at Colombo.

No case of any quarantinable disease arrived in Ceylon during the year.

The wave of Asiatic Influenza which threatened to engulf Ceylon failed to materialise although numerous cases of influenza, though not of the Asian type, occurred in all parts of Ceylon as mentioned elsewhere in this Report. One case of the Asian type of Influenza was identified in the case of a sick Pakistani seaman in a ship calling at Colombo.

The Laboratory forms an integral part of present day medicine not only for the specialists but also for the general practitioner and district medical officer if the patient is to get the efficient diagnosis and treatment that he requires.

It is the aim of the Division of Laboratory Services to provide for every hospital the minimum facilities to enable testing of urine and faeces, equipment for blood examinations and smear examination for bacteria. The provincial and larger hospitals are being provided with the full range of equipment for all normal pathological and bacteriological laboratory examinations.

Buildings to provide these laboratory facilities and the specially trained Medical Officers to man these laboratories have gone on at an accelerated rate and the improvements effected during the year are satisfactory.

Several better accommodations for Laboratories have been put up and put into use in 1957. Qualified pathologists are now working at four of the eight provincial hospital laboratories and the Colombo Group of Hospitals.

Blood Banks have also been established in the laboratories in charge of qualified pathologists, as this service still functions as a part of the pathological department of a hospital.

In the Colombo Group of Hospitals an increase in the demand for blood transfusions has been reached, when it is not possible to be met with an equivalent increase in donors. Added to this there is an excessive use of blood due to a failure to appreciate the limitations of its value. Blood appears to be given purely as a precautionary measure with no indication. In yet others, transfusions are ordered by the most junior and therefore the least experienced of the medical staff. As consumption mounts the provision of blood tends to be more difficult due to greater efforts needed to procure donors who are mostly volunteers contributing a substantial quota free. To them the Department is most grateful.

The Provincial Laboratories are being improved to enable them to handle material from the Public Health Division as well and some of this work hitherto done by the laboratories of the Medical Research Institute in Colombo is being gradually passed down to the much needed relief of this institute.

The training of personnel for the Department's Services has been one of the most important activities during the year. Increased public awareness of needs has made insistent demands for better and more health facilities and the impact from increasing birth rates is now being felt by the country's Health Services. The problem of expanding the services will be with us for a long time not only because many more people will need service, but also training of personnel to man the health services takes time.

It has become necessary to tap every source to recruit and train all categories of personnel in adequate numbers for the diverse needs of the Department. An attempt is being made to meet this by setting up our own training facilities and institutions instead of sending a few abroad on schemes of scholarships.

During the year schools for training of Radiographers, Physiotherapists, Laboratory Technicians and Pharmacists were set up. The School of Dental Nurses put up by the generosity of the Government of New Zealand was completed and handed to national control. Three of the seven additional Nurses' Training Schools undertaken recently were opened during the year at Galle, Kurunegala and Jaffna, with accommodation for 200 in each of them. There are now 511 Nurses in the 5 training schools. In one the training is entirely in swabasha and in two there are bilingual classes.

The target is an output of one thousand trained nurses a year when all the 9 schools function in addition to the Welisara School of Tuberculous Nursing.

There is no shortage of recruits to the nursing profession in the country and nursing attracts suitable entrants. Now it is a question of offering conditions of service in keeping with the modern usage than in the past. The salaries of nurses have scarcely kept pace with increased living costs and responsibilities. Many nurses must work on evenings and night shifts over the weekend and on split shifts. Perhaps even of greater importance is that the present day nurse instead of taking and carrying out orders has to participate as a full fledged member of the medical team. Her duties have become onerous and responsible.

An important change has also been effected in 1957 in the method of training nurses, in that, the 3 year combined didactic and practical training course has been altered into two years' theoretical and practical work followed by one year's full practical work as an interne in a suitable hospital.

A Post-Graduate Course for Nursing Sisters has also been set up.

The first batch of Nurse-Aides completed their training and took up service at the Lady Ridgeway Hospital.

The training of medical specialists on a scholarship scheme abroad at a cost of approximately one million rupees annually is still being continued. The output of specialists by this scheme is so slow and costly that training of medical specialists at the Colombo South Hospital under construction by a team of American specialists and the setting up of a medical school by the Department in addition to the second Medical Faculty contemplated by the University was being pursued at the end of the year.

A School of Psychiatric Nursing was mooted as attention has been focussed on the very serious difficulty in regard to nurses to run the new psychiatric institutions under construction at Mulleriyawa and the heavy burden on the existing staff at Angoda. The training of a psychiatric nurse is different to that of other nurses as the bulk of the work in a psychiatric hospital is directed towards the management of patients who are physically healthy but have trouble with their interpersonal relationships. The proposal to set up this school was not favourably received by the Treasury. This is being further pursued.

The phenomenal rise in the expenditure of the Health Services require all the courage of a financier to determine whether the country can afford to continue to spend a total of Rs. 107.6 million on the Health Services. Drastic changes may have to be made to the existing scheme even without regard to political considerations. Salaries, drugs and medical equipment and diets cost Rs. 61,514,493. The Department feeds daily on an average 33,500 patients and 5,000 minor employees in 396 dieted institutions. To 91 of these the Department of Marketing supplied the provisions and earned from this department by way of handling charges Rs. 960,000, during the year. This payment has been made under representations against such an excessive charge.

There was no improvement in the inadequate accommodation at the Medical Stores. The desirability of establishing two Sub-stores, one at Anuradhapura and another at Kandy, is again being looked into. This was a proposal that was once examined and reported against by the W. H. O. Expert who organised the working of the Stores two years ago.

Assistance from the World Health Organization and the Colombo Plan countries for the advancement of health has been generous as in the past. In addition to aid in the form of supplies for various projects sponsored by these two Agencies from both sources fellowships for the Department's

officers have been awarded. The World Health Organization offered 7 fellowships in 1957 and found placements for another 7 fellows who were awarded the previous year while the Colombo Plan authorities awarded 18 fellowships in 1957 and there were 31 others previously selected awaiting placements at the end of the year. These fellowships were for special studies in various medical and ancillary fields.

The assistance given by 20 W. H. O. and 27 C/Plan Consultants either on continuing programmes or new ones during the year for varying periods is also gratefully acknowledged.

Thanks are due to those voluntary associations and their many enthusiastic workers who have contributed to the steady development in the social consciousness of the value and significance of personal service and lightened the burden of the Department.

The Health Services as well as the entire country have gone through a trying period in 1957. The course which medicine and medical care will pursue is bound to undergo great changes in the future which has its hopes and forebodings. These changes will be determined as much by the desire of the people as by the professional men in the department. Such men should have a sense of dedication to their profession and to their patients without allowing financial gain to wield an unhealthy influence in professional work.

Leadership, even statesmanship, is critically needed in the general body of medical men in the Health Services. Their associations and organisations, even though "trade unions", should be working not only for the betterment of their own members but should be devoting much time and energy to the public welfare by frowning against unethical practice, lowering of standards of professional work, and the outside influence which would interfere with the patient in the country's hospitals getting the best possible care.

We who deal with the health and medical care of our citizens have to pass through a soul searching study of our own activities in order to meet the great opportunities and the grave responsibilities that now confront us. They challenge the best that we can give in planning, in work and in service.

I render my grateful acknowledgments to all members of the Department for their devoted services for the public welfare. Their task has been difficult due to understaffing and inadequate equipment. It was made for them more difficult by publication in the Press of the occasional misfortunes in hospitals to the exclusion, generally speaking, of their trying record of service.

Anything that is deserving of criticism needs to be brought under public scrutiny by means of the Press by a fair and objective account of it, not distorted for the sake of sensationalism. The hospital service depends in very large measure for the success it can achieve on public confidence. The Press could help to inspire in the minds of the public that confidence.

I have also to thank those who so willingly helped me to bring out this report.

D. L. J. KAHAWITA,
Director of Health Services.

Colombo, May 12, 1958.

I—ADMINISTRATION

DURING the year under review, the Department made considerable headway in implementing the decentralisation proposals initiated in the previous years.

As may be expected, in a large Department like the Health Department where technical, para-technical, and lay staff, have to work in close collaboration, the problems connected with administration are bound to be many. Decentralisation pre-supposes the availability of senior officers with the requisite inclinations, experience and personality for administration. The scarcity of such men of the requisite calibre has been one of the major problems of this Department. There are no doubt many senior officers with distinguished records of service in what may be regarded as the strictly technical spheres. But, to work a decentralised set-up successfully the Department needs able and experienced administrators at the divisional levels. It is the policy of the Department to encourage more and more younger officers to get into the administrative grades. It is quite evident that this is a long-term measure.

In the meantime, the Department has attempted to simplify administrative procedure by the publication of a Departmental Manual which is intended to elucidate the normal regulations of the Government in their day to day application.

CADRE OF THE THREE DIVISIONS

(1) <i>Cadre</i>	(2) <i>1956-57 Sanctioned Cadre</i>	(3) <i>Total Number employed on January 1, 1957</i>	(4) <i>Losses during year on account of Deaths, &c.</i>	(5) <i>Additions during year by recruit- ment, &c.</i>	(6) <i>Total Number at the end of year</i>	(7) <i>Net Increase</i>
MEDICAL SERVICES						
Medical Officers	930	776	36	114	854	78
Dental Surgeons	61	54	—	6	60	6
Apothecaries	1,049	992	28	47	1,011	19
Matrons, Sisters and Nurses	1,756	957	38	84	1,003	46
Other Nursing Major Staff	536	959	20	49	988	29
Pupil Nurses	892	491	117	222	596	105
Other Major Staff	1,291	1,078	13	20	1,085*	—
Midwives	809	800	2	35	833	33
Stipend Pupil Midwives	140	120	4	—	116	4†
Male Attendants	3,151	2,397	44	309	2,662	265
Female Attendants	2,935	2,667	24	386	3,029	362
Other Minor Staff	5,137	4,737	50	155	4,842	105
Nurses' Aides and Stipend Nurses' Aides	200	46	23	—	—	—
PUBLIC HEALTH SERVICES						
Medical Officers of Health (Permanent)	135	85	6	1	80	—
Medical Officers doing Health work	—	—	—	—	—	—

* Excludes 823 officers common to two or more services.

† Net decrease.

CADRE OF THE THREE DIVISIONS (contd.)

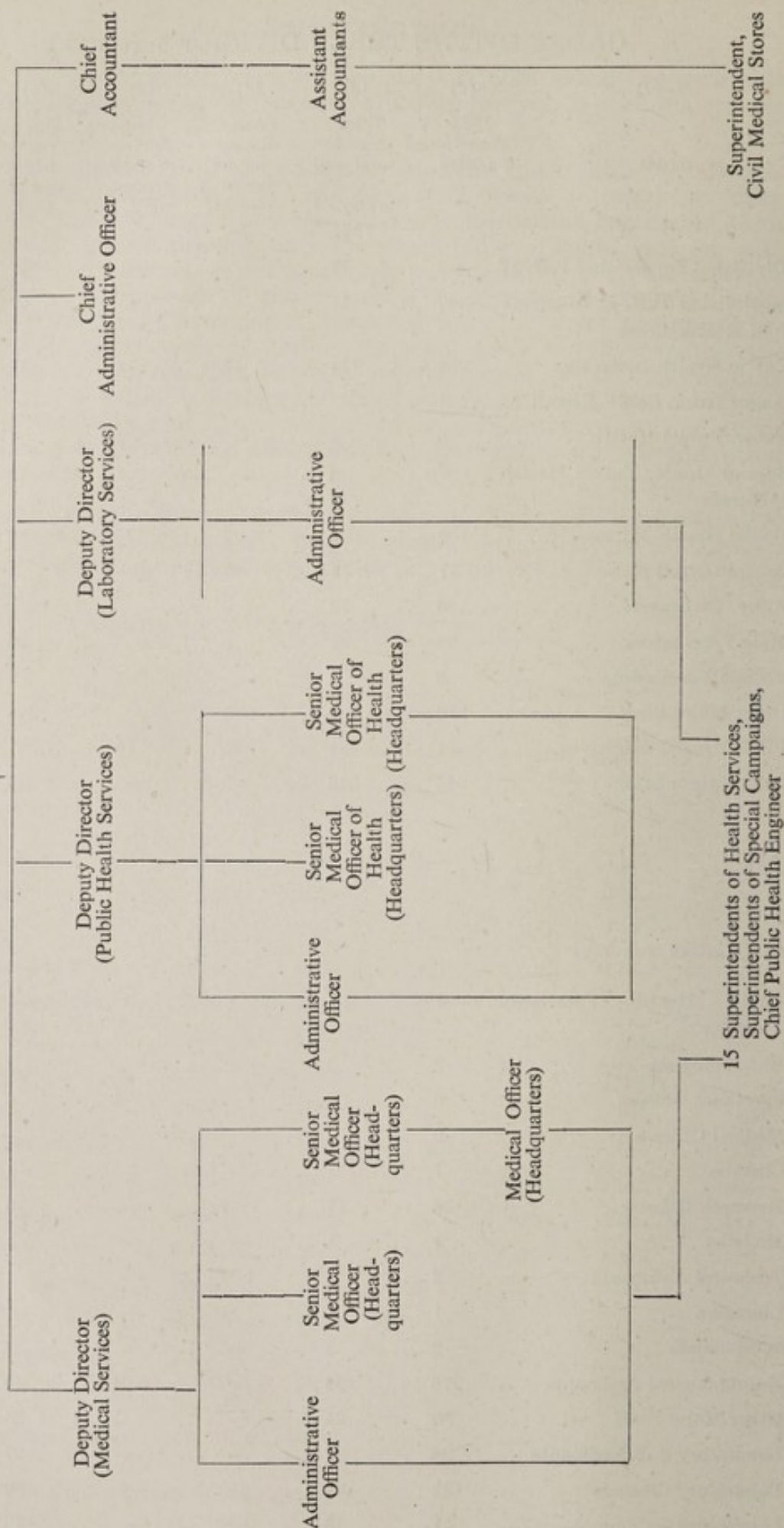
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<i>Cadre</i>	<i>1956-57 Sanctioned Cadre</i>	<i>Total Number employed on January 1, 1957</i>	<i>Losses during year on account of Deaths, &c.</i>	<i>Additions during year by recruit- ment, &c.</i>	<i>Total Number at the end of year</i>	<i>Net Increase</i>
Divisional Supervising P.H. II	15 ..	15 ..	— ..	— ..	15 ..	—
Supervising P.H. II in-charge of Health Areas	47 ..	47 ..	— ..	— ..	47 ..	—
Public Health Inspectors ..	859 ..	774 ..	17 ..	74 ..	831 ..	57
Senior Tutor, Public Health ..	1 ..	— ..	— ..	— ..	— ..	—
Tutor, Public Health ..	2 ..	2 ..	— ..	1 ..	3 ..	1
Special Grade, Public Health Nurses	5 ..	4 ..	— ..	1 ..	5 ..	1
Public Health Nurses ..	160 ..	124 ..	2 ..	10 ..	132 ..	8
School Dental Nurses ..	27 ..	12 ..	3 ..	— ..	9 ..	—
Anky. Dispensers ..	186 ..	13 ..	2 ..	— ..	11 ..	—
Male Vaccinators ..	40 ..	31 ..	8 ..	— ..	23 ..	—
Female Vaccinators ..	8 ..	7 ..	— ..	— ..	7 ..	—
Other Major Staff ..	216 ..	209 ..	4 ..	— ..	205 ..	—
Public Health Midwives ..	1,331 ..	1,331 ..	10 ..	10 ..	1,331 ..	—
Other Minor Staff ..	546 ..	546 ..	3 ..	— ..	543 ..	—

LABORATORY SERVICES

Public Health Veterinary Officer	1 ..	1 ..	— ..	— ..	1 ..	—
Entomologists ..	2 ..	2 ..	— ..	— ..	2 ..	—
Specialist Officers ..	5 ..	4 ..	1 ..	1 ..	4 ..	—
Medical Officers ..	9 ..	..	..	..	..	—
Chemist ..	1 ..	1 ..	— ..	— ..	1 ..	—
Research Officers ..	26 ..	17 ..	1 ..	— ..	16 ..	—
Modeller ..	1 ..	1 ..	— ..	— ..	1 ..	—
Technical Assistants ..	2 ..	2 ..	1 ..	— ..	1 ..	—
Librarian ..	1 ..	1 ..	1 ..	— ..	— ..	—
Biochemists ..	2 ..	2 ..	— ..	— ..	2 ..	—
Entomological Assistants ..	276 ..	236 ..	7 ..	31 ..	260 ..	24
Other Major Staff ..	30 ..	24 ..	— ..	1 ..	25 ..	—
Laboratory Sub-Assistants ..	28 ..	27 ..	— ..	— ..	27 ..	—
Laboratory Cleaners ..	132 ..	89 ..	— ..	— ..	89 ..	—
Laboratory Labourers ..	51 ..	43 ..	— ..	— ..	43 ..	—

CHART I

DIRECTOR OF HEALTH SERVICES



II—VITAL STATISTICS

IT has been possible to obtain only provisional figures from the Registrar-General in respect of Vital Statistics for 1957. Corrected figures for the previous years have since become available and are published.

(I) Population

The estimated mid-year population for 1957 is 9,165,000 and presents an increase of 236,000 from the previous year.

(II) Birth Rate and Death Rate

The number of births registered during 1957 was 334,135 as against 325,067 in 1956. The birth rate increased from 36.4 in 1956 to 36.5. There were 92,759 deaths registered in Ceylon in 1957, as compared with 87,561 in 1956. The crude death rate has increased from 9.8 in 1956 to 10.1 in 1957.

(III) Infant Death Rate

The deaths of infants under one year of age registered during 1957 amounted to 22,551. The figure for 1956 was 21,617. The infant death rate increased from 67 in 1956 to 68 per 1,000 live births.

(IV) Maternal Death Rate

The maternal death rate which was 3.8 in 1956 has been further reduced to 3.7, the lowest on record.

TABLE I—BIRTHS AND DEATHS, 1921-1957

Period	Birth Rate per 1,000 living	Number of Births registered	Estimated Population mid year	Number of Deaths registered	Death Rate per 1,000 living	Infant Mortality Rate per 1,000 live Births
1900 ..	38.6 ..				28.7 ..	
1921 ..	40.7 ..	183,917 ..	4,521,762 ..	140,749 ..	31.2 ..	192
1922 ..	39.1 ..	179,856 ..	4,603,034 ..	126,820 ..	27.5 ..	188
1923 ..	38.7 ..	181,437 ..	4,684,306 ..	141,891 ..	30.3 ..	212
1924 ..	37.5 ..	178,867 ..	4,765,578 ..	122,938 ..	25.8 ..	186
1925 ..	39.9 ..	193,261 ..	4,846,850 ..	117,543 ..	24.3 ..	172
1926 ..	42.0 ..	206,888 ..	4,928,122 ..	124,884 ..	25.3 ..	174
1927 ..	41.0 ..	205,469 ..	5,009,394 ..	113,003 ..	22.6 ..	160
1928 ..	41.9 ..	213,308 ..	5,090,666 ..	132,334 ..	26.0 ..	177
1929 ..	38.3 ..	198,005 ..	5,171,938 ..	135,274 ..	26.1 ..	187
1930 ..	39.0 ..	205,106 ..	5,253,210 ..	133,708 ..	25.4 ..	175
1931 ..	37.4 ..	199,170 ..	5,326,000 ..	117,452 ..	22.1 ..	158
1932 ..	37.0 ..	199,370 ..	5,389,000 ..	110,649 ..	20.5 ..	162
1933 ..	38.6 ..	209,032 ..	5,419,000 ..	114,690 ..	21.2 ..	157
1934 ..	37.1 ..	206,512 ..	5,560,000 ..	127,069 ..	22.9 ..	173
1935 ..	34.4 ..	192,755 ..	5,608,000 ..	204,823 ..	36.5 ..	263
1936 ..	34.0 ..	192,060 ..	5,642,000 ..	123,039 ..	21.8 ..	166
1937 ..	37.7 ..	216,072 ..	5,725,000 ..	124,210 ..	21.7 ..	158
1938 ..	35.8 ..	208,398 ..	5,826,000 ..	122,299 ..	21.0 ..	161
1939 ..	35.9 ..	212,111 ..	5,916,000 ..	128,611 ..	21.7 ..	166
1940 ..	35.7 ..	212,980 ..	5,972,000 ..	122,738 ..	20.6 ..	149
1941 ..	35.6 ..	219,864 ..	6,178,000 ..	113,003 ..	18.3 ..	129
1942 ..	35.8 ..	221,064 ..	6,179,000 ..	112,044 ..	18.1 ..	120
1943 ..	39.5 ..	248,820 ..	6,296,000 ..	131,061 ..	20.8 ..	132
1944 ..	36.1 ..	232,827 ..	6,442,000 ..	133,985 ..	20.8 ..	135
1945 ..	35.9 ..	238,494 ..	6,650,000 ..	142,931 ..	21.5 ..	140
1946 ..	37.4 ..	256,886 ..	6,854,000 ..	135,937 ..	19.8 ..	141
1947 ..	38.6 ..	271,191 ..	7,037,000 ..	98,544 ..	14.0 ..	101
1948 ..	39.7 ..	287,695 ..	7,244,000 ..	93,711 ..	13.0 ..	92
1949 ..	39.1 ..	291,191 ..	7,455,000 ..	91,889 ..	12.4 ..	87
1950 ..	39.7 ..	304,635 ..	7,678,000 ..	95,142 ..	12.4 ..	82
1951 ..	39.8 ..	313,662 ..	7,876,000 ..	100,072 ..	12.7 ..	82
1952 ..	38.8 ..	313,532 ..	8,074,000 ..	95,298 ..	11.8 ..	78
1953 ..	38.7 ..	321,217 ..	8,290,000 ..	89,003 ..	10.7 ..	71
1954 ..	35.7 ..	303,894 ..	8,520,000 ..	86,794 ..	10.2 ..	72
1955 ..	37.3 ..	325,538 ..	8,723,000 ..	94,368 ..	10.8 ..	71
1956 ..	36.4 ..	325,067 ..	8,929,000 ..	87,561 ..	9.8 ..	67
1957 ..	36.5* ..	334,135* ..	9,165,000* ..	92,759* ..	10.1* ..	68*

* Provisional figures.

Figures from 1941 amended vide Registrar-General's Report on Vital Statistics, 1956.

Source: Registrar-General's Report on Vital Statistics.

TABLE II—MATERNAL MORTALITY

<i>Period</i>			<i>Number</i>	<i>Rate per 1,000 Live Births</i>
1921-1930	..	..	3,847	19.8
1931-1940	..	..	4,111	20.1
1941-1950	..	..	2,893	11.2
1931 ..	..	..	4,142	20.8
1932 ..	..	..	3,821	19.2
1933 ..	..	..	3,882	18.6
1934 ..	..	..	4,155	20.1
1935 ..	..	..	5,165	26.8
1936 ..	..	..	4,158	21.6
1937 ..	..	..	4,304	19.9
1938 ..	..	..	4,195	20.1
1939 ..	..	..	3,869	18.2
1940 ..	..	..	3,423	16.1
1941 ..	..	..	3,369	15.3
1942 ..	..	..	3,194	14.4
1943 ..	..	..	3,321	13.3
1944 ..	..	..	3,179	13.7
1945 ..	..	..	3,940	16.5
1946 ..	..	..	3,987	15.5
1947 ..	..	..	2,863	10.6
1948 ..	..	..	2,377	8.3
1949 ..	..	..	1,906	6.5
1950 ..	..	..	1,692	5.6
1951 ..	..	..	1,810	5.8
1952 ..	..	..	1,818	5.8
1953 ..	..	..	1,558	4.9
1954 ..	..	..	1,388	4.6
1955 ..	..	..	1,319	4.1
1956 ..	..	..	1,224	3.8
1957 ..	..	..	1,240	3.7

N.B.—Annual Averages and Rates for the Decades, 1921-1950.

Source : Registrar-General's Report on Vital Statistics.

III—DIVISION OF MEDICAL SERVICES

General

Dr C. D. Amerasinha, Deputy-Director of Health (Medical Services), retired from Government at the end of the year after 36 years of service, during the greater part of which he worked as a Psychiatrist. His training in this speciality helped him to bring into his duties as a Deputy-Director a depth of understanding of human problems which was rarely surpassed by any predecessor in this office.

As in previous years, the most urgent problem confronting the Department is the acute shortage of trained personnel, particularly Medical Officers and Nurses.

The training of Apothecaries by the Ceylon Medical College was suspended in 1956, but was resumed during 1957 with a reduce intake of students. A scheme for the training of Pharmacists for appointment to the Department was also commenced.

A noteworthy event at the beginning of 1957 was the abolition of private practice of Government Medical Officers, other than of those Specialists who opted to stay on the old scale of salaries till 1962 with effect from February 1, 1957, as a result of representations made by the Government Medical Officers' Association. Other problems associated with this step which are receiving consideration are the unification of the three services and the grading of Specialists.

In spite of a liberal scheme of Departmental, W. H. O. and C-Plan Scholarships for Medical Officers, and the institution of short postgraduate courses in certain minor specialists at the University, there is still a dearth of Specialists in many important fields.

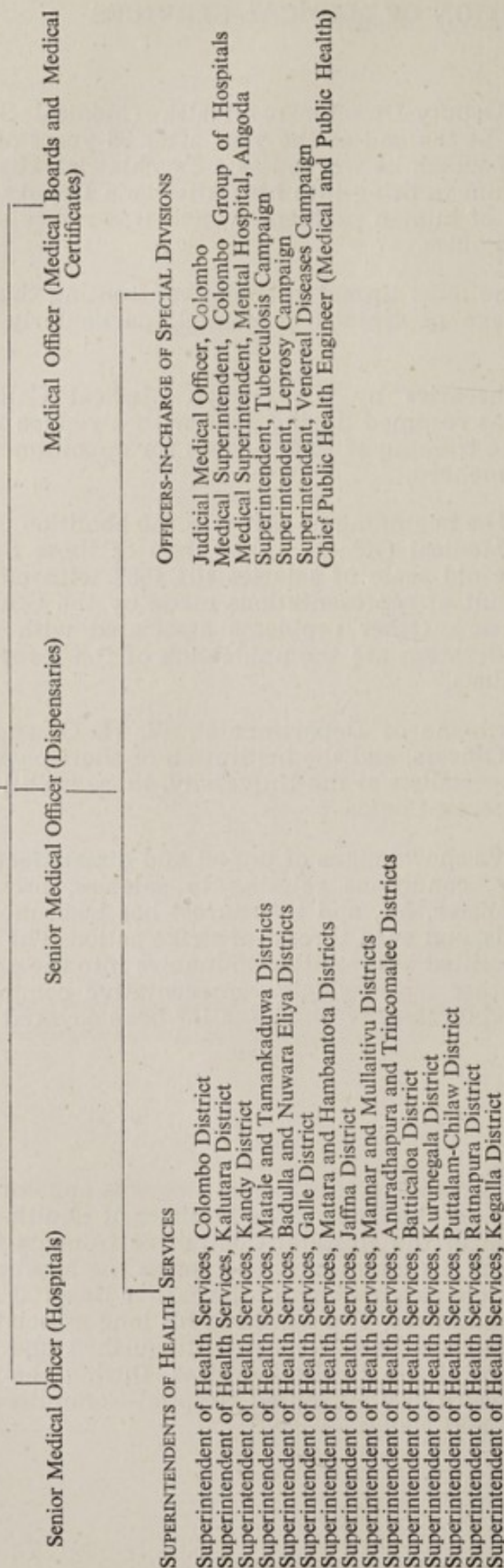
All grades of officers have shown signs of unrest and dissatisfaction with the conditions of service, conditions relating to salaries, prospects of promotion, schemes of transfer, &c., and this unrest has been manifesting itself in numerous demands, and even threats of strike action. The Ministry of Health accordingly appointed a committee to inquire into the grievances of Apothecaries, and another more widely representative committee for minor employees. Much exploratory work has so far been covered by these two committees.

Administration

During the course of 1957 a New Hospital Committee was appointed to the General Hospital, Colombo, by the Hon'ble the Minister of Health. Dr. R. L. Spittel who was Chairman of the Hospital Committee from its inception ceased to be a member. It is necessary here to express the appreciation of the Department of his services as a member of the earlier Hospital Advisory Board and the Hospital Committee. The record of his long association with General Hospital, Colombo, has been a most distinguished and valuable contribution to the welfare of the Health Services. During the year the Hon'ble the Minister of Health also appointed Hospital Committees to two more hospitals, viz., Galle and Kandy.

CHART II

DIRECTOR OF HEALTH SERVICES
DEPUTY DIRECTOR OF HEALTH (MEDICAL SERVICES)



* Excludes 823 Officers common to two or more services.

Medical Care

During 1957 the number of hospital beds was increased by 2,318, the number of beds at the end of 1956 being 26,676 and at the end of 1957, 28,994. During 1957, 1,352,720 cases were treated in Government Hospitals with 25,407 deaths. Out of these 134,416 cases were treated at the Colombo Group of Hospitals with 4,777 deaths.

In view of the Departmental policy of raising the standard of Provincial and Base hospitals, the medical officers recruited during the year have been mostly absorbed by these institutions. However, the number of Central Dispensaries and Branch Dispensaries continued to increase steadily on account of the pressing demands of the rural population for Western treatment. Specialists with the highest qualifications are now stationed at most of the Provincial hospitals. With the completion of the new theatre, a second surgeon was appointed to Badulla. A surgeon was appointed to Ratnapura. A second thoracic surgeon was also appointed to the General Hospital, Colombo. A Neuro-Surgical Unit has been established. The percentage of deaths to cases treated in all hospitals is less than 2 and speaks well for the high standard of medical treatment in our institutions.

The percentage of deaths from T. B. has shown the same low level as last year. The maternity mortality of 0.3% in Government Hospitals compares favourably with those of advanced countries.

The Medical Division with the aid of the University has added more Diploma Courses for its personnel. There are now the following Diploma Courses conducted annually by the University for the benefit of the Departmental Medical Officers.

D. C. H.,

T. D. D.

D. O.

D. T. M. & H.

D. A.

The training of para-medical personnel has not been neglected. With C-Plan assistance, a school of Radiography has been established and the training of Physiotherapists put on a more systematic footing.

With the introduction of electro medical aids for the diagnosis and cure of diseases, it has been realised that an efficient organisation is urgently required for installation, maintenance and repair of Electro Medical and X'ray equipment. A C-plan engineer has done his best to re-organise the electro-medical workshop. With the provision of these facilities, much of the delay in the repair of this equipment will be eliminated not to mention the economy resulting from an efficient maintenance. It may be stated that the medical care provided for the people of Ceylon surpasses both in quality and quantity any that is available in any other country in South East Asia.

MEDICAL INSTITUTIONS

Table III—Distribution of Staff at Medical Institutions as at December 31, 1957

Grade	General Institutions					Special Institutions					All Institutions	
	Provincial, Base and Government Hospitals	Complete Peripheral Units	Rural Hospitals	Maternity Homes	Central Dispensaries	Chest Hospitals and Sanatoria	Mental Hospitals	Leprosy Hospitals	I D Hospitals	Hospitals for other Departments	No.	No.
Medical Officers :	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Special (A) ..	1	..	..	..	..	1	1	..	..	..	3	3
Supra Grade ..	1	..	..	..	..	..	1	1	..	..	3	3
Grade I ..	78	..	3	..	1	5	..	1	2	2	92	92
Grade II ..	101	10	1	..	1	22	12	1	..	1	149	149
Preliminary Grade ..	126	26	10	14	1	18	8	5	2	3	213	213
Internes ..	102	..	..	..	..	2	..	..	..	..	104	104
Apothecaries ..	376	130	102	46	122	31	3	9	3	9	831	831
Nursing Staff :												
Matrons ..	81	..	..	..	..	7	1	..	1	2	92	92
Sisters ..	13	..	..	..	..	..	1	..	..	..	14	14
Nurses ..	847	3	..	..	..	148	43	6	15	3	1,065	1,065
Nurses (Pupils) ..	140	..	..	..	..	81	..	..	..	..	221	221
Tutors ..	7	..	..	..	..	10	..	2	..	..	19	19
Mothers (Religious) ..	5	..	..	..	..	1	..	21	..	..	27	27
Sisters (Religious) ..	64	..	..	..	..	34	..	..	..	..	98	98
Hospital Clerks ..	190	..	..	..	..	41	19	9	2	..	261	261
Kitchen Stewardesses ..	21	..	..	..	..	3	2	2	1	..	29	29
Other Major Staff ..	248	3	..	..	..	206	16	19	..	..	492	492
Minor Staff :												
Midwives ..	377	97	83	105	6	..	..	..	..	..	668	668
Attendants (Male) ..	1,472	124	135	..	3	283	409	..	25	6	2,457	2,457
Attendants (Females) ..	1,583	195	165	116	4	206	251	..	24	..	2,544	2,544
Other Minor Staff ..	2,466	227	201	173	195	635	192	212	45	13	4,359	4,359

Note : Excludes all staff at Colombo Group of Hospitals and Administrative Staff in Head Office and Divisional Offices

Table IV—Distribution of Beds in Institutions by Type and Area*—1957

	General Institutions										Special Institutions								All Institutions
	Provincial Base and Government Hospitals		Complete Peripheral Units		Rural Hospitals		Maternity Hospitals §		† Chest Hospitals and Sanatoria		† Mental Hospitals		† Leprosy Hospitals		I. D. Hospitals		Hospitals for other Departments		
	No.	No. of Beds	No.	No. of Beds	No.	No. of Beds	No.	No. of Beds	No.	No. of Beds	No.	No. of Beds	No.	No. of Beds	No.	No. of Beds	No.	No. of Beds	
S. H. S. Area	Colombo Group of Hospitals	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Colombo	4	1,915	5	123	2	43	2	560	5	1,795	1	2,158	1	702	1	300	6	2,475
	Kalutara	7	1,139	1	30	6	116	4	41	73†	116†	1	278	—	—	—	—	44	7,295
	Kandy	15	1,865	6	199	8	155	8	95	—	236†	—	—	—	—	—	—	19	1,720
	Matale	5	517	4	102	2	40	5	58	—	75†	—	—	—	—	—	—	38	2,595
	Badulla	20	1,494	2	51	5	131	5	62	—	66†	—	—	—	—	—	—	16	792
	Galle	7	1,026	5	178	4	96	5	41	—	140†	—	—	—	—	—	—	32	1,804
	Matara	8	896	6	157	8	178	13	142	1	96	—	—	—	—	—	—	23	1,526
	Jaffna	8	1,153	5	146	4	88	13	118	1	56†	—	—	—	—	—	—	37	1,528
	Vavuniya	6	323	3	62	2	44	3	34	—	84	—	—	—	—	—	—	33	1,864
	Anuradhapura	5	533	3	90	5	108	13	152	—	235†	—	—	—	—	—	—	14	463
	Batticaloa	5	489	2	82	5	102	7	77	—	73†	—	—	—	—	—	—	27	976
	Kurunegala	7	1,299	14	380	2	44	12	131	—	64†	1	260	—	—	—	—	21	1,079
	Puttalam	4	406	3	91	3	80	2	24	—	66†	—	—	—	—	—	—	35	1,920
	Ratnapura	9	962	—	—	5	93	5	56	1	138	—	—	—	—	—	—	13	739
	Kegalle	6	781	1	34	4	96	7	59	—	137†	—	—	—	—	—	—	19	1,248
	Total	126	16,367	60	1,725	65	1,414	118	1,814	8	3,450	2	2,436	3	996	2	320	395	28,994

* All figures as at December 31, 1957.

† Not under control of S. H. S.

‡ Represents Bed-strength of T. B. wards attached to Hospitals.

§ Two Maternity Hospitals are included under Colombo Group. All others are Maternity Homes.

TABLE V—HOSPITAL STATISTICS OF IN-PATIENTS IN ALL INSTITUTIONS BY PROVINCES AND DISTRICTS, 1957

<i>Province and District</i>		<i>Number treated*</i>	<i>Number of Deaths</i>
<i>Western Province :</i>			
Colombo District ..	..	157,122 ..	2,640
Kalutara District ..	..	84,418 ..	1,209
<i>Central Province :</i>			
Kandy District ..	..	121,475 ..	3,102
Matale District ..	..	39,888 ..	499
Nuwara Eliya District ..	..	25,934 ..	591
<i>Southern Province :</i>			
Galle District ..	..	101,068 ..	1,815
Matara District ..	..	62,484 ..	958
Hambantota District †	..	28,828 ..	334
<i>Northern Province :</i>			
Jaffna District ..	..	53,455 ..	731
Mannar District ..	..	19,029 ..	161
Mullaitivu District ..	..	5,139 ..	50
<i>Eastern Province :</i>			
Batticaloa District ..	..	37,840 ..	452
Trincomalee District ..	..	10,417 ..	135
<i>North-Western Province :</i>			
Kurunegala District ..	..	130,886 ..	1,995
Puttalam and Chilaw Districts ..	..	35,474 ..	510
<i>North-Central Province :</i>			
Anuradhapura District ..	..	36,610 ..	428
Tamankaduwa District ..	..	19,722 ..	153
<i>Province of Uva :</i>			
Badulla District ..	..	69,077 ..	1,224
<i>Province of Sabaragamuwa :</i>			
Ratnapura District ..	..	76,389 ..	1,548
Kegalla District ..	..	87,031 ..	1,158
Special Campaigns ..	..	16,018 ..	937
Colombo Group of Hospitals ..	..	134,416 ..	4,777
Total ..		1,352,720	25,407

* Number treated is defined as the number in hospital on January 1, 1957, plus number admitted (whether direct or by transfer from another institution) during the year.

† Includes figures for Rural Hospital, Kataragama, which is in the Badulla District.

Table VI—In-Patient Statistics of all Institutions by Type and Area, 1957

S. H. S. Area	General Institutions										Special Institutions										All Institutions	
	Provincial, Base and Government Hospitals		Complete Peripheral Units		Rural Hospitals		Maternity Hospitals		Chest Hospitals and Sanatoria†		Mental Hospitals†		Leprosy Hospitals†		I. D. Hospitals		Hospitals for other Departments					
	No. Treated*	Deaths	No. Treated	Deaths	No. Treated	Deaths	No. Treated	Deaths	No. Treated	Deaths	No. Treated	Deaths	No. Treated	Deaths	No. Treated	Deaths	No. Treated	Deaths				
Colombo Group of Hospitals	96,274	4,636	—	—	—	—	38,142	141	—	5,616	—	7,917	580	—	835	—	—	—	134,416	4,777		
Colombo	127,130	2,263	13,979	65	—	11	—	—	—	—	—	2,686	—	—	—	—	—	—	171,490	3,523		
Kalutara	74,425	1,124	2,177	6	—	79	—	—	—	—	—	7,816	—	—	—	—	—	—	84,663	1,209		
Kandy	96,104	2,958	14,651	104	—	39	—	—	—	—	—	9,550	—	—	—	—	—	—	121,475	3,102		
Matale	40,331	507	14,296	123	—	22	—	—	—	—	—	4,983	—	—	—	—	—	—	59,610	652		
Badulla	79,447	1,652	5,229	69	—	94	—	—	—	—	—	10,335	—	—	—	—	—	—	95,011	1,815		
Galle	84,695	1,737	12,106	72	—	73	—	—	—	—	—	3,778	—	—	40	—	—	—	101,108	1,815		
Natara	65,277	1,113	15,595	114	—	65	—	—	—	283	17	—	—	—	—	—	—	—	91,595	1,309		
Ja'fna	43,448	674	6,250	44	—	11	—	—	—	288	12	—	—	—	—	—	—	—	53,743	743		
Vavuniya	19,472	205	3,155	2	—	4	—	—	—	—	—	1,541	—	—	—	—	—	—	24,168	211		
Anuradhapura	31,627	482	7,077	47	—	34	—	—	—	—	—	8,054	—	—	—	—	—	—	24,168	211		
Batticaloa	27,329	375	3,634	34	—	43	—	—	—	—	—	6,787	—	—	—	—	—	—	24,168	211		
Kurunegala	83,265	1,725	42,585	243	—	27	—	—	—	—	—	5,036	—	—	270	—	—	—	47,027	563		
Puttalam	22,916	449	8,635	41	—	20	—	—	—	—	—	—	—	—	—	—	—	—	38,110	459		
Ratnapura	65,687	1,466	—	—	—	82	—	—	—	524	18	—	—	—	—	—	—	—	130,886	1,995		
Kegalla	68,359	1,060	6,878	21	—	77	—	—	—	—	—	—	—	—	—	—	—	—	76,389	1,548		
Total	1,025,786	22,426	156,247	985	614	38,142	141	6,711	329	8,162	580	1,1	28	297	7,088	8,711	7	1,352,720	25,407			

* Number treated is defined as the number in hospital on January 1, 1957, plus number admitted (whether direct or by transfer from another institution) during the year.

† Special Campaigns not under control of S. H. S. Figures shown according to areas where the institutions are situated.

Table VII—Midwifery in all Government Institutions

<i>Type of Institution</i>	<i>No. of Mothers Delivered</i>	<i>No. of Live Births</i>	<i>No. of Foetal Deaths</i>	<i>No. of Maternal Deaths</i>	<i>No. of Infant Deaths</i>
De Soysa Hospital for Women	15,589 ..	14,919 ..	1,280 ..	69 ..	706
Castle Street Hospital for Women ..	5,856 ..	5,722 ..	225 ..	30 ..	164
District Hospitals ..	93,253 ..	88,433 ..	6,584 ..	466 ..	2,195
Peripheral Units ..	23,252 ..	22,604 ..	923 ..	26 ..	240
Rural Hospitals ..	12,189 ..	12,045 ..	281 ..	8 ..	88
Cottage Hospitals ..	3,190 ..	3,071 ..	164 ..	4 ..	22
Maternity Homes ..	19,062 ..	18,912 ..	300 ..	6 ..	109
Total ..	172,391	165,706	9,757	609	3,524

Table VIII—Cases Treated and Deaths in all Government Hospitals, 1957

<i>Group (1)</i>	<i>Name of Diseases and Detailed List Numbers (2)</i>	<i>Treated (3)</i>	<i>Deaths (4)</i>
1	Pleural tuberculosis (003) ..	105 ..	2
2(a)	Pulmonary tuberculosis (002) ..	11,498 ..	799
(b)	Other respiratory tuberculosis (001, 004-008) ..	137 ..	4
3	Tuberculosis of meninges and central nervous system (010) ..	100 ..	27
4	Tuberculosis of intestines, peritoneum and mesenteric glands (011) ..	174 ..	22
5	Tuberculosis of vertebral column and hip (012-0, 012-1, 013-0, 013-1) ..	176 ..	3
6	Tuberculosis of other bones and joints (012-2, 012-3, 013-2, 013-3) ..	131 ..	—
7	Tuberculosis of lymphatic system (015) ..	365 ..	—
8	Tuberculosis of genito-urinary system (016) ..	218 ..	13
9	Other tuberculosis (014, 017-019) ..	88 ..	5
10	Congenital syphilis (020) ..	74 ..	3
11	Early syphilis (021) ..	171 ..	—
12	Tabes dorsalis (024) ..	14 ..	1
13	General paralysis of insane (025) ..	9 ..	1
14	Cardio-vascular syphilis (022, 023) ..	4 ..	—
15	Other syphilis (026-029) ..	197 ..	2
16	Gonococcal infection (030-035) ..	664 ..	—
17	Typhoid fever (040) ..	3,913 ..	184
18(a)	Paratyphoid fever (041) ..	393 ..	2
(b)	Other salmonella infections (042) ..	290 ..	4
19	Cholera (043) ..	— ..	—
20	Brucellosis (Undulant fever) (044) ..	6 ..	—
21(a)	Bacillary dysentery (045) ..	2,833 ..	132
(b)	Unspecified forms of dysentery (048) ..	5,669 ..	102
22(a)	Amoebiasis, without mention of liver abscess (046-0) ..	5,502 ..	45
(b)	Amoebiasis, with liver abscess (046-1) ..	1,461 ..	21
(c)	Other protozoal dysentery (047) ..	290 ..	11
23	Scarlet fever (050) ..	— ..	—
24	Streptococcal sore throat (051) ..	1,871 ..	4
25	Erysipelas (052) ..	129 ..	3
26	Septicaemia and pyaemia (053) ..	157 ..	21
27	Diphtheria (055) ..	929 ..	136
28	Whooping cough without mention of pneumonia (056-0) ..	1,321 ..	17
29	Whooping cough with pneumonia (056-1) ..	88 ..	9
30(a)	Cerebro-spinal fever (057-0—part) ..	— ..	—
(b)	Meningococcal infection (057) excludes 30 (a) ..	50 ..	28
31	Plague (058) ..	— ..	—
32	Leprosy (060) ..	1,265 ..	30
33	Tetanus (061) ..	1,007 ..	306
34	Anthrax (062) ..	18 ..	5
35(a)	Acute poliomyelitis, paralytic (080-1) ..	334 ..	37
(b)	Acute poliomyelitis, non-paralytic (080-0, 080-2, 080-3) ..	409 ..	48
36	Acute infectious encephalitis (082) ..	146 ..	62
37	Late effects of acute poliomyelitis (081) ..	27 ..	1

<i>Group</i> (1)	<i>Name of Diseases and Detailed List Numbers</i> (2)	<i>Treated</i> (3)	<i>Deaths</i> (4)
38	Late effects of acute infectious encephalitis (083)	17	—
39	Smallpox (084)	19	6
40	Measles without mention of pneumonia (085-0)	3,242	6
41	Measles with pneumonia (085-1)	620	15
42	Rubella (086)	—	—
43	Yellow fever (091)	—	—
44	Infectious hepatitis (092)	2,288	147
45	Glandular fever (093)	10	—
46(a)	Louse-borne epidemic typhus (100)	—	—
(b)	Flea-borne endemic typhus (murine) (101)	9	—
(c)	Tick-borne typhus (104)	—	—
(d)	Mite-borne typhus (105)	33	—
(e)	Unspecified rickettsial diseases (102, 103, 106-108)	225	4
47(a)	Vivax malaria (Benign tertian) (110)	2,138	1
(b)	Malariae malaria (Quartan) (111)	452	—
(c)	Falciparum malaria (Malignant tertian) (112)	463	1
(d)	Ovale malaria (113)	1	—
(e)	Mixed malarial infections (114)	1,055	1
(f)	Blackwater fever (115)	3	3
(g)	Other and unspecified forms of malaria (116)	1,272	3
(h)	Recurrent induced malaria (117)	26	—
48	Leishmaniasis (120)	—	—
49	Trypanosomiasis (121)	—	—
50	Schistosomiasis (123)	—	—
51	Hydatid disease (125)	—	—
52	Filariasis (127)	469	1
53	Ankylostomiasis (129)	19,019	118
54	Other diseases due to helminths (124, 126, 128, 130)	50,615	1,582
55	Actinomyces (132)	2	—
56(a)	Chancroid (036)	73	—
(b)	Food poisoning (049)	1,246	35
(c)	Gas gangrene (063)	25	1
(d)	Vincent's infection (070)	35	1
(e)	Relapsing fever (071)	—	—
(f)	Leptospirosis icterohaemorrhagica (Weil's disease) (072)	1	—
(g)	Yaws (parangi) (073)	65	—
(h)	Chickenpox (087)	2,588	7
(i)	Herpes zoster (088)	436	—
(j)	Mumps (089)	1,336	4
(k)	Dengue (090)	11	—
(l)	Rabies (094)	155	42
(m)	Trachoma (095)	26	—
(n)	Scabies (135)	1,920	2
(o)	All other diseases classified as infective and parasitic (037-039, 054, 059, 064, 074, 096, 122, 131, 133, 134, 136-138)	3,727	42
57	Malignant neoplasm of lip (140)	138	3
58	Malignant neoplasm of tongue (141)	313	19
59	Malignant neoplasm of other parts of buccal cavity and pharynx (142-148)	1,320	69
60	Malignant neoplasm of oesophagus (150)	195	40
61	Malignant neoplasm of stomach (151)	185	49
62	Malignant neoplasm of intestine other than rectum (152, 153)	109	24
63	Malignant neoplasm of rectum (154)	158	27
64	Malignant neoplasm of liver (primary) biliary passages and pancreas (155, 157)	96	35
65	Malignant neoplasm of larynx (161)	121	6
66	Malignant neoplasm of bronchus and lung not specified as second- ary (162, 163)	57	15
67	Malignant neoplasm of breast (170)	442	19
68	Malignant neoplasm of cervix uteri (171)	691	44
69	Malignant neoplasm of corpus uteri (172)	53	10
70	Malignant neoplasm of other and unspecified uterus (173, 174)	77	4
71	Malignant neoplasm of ovary, Fallopian tube, and broad ligament (175)	43	7
72	Malignant neoplasm of prostate (177)	75	5
73	Malignant neoplasm of bladder and urinary organs (181)	77	14
74	Malignant neoplasm of skin (190, 191)	83	3
75	Malignant neoplasm of bone and connective tissue (196, 197)	61	2
76	Malignant neoplasm of brain, nervous system (193)	17	3
77	Malignant neoplasm of other and unspecified sites, except lym- phatic and haematopoietic tissue (156, 158-160, 164, 165, 176, 178-180, 192, 194, 195, 198, 199)	501	36

Group (1)	Name of Diseases and Detailed List Numbers (2)	Treated (3)	Deaths (4)
78	Lymphatic leukaemia (204.0)	72 ..	26
79	Myeloid leukaemia (204.1)	83 ..	9
80	Other and unspecified leukaemia (204.2-204.4) ..	29 ..	13
81	Hodgkin's disease (201)	46 ..	3
82	Other neoplasms of lymphatic and haematopoietic tissue (200, 202, 203, 205)	15 ..	10
83	Benign neoplasms of respiratory system (212) ..	41 ..	2
84	Benign neoplasms of breast (213)	212 ..	8
85	Uterine fibromyoma (214)	266 ..	—
86	Other benign neoplasms of uterus (including endometrioma) (215) ..	75 ..	—
87	Benign neoplasms of ovary (216)	147 ..	—
88	Benign neoplasms of kidney and other urinary organs (219) ..	65 ..	8
89	Benign neoplasms of skin (220-222)	486 ..	—
90	Benign neoplasms of nervous system (223)	105 ..	14
91	Other benign neoplasms (210, 211, 217, 218, 224-229) ..	461 ..	1
92	Neoplasms of unspecified nature of nervous system (237) ..	4 ..	1
93	Other neoplasms of unspecified nature (230-236, 238, 239) ..	1,103 ..	29
94	Asthma (241)	29,106 ..	183
95(a)	Hay fever (240)	221 ..	—
(b)	Other allergic disorders (242-245)	5,028 ..	3
96(a)	Simple goitre (250)	372 ..	4
(b)	Nontoxic nodular goitre (251)	184 ..	—
97	Thyrotoxicosis with or without goitre (252)	245 ..	11
98	Diabetes mellitus (260)	3,786 ..	156
99(a)	Beriberi (280)	66 ..	1
(b)	Pellagra (281)	7 ..	—
(c)	Scurvy (282)	128 ..	2
(d)	Active rickets (283)	399 ..	14
(e)	Other avitaminosis (284-286)	15,269 ..	177
100	Other endocrine and metabolic disorders (253, 254, 270-277, 287-289)	582 ..	10
101	Pernicious anaemia (290.0, 290.1)	2,438 ..	33
102	Aplastic anaemia (292.4)	511 ..	13
103	Other and unspecified anaemia (290.2, 291, 292.1-292.3, 292.5-292.7, 293)	32,413 ..	808
104	Other diseases of blood and blood forming organs (294-299) ..	566 ..	49
105	Psychoses (300-309)	6,163 ..	4
106	Psychoneurosis with anxiety reaction (310)	1,222 ..	4
107	Psychoneurosis with hysterical reaction (311)	1,699 ..	1
108	Psychoneurosis with somatization reaction (315-317) ..	107 ..	—
109	Other and unspecified psychoneurotic disorders (312-314, 318) ..	656 ..	4
110	Mental deficiency (325)	315 ..	3
111	Other disorders of character, behaviour and intelligence (320-324, 326)	971 ..	2
112	Cerebral embolism and thrombosis (332)	1,179 ..	282
113(a)	Cerebral haemorrhage (331)	523 ..	269
(b)	Other vascular lesions affecting central nervous system (330, 333, 334)	294 ..	43
114	Non-meningococcal meningitis (340)	532 ..	197
115	Multiple sclerosis (345)	33 ..	1
116	Epilepsy (353)	1,987 ..	59
117	Other diseases of central nervous system (341-344, 350-352, 354-357)	1,892 ..	218
118	Sciatica (363)	1,523 ..	—
119	Erythroedema polyneuritica (365)	35 ..	—
120	Other diseases of nerves and ganglia (360-362, 364, 366-369) ..	1,475 ..	20
121(a)	Conjunctivitis and ophthalmia (370)	4,677 ..	—
(b)	Inflammation of eyelids (371, 372)	778 ..	—
122	Inflammation of lachrymal glands and ducts (378)	238 ..	—
123	Inflammation of uveal tract and keratitis (373-376) ..	974 ..	—
124	Other inflammations of eye (377, 379)	993 ..	—
125	Corneal ulcer (381)	1,345 ..	—
126	Strabismus (384)	146 ..	—
127	Cataract (385)	3,558 ..	1
128	Detachment of retina (386)	9 ..	—
129	Glaucoma (387)	485 ..	2
130	Other diseases of eye (380, 382, 383, 388, 389)	2,789 ..	3
131	Otitis media without mention of mastoiditis (391)	4,245 ..	5
132	Mastoiditis (with or without mention of otitis media) (392, 393) ..	652 ..	2
133	Other diseases of ear and mastoid process (390, 394-398) ..	1,573 ..	—
134	Ruematic fever (400-402)	3,220 ..	11

<i>Group (1)</i>	<i>Name of Diseases and Detailed List Numbers (2)</i>	<i>Treated (3)</i>	<i>Deaths (4)</i>
135	Diseases of mitral valve (410) ..	1,545 ..	155
136	Other diseases of heart regarded as rheumatic (411-416) ..	1,116 ..	85
137	Arteriosclerotic heart disease including coronary disease (420) ..	3,309 ..	672
138	Chronic endocarditis not specified as rheumatic (421) ..	316 ..	15
139	Other myocardial degeneration (422) ..	845 ..	153
140	Acute and subacute bacterial endocarditis (430-0) ..	195 ..	24
141	Congestive and left ventricular failure so described (434-1, 434-2) ..	6,741 ..	1,480
142	Other and unspecified diseases of heart (430-433, 434-0, 434-3) ..	2,467 ..	197
143	Hypertension with heart disease (440-443) ..	1,935 ..	192
144	Hypertension without mention of heart (444-447) ..	3,279 ..	155
145	General arteriosclerosis (450) ..	88 ..	1
146	Thrombo-angiitis obliterans (453-1) ..	214 ..	10
147	Other peripheral vascular disease (453-0, 453-2, 453-3) ..	403 ..	7
148	Other diseases of arteries (451, 452, 454-456) ..	252 ..	11
149	Varicose veins of lower extremities (460) ..	927 ..	—
150	Hæmorrhoids (461) ..	4,294 ..	18
151	Phlebitis, venous embolism and thrombosis (463-466) ..	400 ..	22
152	Lymphadenitis (468-0-468-2) ..	749 ..	1
153	Other diseases of circulatory system (462, 467, 468-3) ..	1,769 ..	118
154	Acute pharyngitis and tonsillitis (472, 473) ..	11,447 ..	15
155	Other acute upper respiratory infections (470, 471, 474, 475) ..	7,907 ..	87
156	Hypertrophy of tonsils and adenoids (510) ..	2,487 ..	1
157	Chronic sinusitis (513) ..	1,276 ..	4
158	Deflected nasal septum (514) ..	82 ..	—
159	Nasal polyp (515) ..	348 ..	—
160	Other upper respiratory diseases (511, 512, 516, 517) ..	14,802 ..	16
161	Influenza (480-483) ..	181,290 ..	68
162	Lobar pneumonia (490) ..	7,130 ..	550
163	Broncho-pneumonia (491) ..	20,991 ..	2,444
164	Primary atypical pneumonia (492) ..	123 ..	12
165	Other and unspecified pneumonia (493) ..	2,641 ..	114
166	Acute bronchitis (500) ..	56,093 ..	255
167	Bronchitis, chronic and unqualified (501, 502) ..	35,410 ..	174
168	Empyema and abscess of lung (518, 521) ..	977 ..	71
169	Pleurisy (519) ..	1,526 ..	29
170	Chronic interstitial pneumonia (523-525) ..	14 ..	—
171	Bronchiectasis (526) ..	2,052 ..	63
172	Other diseases of lung and pleural cavity (520, 522, 527) ..	2,859 ..	56
173	Diseases of teeth and supporting structures (530-535) ..	7,240 ..	—
174	Other diseases of buccal cavity (536-538) ..	2,010 ..	3
175	Ulcer of stomach without mention of perforation (540-0) ..	1,425 ..	21
176	Ulcer of stomach with perforation (540-1) ..	167 ..	19
177	Ulcer of duodenum without mention of perforation (541-0) ..	598 ..	8
178	Ulcer of duodenum with perforation (541-1) ..	116 ..	26
179	Gastritis and duodenitis (543) ..	14,263 ..	84
180	Other diseases of oesophagus, stomach and duodenum (539, 542, 544, 545) ..	3,233 ..	42
181	Acute appendicitis without mention of peritonitis (550-0) ..	3,208 ..	24
182	Acute appendicitis with peritonitis (550-1) ..	227 ..	24
183	Other appendicitis (551-553) ..	1,002 ..	2
184	Inguinal hernia without obstruction (560-0) ..	2,378 ..	24
185	Other hernia without obstruction (560-1-560-5) ..	1,402 ..	3
186	Inguinal hernia with obstruction (561-0) ..	371 ..	4
187	Other hernia with obstruction (561-1-561-5) ..	110 ..	9
188	Intussusception (570-0) ..	331 ..	46
189	Other intestinal obstruction (570-1-570-5) ..	879 ..	94
190(a)	Gastro-enteritis and colitis (571—part) ..	64,614 ..	2,518
(b)	Acute or choleraic diarrhoea (571-0—part) ..	2,099 ..	70
(c)	Acute infantile diarrhoea (571-0—part) ..	1,440 ..	58
191	Chronic enteritis and ulcerative colitis (572) ..	2,520 ..	182
192	Anal fistula and abscess of anal and rectal regions (574, 575) ..	2,025 ..	17
193	Other diseases of intestines and peritoneum (573, 576-578) ..	3,132 ..	119
194	Cirrhosis of liver (581) ..	1,685 ..	256
195	Cholelithiasis (584) ..	33 ..	1
196	Cholecystitis without mention of calculi (585) ..	486 ..	22
197	Other diseases of liver, gallbladder and pancreas (580, 582, 583, 586, 587) ..	2,045 ..	86
198	Acute nephritis (590) ..	2,899 ..	147
199	Chronic other and unspecified nephritis (591-594) ..	2,074 ..	119

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Group (1)	Name of Diseases and Detailed List Numbers (2)	Treated (3)	Deaths (4)
200	Infections of kidney (600)	6,411 ..	20
201	Calculi of urinary system (602, 604)	1,664 ..	2
202	Cystitis (605)	4,285 ..	31
203	Stricture of urethra (608)	914 ..	5
204	Other diseases of urethra (607, 609)	1,243 ..	2
205	Other diseases of urinary system (601, 603, 606)	5,656 ..	81
206	Hyperplasia of prostate (610)	546 ..	23
207	Hydrocele (613)	1,703 ..	—
208	Redundant prepuce and phimosis (615)	1,064 ..	—
209	Other diseases of male genital organs (611, 612, 614, 616, 617)	2,267 ..	35
210	Acute non-puerperal mastitis (621.0)	412 ..	—
211	Other diseases of breast (620, 621.1, 621.2)	957 ..	4
212	Salpingitis and oophoritis (622-624)	436 ..	7
213	Cervicitis and other infective diseases of uterus (630.0, 630.1)	955 ..	9
214	Vaginitis and vulvitis (630.2)	1,032 ..	3
215	Utero-vaginal prolapse (631)	2,108 ..	2
216	Malposition of uterus (632)	509 ..	—
217	Disorders of menstruation (634)	6,945 ..	1
218	Sterility, female (636)	187 ..	—
219	Other diseases of female genital organs (625, 626, 633, 635, 637)	3,361 ..	21
220	Pregnancy, unspecified	58,709 ..	4
221	Pyelitis and pyelonephritis of pregnancy (640)	2,754 ..	3
222	Other infections of genito-urinary tract during pregnancy (641)	1,693 ..	15
223(a)	Toxaemias of pregnancy (642)	5,992 ..	59
(b)	Toxaemias of the puerperium (652, 685, 686)	231 ..	5
224	Haemorrhage of pregnancy (643, 644)	2,170 ..	35
225	Ectopic pregnancy (645)	420 ..	6
226	Pregnancy with malposition of foetus in uterus (647)	1,577 ..	—
227	Threatened abortion (648.0)	6,361 ..	6
228(a)	Anaemia of pregnancy (646)	19,063 ..	38
(b)	Other complications of pregnancy (648.1-648.3, 649)	4,634 ..	30
229	Abortion without mention of sepsis or toxæmia (650)	6,766 ..	7
230	Abortion with sepsis (651)	457 ..	6
231	Delivery without complication (660)	143,920 ..	—
232(a)	Delivery complicated by placenta prævia or antepartum hæmorrhage (670)	726 ..	33
(b)	Delivery complicated by retained placenta (671)	1,321 ..	93
(c)	Delivery complicated by other postpartum hæmorrhage (672)	1,286 ..	111
233	Delivery with disproportion or other cause of prolonged labour (673-675)	1,987 ..	24
234	Delivery with laceration or other trauma (676, 677)	2,844 ..	21
235	Delivery with other complication of childbirth (678)	1,947 ..	78
236(a)	Sepsis of childbirth and the puerperium (681)	476 ..	29
(b)	Other puerperal sepsis (682, 684)	288 ..	4
237	Mastitis and other disorders of lactation (689)	1,027 ..	—
238(a)	Pyrexia of unknown origin during the puerperium (683)	902 ..	4
(b)	Other complications of puerperium (680, 687, 688)	565 ..	9
239	Boil and carbuncle (690)	6,930 ..	6
240	Cellulitis and abscess of skin and subcutaneous tissue (691-693)	24,143 ..	62
241	Other infections of skin and subcutaneous tissue (694-698)	13,865 ..	15
242(a)	Occupational dermatitis (702)	1,496 ..	1
(b)	Other dermatitis and eczema (700, 701, 703)	9,905 ..	23
243	Psoriasis and similar disorders (706)	602 ..	—
244	Other diseases of skin (704, 705, 707-716)	6,319 ..	23
245	Rheumatoid arthritis and allied conditions (722)	3,877 ..	4
246	Osteo-arthritis (arthrosis) and allied conditions (723)	1,118 ..	2
247	Other and unspecified arthritis (720, 721, 724, 725)	3,186 ..	6
248(a)	Muscular rheumatism (726)	8,866 ..	—
(b)	Rheumatism unspecified (727)	12,408 ..	1
249	Osteomyelitis and periostitis (730)	576 ..	4
250	Other diseases of bone (731-733)	639 ..	—
251	Internal derangement of knee joint (734)	125 ..	—
252	Displacement of intervertebral disc (735)	34 ..	—
253	Other diseases of joints (736, 738)	817 ..	—
254	Hallux valgus and varus (747)	1 ..	—
255	Other acquired musculo-skeletal deformities (737, 745, 746, 748, 749)	358 ..	1
256	Synovitis, bursitis and tenosynovitis (741, 742)	653 ..	2
257	Other diseases of muscle, tendon and fascia (740, 743, 744)	892 ..	1
258	Spina bifida and meningocele (751)	56 ..	17
259	Congenital malformations of circulatory system (754)	168 ..	14
260	Cleft palate and harelip (755)	259 ..	3

<i>Group (1)</i>	<i>Name of Diseases and Detailed List Numbers (2)</i>	<i>Treated (3)</i>	<i>Deaths (4)</i>
261	Other congenital malformations (750, 752, 753, 756-759) ..	216 ..	16
262	Birth injuries (760, 761) ..	93 ..	19
263	Post-natal asphyxia and atelectasis (762) ..	640 ..	253
264(a)	Pneumonia of newborn (763) ..	53 ..	20
(b)	Diarrhoea of newborn (764) ..	110 ..	7
(c)	Ophthalmia neonatorum (765) ..	36 ..	—
(d)	Pemphigus neonatorum (766) ..	10 ..	3
(e)	Umbilical sepsis (767) ..	120 ..	6
(f)	Other sepsis of newborn (768) ..	36 ..	2
265	Haemolytic disease of newborn (770) ..	42 ..	15
266	Nutritional maladjustment (772) ..	3,901 ..	402
267	Other defined diseases of early infancy (769, 771) ..	1,877 ..	347
268	Ill-defined diseases and immaturity unqualified (773-776) ..	9,647 ..	2,134
269	Haematemesis (784.5) ..	694 ..	12
270	Abdominal pain (785.5) ..	20,332 ..	1
271	Symptoms referable to genito-urinary system (786) ..	3,929 ..	27
272	Senility without mention of psychosis (794) ..	6,486 ..	720
273(a)	Pyrexia of unknown origin (788.8) ..	10,408 ..	77
(b)	Other ill-defined conditions (rest of 780-795) ..	9,385 ..	327
274	Fractures of face bones (N 802) ..	499 ..	1
275	Other fractures of skull (N800, N801, N803, N804) ..	907 ..	140
276	Fractures of ribs and sternum (N807) ..	775 ..	23
277	Fractures of spine and other trunk bones (N805, N806, N808, N809) ..	802 ..	95
278	Fractures of phalanges and metacarpal bones (N815-N817) ..	920 ..	—
279	Fractures of other upper limb bones (N810-N814, N818, N819) ..	2,588 ..	19
280	Fracture of neck of femur (N820) ..	478 ..	16
281	Fractures of other and unspecified parts of femur (N821) ..	1,091 ..	15
282	Fractures of lower leg and ankle (N823, N824) ..	861 ..	2
283	Fractures of other lower limb bones (N822, N825-N829) ..	2,115 ..	11
284	Dislocations without fracture (N830-N839) ..	2,172 ..	1
285	Sprains and strains of joints and adjacent muscles (N840-N848) ..	3,784 ..	—
286	Wounds or contusions of scalp (N850, N851) ..	5,907 ..	17
287	Concussion, cerebral damage and unspecified head injury (N852-N856) ..	1,964 ..	183
288	Internal injury of chest, abdomen and pelvis (N860-N869) ..	1,537 ..	93
289	Lacerations and open wounds of eye and orbit (N870, N871) ..	820 ..	—
290	Lacerations and open wounds of ear, face and neck (N872-N874) ..	3,116 ..	1
291	Lacerations and open wounds of hand and fingers (N883, N884, N886, N887) ..	8,427 ..	1
292	Lacerations and open wounds of other sites (N875-N882, N885, N888-N908) ..	19,784 ..	81
293	Superficial injury, contusion and crushing (N910-N929) ..	16,768 ..	6
294	Effects of foreign body entering through orifice (N930-N936) ..	1,845 ..	—
295	Burn confined to eye (N940) ..	124 ..	—
296	Burn confined to face, head and neck (N941) ..	1,152 ..	77
297	Burns of other and unspecified sites (N942-N949) ..	4,486 ..	307
298	Poisoning by analgesic and soporific drugs (N970-N974) ..	252 ..	22
299	Poisoning by other substances (N960-N969, N975-N979) ..	1,958 ..	162
300	Other and unspecified effects of external causes (N950-N959, N980-N999) ..	5,712 ..	127
Total ..		1,352,720	25,407

Number admitted with patients 105,153 (not included in the "Total" above).

Footnote.—Cases treated and deaths recorded to any particular diagnosis are not strictly comparable. In the case of long stay chronic patients "treated" relates to the admission diagnosis, whereas "deaths" are attributed to the supervening diseases which caused death.

(A)—HOSPITALS
(Table IX) COLOMBO GROUP OF HOSPITALS—STAFF

Institution	Total Number of Beds	Medical Staff																							
		Medical Superintendent	Medical Officer I/c., O. P. D.	Physician I/c., or M. O. I/c.	Surgeon in-charge	Obstetrician in-charge	Professor of Medicine or Paediatrics	Visiting Physicians	Resident Physicians	Paediatrician	Resident Paediatrician	Visiting Paediatrician, Part time	Professor of Surgery, Part time	Visiting Surgeon, Part time	Assistants to Visiting Surgeons	Resident Surgeons	Professors of Obstetrics and Gynaecology, Part time	Visiting Obstetricians	Resident Obstetricians	Resident Obstetrician and Registrar	Additional Resident Obstetrician	Anaesthetists, Common to other Hospital	Anaesthetists (Relieving)	Radiologist	
General Hospital, Colombo	1,445	1	1	1	1	—	2	7	2	—	—	1	8	2	2	2	2	—	—	1	1	—	17	—	1
De Soysa Hospital for Women, Colombo	340	—	—	—	—	1	—	—	1	—	—	—	—	—	—	—	—	4	1	1	—	—	—	—	
Castle Street Hospital for Women, Colombo	220	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	1	—	—	—	—	—	
Lady Ridgeway Hospital, Colombo	242	—	—	1	—	—	1	2	—	1	1	2	1	—	—	—	—	—	—	—	—	—	—	—	
Victoria Memorial Eye Hospital, Colombo	200	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Dental Institute, Colombo	28	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	

* Part time

Table IX—Colombo Group of Hospitals—Staff—(contd.)

Institution	Total Number of Beds	Medical Staff—(contd.)	Nursing Staff
		Pathologist, Part time	
		Viennese Specialists	
		Visiting Dental Surgeons	
		Additional Medical Officers (Dental)	
		Medical Officer (Training Dental)	
		Dental Surgeons (Colombo Clinics)	
		Dental Surgeons (Mobile Dental Vans)	
		Dental Surgeons	
		Dental Assistants	
		Senior House Officers	
		Medical Registrars	
		Pædiatric Registrar	
		Surgical Registrar	
		Anæsthetic Registrar	
		House Officers	
		Junior House Officers	
		House Officers (under training in Anaesthetics)	
		House Officers (Relieving)	
		Medical Officers (O. P. D.)	
		Medical Graduates (Internees) and others	
		Matrons (Higher Grade)	
		Religious Nursing Mothers	
		Religious Nursing Sisters	
		Assistant Matrons	
General Hospital, Colombo ..	1,445	1	1
De Soysa Hospital for Women, Colombo ..	340	1	72
Castle Street Hospital for Women, Colombo ..	220	—	2
Lady Ridgeway Hospital, Colombo ..	242	—	1
Victoria Memorial Eye Hospital, Colombo ..	200	—	1
Dental Institute, Colombo ..	28	—	—

Table IX—Colombo Group of Hospitals—Staff—(contd.)

Institution	Total Number of Beds	Nursing Staff—(contd.)													Technical Staff										
		Nursing Sisters	Matrons (Lower Grade)	Paediatric Sisters	Sisters under Midwifery Training	Staff Nurses (English and Swabasha)	Staff Nurses (Not Maternity Qualified)	Emergency Nurses	Temporary Qualified Nurses	Assistant Nurses	Principal, Nurses' Training School	Vice-Principal, N. T. S.	Sister Tutors	Public Health and Staff Nurses in Training	Nurses in Midwifery Training	Nurses Midwives	House Wardens	Shroff	Cashier	Apothecaries	X-Ray Assistants	X-Ray Technicians	X-Ray Technicians (Under Training)	Assistant Physiotherapists	Laboratory Assistants
General Hospital, Colombo	..	10	—	—	—	144	—	59	13	2	1	—	12	—	—	—	12	2	—	20	3	39	—	49	49
De Soysa Hospital for Women, Colombo	..	8	—	1	—	31	—	19	1	—	—	—	1	9	—	—	2	—	—	5	—	—	—	—	4
Castle Street Hospital for Women, Colombo	..	4	—	1	—	16	—	3	—	—	—	—	—	—	—	—	1	—	—	3	—	—	—	—	3
Lady Ridgeway Hospital, Colombo	..	4	—	2	—	35	—	40	4	—	—	—	—	—	—	—	2	—	—	12	—	2	—	—	7
Victoria Memorial Eye Hospital, Colombo	..	2	—	—	—	1	—	16	6	—	—	—	—	—	—	—	—	—	—	2	—	—	—	—	2
Dental Institute, Colombo	..	—	1	—	—	1	—	5	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—

Table IX—Colombo Group of Hospitals—Staff—(contd.)

Institution	Total Number of Beds	Technical Staff—(contd.)										Administrative and Non-Technical Staff													
		Electro-Medical Technologist	Biochemist	Electro-Medical Foreman	Workshop Manager	Assistant Workshop Manager	Workshop Technicians	Photographers-Dental	Mechanics (Training)	Public Health Inspector	Physiotherapy Technicians	Walking Training and Arm Training Instructors	Secretary	Hospital Secretary Part time	Finance Officer	Medical Records Officer	Supplies Officer	Clerks, E. C. C., Grade I	Clerks, E. C. C., Grade II	Clerks, G. C. C.	Clerks, Q. C. S.	Clerks, H. C. S.	Clerks (Temporary)	Stenographer (Temporary)	Typist (Temporary)
General Hospital, Colombo	..	1	1	6	1	1	3	1	2	1	2	1	1	—	1	1	1	1	2	6	4	57	8	1	3
De Soysa Hospital for Women, Colombo	..	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	10	1	—	
Castle Street Hospital for Women, Colombo	..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	1	—	
Lady Ridgeway Hospital, Colombo	..	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	12	1	—	
Victoria Memorial Eye Hospital, Colombo	..	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	7	1	—	
Dental Institute, Colombo	..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	—	—	

Table IX—Colombo Group of Hospitals—Staff—(contd.)

Institution	Total Number of Beds	Administrative and Non-Technical Staff (contd.)													
		Ward Clerks	Medico-Social Worker	Dietitian	Lady Welfare Officer	Physical Training Instructress	Kitchen Stewardsess	Telephone Operators	Hospital Overseers	Male Attendants	Female Attendants	Other Minor Staff	Stores Overseer (Temporary)	Storekeeper (Temporary)	
General Hospital, Colombo ..	1,445	33	1	1	1	1	3	4	15	387	285	999	—	—	
De Soysa Hospital for Women, Colombo ..	340	10	—	—	—	—	—	3	3	1	86	193	1	—	
Castle Street Hospital for Women, Colombo ..	220	5	—	—	—	—	—	3	1	1	11	81	—	—	
Lady Ridgeway Hospital, Colombo ..	242	12	—	—	—	—	—	3	3	6	144	212	—	—	
Victoria Memorial Eye Hospital, Colombo ..	200	1	—	—	—	—	—	1	2	35	30	68	—	—	
Dental Institute, Colombo ..	28	1	—	—	—	—	—	—	1	15	11	16	—	—	

Table X—COLOMBO GROUP OF HOSPITALS—BED STATE, 1957

Institution	General Medicine	General Surgery	Gynaecology	Obstetrics	Dermatology	V. D.	Neurology	Thoracic Surgery	Orthopaedic Surgery	Eye Surgery	E. N. T.	Genito Ur. Surgery	Dental Surgery	Cancer	General	Paying Wards	Total number of Beds
General Hospital, Colombo	453	475	83	—	27	10	32	57	104	—	46	15	—	31	—	112	1,445
De Soysa Hospital for Women, Colombo ..	—	—	27	297	—	—	—	—	—	—	—	—	—	—	—	16	340
Castle Street Hospital for Women, Colombo ..	—	—	56	164	—	—	—	—	—	—	—	—	—	—	—	—	220
Lady Ridgeway Hospital, Colombo ..	159	53	—	—	—	—	—	—	—	—	—	—	—	—	30	—	242
V.M. Eye Hospital, Colombo	—	—	—	—	—	—	—	—	—	194	—	—	—	—	—	6	200
Dental Institute, Colombo ..	—	—	—	—	—	—	—	—	—	—	—	—	28	—	—	—	28

Table XI — Attendance at Clinics conducted by the Staff of the Colombo Group of Hospitals, 1957

<i>Nature of Clinic</i>	<i>Where Held</i>	<i>No of ½ day sessions per week</i>	<i>No. of First Visits</i>	<i>No. of Subsequent Visits</i>
Surgical	General Hospital	—	4,958	10,194
Medical	Lady Ridgeway Hospital	6	4,056	8,759
Rectal	General Hospital	—	1,868	1,138
Varicose Vein	General Hospital	1	1,323	1,148
Skin	General Hospital	4	15,163	54,748
E. N. T.	General Hospital	6	23,728	18,490
Heart	General Hospital	4	2,816	7,910
Nerve	General Hospital	2	1,939	5,388
Asthma	General Hospital	2	3,016	14,860
Diabetic	General Hospital	2	1,046	10,831
Genito Urinary	General Hospital	2	867	803
Orthopaedic	General Hospital	7	15,920	43,396
Ante-Natal	De Soysa Hospital for Women	6	16,785	16,212
Ante-Natal	Castle Street Hospital for Women	3	120	96
Post-Natal	De Soysa Hospital for Women	6	276	38
Post-Natal	Castle Street Hospital for Women	1	12	—
Gynaecology	De Soysa Hospital for Women	6	17,457	11,285
Family Planning	De Soysa Hospital for Women	1	789	644
Family Planning	Castle Street Hospital for Women	—	—	—
Family Planning	Lady Ridgeway Hospital	1	235	133
Malnutrition	Lady Ridgeway Hospital	1	312	5,978
Eye	V. M. Eye Hospital	1	569	1,627
Eye	Avissawella	1	2,417	1,984
Eye	Panadura	1	2,684	2,186
Eye	Welikade Prison Hospital	2	269	677
Eye	Welisara T. B. Hospital	1	209	234
Eye	Negombo	—	2,988	1,505
Eye	Leprosy Hospital	—	—	256
Eye	Lady Ridgeway Hospital	1	91	42

Table XII Work of the Out-Patient Department of the Colombo Group of Hospitals, 1957

<i>Nature of O.P.D.</i>	<i>Place Held</i>	<i>First Visits</i>	<i>Subsequent Visits</i>
Medical Surgical	General Hospital	146,570	18,796
Casualty	General Hospital	20,501	—
Dressings	General Hospital	34,758	—
Paediatric	Lady Ridgeway Hospital	198,900	117,427
Ophthalmic	V. M. Eye Hospital	74,973	72,492
Dental	Dental Institute	54,406	23,864

Table XIII — Surgical Operations Performed in the Colombo Group of Hospitals 1957,

<i>Nature of Operation</i>	<i>General Hospital</i>	<i>De Soysa Hospital for Women</i>	<i>Castle Street Hospital for Women</i>	<i>Lady Ridgeway Hospital for Children</i>	<i>Victoria Memorial Eye Hospital</i>	<i>Dental Institute</i>
Dental	6	—	—	—	—	1,259
E. N. T.	1,299	—	—	554	—	—
General	10,363	—	—	1,689	—	—
Gynaecological	3,900	512	763	—	—	—
Neuro-Surgical	210	—	—	—	—	—
Obstetrical	—	806	249	—	—	—
Ophthalmic	—	—	—	—	3,462	—
Orthopaedic	628	—	—	244	—	—
Thoracic	440	—	—	—	—	—
Urological	566	—	—	—	—	—

TABLE XIV—PATIENTS TREATED* AT THE COLOMBO GROUP OF HOSPITALS, 1957

Institution	General Medicine	General Surgery	Gynaecology	Obstetrics	Dermatology	V.D. Neurology	Thoracic Surgery	Orthopaedic Surgery	Eye Surgery	E. N. T.	Genito Ur. Surgery	Dental Surgery	Cancer	General	Paying wards	Total Number treated
General Hospital ..	27,788	16,216	5,641	—	3,165	1,389	456	4,225	—	1,457	5,990	—	2,777	—	1,401	70,620
De Soysa Hospital for Women ..	602†	—	767	27,077	—	—	—	—	—	—	—	—	—	—	—	28,446
Castle Street Hospital for Women ..	—	—	2,047	7,649	—	—	—	—	—	—	—	—	—	—	—	9,696
Lady Ridgeway Hospital ..	15,039	3,817	—	—	—	—	—	—	—	—	—	—	—	—	—	18,856
V. M. Eye Hospital ..	—	—	—	—	—	—	—	—	5,216	—	—	—	—	—	80	5,296
Dental Institute ..	—	—	—	—	—	—	—	—	—	—	—	1,310	192	—	—	1,502

* Patients treated is defined as the number in Hospital at the beginning of the year plus the number of admissions during the year.

† Cases of dual infection. This figure is classified under Gynaecology and Obstetrics as well.

TABLE XV—Statement of Clinics held at Provincial/Base Hospitals

S. H. S. Area	Name of Clinic	Provincial Hospitals				Base Hospitals			
		No. of half Day Sessions per Week	No. of First Visits	No. of subsequent Visits	Total Visits	No. of half Day Sessions per Week	No. of First Visits	No. of subsequent Visits	Total Visits
Colombo	Ante-natal	..	..	..	..	..	2,971	..	6,885
	Gynaecology	..	..	..	..	..	2,477	3,914	3,820
	Asthma	..	..	..	..	..	97	441	538
	Heart	..	..	..	..	..	239	846	1,085
	Medical	..	..	..	..	..	886	1,372	2,258
	Diabetic	..	..	..	..	..	86	547	633
	Children	..	..	..	..	..	5,150	7,494	12,644
	Anti-rabies	..	..	..	..	..	359	..	359
	Surgical	..	..	..	..	..	3,000	952	3,952
	Dental	..	13,857	7,951	21,808	..	..	..	..
Kandy	E. N. T.	4	9,730	8,496	18,226	..	..	..	..
	Eye	6	15,203	6,961	22,164	..	..	..	..
	Ante-natal	2	1,404	892	2,296	..	..	..	..
	Paediatric	2	711	2,286	2,997	..	..	..	..
	Surgical	..	..	..	..	..	..	..	..
Kalutara	E. N. T.	..	..	..	..	..	2,541	456	2,997
	Dental	..	..	..	..	..	987	456	1,443
	Gynaecology	..	..	..	..	6	8,803	2,006	10,809
	Children	..	..	..	..	1	1,332	498	1,830
	V. D.	..	..	..	..	2	2,109	5,289	7,398
	Eye	..	..	..	..	2	567	142	709
	Diabetic	..	..	..	..	6	4,126	5,602	9,728
	E. N. T.	1	97	747	844	..	..	..	..
	Ante-natal	3	5,279	2,483	7,762	..	..	..	..
	Post-natal	1	559	680	1,239	..	..	..	..
Galle	Heart	1	265	860	1,125	..	..	..	..
	Children	1	567	570	1,137	..	..	..	..
	Surgical	3	412	154	566	..	..	..	..
	Medical	1	702	239	941	..	..	..	..
	Ante-natal	1	227	485	712	..	..	..	..
	Children	..	..	..	..	..	..	..	..
	Gynaecology	..	..	..	..	..	..	..	..
	Dental	..	..	..	..	..	..	..	..
	Heart	..	..	..	..	..	..	..	..
	Ante-natal	..	..	..	..	1	..	..	2,939
Matara	Children	..	..	..	..	1	..	..	1,419
	Gynaecology	..	..	..	..	1	..	..	1,920
	Dental	..	..	..	..	10	..	..	7,210
	Heart	..	..	..	..	1	..	..	663
	Ante-natal	..	..	..	..	..	..	..	..

[illegible]

Table XVI—Statement of Operations Performed in Provincial/Base Hospitals, 1957

S. H. S. Area	Provincial Hospitals						Base Hospitals												
	Major			Minor			Major			Minor									
	Ophtha- lmic	Obste- tric	Gyna- ecolo- gical	E. N. T.	Other		Ophtha- lmic	Obste- tric	Gyna- ecolo- gical	E. N. T.	Other	Ophtha- lmic	Obste- tric	Gyna- ecolo- gical	E. N. T.	Other			
Colombo	..	..	..	..	..	..	..	89	752..	..	879..	..	..	..	577	..	..
Kalutara	..	..	..	..	..	..	..	263..	8..	82..	963..	84..	..	..	1,006	..	..
Kandy	541..	134..	688..	331..	1,582..	924..	387..	109..	755..	3,152..	..	..	..	..	..	..	..
Matale	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Badulla	59..	104..	109..	16..	1,400..	199..	..	..	133..	2,236..	..	..	..	..	958	..	..
Galle	382..	86..	96..	185..	1,284..	133..	165..	102..	274..	890..	..	..	..	..	363	..	..
Matara	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Jaffna	750..	171..	515..	562..	1,798..	2,497..	493..	..	468..	14,311..	..	..	..	..	478	..	..
Vavuniya	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Anuradhapura	1..	24..	5..	2..	2..	2..	..	5..	10..	116..	..	..	..	..	138	..	..
Kurunegala	..	143..	276..	139..	1,579..	24..	..	603..	94..	1,638..	..	..	..	..	..	..	..
Puttalam	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Ratnapura	..	19..	..	..	72..	..	..	..	28	203..	..	..	..	..	56	12..	..
Kegalla	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Batticaloa	11..	52..	82..	..	252..	362..	..	39..	..	103..	..	..	..	..	204	..	..
Total	1,744	733	1,771	1,235	7,999	4,141	1,045	888	1,762	22,649	585	801	82	2,880	88	40	10	28	4,284

HOSPITAL FOR OTHER DEPARTMENTS

Table XVII—(i) Hospitals for Police Department ; (ii) Hospitals for Prisons Department

	Police Hospital, Colombo	Prison Hospital, Colombo	Prison Hospital, Mahara	Prison Hospital, Kandy	Prison Hospital, Anuradhapura	Prison Hospital, Jaffna	Prison Hospital, Galle	Prison Hospital, Matara	Prison Hospital, Batticaloa	Government Prison Camp, Pallekelle	Training School for Youthful Offenders, Watupitiwela	Training School for Youthful Offenders, Negombo
Staff :												
Medical Officers	2	2	1	1	*	†	†	*	*	†	*	*
Apothecaries	2	3	1	1	—	—	—	—	—	—	—	—
Others	13	—	—	—	—	—	7	—	—	—	—	—
No. of Beds	37	176	105	45	20	20	11	3	5	only	26	24
Daily average in-patients	21	74	53	20	4	6	7	2	3	cases	7	7
No. treated as in-patients	952	3,769	549	1,170	269	268	489	121	90	attended	513	521
No. treated as out-patients	12,896	5,958	No outdr.	12,084	5,477	11,189	No outdr.	4,336	3,626	to	2,553	—
No. admitted in 1957	943	3,698	523	1,157	262	264	488	121	88	2,641	509	518
No. died in 1957	—	5	1	1	—	—	—	—	—	—	—	—

* Visited by the D. M. O. of the area

† Visited by the J. M. O. of the area

‡ Visited by M. O., Prisons, Kandy

(B) SPECIAL INSTITUTIONS

(i) FEVER HOSPITAL, ANGODA

(a) **Bed Strength.** There was no change from the year 1956 and the number of beds remained at 300.

(b) **Indoor Attendance.** The total number of Indoor-cases treated was 7,023 as compared to 6,646 of previous year. During the early months of the year a number of smallpox cases were admitted, the first case being admitted at the end of February, 1957. A total of 19 cases were treated in the Institution the bulk of them being from Kalpitiya area. There were six deaths from smallpox. There were 337 cases of diphtheria as compared to 515 of previous year. There were 133 cases of Polio as compared to 20 of the previous year. There were 79 cases of Infectious Hepatitis as compared to 39 of the previous year. There were 119 cases of Typhoid as compared to 79 of the previous year. The daily average indoor attendance was 235 as compared to 254 of the previous year.

(c) **Buildings.** The future plan of development has provision for a storeyed building of 200 beds. No progress has been made regarding the supplying of water-carriage system with an augmentation of the present water supply.

(ii) T. B. HOSPITALS

(Vide Anti-Tuberculosis Campaign pages 72-107)

(iii) LEPROSY HOSPITALS

(Vide Anti-Leprosy Campaign pages 130-38)

(C)—OUTPATIENT DISPENSARY TREATMENT.

This is given at :—

- (a) Outpatient Departments of Hospitals
- (b) Central Dispensaries in-charge of Apothecaries
- (c) Branch Dispensaries and Visiting Stations attached to Central Dispensaries and visited by Apothecaries, usually twice a week.

Some of the diseases shown in the list e.g., typhus (17), hydrocele (36) were of course not actually treated at the Outpatient Dispensaries, but were only detected and diagnosed there and admitted for necessary treatment.

A fair proportion of the treatment given at Dispensaries attached to the smaller Hospitals and Peripheral Units in charge of Medical Officers has necessarily to be done by Apothecaries owing to the shortage of Medical Officers.

The total number of Central Dispensaries at the end of 1957 was 362, there being 17 additions during the year. 11 Branch Dispensaries and 25 Visiting Stations were also opened.

Table XVIII—Out-Patient Dispensary Treatments 1957

<i>Name of Disease</i>				<i>Cases Treated.</i>
1.	Respiratory tuberculosis (001—008)	..	..	30,737
2.	Syphilis and its sequelae (020—029)	..	..	2,945
3.	Gonococcal infections (030—035)	..	..	10,001
4.	Typhoid (040)	..	..	555
5.	Cholera (043)	..	..	—
6.	Dysentery (048)	..	..	76,609
7.	Diphtheria (055)	..	..	254
8.	Whooping Cough (056)	..	..	9,869
9.	Plague (058)	..	..	—
10.	Leprosy (060)	..	..	794
11.	Yaws (073)	..	..	634
12.	Smallpox (084)	..	..	—
13.	Measles (085)	..	..	12,707
14.	Rubella (086)	..	..	243
15.	Chickenpox (087)	..	..	1,957
16.	Mumps (089)	..	..	3,590
17.	Typhus (107)	..	..	71
18.	Malaria (110—117)	..	..	29,676
19.	Worms (123—126 ; 128—130)	..	..	2,542,942
20.	Filariasis (127)	..	..	20,702
21.	Scabies (135)	..	..	167,977
22.	Asthma (241)	..	..	493,278
23.	Simple goitre (250)	..	..	20,258
24.	Nutritional deficiencies (280—286)	..	..	1,600,911
25.	Diseases of the Eye (370—379)	..	..	295,304
26.	Diseases of the Ear (390—398)	..	..	245,971
27.	Colds and other respiratory infections (470—475)	..	..	2,146,994
28.	Influenza (480—483)	..	..	4,259,000
29.	Pneumonia and bronchitis (490—502)	..	..	1,217,157
30.	Hypertrophy of tonsils and adenoids (510)	..	..	134,859
31.	Diseases of teeth and buccal cavity (530—538)	..	..	379,879
32.	Gastro-enteritis and colitis (571—part)	..	..	1,493,815
	Gastro-enteritis and colitis (571.1—part)	..	..	93,793
33.	Hydrocele (613)	..	..	10,623
34.	Complications of pregnancy (640—649)	..	..	278,753
35.	Skin infections and diseases (690—698)	..	..	798,403
	Skin infections and diseases (700—716)	..	..	90,836
36.	Rheumatism (720—727)	..	..	1,229,030
37.	Symptoms referable to gastro-intestinal system (784—785)	..	..	1,004,497
38.	Pyrexia of unknown origin (788.8)	..	..	225,804
39.	All other diseases	..	..	1,522,249
40.	Injuries (N800—N999)	..	..	791,448
Total				21,245,125*

*This figure does not indicate the number of cases treated. Repeated visits by the same patients after short intervals have been regarded as new cases.

(D) — PRIVATE NURSING HOMES AND CO-OPERATIVE HOSPITALS

Number existing at the beginning of 1957	..	..	43
Number closed down in 1957	..	..	Nil
Number newly registered in 1957	..	..	3
Number existing at the end of 1957	..	..	46

MENTAL CARE

(i)—MENTAL HOSPITAL, ANGODA.

General

New ventures started for the benefit of the patients in this institution, during the course of the year are the formation of the "Voluntary Association for the Care of Psychiatric Patients", the opening of a first class Barber Saloon for the patients in this hospital, the opening of a separate ward of 24 beds for Juvenile mental patients and housing patients between the ages of 6 to 12 years and the building of a creche for infants of mothers who are inmates here. These two have been built without the help either of men or finance from the Public Works Department.

Staff

The present staff consists of :—

Medical Superintendent	..	..	..	1
Deputy Medical Superintendent	..	..	..	1
Psychiatrists	..	..	..	7
Medical Officers	..	..	..	13
Secretary	..	..	..	1
Matron and Nursing Sister	..	..	..	2
Chief Male Nurse	..	..	..	1
Psychiatric Social Workers	..	..	..	3
Occupational Therapist	..	..	..	1
Nurses—Male	..	..	..	19
Nurses—Female	..	..	..	23
Chief Clerk and Clerical staff	..	..	..	11
Chief Steward and Hospital Clerical staff	..	..	..	19
Male Attendants	..	..	..	409
Female Attendants	..	..	..	251
Labourers	..	..	..	100
Miscellaneous Staff	..	..	..	92

During the year an Inquiry was held into the grievances of minor employees of this institution following the labour unrest throughout the Department and the Government Services. All recommendations made after this inquiry have been implemented.

In addition to this the hospital was divided into 10 Units each in charge of a Psychiatrist and an Assistant Medical Officer where previously there were only five Units. The Medical work has therefore increased considerably during the morning hours when the full strength of Psychiatrists and Medical Officers are in the wards and various specific treatments are being administered to patients. The full available strength of attendants is then required in the wards and none are available to take the convalescent patients out of the wards for airings, walks, library facilities and social centres. These activities being restricted to the afternoon periods when the work in the wards is not so heavy.

An attempt is being made to give recovered patients greater responsibility and opportunity to do at least some of the work now done by the Attendants to overcome their boredom in the morning hours. The library is now run entirely by two patients. The giving out of books and magazines, the collecting of those after the patients have read them and the necessary clerical work involved is entirely done by patients and done exceedingly well. Patients have been appointed for a part of the work in the Administration Block relieving the Attendants who were working there for work in the wards. A patient is doing the peons work attached to the Psychiatrists. Another patient is attached as a general usher at the entrance to the hospital his duty being to meet callers at this entrance,

provide them with the information of the wards and direct them to the various rooms in the Administration Block where more information is available.

There is however a limit to the utilisation of recovered patients for such work. Patients must necessarily be discharged from hospital and with every discharge the work done by that patient is upset and it takes time for others even when under-studied to step in at peak efficiency. However, the disparity between present strength and basic requirements is great and cannot efficiently be bridged with the help of patient labour alone.

Four Medical Officers who were away in England, returned with specialist qualifications.

In the Unit System each Psychiatrist is given a ward of about an average of 160 patients. He is helped by an Assistant Medical Officer, and a Nurse to each ward.

Work Done

Four more additional Units have been created during the year under review, so that the ten Psychiatrists have each a separate Unit. Admission to these Units is by a Roster System and the day's admissions are sent to all Units in numerical order while the average admission rate to hospital is about 10 new patients a day. Thus each Unit has a new admission daily. This plan seems to work better and ensures greater attention to the patients, than the previous method where only a single day of the week was set apart for each Unit and on that day the Unit was flooded with the 10 new admissions.

Insulin and Electric shock therapy remained the sheet anchor of therapy for mental patients during the year. The Statistics with regard to this treatment are :—

<i>Treatment</i>	<i>Total treated</i>	<i>Recovered</i>	<i>Improved</i>	<i>Failure</i>
E.C.T. ..	2716 ..	747 ..	1329 ..	640
Insulin ..	543 ..	235 ..	182 ..	126
Other Drug therapies ..	115 ..	37 ..	60 ..	18
Total ..	3374 ..	1019 ..	1571 ..	784

Of the new drugs chlorpromazine (Largactil) was the drug used most. It was used in the tablet form in an attempt to stabilise all improvements and cures procured with Insulin Shock Therapy and electropexy. As an injection in 50 m.g. doses it completely and efficiently replaced the Morphia injection so largely used in the wards in the past in an attempt to control restless patients. Combined with Electroshock it has been the treatment "par excellence" for the acute Katatonias. In view of the very large increase in the use of largactil it is interesting to note that contrary to reports on its use in English and American institutions, the incidence of Jaundice here in patients on such prolonged largactil medication has been almost negligible. This I believe is undoubtedly due to the fact that whatever ills large quantities of rice eating may bring, it certainly keeps the liver well stocked with glycogen and a well stocked liver is apparently much less susceptible to the pathological effects of circulating toxins. However some of the largest doses administered here are in the region of 250 m.g. per day of the drug in comparison to much larger doses administered elsewhere. It has also been the experience that agranulocytosis is much less common here than one would expect judging from cases cited in the literature. Both effects may possibly be due to the rice diet of the patients and it

would be interesting to note the experience of other rice-eating countries Serpasil continues to maintain its popularity as another of the drugs used in considerable quantities in the wards whilst the newer drugs like Pacatal and Stemetil have also been experimented with. Another notable advance in therapy administered to patients in the hospital is the subjection of suitable patients to Neuro-Surgery by the Neuro-Surgical Unit of the General Hospital Colombo. The Neuro-Surgeon of the General Hospital visited regularly to keep in touch with patients operated on by him.

The work of the Voluntary Association for the care of Psychiatric patients deserves special mention. The Association was formed in June, 1957, with a small band of enthusiastic workers and today its membership is over sixty members. The members meet monthly in this hospital and after this, they meet selected batches of patients. Each group of members have a patient or more attached to them when their difficulties are discussed among members and the patients. They then meet the patients relatives, often see his or her employees and attempt to resocialise these patients. By these methods a considerable number of chronic patients—often discarded by their own relatives and living in hospital for years have found new hope and at least one monthly visit to look forward to. Six of the members of the Voluntary Association for Psychiatric patients have been considered for appointment by the Hon. Minister of Health on the panels of official visitors to the "Criminal Patients". The gifting by the Association of an entire library of English, Sinhalese and Tamil books and magazines numbering about 300 for the use of the patients is recorded with gratitude. These members arranged a picnic for 25 patients and took them out for the day. The entire expenses of the travelling and food for the patients being borne by the Association. In the six months this association has been in existence it has shown a most commendable enthusiasm. Thanks are due to Mr. D. W. de Kretser of Messrs. Keel and Waldock its President and Mr. Malcolm Perera its Secretary and the other committee members and Mr. R. M. S. de Silva, Psychiatric Social Worker for setting up this association. The Association proposes to run an employment Bureau for recovered patients left in hospital with nowhere to go to. In addition to this the Association has also provided Financial Aid to patients who have no means of returning home and do not come within the Governments provisions.

Psychiatric Social Work—1957

During the year under review Psychiatric Social Work in this Institution expanded very considerably. During this year approximately 425 patients were referred to the P.S.W. by the Psychiatrists. All these cases have been interviewed and attended to. With the addition of 4 more Psychiatrists to this Institution during the year the number of patients referred have proportionately increased. This has been particularly felt as there is only one Psychiatric Social Worker to handle all the cases requiring attention.

Work Done

The work that has been performed during the year may be classified as follows :

1. Social Histories—32 submitted. Social Histories have been done in cases where these have been called for by Psychiatrists. The relatives have more often been interviewed at the hospital and in certain instances they have been visited. These Social Histories covering the environmental back-

ground, the illness, the personality of the patient and other relevant facts from early childhood to the date of admission to hospital have been an integral part of Psychiatric Social work.

2. Interviews with relations of Patients. Approximately 577 relatives of patients were interviewed during the year. In this sphere their anxieties about the patient and their fears re-mental illness and also other problems consequent to hospitalisation of family members, have been dealt with. Help and assistance have been obtained for some from the firms in which patients have been employed and those eligible have been referred to the Charity Commissioner, to the D.R.O's and Government Agents of their areas with letters detailing the particular difficulties. Many of these relatives have been given the necessary help to obtain discharges of their patients particularly discharges "on security".

3. Rehabilitation—81 patients. The majority of cases referred to the P.S.W. have been for rehabilitation. From the commencement of the year the rehabilitation and placement of approximately 75 recovered and ostensibly discharged patients who were continuing to stay in a special "Discharged Ward" was undertaken. These patients continued to stay as they had no place to go to or because their relatives were not prepared to take them back or lacked the necessary finances to call at the hospital to remove the patients. All these patients save two were finally sent out from the hospital after the necessary arrangements had been made.

A Rehabilitation scheme for recovered patients was initiated in collaboration with the Voluntary Association for the care of Psychiatric Patients since members of the Association would be in a position to find employment and generally help in the rehabilitation of patients.

4. After care of discharged patients and follow up visits—38—visits.

During the year under review 38 visits were performed in relation to 9 discharged patients. They were regularly visited once a month in their homes or other places of abode and the necessary supportive case-work, guidance and encouragement to face their individual problems and other difficulties, in life have been afforded. Whenever a relapse has been evident the necessary steps have been taken to re-admit the patients.

5. Group work and supportive case-work with in-patients:—

Group work-weekly sessions

Work with individuals-weekly

Group work with a selected number of deteriorated Schizophrenic patients was begun recently in this hospital. These patients and the P.S.W. meet once a week regularly and have a session generally lasting an hour. At these discussions the patients talk freely about common problems or on any subject they wish and a great degree of enthusiasm prevails. The fundamental aim behind this scheme is to "awaken" and keep alert and active patients who tend to dissociate themselves from the normal environment and be absorbed in their own world. Apart from these, patients, are free to see the P.S.W. whenever the latter is free to discuss their difficulties and problems. Various issues have been presented and salaries which have been delayed have been obtained for some and in other cases pensions which had been lost sight of resuscitated. Further arrangements have been made for patients anxious to see their children and in one case free legal aid was afforded the wife of a patient.

6. Out-door Visits—101. During the year 101 visits were paid to homes of patients, to their work places and various other institutions in connection with assessments of environment, discharge arrangements, rehabilitation, to see relations, former employers and to obtain information for Psychiatric purposes.

Buildings

The Psychiatric Social Worker now shares a room in the main Administration Block. This is inadequate, especially when he has to interview relations. This office should be so situated that it is easily available to the outside public and at the same time within reach of the inmates of the institution. Unfortunately rooms are not available here to be sent apart for this work entirely.

Occupational Therapy Activities

The activities of the Occupational Therapy Department are under the following headings at present :—

Recreational (Entertainment, Social activities,
Cultural activities, visits, picnics etc.)

Religious

Sports

Farm and gardens

Drafts

Work Done

The following table will show the details of the activities undertaken during the year :—

Stage Shows—Variety Entertainments, Musicals, Concerts, etc.	6
Film Shows	7
Police Band	1
Cricket Matches	26
Volley Ball Matches	19
Visit to the Zoo	4
Picnics	1
Cricket practice days	198
Volley Ball practice days	Almost daily
Music practice days	23

Mr Donovan Andrees full Bambalapitiya Stadium Troupe including the International Roller Skaters performed at Angoda. On the Oriental side, (through the good offices of the Ceylon Art Council) almost all the leading oriental dancers, musicians, etc. visited Angoda on 13.6.57. The X'mas party on 27.12.57 was a great success. This was rather a unique one in that this was the first play by the Staff for the patients.

A scheme has also been instituted where the patients are taken by batches to visit the Dehiwala Zoo periodically. The therapeutic value of these activities are considerable. Patients have shown definite changes after such activities. These are an important branch of Psychiatric treatment and the aim is the resocialisation of the patients through these activities.

Religious Activities

Buddhist, Christian, and Hindu.

Buddhist Activities

All activities for the Buddhist patients are initiated under the Mental Hospital Buddhist Society.

The following buildings have been completed up to date at the temple.

- (a) Bo Tree Wall and Shrine
- (b) Image Room

The Society is contemplating putting up a Preaching Hall too. Patients went in procession to the temple on all Poya Days where they had Bana Preachings and other Pinkamas. About 250 patients observed "SIL" on the Wesak Day. Phamplets and other Buddhist literature were distributed to the patients. A huge Wesak Pandal was erected at the Hospital entrance for the Wesak Festival by the Society with the help of the patients.

Christians

Every Sunday there was a service for the patients. The Roman Catholics had 2 Sundays Services every month by a priest from the Arch Bishop's Palace, Borella. He also visited the wards every Friday to see their members. The Anglicans too had similar services.

Hindu

The Mental Hospital Hindu Seva Sangam looked after the religious interest of the Hindu patients. There were several religious meetings and Pujas held during the year.

Sports

Out of the 26 Cricket matches played during the year 11 were Home and Home and out of the rest, the Mental Hospital Team won 7 matches. The Mental Hospital Volley Ball Team won both C & D Division shields in the Government Service Volley Ball league.

The two Badmington Courts were opened in the Male Insulin Centre and the Female section.

The work sheds where crafts are done need complete reorganisation.

Carpentry

All the repair works of furniture were undertaken at the carpentry shed. In addition it has produced new furniture urgently needed for the wards. The Occupational Therapy Section was also completed with the help of a few masons, with the following new building :—

- Store room in the pig farm.
- Occupational Therapists Office.

If adequate facilities are provided, the Department will be able to undertake all the repairs and the maintenance works of the Hospital.

Rattan

All the rattaning of Hospital Chairs and other cane furniture were undertaken in the rattan shed. The Department has also undertaken a few private jobs as time permitted.

Tinker

Tinker section has repaired all the buckets, bath tubs and aluminium ware of the Hospital.

Blacksmithy

The Blacksmiths section has attended to all the repairs and making of keys, locks, padlocks and various other smithy work.

Coir

The Coir party has been making coir strings and coir brooms for the Hospital. The coir used for this purpose was obtained from the coconut husk of the nuts used in the hospital. Since September this section was forced to buy the coir from out-side as the huskpits, had to be closed on a request from the sanitary authorities.

Textile

This is looked after by a demonstrator loaned by the Industries Department.

Mat Weaving

This centre is also supervised by a demonstrator loaned by the Industries Department. It is producing mats, bags and other Wetakeiya articles.

Farms and Gardens

This is a very important section of the Occupational Therapy Department. About 50 patients work in the Dairy Farm, 15 in the pig farm and about 30 in the gardens. The Dairy Farm is supplying a proportion of the milk required in the Hospital. The gardens are all worked by patients. The Pig Farm is a success. The treat fund swells mostly from the pig Farm profits. The sales figures show a steady increase and 1957 has been the highest.

There is a considerable amount of work to be done in this hospital if sufficient amenities are to be provided for the 4500 patient population at Angoda. With this end in view it is proposed :—

1. To organise a Hospital Orchestra
2. To start classes in Art Therapy and Rhythmic movements.
3. To expand the work-shed buildings and to get the work centres now scattered all over the hospital under one roof.
4. To intensify entertainment and sports facilities for the patients.
5. To start a patients' Gazette.

The Farm

A total of 105,195 pints of milk was produced realising a sum of Rs. 55,227.43. Although this represents an increase over the previous year, more should have been produced. The year was commenced with a herd of 120 head of cattle lead of cattle comprising 3 stud bulls, 2 Draught Bulls, 58 cows, 46 heifer calves and 11 bull calves. Of this number 25 head comprised of 1 Draught bull, 15 cows, 2 heifer calves and seven bull calves were sold by Public Auction during the year. At the end of the year there were 104 head of cattle comprised of 4 stud bulls, 1 Draught bull, 50 cows, 39 heifer calves

and 10 bull calves, with 43 of the 50 cows in the Farm in milk. This is a good record for any farm and proves that the breeding programme has been sound. There were a number of deaths among very young calves due to an infestation of Tapeworm and bad housing conditions. However, measures have been taken with the co-operation of the Department of Agriculture to eradicate tapeworm infestation. The ground in the open air paddocks have been filled and limed and allowed to lie fallow for long periods in our attempt to rid the farm of tapeworm.

The buildings are in a state of disrepair and reports to the P. W. D. have only resulted in superficial tinkering with this problem without any set programme for radical repairs and renovations. The only electric pump in the farm which has to pump water to the entire farm and the Managers' Quarters has been out of commission for long periods and water had to be drawn from wells for bathing, feeding and washing of the entire herd and buildings. The motor has been out of order on different occasions for a total period of nearly 250 days in the year. At present there are seven labourers working on the farm. In addition 7 attendants from the hospital take about another 50 patients for work there.

(ii) ELECTRO ENCEPHOLOGRAPHIC CLINIC

APPOINTMENTS are given to patients throughout the week. There was a considerable increase in work in this Department during the period under review as seen by the number of records done.

The Department now has two recordists under training on probation for two permanent posts.

Though the service received from Technicians of the E.M.T.'s Department improved during the year it would be necessary to train a Technician in this special branch of Electronics.

Accommodation

With increasing number of records the problem of storage will become more acute. A few racks in the recording room itself have been installed but soon there will be an overflow.

An extra room adjoining the recording room is essential for preparation of patients as well as for Reporting work.

Recording

Recording is done throughout by the recordists with time allotted to patients of different Medical Officers according to a set programme.

Statistics

A total of 1536 records have been done in the Department during the year. This shows an increase to nearly double the output of the last year (877). Demand for this work is on the increase and it may be necessary to obtain another machine unless the work is decentralised.

(iii) EPILEPTIC CLINIC

THE adult Epileptic Clinic was run on Tuesday afternoon and the children's Epileptic Clinic on Thursday afternoon.

This clinic has become increasingly popular and there were nearly 50 more new cases during this year compared with the last (173 against 129).

Subsequent visits have also increased very considerably which is a healthy sign in that the patients are willing to keep regularly on the drugs.

This clinic now has a waiting list that runs into 3 months and may soon have to be given an extra clinic day. This would suggest that the people do value specialised clinics for their ailments.

(iv) EPILEPTIC CLINIC—CHILDREN

THIS clinic was held for the same number of sessions as the previous year (51) but there is an increase of 12 in the new cases.

Subsequent visits have shown a considerable increase which is a very healthy sign particularly in this disease where drugs have to be given repeatedly and regularly for years.

(v) PSYCHIATRIC CLINIC I.

THIS clinic is conducted on Monday and Friday afternoon. Cases requiring Psychotherapy are now referred to the Psychotherapist.

Staff

The present staff is as follows :—

- (1) One part time Psychiatrist from the Mental Hospital.
- (2) One part time Assistant Medical Officer from the Mental Hospital.
- (3) One whole time Psychiatric Social Worker.
- (4) One whole time Nurse.
- (5) One whole time peon.
- (6) One part time labourer.

Buildings

The buildings are unsatisfactory for a Psychiatric Clinic owing to lack of accommodation and insufficient rooms.

Table XIX—Psychiatric Clinic No. 1

<i>Month</i>	<i>1st Visits</i>	<i>Sub. Visits</i>	<i>Total</i>	<i>No. of Sessions</i>	<i>E. G. T.</i>
January, 1957	.. 53	.. 182	.. 235	.. 8	.. 62
February, 1957	.. 49	.. 210	.. 259	.. 8	.. 59
March, 1957	.. 62	.. 278	.. 340	.. 9	.. 86
April, 1957	.. 47	.. 212	.. 259	.. 7	.. 43
May, 1957	.. 49	.. 241	.. 290	.. 8	.. 67
June, 1957	.. 43	.. 186	.. 229	.. 8	.. 13
July, 1957	.. 42	.. 224	.. 266	.. 9	.. 26
August, 1957	.. 50	.. 214	.. 264	.. 9	.. 23
September, 1957	.. 49	.. 232	.. 281	.. 9	.. 17
October, 1957	.. 37	.. 196	.. 233	.. 8	.. 9
November, 1957	.. 48	.. 219	.. 267	.. 9	.. 11
December, 1957	.. 47	.. 250	.. 297	.. 9	.. 25
Total	.. 576	2,644	3,220	101	441

(vi) PSYCHIATRIC CLINIC II

THIS clinic functions on the same days and at the same time as Psychiatric Clinic No. 1 viz. Mondays and Fridays from 2 to 4.30 p.m. weekly. But this clinic does mainly Psycho-therapeutic work and on an outpatient basis on patients referred from other Psychiatric Clinics. But in—patients referred by other Doctors are also attended to. The type of cases seen comprise mainly neurotic disorders, hysterias, anxiety states, neurotic depressions and also cases of stammering and sexual impotence. The type of psycho-therapy employed varied from drug abreactive techniques to short term goal—directed insight therapy depending on the case. In addition a number of cases of chronic neurosis were given supportive psychotherapy in the form of Explanation, Reassurance and Persuasion in 15-20 minutes interviews.

The accommodation provided for this clinic at present is unsatisfactory. A psychotherapist has to share a room with another medical officer attending to other patients.

Table XX—Psychiatric Clinic II, General Hospital, Colombo

<i>Month</i>	<i>1st Visits</i>	<i>Sub. Visits</i>	<i>Total</i>	<i>No. of Sessions</i>	<i>E. C. T.</i>
January, 1957	17	67	84	5	1
February, 1957	13	67	80	4	2
March, 1957	26	69	95	4	2
April, 1957	13	75	88	4	—
May, 1957	16	77	93	5	—
June, 1957	19	76	95	4	1
July, 1957	15	90	105	5	3
August, 1957	19	61	80	4	2
September, 1957	18	47	65	4	1
October, 1957	18	67	85	5	2
November, 1957	9	48	57	4	2
December, 1957	16	33	49	3	4
Total	199	777	976	51	20

(vii) PSYCHIATRIC CLINIC III

THIS clinic is conducted on Wednesday afternoons. The following clinics are run by this service at the General Hospital, Colombo. It would be noticed that there are on an average two clinics an afternoon throughout the week. From the time that there was only one clinic a week to the present when there are two clinics a day throughout the week is a far cry and it has been a strain on personnel and accommodation.

The clinics are distributed as follows :—

Mondays	..	Psychiatric Clinic I Psychotherapy Clinic
Tuesdays	..	Adult Epileptic Clinic Child Guidance Clinic
Wednesdays	..	Psychiatric Clinic II
Thursdays	..	Children's Psychiatric Clinic Children's Epileptic Clinic
Fridays	..	Psychiatric Clinic I Psychotherapy Clinic
Saturdays	..	Child Psychiatric Clinic
Tuesdays, Wednesdays and Thursdays	} ..	Neuro Psychiatric Clinic Island Clinic.

(viii) NEURO-PSYCHIATRIC CLINIC

THE Neuro-Psychiatric Clinic and the "Island Diseases" clinic continue to be conducted by Dr. Grillmayre at the General Hospital, Colombo, on 3 afternoons a week.

(ix) PRISON PSYCHIATRIC CLINIC

THE Prison Psychiatric Clinic has been in operation throughout the year. It consists only of patients in the Prison showing mental disturbances and of remand prisoners suspected of mental illness.

The Clinic functions three times a week in the afternoons at the Prison Hospital. Female prisoners are seen in the Female Section.

(x) PSYHIATRIC CLINIC—LEPROSY HOSPITAL, HENDALA

THE visits to this clinic have dropped during this year and only 11 visits were paid.

This was due to there being less calls from the Leprosy Hospital. The staff being able to cope with patients, who showed Psychiatric trends under the instructions given them regarding drugs administered earlier.

It was only when specialised physical treatment (E.C.T.) was necessary that a visit had to be paid.

<i>No. of Clinics</i>	<i>1st Visits</i>	<i>Sub. Visits</i>	<i>Total</i>
11 ..	6 ..	21 ..	27

(xi) CHILD GUIDANCE CLINIC I

FUNCTIONED on Tuesday afternoons and was conducted with the following staff :

- (1) Part time Psychiatrist from the Mental Hospital.
- (2) Part time Assistant Medical Officer from the Mental Hospital.
- (3) One whole time Psychiatric Social Worker.
- (4) One whole time Nurse.
- (5) One whole time Clerk.
- (6) One whole time Peon.
- (7) One part time Labourer.

(xii) CHILD GUIDANCE CLINIC II

CHILD Guidance Clinic II functioned on Thursday afternoon and Saturday morning. Throughout the year there has been a marked increase of patients seeking treatment especially for behaviour disorders.

Several of these cases seeking treatment for behaviour disorders have been found on E. E. G. examinations to be suffering from Temporal Lobe Epilepsy.

Treatment of behaviour disorders have been mainly through play techniques in the younger age groups and verbalization in the older age groups. The cases of behaviour disorders with Temporal Lobe Epilepsy have been treated with anticonvulsion drugs.

The Juvenile Court cases are now referred to the Children's Department of Probation and Child Care. Juvenile Schizophrenics seeking treatment have been less than in the previous years. Three of the four cases were admitted to the Mental Hospital.

Work

The work done is mostly therapy. The number of sessions per case is very valuable. Some cases need treatment for several months. The Defectives still continue to seek treatment. This aspect of Psychiatric work has still to be organised.

Equipment

Equipment for the year has been adequate. However, there should be facilities for open air play such as sand pit, climbing frame, Paddle port with tap and out door games.

Buildings

As in the previous year the clinic continues to function in the present unsatisfactory premises at General Hospital, Colombo.

At present Child Guidance Clinics 1 and 2 together with epileptic clinics functions at the same time.

Attention should be paid to the following proposals during the next year.

- (1) Immediate removing of the Clinic from G. H. C. to Children's Hospital, where work could be done in consultation with Pædriaticians.
- (2) Therapy sessions to be held more often during the week to cope with the increasing number of patients seeking treatment.
- (3) A full-time Psychiatric Social Worker for child Guidance Work only.
- (4) A psychologist.
- (5) An institution or Home to which Defectives could be referred to.

Table XXI—Child Guidance Clinic Figures, 1957

<i>Month</i>	<i>1st Visits</i>	<i>Sub. Visits</i>	<i>Total</i>	<i>No. of Sessions</i>
January 1957 ..	12	63	75	12
February, 1957 ..	11	56	67	12
March, 1957 ..	9	55	64	13
April, 1957 ..	8	39	47	10
May, 1957 ..	15	45	60	11
June, 1957 ..	9	64	73	12
July, 1957 ..	6	59	65	12
August, 1957 ..	17	60	77	13
September, 1957 ..	2	45	47	7
October, 1957 ..	3	39	42	4
November, 1957 ..	3	32	35	4
December, 1957 ..	1	31	32	5
Total ..	96	588	684	115

(xiii) CHILD GUIDANCE CLINIC, KALUTARA

A child guidance clinic was inaugurated at the Government Hospital, Nagoda, in July, 1957. The ground work for the clinic was done in April and May, 1957, with lectures to Public Health Nurses, Midwives and others working at the Public Health Unit, Kalutara. With the co-operation of the C. M. O. H. and S. H. S., Kalutara, posters were circularised notifying schools, colleges and comments of the type of services available at the Clinic and the response was very gratifying.

At first the clinic was run in conjunction with the W. H. O. Pædiatric Team, attached to the Nagoda Hospital, and valuable help was afforded in the problem of staffing the clinic with the assistance of the Public Health Nurses attached to the Pædiatric Team. The assistance of these nurses was only available for a short time, as their duties included field work in distant parts.

At first the clinic was held only once a week, on Friday afternoons, as only a few patients were brought for advice. From September, 1957, the numbers increased rapidly and it became necessary to hold sessions twice a week on Monday and Friday afternoons. In December, 1957, the numbers increased still further and two sessions a week were held on Monday, Wednesday and Friday afternoons.

Staff

The present staff is as follows :—

- (1) One part-time Psychiatrist from the Mental Hospital, Angoda.
- (2) One part-time nurse from the Nagoda Hospital.
- (3) One part-time attendant from the Nagoda Hospital.

Accommodation

The Accommodation available is very unsatisfactory. There is only one small ill-ventilated room in which the parents and children are interviewed. There is no room at all for play therapy of any sort to be done.

Work Done

Most of the patients attending the child guidance clinic are Epileptic children, hence one of the three weekly sessions is devoted only to these epileptics. This leaves two sessions a week in which child guidance problems, mental defectives, juvenile delinquents and others are seen and advised.

Statistics of the work done are given in the following table

Table XXII—Child Guidance Clinic—Kalutara, 1957

ANALYSIS OF CASES			
Epileptics	..	..	24
Mental Defectives	..	..	14
Mental Deficiency and Epilepsy	..	..	8
Habit and Speech disorder	..	..	9
Juvenile Delinquency	..	..	7
Behaviour disorder	..	..	7
Schizophrenia	..	..	1
Deafness	..	..	1
Infantile Hemiplegia	..	..	1
Hysteria	..	..	2
No Psychiatric Disability	..	..	2
Total No. of cases seen	..	..	76

ATTENDANCE

Total No. of new cases	76
Total attendance for Medical Treatment .. .	202
Attendance for Therapy	64

ANALYSIS OF REFERRALS

Out patient department, Nagoda Hospital ..	14
Pædiatric Clinic, Nagoda Hospital ..	22
Schools and Colleges	26
Public Health Nurses and Midwives ..	8
Private Practitioners	1
Parents	5
Total	<hr/> 76 <hr/>

(xiv) THE PELAWATTA HOSPITAL

Staff

Medical Officer ..	1
Apothecary ..	1
Clerk ..	1
Chief Male Nurse ..	1
Hospital Overseers ..	2
Agricultural Overseer ..	1
Peon ..	1
Temporary Cycle Labourer ..	1
Male Attendants ..	37
Boilerman ..	1
Cooks ..	7
Watchers ..	2
Ordinary Labourers ..	2
Conservancy Labourers ..	4
Female Temporary Labourers ..	2

Work

Ninety-six patients were transferred to Pelawatta from Angoda during the year under review. The total patient population in hospital is at present 222. The work here is mainly in the nature of Occupational Therapy. The patients are engaged in the cultivation of paddy, manioc, sweet potatoes and vegetables while a few are engaged in road construction and maintenance. 15 acres of paddy land were under cultivation during the Maha and Yala seasons. The yield obtained during the Maha season was 61 bushels and during the Yala season 109 bushels. No paid labour was engaged for this work.

Water Supply

The C. P. H. E. had handed over the Power House and all its annexures, &c., to the Electrical Department. The water remains very muddy in colour and requires filtration and chlorination.

Electricity

This has not been attended to yet. It now merely requires the laying of the electrical mains either underground or overhead. Great inconvenience is experienced in not having electric lights.

Buildings

Wards of the L. C. C. type to accommodate 1,500 patients, living quarters for the Minor Staff, dining rooms for attendants and labourers and other subordinate staff, shed for firewood and a cycle shed for 75 cycles with doors and locks are needed. A wooden ceiling to the existing L. C. C. Wards, a permanent Mortuary, Recreation Halls for patients and staff, a permanent cooking range and a work shed for Occupational Therapy are also needed.

Table XXIII—Annual Statement of Out-Patients and Clinics held

Out-Patient Department : No. of First Visits	..	1,981
No. of subsequent Visits	..	11,975
Island Disease Clinic	..	12,167
Total Visits	..	<u>26,123</u>

Clinics held : 11.

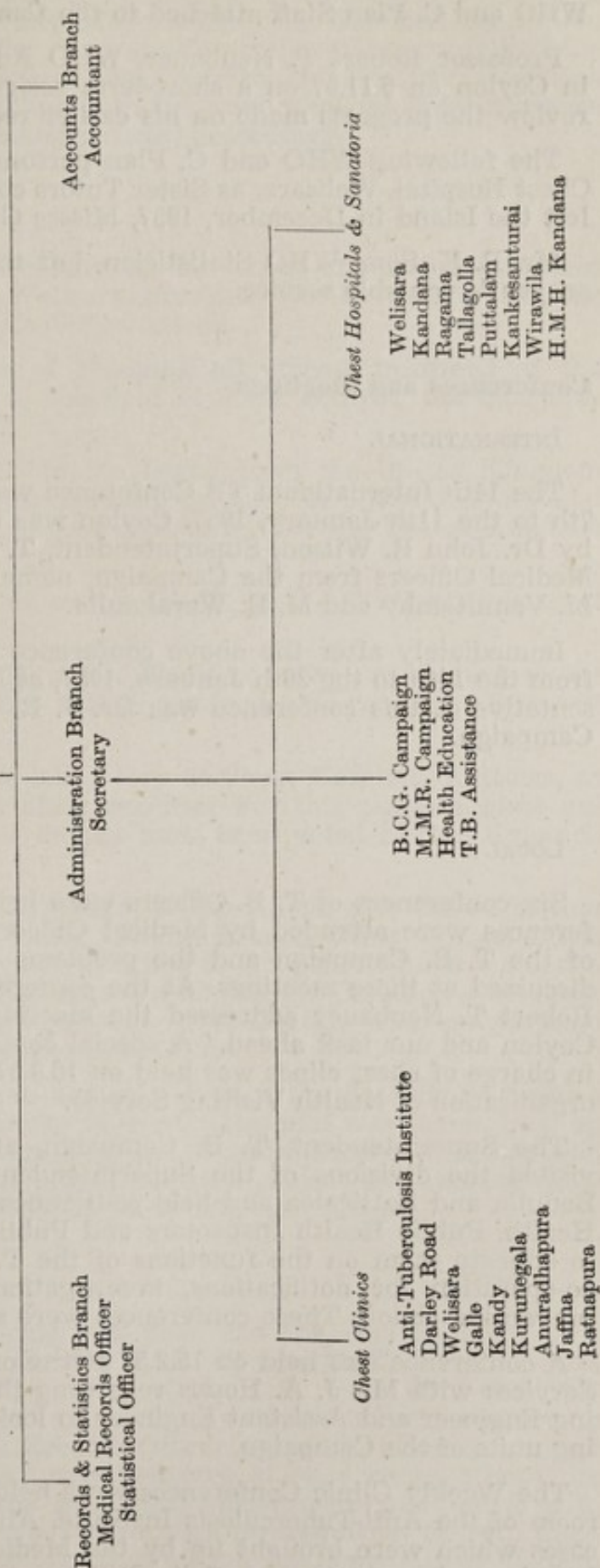
<i>Nature of Clinic</i>	<i>Number of half day sessions per week</i>	<i>Number of first visits</i>	<i>Number of subsequent visits</i>	<i>Total Visits</i>
1. Psychiatric Clinic— (1) G. H. C. ..	2	576	2,644	3,220
2. Psychiatric Clinic— (2) G. H. C. ..	1	199	777	976
3. Psychiatric Clinic— (3) G. H. C. ..	1	75	485	560
4. Child Guidance Clinic— (1) G. H. C. ..	1	96	588	684
5. Child Guidance Clinic— II. G. H. C. ..	2	83	259	342
6. Child Guidance Clinic, Kalutara ..	3	76	126	202
7. Epileptic Clinic— G. H. C. ..	2	320	4,409	4,729
8. Psychiatric Clinic— L. H. Hendala ..	—	6	21	27
9. Neuro-Psychiatric Clinic ..	1	415	2,375	2,790
10. Prison Psychiatric Service ..	3	135	291	426
11. Island Disease Clinic ..	.. Injection Cases : 10,709 Luotest Cases : 1,458			12,167

CAMPAIGNS AGAINST SPECIAL DISEASES

(I) ANTI-TUBERCULOSIS CAMPAIGN

Administrative Set up of the T. B. Campaign

Superintendent, T.B. Campaign



CHEST SERVICES

WHO and C. Plan Staff attached to the Campaign

Professor Robert T. Neubauer, WHO Adviser on Tuberculosis arrived in Ceylon on 5.11.57 on a short-term assignment as WHO Consultant to review the progress made on his earlier recommendations.

The following WHO and C. Plan personnel who were attached to the Chest Hospital, Welisara, as Sister Tutors completed their assignments and left the Island in December, 1957, Misses Gillespie Robertson and Inkpen.

Mr. R. K. Som, WHO Statistician, left the Island in August, 1957 after an year's valuable service.

Conferences and Meetings

INTERNATIONAL

The 14th International TB Conference was held at New Delhi from the 7th to the 11th January, 1957. Ceylon was represented at this conference by Dr. John R. Wilson, Superintendent, T. B. Campaign and three other Medical Officers from the Campaign, namely, Doctors T. Somasundaram, M. Vannitamby and M. B. Warakaulla.

Immediately after the above conference a WHO Conference was held from the 14th to the 20th January, 1957, at New Delhi. The Ceylon Representative at this conference was Dr. J. R. Wilson, Superintendent, T. B. Campaign.

LOCAL

Six conferences of T. B. Officers were held during the year. These conferences were attended by Medical Officers and Administrative Officers of the T. B. Campaign and the problems relating to T. B. were freely discussed at these meetings. At the conference held on 5.12.57, Professor Robert T. Neubauer addressed the meeting on 'The T. B. situation in Ceylon and our task ahead.' A special conference of the Medical Officers in charge of chest clinics was held on 16.8.57 to discuss the question of re-organisation of Health Visiting Service.

The Superintendent, T. B. Campaign, and Professor R. T. Neubauer visited the divisions of the Superintendents of Health Services, except Badulla and Batticaloa and held conferences with the Medical Officers of Health, Public Health Inspectors and Public Health Nurses with a view to educate them on the functions of the T. B. Campaign to solicit their co-operation for notifications, investigations, contact examinations and preventive action. These conferences were found to be very useful.

A conference was held on 15.2.57 at the office of the Director of Health Services with Mr. J. A. Hopps regarding the appointment of a Supervising Engineer and Assistant Engineer to look after the X-Ray and Screening units of the Campaign.

The Weekly Clinic Conferences were held on Wednesdays at the board room of the Anti-Tuberculosis Institute. All controversial and interesting cases which were brought up by the Medical Officers were discussed at length, and patients and their X' Rays, too, examined by the officers present.

The second meeting of the T. B. Advisory Board was held on 3.7.57. at the office of the Director of Health Services. This meeting was attended by the Representatives of the Departments of Social Services, Education, Housing, Local Government, the Assistant Controller (Granaries) and the Chief Medical Officer of Health of the Colombo Municipality. Decisions regarding the Rehabilitation Schemes in the provinces and slum clearance were arrived at and action is being pursued accordingly.

Staffing and other Activities

The fourth Passing Out Ceremony of the school of nursing was held on 16.11.57 at Chest Hospital, Welisara, presided over by the Hon'ble the Minister of Health, Mrs. Wimala Wijewardena.

Considering the importance of keeping all officers informed of the progress that is being made in the field of T. B. control, the quarterly T. B. Bulletin was reorganised.

Six medical officers returned to the Island from the United Kingdom after successfully completing specialised training in chest diseases and public health. A further batch of four doctors left for the United Kingdom for specialised training.

Seven medical officers are following the T. D. D. (Ceylon) course at the University of Ceylon.

An X-Ray and Pulmonary Function Block is to be constructed at the Chest Hospital, Welisara. Once this is ready it will satisfy a long felt need in the Chest Services.

It is proposed to convert the laboratory at Chest Hospital, Welisara, as the central laboratory for the chest services. For this purpose some extensions are necessary and the money have been voted by the Colombo Plan Authorities.

The Superintendent, T. B. Campaign, continued to visit the outstation T. B. institutions such as the Chest Clinics, Branch Chest Clinics, Chest Hospital, Sanatoria and T. B. wards attached to general hospitals regularly. This close supervision and discussions with the T. B. officers of these institutions have brought about greater co-ordination and co-operation between the administration and the institutions.

A considerable length of time has passed since the decision to build a school for T. B. children at Hawke Memorial Hospital was taken. But, up to now, the Department of Education has not undertaken the construction of the school building and it is hoped that this project will receive early attention in considering the plight of these helpless children.

Records and Statistics Branch

Another important undertaking this year was the establishment of a records and statistics branch for the T. B. Campaign. This branch was established on the advice and guidance of Mr. R. K. Som W H O Statistician. Although the administrative machinery of the branch was set up immediately after the Medical Records Officer assumed duties no attempt was made to embark upon any new ventures at once because both the Medical Records officer and the Statistical officer were new entrants to this field and it was considered advisable, as a pre-requisite, to train these two officers as under-studies to Mr. Som on the fundamentals of Medical Statistics. It was unfortunate that the WHO was not able to agree to an extension of the period of Mr. Som's assignment and he had to leave the

island half-way through his scheme for the organisation of the Records and Statistics Branch. Mr. Som, however, was good enough to give the necessary advice to the senior officers of the Branch and also to prepare and present a very comprehensive scheme for their future guidance. Towards the end of the year the Statistics Branch of the B. C. G. Campaign was amalgamated with this Branch.

The most important work undertaken by the records and statistics branch during the year was the organisation of a Central T. B. Register for the whole island with its counterparts at provincial level at the Provincial Chest Clinics. Arrangements have been made for all notifications of T. B. to pass through this branch so that they could be taken into the register, without delay. Even the investigations and preventive action are directed by this branch and this method has proved that no case is lost sight of once it is notified. It was not possible to bring this register up to date as yet, by taking in all the cases that were diagnosed prior to the opening up of this register, too, due to the shortage of staff and office accommodation. Every endeavour will be made to bring the register up to date with all the maps and graphs which are ancillary to it within the course of next year. The central T. B. register was opened in April, 1957, and by the end of the year there were 5,589 patients registered as newly diagnosed cases during this period.

Chest Clinics

At the end of the year the following Chest Clinics were in operation :—

- Anti-Tuberculosis Institute, Colombo
- Chest Clinic, Darley Road, Colombo
- Chest Clinic, Welisara
- Thassim Chest Clinic, Galle
- Chest Clinic, Ratnapura
- Chest Clinic, Kandy
- Chest Clinic, Kurunegala
- Chest Clinic, Anuradhapura
- Chest Clinic, Jaffna

The new chest clinic at Anuradhapura was opened in February, 1957, by the High Commissioner for Australia in Ceylon.

The chest clinic at Jaffna continued to function for three days in the week, conducted by the Medical Officer, Sanatorium, K. K. S. This clinic will start functioning as any other clinic from the beginning of 1958, when Dr. F. J. Ratnaser, who has been appointed Medical Officer in charge assumes duties. It was decided to treat the O. P. D. at Chest Hospital, Welisara as a chest clinic in view of the volume and importance of work done by this clinic.

Buildings

The new extensions to the Thassim Chest Clinic, Galle, were completed and taken over in September, 1957. The work-load of the clinic is such that, even after occupation of these extensions, the accommodation does not seem to be sufficient.

The chest clinics at Darley Road and Anti-Tuberculosis Institute were not expanding as far as the buildings were concerned although the volume of work has increased considerably at both these institutions. These two institutions will have to be maintained until the new central chest clinic at Deans Road for which the plans are ready is constructed in the very near future.

Most of the other chest clinics are housed in new buildings and do not need any repairs except a few additional items like a retaining wall for the Kandy clinic, a lightening conductor for the Jaffna clinic, extensions to the laboratory at Galle clinic and most important, garages for all clinics.

Equipment

(i) *X'Ray*.—The X'Ray Plant at the Anti-Tuberculosis Institute, Colombo, is old and requires replacement. The chest clinic at Kandy is in need of a X'Ray drying cabinet and a cough protector for the Screening Plant.

A Screening Plant was installed at Anuradhapura clinic in September 1957. A 4" × 5" X'Ray plant was installed at chest clinic, Darley Road, and this has proved to be very useful and economical.

A Screening Plant is required for the Kurunegala clinic. If this is done the shortage of 70 mm. films could be overcome to a great extent.

(ii) *Laboratory*.—A Laboratory Sub-Assistant was appointed to the Chest Clinic, Darley Road, in August, 1957. Gas generators are required for the Chest Clinics at Kurunegala and Ratnapura.

Sputum and Laryngeal Swabs are sent to the Laboratory at Welisara from most institutions for culture examinations.

(iii) *Transportation*.—With the reorganisation of the Health Visitors Services by taking the Public Health Inspectors too, into the scheme there will be a considerable increase in the number of contacts who will be brought to the clinics for examination. Most of the contacts from remote areas are reluctant to come to the clinic because of the heavy expenditure incurred and the lack of transport facilities. To overcome this difficulty another 5 or 6 vans will be needed for the clinics immediately.

Work Accomplished

Tables 2.1 to 5.1 show the volume of work done by the chest clinics and these tables, when compared with the figures for the previous years it will be seen that clinics have become very popular centres for the chest patients.

(i) *Clinical*.—Table 2.1 gives the number of first visits, classified by how the case was found (i.e., sent by doctor, own initiative, &c.) the number of subsequent visits and the total number of all visits to each clinic. The average number of visits per working day is highest at the Anti-Tuberculosis Institute, Colombo (295). The average visits to clinics at Galle and Darley Road are 264 and 246 respectively.

Table 2.2 gives the details of diagnosis made. It shows that there are 7,480 patients newly diagnosed cases of Pulmonary T.B. as against 6,002 last year. This increase, is the result of extensive case-finding methods. Nearly 60 per cent. of the cases diagnosed as Pulmonary T.B. were found to be without cavity. There were 1,374 patients having non-pulmonary tuberculous conditions. 10,587 have been diagnosed as non-T.B. Pulmonary conditions. Bronchitis seems to be the major disease in this category.

(ii) *X'Rays*.—Table 3 shows the number of X'Rays taken. In all 71,899 large films and 365,105 miniature films have been taken. Due to the non-availability of 70 mm. films towards the end of the year work at some clinics and Mass Radiography Campaign had to be curtailed as an economy measure. More and more screenings were done to compensate for it. Of the 365,105 miniature films taken 140,505 were done at Ratnapura clinic and 133,380 in Kurunegala clinic.

(iii) *Laboratory*.—Table 4 shows the volume of laboratory work done in the clinics. The figures shown against Welisara in this table are in respect of the work done for the Clinic only. 22,391 sputum direct smear, 4,549 sputum culture and 22,455 laryngeal swab culture examinations were done in the clinics during the year. It is interesting to note that out of the 22,455 laryngeal swab cultures done 11,250 were done at Welisara and 9,629 at Galle. It is not possible for every clinic to carry out culture examinations as some of them still do not have gas generators.

(iv) *Tuberculin testing and BCG*.—Table 19.1 gives the amount of work done in this respect. It is observed that 60.5 per cent. of those tested at Galle and 35.1 per cent. at Welisara have not been read, and only 20 per cent. of the persons with negative results at Darley Road have been vaccinated. 18 per cent. of the total tested have not got their results read and only 5 per cent. of the negative results have not been vaccinated. The large number of persons who do not report for mantoux reading may be due to a variety of reasons such as, lack of transport facilities, financial difficulties and the ignorance of the importance of having it read. It may be possible to overcome these difficulties gradually by persuasion, effective propaganda and health education.

(v) *Treatment*.—Table 5.1 gives the number of patients under ambulatory treatment as at beginning of the year and end of the year with admissions and discharges.

Domiciliary treatment seems to be not very popular in some areas as the patients shun publicity. Further this method of treatment is considered to be uneconomical if there are insufficient number of patients in a certain area.

Table 5.2 shows the amount of drugs used in the clinics.

Collapse therapy was done on 145 patients at Darley Road Chest Clinics and 65 patients at Galle Chest Clinic.

Branch Chest Clinics

Attendance at almost every Branch Chest Clinic has increased during the year. It will be necessary to open some more Branch Clinics when the "Black Spots" are brought out according to the residential areas of all the TB patients with the help of the Central TB Register.

Many of the existing Branch Clinics are conducted under adverse conditions as some of them do not have even the fundamental necessities such as accommodation. Office furniture, equipment, X-ray or screening plants and staff. Proper and efficient functioning of the clinics, under these circumstances cannot be expected although every endeavour was made to maintain them to a certain standard. 24 Branch Clinics were functioning at the end of the year.

A Branch Chest Clinic was opened at Avissawella during the course of this year.

Work Accomplished

Table 6 to 9 give the volume of work done in the Branch Clinics. These figures show a marked increase in the volume of work in every field of activity in Branch Clinics. All suspected cases are transported to the main clinics for detailed diagnosis.

(i) *Clinical*.—Table 6 gives the number of first visits, subsequent visits, total of all visits and the diagnosed cases of Pulmonary TB. The first visits

at the Branch Clinics were 27,224. There were 6,066 first visits at the Branch Clinic at Sanatorium, K. K. S. and 4,080 at the Branch Clinic at Negombo. Number of first visits at K. K. S. in 1956, was 5,021.

(ii) *X'Rays*.—Table 7 gives the number of X'Rays taken in the Branch Clinics. Of about 12,000 large films taken in 11 Branch Clinics about one third the number was done in Ragama and another one third in K. K. S. Sanatorium. There are no X-Ray plants available at most of the Branch Clinics.

(iii) *Laboratory*.—Table 8 gives the number of laboratory examinations done in 9 Branch Clinics. All together 3,275 sputum examinations by direct smear have been done of which 2,286 were in Ragama.

(iv) *Treatment*.—Table 9 gives the drugs used with quantities in the Branch Clinics.

(v) *Tuberculin testing and BCG*.—This is done only in a few clinics by the Health Visitor who accompanies the Medical Officer on his visits, this too for diagnostic purposes only. It cannot be done in other clinics due to the lack of facilities and staff.

Chest Hospitals

The following chest hospitals and sanatoria were in operation during the year :—

Chest Hospital, Welisara
Chest Hospital, Ragama
Sanatorium, Kandana
Hawke Memorial Hospital, Kandana
Rehabilitation Centre, Talagolla
Chest Hospital, Puttalam
Chest Hospital, Wirawila
Sanatorium, Kankesanturai.

Total bed-strength of the chest hospitals as at the end of the year was 2,113 which is 34 more than last year. This increase is due to some improvements made at Kandana and additions made at Puttalam.

Buildings

The construction of additional quarters providing accommodation for 18 staff nurses and sisters at Welisara were completed during the course of the year. The admission ward (No. 7) at Ragama was demolished as it was in a dilapidated state. The old kitchen at Ragama which is in a very bad state of repair has not been attended to by the D. P. W. in spite of the request to complete the work before the end of September 1957. Two pre-fabricated wards, which could accommodate about 60 patients were opened at Puttalam in the middle of the year. The construction work in connection with Medical Officer's quarters and Nurses' quarters at Puttalam were completed and occupied. Water supply to the Puttalam Hospital is satisfactory now as the work in this connection was completed in June 1957. A new water tank is being constructed at Sanatorium, Kandana.

Almost all the hospitals are in need of further repairs and additions. The most pressing problem is the quarters for the staff both major and minor. Action will be taken to extend the buildings at the Rehabilitation Centre

at Talagolla to accommodate about 200 patients. In this connection the Government has decided that a portion of the funds collected by the Hospital Lotteries Board be utilized for the Rehabilitation of the TB patients. Drainage facilities, too, should be provided for all these institutions.

Equipment

700 steel bedside lockers, 20 steel food trolleys, 2 large operating theatre sterilizers, 4 small sterilizers and an x-ray plant were received at Welisara from Australia under the C. Plan. One of the large sterilizers was installed at Sanatorium, K. K. S. Among the Russian equipment received were two refrigerators, 120 iron-beds and two instrument cabinets.

(i) *X-rays*.—A new screening unit was installed at Chest Hospital Puttalam.

(ii) *Laboratory*.—The Laboratory at Chest Hospital, Welisara, continued to function as the Central Laboratory for the TB campaign. It is also the training centre for laboratory assistants of the different chest institutions.

Work Accomplished

Tables 11 to 14 give the volume of work done in chest hospitals. Every attempt was made to hospitalize patients who were sputum positive and also the patients whose home conditions were unsatisfactory.

(i) *Clinical*.—Table 11 gives the number of patients and diagnosis of patients admitted to chest hospitals during the course of the year 6,711 patients were treated in chest hospitals. Of this number 2,269 were in Welisara and 2,338 in Ragama, 4.9 per cent. of the patients treated in hospitals died. 4,846 patients were admitted as against 3,843 in 1956, 4,210 were discharged and 329 died. The average number of days a patient was hospitalized ranged from 75 at Ragama to 264 at Talagolla. (Talagolla is the Rehabilitation Centre and patients are kept here until their training course is over). In Welisara and Kandana the numbers were 113 and 136 respectively.

(ii) *X-rays*.—Table 12 gives the number of x-rays taken in the chest hospitals. 35,551 x-rays have been taken in hospitals where x-ray plants are available. Of this number 18,842 were done at Welisara and 7,062 at Kandana.

(iii) *Laboratory*.—Table 13 gives the number of examinations by type. The figures shown against Welisara relate to the examinations done for the hospitalized patients. 41,848 examinations of sputum by direct smear and 25,036 by culture have been done as against 32,300 and 11,182 respectively in 1956. 15,858 laryngeal swab culture examinations have been done during the year. Of these 20,932 sputum direct smears, 23,830 sputum cultures and 12,839 laryngeal swab cultures were done at Welisara. Welisara was the only hospital which did laboratory work for other institutions.

(iv) A. P. refills on 3 patients, P. P inductions on 7 patients, P. P. refills on 10 and aspirations on 77 patients were done in Welisara.

Table 14 gives the drugs and quantities used in chest hospitals.

TB Wards in General Hospitals

It has been the policy of the Government to open light construction wards in general hospitals all over the Island, wherever this is possible, to ease the congestion at chest hospitals and to hospitalize as many TB patients as possible. TB wards were available in 27 general hospitals during the year. (For statistical purposes we have treated even the hospitals where there are no separate TB wards but where beds have been set apart for TB patients as TB wards). Beside these there are more than 28 other district hospitals where a few TB patients are treated as in-patients if and when accommodation is available. The bed-strength in these wards at the end of the year is 1,337 as against 1,359 in 1956. This slight fall is due to the fact that Giriulla wards were taken over for general patients while the opening of new wards was delayed due to the shortage of water supply and the Chilaw wards were commandeered for general patients without alternative arrangements being made for TB patients. However, additional beds for TB patients at Pimbura, Walasmulla and a few other hospitals compensated for this loss at least to a certain extent.

All the TB wards, except Batticaloa are regularly visited by Medical Officers from the TB Campaign.

Buildings

The new TB wards at Anuradhapura were ready for occupation but the opening of these wards for patients were delayed as these buildings were being occupied temporarily by the flood victims. Balapitiya new wards were commandeered for use as general wards and two old wards were set apart for TB patients. Nikaweratiya TB wards could not be opened due to the shortage of water.

Work Accomplished

(1) *Clinical*.—Table 15 gives the number of patients treated and the number admitted during the year. Approximately 3,000 patients have been treated during the year as against 2,859 last year. Number admitted was 1,925 whereas it was 1,611 in 1956. 207 patients died in TB wards. These figures relate only to the patients treated by Visiting Chest Physicians in the TB wards.

(ii) *X-rays*.—Table 16 gives the number of x-rays taken for patients in TB wards. Of 3,684 large films taken nearly one third was taken in General Hospital, K. K. S.

(iii) *Laboratory*.—Table 17 shows the number of examinations by type in 11 TB wards. In all 6,574 examinations of sputum by direct smear have been done. This is nearly 4 times the figure for last year which was 1,587. 233 examinations of sputum by culture and 222 of laryngeal swab by culture have been done.

(iv) *Treatment*.—48 P. P. refills and 10 aspirations were done in General Hospital, Galle.

Table 18 gives the drugs used with quantities in TB wards.

Special Activities

BCG Campaign.—The BCG Campaign reached the target figure of 3½ million by the end of the year. This brings the first stage of its development to an end.

In the year 1957 the activities of the BCG Campaign was confined to the Central Province, the North Western Province and the Southern Province. The out-break of the small-pox epidemic in this year affected the BCG activities to a certain extent because mass vaccination against small-pox had to be given priority over BCG.

Extensive propaganda was done by the Propaganda Officers before the BCG team arrived in any area. Work was carried out under the supervision of the Field Medical Officer of the BCG Campaign. It was possible to carry out the work without obstruction mainly because of the co-operation of all the prominent persons and Government Officers of the area, visited by teams.

Training classes in BCG work were conducted by the Staff Nurse, BCG Campaign for the Public Health Inspectors and Public Health Nurses at Gampola, Nawalapitiya, Kandy, Kadugannawa, Urugala, Teldeniya, Galagedera, Harispattu, Matale, Rattota, Wattegama, Talatuoya, Maturate and Nuwara Eliya. Nurses employed at chest clinics, Ratnapura, Jaffna and Kandy and Sanatorium, KKS too were given BCG training.

In all 58 Public Health Inspectors and Public Health Nurses were trained in 1957 in BCG work.

Work Accomplished

Table 19.1 gives the number of persons tested and other particulars regarding mantoux reading and vaccination. 80 per cent. of the testing was done by the field teams. 82 per cent. of the total tested were read of which 55 per cent were positive. 95 per cent. of the negatives were vaccinated.

Table 19.2 gives the percentage positive and vaccinated, by age groups for the fields teams. 53 per cent of the tests read were positive and 99 per cent negatives were vaccinated. The percentage positive increased from 19.7 per cent. at the age group 0-6 to 76 per cent at ages 15 and above.

Mass Miniature Radiography Campaign

The Mobile Mass Radiography Unit was in full operation throughout the year (except for the unavoidable suspension of work for a short period due to shortage of films) and it was possible to set up a new record in the total number of persons x'rayed on miniature films for any one year in Ceylon.

A Mass Radiography Survey of Colombo Schools was done during the year with the co-operation of the School Medical Officer.

Work Done

The Unit x'rayed a total of 97,844 persons on miniature films during the year. This was the highest on record for any one year in Ceylon. Considering the fact that the unit was not in operation for approximately two months during the latter part of the year and the suspension of work due to non arrival in time of films ordered this has been a very satisfactory achievement.

Of the total number of x'rays taken 8,994 were found to be spoilt, and 4,056 abnormal. 776 persons were suspected of Pulmonary TB, and 615 were referred for follow-up examinations.

Mantoux Testing and BCG Vaccination

Members of all groups examined by the Mass Radiography Unit were Mantoux tested and BCG vaccination was offered to the negative reactors. Mantoux testing was not done only in respect of those persons who had been previously tested and found to be positive reactors. Testing and vaccination were done by the base team of the BCG Campaign.

Follow-up Work

(i) Follow-up work of all the adult groups in Colombo were done at the Chest Clinic. Individuals and groups came for the examination by appointment. In the case of school groups initial follow-up work was done where accommodation was available.

(ii) In the case of the Mental Hospital at Angoda the Medical Officer in charge was requested to carry out further investigations other than the taking of large films. Owing to the large number of cases involved even the taking of large films was not done in cases showing a frankly tuberculous appearance in the miniature films.

(iii) In the case of the Kandy group the Medical Officer in charge, Chest Clinic, Kandy was requested to carry out follow-up work.

Treatment and Hospitalisation

Patients found to be suffering from non-tuberculous conditions requiring treatment were advised accordingly and referred to the Medical Officer close to their place of work.

An attempt was made to hospitalize as many of the cases as possible showing a positive sputum on direct smear. However, owing to the lack of hospital accommodation and unwillingness of patients this was not always possible.

A total number of 8 cases were referred to the Thoracic Unit, General Hospital, Colombo for their advice and/or action during the year. These included cases who were not responding to O. P. D. treatment and cases where diagnosis was doubtful.

Rehabilitation Centre, Talagolla

This is the only Rehabilitation Centre available for TB patients at the moment. Seventy patients were undergoing training at the Centre in carpentry, weaving, sewing, tailoring and shorthand and typewriting. At the Conference of the TB Advisory Board held on 3.7.57 it was decided to hold the next Conference of the Board at the Rehabilitation Centre and to invite representatives of the voluntary organisations and other departmental officers whose assistance is required to rehabilitate and re-settle these trainees in order to give them an opportunity to get a clear picture of what has been done in this respect and to decide what further action to be done. Re-settlement work will be done by the Re-settlement Officer who will be appointed in due course.

The patients of this Centre have been under close and careful medical supervision but it was considered useful that the actual nursing aspect should receive less emphasis in order to build up greater confidence in the patients as to their physical capabilities.

A general programme of recreational activities, in the evenings, designed to develop the sense of social behaviour and latent qualities of leadership and public spiritedness has been followed with a certain amount of success.

Arrangements have been made for the Health Educator of the TB Campaign to visit the Centre as often as desirable and to have lectures and film shows for the benefit of the patients. Two graduate teachers are voluntarily instructing the patients who are preparing for the S. S. C. and G. C. E. examinations. Four patients sat for the S. S. C. examination and eight others took up the G. C. C. examination in shorthand and type-writing. Two patients took up the competitive examination for recruitment of Sinhala Stenographers. Some of the trainees will be discharged early next year and the question of finding employment for them will receive consideration.

The question of rehabilitation of the tailoring trainees was discussed with Dr. J. H. F. Jayasuriya, Chairman, CNAPT Council, which is sponsoring a Rehabilitation Project at Kadawata. It is proposed to form a co-operative society of the graduating trainees and to assist them by giving departmental or other government contracts for the tailoring of uniforms, &c. A detailed scheme for this purpose will be drawn up in consultation with the Co-operative Department.

A poultry section was started in May, 1957, following the Deep Litter System and the results have been extremely good. The Divisional Agricultural Officer visited the Centre in November, 1957, to inspect and advise on the development of the Agricultural Section. It is also proposed to open a Dairy at the Centre.

The spiritual and cultural activities at the Centre leave much room for improvement and in the next year those activities will receive due consideration with the assistance of the Department of Cultural Affairs and other voluntary organisations.

National TB Survey and Morbidity Study

Processing of the data collected on these surveys were continued during the early half of the year by Mr. R. K. Som, WHO Statistician assisted by the Statistical Officer of the TB Campaign. Final reports of Dr. J. Deeny who was directing the surveys were received towards the end of the year. It will take some time to study the reports and make any suggestions.

Health Education

In-service training classes for nurses and attendants were held by the Health Educator at Chest Hospitals, Welisara, Ragama, Kandana and Puttalam, Hawke Memorial Hospital, Kandana and at Chest Clinics, Kurunegala and Kandy. Total number of nurses trained in this respect was 34 and the number of attendants was 239. The nurses who visited the Anti-Tuberculosis Institute for training in public health and TB work were also given lectures on the techniques of patient education in institutions.

Health education for patients was carried out at the Rehabilitation Centre, Talagolla, Chest Hospitals, Welisara, and Puttalam and Chest Clinic, Darley Road, Colombo.

The health visitors attached to Chest Clinics, Jaffna and Kurunegala, were trained in Health Education work during the year.

Education on TB was carried out in training colleges for teachers at Polgolla, Uyanwatta, Peradeniya, Giragama, Nittambuwa, Mirigama, Katukurunda and Bolawalana, and also at Mahila Samiti Training Centre at Kaduwela.

This Campaign took part in Health Exhibitions held at Kandy, Veyangoda, Mahawatta, Maharagama, Kosgama, Anuradhapura, Undugoda, Ratnapura, Digampitiya in Kurunegala and Ragama, by making exhibits and leaflets available.

Cinema shows were conducted in Kandy, Kandana, Kosgama, Talagolla and Digampitiya. Cinema shows and propaganda and publicity work were carried out by the Propaganda Officers of the BCG Campaign in those areas where BCG programmes were in operation.

Health Education work has helped a great deal to popularise the Chest Services among the masses by removing the social stigma attached to this disease.

Finance

In the year 1956-57 out of a total estimate of Rs. 103,788,300 for the Department of Health Services a sum of Rs. 7,610,012 was voted for the TB Campaign. This is nearly 7.3 per cent. of the Department's vote and 0.63 per cent. of the total estimated revenue of the country for the year. The Secretary of the TB Campaign was in charge of Finance up to the time an Accountant was appointed towards the end of the year.

Staff and Recreation

Every branch of the staff is greatly affected by the inadequacy of quarters and recreational facilities. This is more so in the case of subordinate and minor staffs.

Notification and Disease

Under the Quarantine and Prevention of Diseases Ordinance (Cap. 173) any Medical Practitioner who attends on any person suffering from Pulmonary Tuberculosis has to notify such case to a "Proper authority". Unfortunately, the Superintendent, TB Campaign, is not a "proper authority" for this purpose. There are several "proper authorities" in each area and this situation makes it difficult to gauge the TB position in the country as the notifications need not go through a central body.

However, with the opening up of the Central TB Register all the Government Medical Officers in the Island were requested to forward their notifications to the Superintendent, TB Campaign. It cannot be stated that this request has brought 100 per cent. results. Further, there are a large number of TB patients treated by General Practitioners and Ayurvedic Practitioners. Action will be taken to make the Superintendent, TB Campaign, the "proper authority" for the purpose of notifying TB and also to include all types of TB in the list of notifiable diseases, by amending the Ordinance to give a legal backing to the Superintendent's request to Medical Officers.

TB Assistance Scheme

This is the fifth year of operation of the Financial Assistance Scheme, run by the Department of Social Services to assist the incapacitated TB patients and their dependents. Owing to the expansion of the activities of the TB Campaign in carrying out case finding programmes all over the Island with the help of various Medical Officers, Public Health Inspectors and Health Visitors, it has brought to light many hidden cases thus accounting for the steady flow of applications from patients and

their dependents for financial assistance. The figures at the end of December, 1956, were 7,746 but it has gone up to 12,262 at the end of December, 1957.

The total number of paying cases at the end of December, 1957, is 12,262. An amount of Rs. 5,940,959 has been paid during the financial year 1956-57 as compared with Rs. 4,313,974 in the financial year of 1955-56.

The payments to patients or authorised payees is done through the Post Offices and Kachcheries which is fairly satisfactory. In cases where the authorised payees fail to draw their payments from the Post Offices or Kachcheries, the allowances are paid by money orders.

Periodical reviews of the paying cases are done by the Medical Officers, Public Health Inspectors, Health Visitors and Social Service Officers in order to ensure treatment and proper use of the allowances paid to them.

The following is the statement of family units receiving TB assistance at end of December, 1957, according to Revenue Districts of the Island:

Colombo Municipality	..	1,399	Mannar	..	30
Colombo District	..	2,497	Vavuniya	..	58
Kalutara	..	1,204	Batticaloa	..	271
Kandy	..	728	Trincomalee	..	50
Matale	..	163	Kurunegala	..	764
Nuwara Eliya	..	23	Puttalam	..	279
Galle	..	875	Anuradhapura	..	359
Hambantota	..	230	Badulla	..	211
Matara	..	617	Kegalle	..	605
Jaffna	..	1,270	Ratnapura	..	600
			Polonnaruwa	..	29
Total					12,262

Voluntary Organisations

The co-operation and encouragement received from the voluntary organisations chief among which is the Ceylon National Association for the Prevention of Tuberculosis is recorded with gratitude. The close co-operation this Campaign had with the CNAPT, throughout the year, has helped the Campaign to plan out its development schemes specially in the field of rehabilitation.

Summary

Planning a programme can never, of course, be done at any one time—ideally it must be a continuous, flexible and ever changing process. Looking back on 1957 it can be said that there has been a drop in the death rate from Pulmonary Tuberculosis, but this is offset by an increase in the morbidity rate. Although the death rate is going down the morbidity rate is still rising and more cases are being detected. The figures are not reliable. During 1958, it will be possible to have more reliable figures as the Medical Records Officer is making a bold bid to organise the records and statistics section to obtain reliable data.

In spite of all the difficulties a certain amount of progress has been made but not commensurate with the time, money and effort put into this fight against Tuberculosis. There has been undue interference in the matter of transfers of medical officers and health visitors in particular by interested parties. This has been a serious draw back in the progress towards the control of TB.

GENERAL NOTES ON STATISTICAL TABLES

1. Coverage

The tables are based on the quarterly returns received from the chest clinics, branch chest clinics, chest hospitals and TB wards in general hospitals. Figures were not however available for a number of items. Whenever figures do not relate to the complete period during which a TB ward or Branch Clinic was functioning, foot notes indicate the period to which the figures relate to.

2. Symbols used

' — ' Not applicable or Nil.

' n.a. ' Not available.

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TABLE No. 1*1

MAJOR STAFF—T. B. CAMPAIGN

	Superintendent	Visiting Physician and Consultant	Accountant	Medical Records Officer	Hospital Secretaries		Medical Officers			Statistical Officers	Nursing Staff									Pupil Assistant Nurses	Emergency Nurses	Temporary Nurses	Assistant Nurses	Nurses	Sister Tutors	Religious Sisters	Religious Mothers	Matrons, Lower Grade	Matrons, Higher Grade	House Warden																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
					Higher Grade	Ordinary Grade	Grade I	Grade II	Preliminary Grade		Matrons, Higher Grade	Matrons, Lower Grade	Religious Sisters	Sister Tutors	Nurses	Assistant Nurses	Temporary Nurses	Emergency Nurses																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		

* Loaned by the Department of Census and Statistics, Colombo.

TABLE No. 1·1—contd.

MAJOR STAFF—T. B. CAMPAIGN—contd.

	Apothecaries	Clerical Staff	Medical Laboratory Technologists	Laboratory Sub-Assistants	Health Visitors
	Class I Class II Internes	E. C. C., Grade I E. C. C., Grade II G. C. C. Q. C. S. A. C. S. H. C. S., Class II Ward Clerks	Grade I Grade II Grade III	Grade I Grade II	Occupational Therapists
Superintendent Office T. B.	—	—	—	—	—
Campaign Records and Statistics Branch...	—	—	—	—	—
CHEST HOSPITALS					
Wellsara ..	1	—	—	—	7
Ragama ..	—	—	—	—	—
Kandana Sanatorium ..	2	—	—	—	—
K. K. S. Sanatorium ..	1	—	—	—	—
Puttalam ..	—	—	—	—	—
Wrawila ..	—	—	—	—	—
R. C. Talagolla ..	—	—	—	—	—
H. M. H. Kandana ..	—	—	—	—	—
Nurses Aides School, Kandana	—	—	—	—	—
CHEST CLINICS					
Darley Road and Domiciliary ..	—	—	—	—	—
A. T. I. ..	—	—	—	—	—
Jaffna ..	—	—	—	—	—
Kurunegala ..	—	—	—	—	—
Kandy ..	—	—	—	—	—
Galle ..	—	—	—	—	—
Ratnapura ..	—	—	—	—	—
Anuradhapura ..	—	—	—	—	—
B. C. G. Campaign ..	—	—	—	—	—
M. M. R. Unit .	—	—	—	—	—
Total ..	4	27	2	1	60

* Loaned by the Department of Census and Statistics, Colombo.

* Includes 2 Officers attached to the Mihintale District Hospital.

TABLE No. 1'2

Subordinate and Minor Staff
T. B. Campaign

	Telephone Operators	Hospital Overseers, Grade II	Book Binders		Drivers, Vans, Ambulances, etc.	Hospital Overseers Daily paid	Instructor	Male	Hospital Attendants, Female	Temporary Hospital Attendants, Male	Temporary Hospital Attendants, Female	Casual Attendants	Orderlies				Nurses' Ayahs	Nurses' Ayahs Substitutes	Seamstresses	Watchers	Gate-Keepers	Peons	Unskilled Labourers	Conservancy Labourers	Casual Labourers	Temporary Labourers	Cleaners	Cooks and Appus	Carpenters	Linemen Collectors	Barbers
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Superintendent Office, T. B. Campaign Records and Statistical Branch	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
CHEST HOSPITALS	2	3	—	2	3	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Welisara	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ragama	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Kandana Sanatorium	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
K. K. S. Sanatorium	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Puttalam	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Wirawila	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
R. C. Talagolla	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
H. M. H. Kandana	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Nurses Aides School, Kandana	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
CHEST CLINICS and Darley Road Domiciliary	—	—	—	—	6	—	—	10	6	1	—	2	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
A. T. I.	—	—	—	—	—	—	—	12	3	1	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Jaffna	—	—	—	—	—	—	—	5	3	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Kurunegala	—	—	—	—	—	—	—	5	3	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Kandy	—	—	—	—	—	—	—	5	3	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Galle	—	—	—	—	—	—	—	5	3	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ratnapura	—	—	—	—	—	—	—	6	3	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Anuradhapura	—	—	—	—	—	—	—	8*	5	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
B. C. G. Campaign	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
M. M. R. Unit	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	2	7	1	2	36	3	6	248	181	35	25	59	20	2	4	4	24	6	4	39	8	12	128	170	29	4	4	58	1	1	2

* Includes Officers attached to Mihintale District Hospital.

Chest Clinics—Clinical Section—Table No. 2.1

Chest Clinic	First visits						Subsequent Visits	Total number of visits	Total number of working days	Average number of visits per working day
	Total	Sent by doctor	On own initiative	Group examinations	Others					
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
Welisara	19,685	3,011	13,243	—	3,431	23,059	42,744	297	144	
Darley Road	28,076	4,478	17,239	409	5,950	38,657	66,733	271	246	
A.T.I.	20,893	1,802	18,709	—	382	63,190	84,083	285	295	
Kandy	12,667	1,665	7,813	912	2,277	39,830	52,497	273½	192	
Galle	19,138	2,818	10,819	2,488	3,013	52,268	71,406	270	264	
Jaffna	4,325	1,003	3,238	13	71	24,554	28,879	220	131	
Kurunegala	10,284	2,069	7,365	1	849	15,503	25,787	266	97	
Anuradhapura	4,270	755	3,331	—	184	5,208	9,478	264	36	
Ratnapura	13,450	760	10,839	878	973	27,316	40,766	260	157	
Total	132,788	18,361	92,596	4,701	17,130	289,585	422,373	2,406½	176	

Chest Clinics—Diagnosis—Table No. 2.2

Chest Clinic	Pulmonary T.B.					Non-T.B. Pulmonary Disease					Without Path. findings (13)	
	Total	Total	Without cavity		Non-Pulm. T.B. (6)	Total	Bronchitis (8)	Pneumonia (9)	Bronch. Asthma (10)	Others (11)		Other diseases (12)
			(3)	(4)									(5)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Welisara	16,238	2,179	1,555	624	112	1,394	764	72	424	134	310	12,243
Darley Road	n.a.	1,121	n.a.	n.a.	33	488	n.a.	n.a.	n.a.	n.a.	255	n.a.
A.T.I.	20,302	947	630	317	219	1,211	492	95	115	509	99	17,826
Kandy	12,641	625	n.a.	n.a.	74	216	n.a.	n.a.	n.a.	n.a.	111	11,615
Galle	19,067	1,044	414	630	122	2,206	469	—	207	1,530	397	15,298
Jaffna	4,864	237	143	94	176	3,273	1,316	8	201	1,748	30	1,148
Kurunegala	9,986	633	237	396	403	743	504	48	72	119	76	8,131
Anuradhapura	2,937	200	132	68	57	86	—	—	4	82	55	2,539
Ratnapura	13,281	494	464	30	178	970	848	46	19	57	110	11,529
Total	n.a.	7,480	n.a.	n.a.	1,374	10,587	n.a.	n.a.	n.a.	n.a.	1,443	n.a.

Table No. 3—Chest Clinics—X-Ray Section

NUMBER OF X-RAYS

<i>Chest Clinics</i> (1)			<i>Number of X-rays</i>	
			<i>Large films</i> (2)	<i>Miniature films</i> (3)
Welisara	..	..	4,435	38,365
Darley Road	..	..	11,184	29,809
A.T.I.	..	..	12,361	—
Kandy	..	..	8,372	11,994
Galle	..	..	17,872	4,622
Jaffna	..	..	1,319	4,320
Kurumegala	..	..	10,355	133,380
Anuradhapura	..	..	4,915	2,110
Ratnapura	..	..	1,086	140,505
Total			71,899	365,105

Table No. 4—Chest Clinics—Laboratory Section

No. OF EXAMINATIONS BY TYPE

Chest Clinic	Type of Examination											
	Sputum			Other specimen			Blood			Urine	Stools	Other exams.
	Direct smear	Culture	Lar. swab culture	Direct smear	Culture	Resistant tests	B.S.R.	Other exams.				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	
Welisara	2,459	2,459	11,250	2	4	4	33	12,004	1,178	72	9	
Darley Road	—	—	—	—	—	—	3,094	8,023	757	30	—	
A.T.L	3,733	15	28	—	—	164	1,719	9,099	250	107	28	
Kandy	3,431	1	708	771	—	—	1,259	3,024	47	12	—	
Galle	4,179	—	9,629	—	—	147	9,092	8,151	2,062	6	—	
Jaffna	280	17	—	—	—	—	349	548	48	—	—	
Kurunegala	3,574	712	79	—	—	—	62	1,794	40	3	—	
Anuradhapura	1,597	—	761	382	—	—	791	1,361	282	—	—	
Ratnapura	3,138	1,345	—	—	—	—	2,972	4,158	403	—	—	
Total	22,391	4,549	22,455	1,155	4	315	19,371	48,162	5,067	230	43	

Table No. 5.1—Chest Clinics—Ambulatory Treatment

[illegible]

Table No. 5.2—Chest Clinics—Ambulatory Treatment

DRUGS USED AND QUANTITIES					
Chest Clinics	Drugs used				
	S. T. R. (grs.)	P. A. S. (tabs.)	P. A. S. (grs.)	I. N. A. H. (tabs.)	Combined tablets (PAS & INAH)
(1)	(2)	(3)	(4)	(5)	(6)
Welisara	.. 99,406	.. 10,083,700	.. 783,688	.. 3,352,940	.. 554,920
Darley Road	.. 61,237	.. 2,460,779	.. 1,183	.. 639,042	.. 1,011,256
A. T. I.	.. 46,596	.. 236,191	.. —	.. 373,790	.. 2,233,730
Kandy	.. 14,474	.. 338,866	.. —	.. 135,085	.. 1,951,217
Galle	.. 10,534	.. 1,766,942	.. 883,471	.. 499,710	.. 4,188,076
Jaffna	.. 13,743	.. 57,577	.. —	.. 249,460	.. 436,088
Kurunegala	.. 25,630	.. 1,731,997	.. —	.. 664,059	.. 1,884,641
Anuradhapura	.. 6,710	.. 992,954	.. 372,647	.. 157,965	.. 20,160
Ratnapura	.. 21,730	.. 2,858,598	.. 1,982,736	.. 707,147	.. 208,890
Total	.. 300,060	.. 20,527,604	.. 4,023,725	.. 6,779,198	.. 12,488,978

Table No. 6—Branch Chest Clinics—Clinical Section

VISITS AND PULMONARY TB DIAGNOSIS

Branch Chest Clinics	Pulmonary Tuberculosis					
	Number of first visits	Number of sub- sequent visits	Total number of all visits	Total	Without cavity	With suspec- ted or definite cavity
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Negombo	.. 4,080	.. 2,173	.. 6,253	.. 421	.. 230	.. 191
Avissawella	.. 696	.. 1,300	.. 1,996	.. 89	.. 85	.. 4
Pimbura	.. 511	.. 3,224	.. 3,735	.. 42	.. 24	.. 18
Neboda	.. 156	.. 382	.. 538	.. 13	.. 8	.. 5
Nagoda	.. 3,753	.. 5,303	.. 9,056	.. 90	.. 62	.. 28
Dambulla	.. 118	.. 287	.. 405	.. 46	.. 32	.. 14
Hambantota	.. 2,161	.. n.a.	.. n.a.	.. n.a.	.. n.a.	.. n.a.
K. K. S., G. H.*	.. 961	.. 7,942	.. 8,903	.. 96	.. 46	.. 50
K. K. S. Sanat.*	.. 6,066	.. 11,408	.. 17,474	.. 154	.. 72	.. 82
Vavuniya	.. 363	.. 510	.. 873	.. 34	.. 20	.. 14
Trincomalee	.. 547	.. 1,007	.. 1,554	.. 129	.. 92	.. 37
Kuliyapitiya	.. 588	.. 1,195	.. 1,783	.. n.a.	.. n.a.	.. n.a.
Giriulla	.. 267	.. 673	.. 940	.. n.a.	.. n.a.	.. n.a.
Nikaweratiya	.. 309	.. n.a.	.. n.a.	.. n.a.	.. n.a.	.. n.a.
Kalpitiya*	.. 175	.. n.a.	.. n.a.	.. n.a.	.. n.a.	.. n.a.
Puttalam	.. 3,023	.. 521	.. 3,544	.. n.a.	.. n.a.	.. n.a.
Chilaw*	.. 1,259	.. 1,811	.. 3,070	.. n.a.	.. n.a.	.. n.a.
Kabatagasdigiliya	.. 234	.. 552	.. 786	.. 34	.. 22	.. 12
Kekirawa	.. 228	.. 555	.. 783	.. 118	.. 73	.. 45
Balangoda	.. 175	.. 960	.. 1,135	.. 46	.. 44	.. 2
Kahawatta	.. 143	.. 94	.. 237	.. 8	.. 7	.. 1
Kegalla	.. 1,411	.. 2,449	.. 3,860	.. n.a.	.. n.a.	.. n.a.
Total	.. 27,224	.. n.a.	.. n.a.	.. n.a.	.. n.a.	.. n.a.

* Figures are in respect of the period of 1.1.57–30.9.57.

Table No. 7—Branch Chest Clinics—X-Ray Section

<i>Branch Chest Clinic</i>	<i>Number of X-Rays</i>	
	<i>Large Films</i>	<i>Miniature Films</i>
(1)	(2)	(3)
Ragama*	3,898	—
Negombo	634	433
Pimbura	525	—
Neboda	158	—
Nagoda	695	—
Dambulla	103	n.a.
Kankesanturai, G. H.†	1,082	n.a.
Kankesanturai, Sanat.	3,449	13
Chilaw†	836	—
Kahatagasdigiliya	364	103
Kekirawa	182	—
Total	11,926	n.a.

* Excluding figures for the period of 1.1.57—31.3.57.

† Figures are in respect of the period 1.1.57—30.9.57.

Table No. 8—Branch Chest Clinics—Laboratory Section

NUMBER OF EXAMINATIONS BY TYPE

Branch Chest Clinic (1)	Sputum			Lar. swab culture (4)	Resistant tests (5)	Blood			Urine (8)	Stools (9)	Other exams. (10)
	Direct smear (2)	Culture (3)				B. S. R. (6)	Other exams. (7)				
Ragama	2,286	—	..	—	—	2,661	209	..	153	26	3
Pimbura	78	6	..	—	3	3	57	..	20	—	—
Neboda	24	20	..	—	—	3	—	..	5	5	—
Hambantota	—	—	..	—	—	—	22	..	19	—	—
Kankesanturai G. H.	312	4	..	—	—	329	931	..	1,512	100	—
K. K. S. Sanatorium	384	—	..	—	—	413	1,003	..	1,054	151	—
Chilaw*	47	—	..	—	—	35	110	..	6	—	—
Kahatagasdigiliya	69	—	..	35	32	136	—	..	—	—	—
Kekirawa	75	—	..	16	—	32	46	..	—	—	—
Total	3,275	30	..	51	35	3,612	2,378	..	2,769	282	3

*Figures are in respect of the period 1.1.57 — 30.9.57.

Table No. 9—Branch Chest Clinics—Drug Treatment

DRUGS USED AND QUANTITIES

Branch Chest Clinic	Drugs used			
	S.T.R. (grs.)	P.A.S. (tabs.)	I.N.A.H. (tabs.)	Combined drugs PAS & INAH
(1)	(2)	(3)	(4)	(5)
Ragama ..	588	421,540	95,604	2,021,570
Negombo ..	7,985	183,531	63,418	447,040
Avissawella ..	1,185	112,000	9,600	32,820
Pimbura* ..	2,181	47,675	20,656	485
Neboda ..	619	12,628	6,361	206
Nagoda ..	6,303	200,930	108,087	370,913
Dambulla ..	3,279	145,378	29,312	2,464
Hambantota† ..	50	121,000	100,500	11,520
Kankasanturai, G.H.‡ ..	2,240	—	12,000	208,073
Kankasanturai, Sanat. ..	4,813	87,790	58,000	413,150
Vavuniya ..	1,090	93,424	16,692	30,120
Trincomalee ..	6,794	348,396	62,770	15,161
Nikaweratiya ..	4,893	86,602	8,446	15,840
Kahatagasdigiliya ..	1,125	196,611	26,396	—
Kekirawa ..	1,201	128,811	25,392	48,020
Balangoda ..	3,562	203,720	63,844	9,379
Total ..	47,908	2,390,036	707,078	3,626,761

*Excluding figures for the period of 1.1.57—31.3.57

†Excluding figures for the period of 1.4.57—30.6.57

‡Excluding figures for the period of 1.10.57—31.12.57.

Table No. 10—Chest Hospitals and T.B Wards in General Hospitals
HOSPITAL BEDS FOR T.B PATIENTS

	<i>T.B. Service</i> (1)	<i>Number of beds</i>		
		<i>Male</i> (2)	<i>Female</i> (3)	<i>Total</i> (4)
<i>Chest Hospitals :</i>	..	1,227	776	2,113
Welisara	..	390	319	709
Ragama	..	389	197	586
Kandana	..	169	151	320
Hawke Memorial*	..	—	—	110
Tallagolla	..	35	35	70
Wirawila	..	96	0	96
Kankesanturai	..	42	42	84
Puttalam	..	106	32	138
<i>T.B. Wards in General Hospitals</i>	..	781	556	1,337
Moratuwa	..	—	29	29
Pimbura	..	—	6	6
Nagoda	..	42	42	84
Neboda	..	12	14	26
Kandy	..	31	31	62
Gampola	..	70	30	100
Teldeniya	..	44	30	74
Matale	..	28	28	56
Dambulla	..	15	4	19
Galle	..	31	31	62
Udugama	..	48	—	48
Balapitiya	..	—	30	30
Matara	..	—	32	32
Walasmulla	..	6	6	12
Hambantota	..	12	—	12
Kankesanturai	..	145	70	215
Chavakachcheri	..	10	10	20
Trincomalee	..	33	—	33
Kurunegala	..	31	35	66
Anuradhapura	..	21	7	28
Mihintale	..	12	—	12
Kahawatte†	..	12	4	16
Badulla	..	33	33	66
Balangoda	..	14	—	14
Eheliyagoda	..	77	30	107
Thoracic Unit, G.H.C.	..	22	22	44
Batticaloa	..	32	32	64
Total bed strength for T.B. patients in 1957	3,450
Total bed strength for T.B. patients in 1956	3,438*
Total bed strength for T.B. patients in 1955	2,886
Total bed strength for T.B. patients in 1954	2,510
Total bed strength for T.B. patients in 1953	2,314
Total bed strength for T.B. patients in 1952	1,962

*The 110 beds are common to both male and female children.

†There are no special beds for T.B. patients. The figures are in respect of patients at the end of the year.

*Revised figure.

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Table No. 11—Chest Hospitals—Number of Patients and Diagnosis

Chest Hospitals	Number of Patients					Diagnosis*								
	At beginning of period	Admitted	Discharged		At end of period	Treated	No. of patient days	Average No. of patient days per patient	Total	Pulm. TB	Non-Pulm. TB	Non-Pulm. conditions	Other diseases	
			Released	Dead										
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	
Welisara*	702 ..	1,567 ..	1,442 ..	111 ..	716 ..	2,269 ..	256,986 ..	113 ..	1,046 ..	731 ..	49 ..	194 ..	72	
Ragama	543 ..	1,795 ..	1,468 ..	129 ..	741 ..	2,338 ..	176,270 ..	75 ..	1,795 ..	1,490 ..	33 ..	269 ..	3	
Kandana	242 ..	538 ..	442 ..	42 ..	296 ..	780 ..	106,269 ..	136 ..	—	—	—	—	—	
H. M. H.	70 ..	83 ..	95 ..	—	58 ..	153 ..	20,315 ..	133 ..	n.a.	n.a.	n.a.	n.a.	n.a.	
Tallagolla	35 ..	41 ..	11 ..	—	65 ..	76 ..	20,070 ..	264 ..	—	—	—	—	—	
Wirawila	93 ..	190 ..	179 ..	17 ..	87 ..	283 ..	32,250 ..	114 ..	n.a.	n.a.	n.a.	n.a.	n.a.	
K. K. S.	77 ..	211 ..	197 ..	12 ..	79 ..	288 ..	28,895 ..	100 ..	207 ..	190 ..	1 ..	14 ..	2	
Puttalam	103 ..	421 ..	376 ..	18 ..	130 ..	524 ..	44,601 ..	85 ..	n.a.	n.a.	n.a.	n.a.	n.a.	
Total	1,865	4,846	4,210	329	2,172	6,711	685,656	102	n.a.	n.a.	n.a.	n.a.	n.a.	

* Diagnosis figures excluding particulars in respect of the period 1.7.57-30.9.57.

† Figures are in respect of cases diagnosed at the Hospitals only.

Table No. 12—Chest Hospitals—X-Ray Section

NUMBER OF X-RAYS

<i>Chest Hospitals</i> (1)		<i>Number of X-rays*</i> <i>Large films</i> (2)
Welisara	..	18,842
Ragama	..	4,969
Kandana	..	7,062
Kankesanturai	..	1,542
Puttalam	..	3,136
	Total ..	<hr/> 35,551 <hr/>

*Figures in respect of Wirawila are not available.

Table No. 13—Chest Hospitals—Laboratory Section
NO. OF EXAMINATIONS BY TYPE

Chest Hospitals (1)	Type of Examinations										
	Sputum			Other specimens			Blood				
	Direct Smear (2)	Culture (3)	Lar. Swab Culture (4)	Direct Smear (5)	Culture (6)	Resistant Tests (7)	B.S.R. (8)	Other Exams (9)	Urine (10)	Stools Examinations (11)	Other Examinations (12)
Wolisara	.. 20,932	.. 23,830	.. 12,839	.. 190	.. 342	.. 373	.. 10	.. 14,342	.. 8,949	.. 3,110	.. 507
Ragama	.. 12,936	.. 26	.. 3,017	.. 19	.. 57	.. 42	.. 4,232	.. 9,346	.. 4,674	.. 1,208	.. 66
Kandana	.. 3,365	.. 515	..	..	.. 22	..	.. 3,723	.. 2,502	.. 1,157	.. 721	..
K. K. S.	.. 2,703	.. 360	..	..	..	..	.. 827	.. 415	.. 3,239	.. 11	..
Puttalam	.. 1,912	.. 305	.. 2	.. 5	..	.. 2	.. 463	.. 811	.. 2,301	.. 48	.. 36
Total	.. 41,848	.. 25,036	.. 15,858	.. 214	.. 421	.. 417	.. 9,255	.. 27,416	.. 20,320	.. 5,098	.. 609

Figures in respect of Wirawila are not available.

Table No. 14—Chest Hospitals—Drug Treatment

DRUGS USED AND QUANTITIES

Chest Hospitals	Drugs used					Penicillin Million Units
	S. T. R. (Grs.)	P. A. S. (tabs.)	P. A. S. (grs.)	I. N. A. H. (tabs.)	Combined tablets PAS & INAH	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Welisara	.. 109,840..	747,000..	209,200..	804,881..	247,480..	9,387
Ragama	.. 104,650..	126,000..	—	.. 447,000..	145,000..	5,192
Kandana	.. 42,005..	1,020,123..	—	.. 441,558..	237,040..	2,852·5
Hawke Memorial	.. 1,370..	21,885..	109,423..	20,546..	—	202·4
Tallagolla	.. 650..	139,528..	—	.. 42,900..	11,500..	330
Wirawila*	.. 11,485..	103,640..	—	.. 320..	30,824..	283
Kankesanturai	.. 17,080..	4,000..	—	.. 74,000..	269,000..	861
Puttalam	.. 27,750..	221,000..	4,750..	157,000..	570,600..	436·3
Total	.. 314,830	2,383,176	323,373	1,988,205	1,511,444	19,544·2

*Excluding particulars for the period of 1.4.57-30.6.57.

Table No. 15—TB Wards—Number of Patients treated by the Visiting Chest Physicians

T. B. Wards	No. of patients					
	Discharged				At end of period	Treated
	At beginning of period †	Admitted	Released	Died		
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Moratuwa	.. 25 ..	53 ..	52 ..	5 ..	21 ..	78
Pimbura	.. 5 ..	5 ..	4 ..	— ..	6 ..	10
Neboda	.. 24 ..	16 ..	18 ..	3 ..	19 ..	40
Nagoda	.. 64 ..	75 ..	46 ..	9 ..	84 ..	139
Kandy	.. 32 ..	179 ..	145 ..	12 ..	54 ..	211
Gampola	.. 64 ..	45 ..	23 ..	— ..	86 ..	109
Teldeniya	.. 60 ..	73 ..	62 ..	13 ..	58 ..	133
Matale	.. 54 ..	98 ..	86 ..	10 ..	56 ..	152
Dambulla	.. 8 ..	7 ..	1 ..	5 ..	9 ..	15
Galle	.. 50 ..	142 ..	109 ..	23 ..	60 ..	192
Udugama	.. 46 ..	84 ..	84 ..	8 ..	38 ..	130
Matara	.. n.a. ..	92 ..	n.a. ..	8 ..	29 ..	n.a.
Hambantota	.. n.a. ..	27 ..	n.a. ..	3 ..	12 ..	n.a.
K. K. S.*	.. 200 ..	473 ..	434 ..	35 ..	204 ..	673
Chavakachcheri*	.. 20 ..	46 ..	46 ..	2 ..	18 ..	66
Trincomalee	.. 20 ..	42 ..	20 ..	13 ..	29 ..	62
Kurunegala	.. 65 ..	97 ..	71 ..	26 ..	65 ..	162
Anuradhapura	.. n.a. ..	94 ..	n.a. ..	7 ..	30 ..	n.a.
Minintale	.. 12 ..	43 ..	40 ..	3 ..	12 ..	55
Kahawatte	.. 23 ..	98 ..	93 ..	12 ..	16 ..	121
Eheliyagoda	.. n.a. ..	136 ..	n.a. ..	10 ..	105 ..	n.a.
Total	.. n.a.	1,925	n.a.	207	1,011	n.a.

*Figures are in respect of the period of 1.1.57-30.9.57.

†Revised figures

Table No. 16—TB Wards—X-Ray Section

NUMBER OF X-RAYS

<i>TB Wards</i>		<i>Large films</i>
(1)		(2)
Pimbura	..	25
Neboda	..	162
Nagoda	..	533
Gampola	..	376
Teldeniya	..	124
Matale	..	162
Galle	..	761
Udugama	..	168
Matara	..	191
Kankesanturai*	...	1,182
Total	..	3,684

*Figures are in respect of the period 1.1.57-30.9.57

Table No. 17—TB Wards—Laboratory Section

<i>T. B. Wards</i>	<i>Type of Examination</i>							
	<i>Sputum</i>				<i>Blood</i>			
	<i>Direct smear</i>	<i>Culture</i>	<i>Lar. swab culture</i>	<i>Resistant tests</i>	<i>B.S.R.</i>	<i>Other examinations.</i>	<i>Urine</i>	<i>Stools</i>
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Pimbura	.. 10	.. 4	.. —	.. —	.. —	.. 6	.. —	.. —
Neboda	.. 66	.. 48	.. —	.. 13	.. 8	.. 17	.. 18	.. 9
Nagoda	.. 273	.. 128	.. —	.. 38	.. 98	.. 435	.. 147	.. 24
Kandy	.. 72	.. —	.. 94	.. —	.. 284	.. 375	.. 184	.. 143
Gampaha	.. 203	.. —	.. —	.. —	.. 47	.. —	.. 689	.. 220
Matale	.. 46	.. —	.. 16	.. —	.. 171	.. 46	.. —	.. 43
Galle	1,517	.. —	.. —	.. —	.. 747	.. 172	.. 408	.. 1
Udugama	.. —	.. —	.. —	.. —	.. 460	.. 58	.. 45	.. 5
Matara	.. 372	.. 1	.. 110	.. —	.. 404	.. 32	.. 760	.. 26
K. K. S.*	1,550	.. 12	.. 2	.. —	1,651	2,820	5,099	.. 803
Eheliyagoda	2,465	.. 40	.. —	.. —	.. 753	.. 59	.. 123	.. 6
Total	6,574	233	222	51	4,623	4,020	7,473	1,280

*Figures are in respect of the period of 1.1.57-30.9.57.

Table No. 18—TB Wards—Drug Treatment

DRUGS USED AND QUANTITIES

TB Wards	Drugs used				
	S.T.R. (grs.)	P.A.S. (tabs.)	I.N.A.H. (tabs.)	Penicillin (Million Units)	Combined tablets PAS & INAH
(1)	(2)	(3)	(4)	(5)	(6)
Pimbura ..	134 ..	8,682 ..	6,388 ..	— ..	—
Neboda ..	1,610 ..	24,781 ..	8,867 ..	27 ..	280
Kandy ..	7,781 ..	67,000 ..	64,253 ..	1,226.9 ..	—
Gampola ..	30,855 ..	174,293 ..	70,645 ..	285 ..	—
Teldeniya* ..	4,885 ..	13,200 ..	21,000 ..	— ..	25,500
Matale ..	8,342 ..	120,346 ..	73,205 ..	732 ..	—
Dambulla ..	2,143 ..	57,426 ..	7,292 ..	— ..	—
Galle ..	13,332 ..	32,404 ..	54,195 ..	1,595.7 ..	—
Udugama ..	8,725 ..	90,548 ..	58,809 ..	295 ..	—
Matara ..	7,241 ..	33,996 ..	36,889 ..	98 ..	—
K. K. S.* ..	14,232 ..	21,725 ..	— ..	— ..	66,585
Chavakachcheri* ..	3,228 ..	115,000 ..	90,000 ..	— ..	—
Anuradhapura ..	5,396 ..	51,558 ..	29,074 ..	— ..	—
Mihintale ..	3,090 ..	123,898 ..	16,949 ..	100 ..	—
Eheliyagoda ..	8,215 ..	127,672 ..	180,288 ..	— ..	6,500
Total ..	119,209	1,062,529	717,854	4,359.6	98,865

*Figures are in respect of the period of 1.1.57-30.9.57.

Table No. 19.1—B. C. G Campaign—Number of Persons tested and vaccinated in 1957

	Not read			Positive			BOG given			BOG not given
	Total tested	Number	Percentage not read to total tested	Total read	Number	Percentage Positive to total read	Negative	Number	Percentage BCG given to negative	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Field Teams—										
North Western Province	246,950	37,718	15.3	209,232	108,956	52.1	100,276	99,201	98.9	1,075
Central Province	55,864	7,770	13.9	48,094	24,414	50.8	23,680	23,558	99.5	122
Southern Province	125,564	19,316	15.4	106,248	58,085	54.7	48,163	47,488	98.6	675
BOG Teams—										
Chest Clinic, Colombo	6,966	1,985	28.5	4,981	3,823	76.8	1,158	230	19.9	928
A T I Colombo	9,496	1,640	17.3	7,856	4,705	59.9	3,151	—	—	3,151
Chest Hospital, Welisara	15,904	5,587	35.1	10,317	6,256	60.6	4,061	2,627	64.7	1,434
Chest Clinic, Galle	18,980	11,487	60.5	7,493	5,452	72.8	2,041	1,330	65.2	711
Chest Clinic, Kandy	14,231	2,919	20.5	11,312	9,009	79.6	2,303	1,480	64.3	823
Chest Clinic, Ratnapura	15,370	4,423	28.8	10,947	8,886	81.2	2,061	1,969	95.5	92
Chest Clinic, Kurunegala	3,187	468	14.7	2,719	1,726	63.5	993	754	75.9	239
Chest Clinic, Kurunegala	3,296	380	11.5	2,916	1,553	53.3	1,363	1,331	97.7	32
Health Unit Office, Panadura	202	28	13.9	174	143	82.2	31	18	58.1	13
Saatorium, Kankasanturai	2,133	151	7.1	1,982	803	40.5	1,179	1,175	99.7	4
Training Programme, Gampola	1,549	121	7.8	1,428	469	32.8	959	957	99.8	2
Training Programme, Kadugannawa	2,021	389	19.2	1,632	343	21.0	1,289	1,285	99.7	4
Training Programme, Wattagama	1,008	103	10.2	905	121	13.4	784	781	99.6	3
Training Programme, Harispattu	107	58	54.2	49	23	46.9	26	25	96.2	1
Chest Clinic, Jaffna (MMR Unit)	2,646	442	16.7	2,204	567	25.7	1,637	1,622	99.1	15
Training Programme, Matale & Matale	45	17	37.8	28	7	25.0	21	—	—	21
Chest Clinic, Anuradhapura	1,895	131	6.9	1,764	765	43.4	999	997	99.8	2
Training Programme, Matale	2,000	281	14.1	1,719	137	8.0	1,582	1,577	99.7	5
Training Programme, Maturata	1,907	285	14.9	1,622	378	23.3	1,244	1,242	99.8	2
Training Programme, Nuwara-Eliya	4,133	657	15.9	3,476	2,502	72.0	974	963	98.9	11
M. O. H's Office, Dehiwala	40	3	7.5	37	12	32.4	25	—	—	25
Lady Ridgeway Hospital, Colombo										
Total	535,494	96,359	18.0	439,135	239,135	54.5	200,000	190,610	95.3	9,390

Table No. 19·2—B. C. G. Campaign

FIELD TEAMS—PERCENTAGE POSITIVE AND VACCINATED BY AGE

<i>Age group by years</i>		<i>Percentage positive to total read</i>		<i>Percentage of negative vaccinated</i>	
(1)		(2)		(3)	
0-6	..	19·7	..	98·2	
7-14	..	43·6	..	99·2	
15 and above	..	76·0	..	99·3	
All ages		52·7		98·9	

	Darley Road	Wellsara (709)	Negombo	Dr. A. J. de Croos, Darley Road Clinic Dr. C. Kulanyagum, ATI do. do. M.O. i/c. C.C. Ratnapura	Monday, Saturday Tuesday, Friday do. do. Saturday	Neboda (26) Colombo (44) Nagoda (84) Pimbura (6) Moratuwa (29) L.H. Hendala MH. Angoda	Dr. C. Kulanyagum, ATI do. do. do. M.O. i/c. A.T.I. Dr. A. J. de Croos Darley Road R.M.O., Kandana	Tuesday, Friday do. do. do. Wednesday, Saturday Thursday Monday, Tuesday, Thursday & Friday
Western	A.T.I. Wellsara	Ragama (586) Kandana (320) Tallagolla (70) H.M.H. (110)	Nagoda Neboda Pimbura Avisawella					
North-Central	Anuradhapura		Kahatagasdigillya Kekirawa	M.O. i/c. C.C. Anuradhapura do.	Thursday Friday	Anuradhapura (28) Mihintale (12)	M.O. i/c. C.C. A'pura do.	Tuesday Thursday
Central	Kandy		Dambulla	M.O. i/c. C.C. Anuradhapura	Friday	Kandy (62) Matale (56) Gampola (100) Teldeniya (74) Dambulla (19)	M.O. i/c. C.C. Kandy do. do. do. M.O. i/c. C.C. A'pura	Every day Tuesday, Friday Wednesday, Saturday Monday, Thursday Friday
Eastern			Trincomalee	M.O. i/c. C.C. Anuradhapura	Wednesday	Trincomalee (33) Batticaloa (64)	M.O. i/c. C.C. A'pura	Wednesday
Uva			Badulla	M.O. i/c. Darley Road	2nd & 4th Weekends	Badulla (66)	M.O. i/c. Darley Road	2nd & 4th Weekends

(ii)—ANTI-VENEREAL DISEASES CAMPAIGN

General

BESIDES the Central V. D. Clinic, Colombo, eight full time V. D. Clinics functioned at Kandy-Katugastota, Jaffna, Galle, Kurunegala, Anuradhapura, Badulla, Negombo and Ratnapura. The full time V. D. Clinic at Ratnapura commenced with effect from 1st January, 1957.

Staff

The present organization of the Anti-V. D. Campaign consists of the following staff :—

Office of the Superintendent, V. D. Campaign :

Superintendent ..	..	..	1
Secretary (Post vacant since 2.1.57)	..	..	—
Stenographer ..	..	..	1
Clerk, G. C. C. ..	..	..	1
Clerk, H. C. S. ..	..	..	1
Clerk, Temporary	..	..	1
Peon ..	..	..	1
Cycle Orderly ..	..	..	1

Central V. D. Clinic, Colombo :

Medical Officers ..	..	..	4
Apothecaries ..	..	..	3
Supervising Public Health Inspector	..	..	1
Public Health Inspector—Health Education	..	..	1
Public Health Inspector	..	..	5
Public Health Nurse	..	..	1
Nurses ..	..	..	8
Social Worker ..	..	..	1
Medical Laboratory Technologists	..	..	3
Clerk, H. C. S.	..	..	1
Clerk, Temporary	..	..	1
Male Attendants	..	..	3
Female Attendants	..	..	3
Drivers ..	..	..	2
Labourers ..	..	..	7
Laboratory Labourers	..	..	3
Watcher ..	..	..	1

Full time Staff at outstation V. D. Clinics :

Medical Officers ..	..	..	8
*Public Health Inspectors	..	..	9
Clerks ..	..	..	8
Nurses ..	..	..	8
Medical Laboratory Technologist	..	..	1
*Male Attendants	..	..	9
*Female Attendants	..	..	9
Labourers ..	..	..	8
Laboratory Labourer	..	..	1

* With effect from 1st October 1957 a full-time Public Health Inspector, a male and a female attendant were assigned to V. D. Clinic, Horana.

Buildings*(a) Colombo :*

Additions and improvements to the Central V. D. Clinic commenced in August, 1957. The construction programme is nearing completion.

(b) Outstation V. D. Clinics :

Accommodation for a V. D. Clinic has been provided in the new buildings at Horana, Panadura and Negombo. Clinics are being conducted in the newly constructed buildings. Provision has been made for a full time V. D.

Clinic in the new administration block at Galle, Badulla, Anuradhapura, Ratnapura, Matale and Polonnaruwa. These buildings are not ready for occupation.

Equipment

A consignment of vacutainer equipment was obtained in October, 1957. These are available for mass blood surveys in villages and other groups of population.

Drugs

P. A. M. and other anti-biotics are available for the treatment of V. D. and Yaws. Distribution of P.A.M. is through the Office of the Superintendent, Anti-V. D. Campaign. Easy access to all types of anti-biotics and sulpha-drugs in the open market remains a difficult problem in V. D. control. It is understood that action has been taken by the Department to include all anti-biotics and sulphonamides as dangerous drugs in the revised Ordinance for Poisons and Dangerous Drugs.

Bed Strength

Beds have been allotted to V. D. patients at the following institutions :—

General Hospital, Colombo—10 (Male) Ward No. 36.

Government General Hospitals :

Galle	} 5 male and 5 female }	beds have been provided for V. D. patients
Kurunegala		
Jaffna		
Anuradhapura		
Negombo		

At Badulla, Katugastota and Ratnapura beds are made available whenever the necessity arises. All indoor V. D. cases are under the care of the Medical Officers attached to the respective full time V. D. Clinics; the patients are admitted through the V. D. Clinics.

V. D. Clinics, Colombo

The work done during the year under review is summarized in the following Table and annexed Tables II to VII.

TABLE I—Attendance by Years—V. D. Clinics, Colombo

Year	Males			Females		
	First visits	Subsequent visits	Total	First visits	Subsequent visits	Total
1952	5,378	23,241	28,619	2,486	10,734	13,220
1953	5,599	20,257	25,856	2,922	12,193	15,115
1954	5,947	20,534	26,481	2,381	14,811	17,192
1955	5,486	26,430	31,916	2,108	12,017	14,125
1956	5,368	24,373	29,741	1,881	6,193	8,074
1957*	6,011	27,324	33,335	2,267	7,354	9,621

* Inclusive of Peripheral V. D. Clinics, Colombo.

Outstation V. D. Clinics—Full time basis

Eight outstation V. D. Clinics functioned on a full time basis since 1st January, 1957. Since January, 1957, a full time V. D. Clinic was established at Ratnapura with a peripheral clinic at Government Hospital, Eheliyagoda, resulting in eight full time V. D. Clinics at outstations. Clinics are conducted daily from 8 a.m. to 12 noon as a general rule on week days except certain public holidays. Afternoon sessions from 2 p.m. to 5 p.m. are devoted to work at peripheral clinics or field work. The full time staff at these clinics undertake V. D. control activities in their respective areas viz.,—Health Education on V. D.—Group discussions, lecture demonstrations and film shows. They participate in the inservice training programmes of health personnel. Blood surveys on certain population groups are undertaken with prior approval of the Superintendent, Anti-V. D. Campaign.

The work done in these clinics is summarized in Tables VIII A to VIII E, annexed.

Outstation V. D. Treatment Centres and Part-time Clinics

Treatment for V. D. and Yaws is afforded to patients at several institutions. Regular part-time V. D. Clinics are conducted in some of the institutions. Drugs are made available when treatment is undertaken for V. D. and Yaws. The drugs are issued by Superintendent, Anti-V. D. Campaign, according to the number of cases treated during the preceding quarter. Quarterly returns are received by the Superintendent from all institutions which afford treatment to cases of V. D. and Yaws. Quarterly returns have been received from 85 institutions :

Total No. of cases treated during the year, 1957 :

Total No. of Institutions	..	..	85
Total No. of cases of Syphilis	..	..	587
Total No. of cases of Gonorrhoea	..	..	443
Total No. of cases of Early Yaws	..	..	9
Total No. of cases of Late Yaws	..	..	62
Total No. of cases of other Ven.	..	..	108
Total No. of cases of Non-Ven.	..	..	637

Prevention of Congenital Syphilis

The routine blood testing at all ante-natal clinics in Colombo has been maintained. It is also done at all outstation hospitals where full time V. D. Clinics are conducted. Some of the Government institutions also carry out the blood testing of pregnant mothers admitted to the maternity wards of those institutions. Some Medical Officers of Health and Medical Officers at Peripheral Units carry out the blood testing at ante-natal clinics conducted by them.

Colombo Municipal Clinics—Routine Ante-Natal Blood Test 1957 :

	Total	No. Positive	No. Negative	No. Doubtful	No. Damaged	Per Cent. Positive
C. M. C., Maradana	.. 1,344	.. 20	.. 1,307	.. 4	.. 13	.. 1.5
C. M. C., St. Paul's	.. 1,360	.. 18	.. 1,302	.. 17	.. 23	.. 1.3
C. M. C., Kirillapone	.. 404	.. 4	.. 390	.. 5	.. 5	.. 1.0
C. M. C., Modera	.. 1,162	.. 12	.. 1,139	.. 5	.. 6	.. 1.0
C. M. C., Wanathamulla	.. 428	.. 6	.. 419	.. 2	.. 1	.. 1.4
C. M. C., Wellawatte	.. 765	.. 16	.. 733	.. 6	.. 10	.. 2.1
C. M. C., New Bazaar	.. 1,400	.. 22	.. 1,358	.. 4	.. 16	.. 1.6
C. M. C., Slave Island	.. 1,075	.. 15	.. 1,040	.. 12	.. 8	.. 1.4
	<u>7,938</u>	<u>113</u>	<u>7,688</u>	<u>55</u>	<u>82</u>	<u>1.4</u>

Contact Investigation and Follow-up

Lecture demonstrations in V. D. epidemiology have been continued during the period under review. Supervising Public Health Inspector, Central V. D. Clinic, Colombo, meets the health personnel in each M. O. H's area at their monthly conferences. These lecture demonstrations were conducted in 44 health areas on an advanced programme. At the beginning of the year several Public Health Inspectors were released from the Anti-V. D. Campaign and other Public Health Inspectors were recruited for training in V. D. epidemiology from 1st January, 1957.

The Divisional (Medical) Circular No. 33 of 30th April, 1957, to all officers gives guidance in dealing with contact investigation in the control of Infectious Venereal Diseases in the Island. This circular explains the object of the V. D. Regulations of 1943.

Vagrants

The investigation and follow-up of all admissions to the Vagrants Home and House of Detention have been continued. All positive cases are followed up with the assistance of the Chief Probation Officer. A statement of cases referred to the V. D. Clinic for investigation is given below:—

<i>Vagrants</i>	<i>Total</i>
No. of vagrants referred	10
No. of vagrants positive for Syphilis	2
No. of vagrants positive for Gonorrhoea	1
No. of cases treated for Syphilis	2
No. of cases treated for Gonorrhoea	1

Other cases treated previously were also referred to V. D. Clinic for further investigation and follow-up. The treatment was undertaken whenever necessary.

The Hon'ble Minister of Labour, Housing and Social Services has appointed a Committee to draft legislation to deal with the beggar problem in Ceylon. The Superintendent, Anti-V. D. Campaign, has been appointed a member of that Committee. The Report on the Beggar Problem in Ceylon, Sessional Paper XI—1956, Department of Social Services, and its recommendations are being considered in order to draft suitable legislation to deal with the beggar problem.

Houses of Ill-Fame

These houses continue to remain as sources of infection to certain groups of the community who persist in their promiscuous habits. It is a difficult task to Police authorities as well as the staff of the V. D. Control programme to bring such cases under treatment and control.

Data of Cases investigated during the year, 1957:

No. of houses of ill-fame named by patients	72
No. of contacts brought from these for examination	42
No. of contacts found positive for infectious Syphilis	10
No. of contacts found positive for Gonorrhoea	2
No. of contacts found positive for presumptive Gonorrhoea	28
Percentage positive for V. D.	95%
No. of brothel keepers examined	21
No. of brothel keepers found positive for infectious Syphilis	6
No. of brothel keepers found positive for Gonorrhoea	2
No. of brothel keepers found positive for presumptive Gonorrhoea	1
Percentage positive for V. D.	43%

No. of prostitutes who haunt parks and other public places ..	200
No. of prostitutes brought for examination ..	101
No. of prostitutes found positive for infectious Syphilis ..	26
No. of prostitutes found positive for Gonorrhoea ..	6
No. of prostitutes found positive for presumptive Gonorrhoea ..	52
Percentage positive for V. D. ..	83%

V. D. among Prisoners

ALL new admissions to all Prisons in Ceylon are serologically tested for Syphilis. The positive cases are further investigated at full time V. D. Clinics and treatment instituted.

Blood Tests done at Prisons—1957 :

	<i>Total Number Examined</i>	<i>Number Positive</i>	<i>Percentage Positive</i>
Welikada ..	4,861	461	9.5
Mahara ..	232	17	7.3
Bogambara ..	633	24	3.8
Anuradhapura ..	434	8	1.8

Mental Hospital, Angoda—Routine Blood Test 1957 :

No. of cases examined ..	3,284
No. positive for first test ..	210
Percentage positive ..	6.4%

All positive cases were investigated and treated at Mental Hospital. The family contacts were invested by the V. D. Clinic, Colombo, and treatment undertaken whenever necessary.

V. D. Serology

Since 29th November, 1957, an average case load of 75 specimens per day is examined for V. D. R. L.—Screen test for Syphilis at Central V. D. Clinic Laboratory independent of the Medical Research Institute. A Cross check is undertaken with the Medical Research Institute to maintain the efficiency of standards of this test at Central V. D. Clinic, Colombo. All blood specimens for Kahn and CI from other institutions, clinics and private practitioners are being examined at the Medical Research Institute. The average case load at the Medical Research Institute has exceeded 1,000 specimens a day since November, 1957. This is the maximum case load which could be examined per day at the Medical Research Institute. Further expansion will be possible only with the decentralizing of V. D. Serology within the programme of the Anti-V. D. Campaign. Since 1st September, 1957, one Medical Laboratory Technologist has been trained in V. D. Serology at the Central V. D. Clinic, Colombo. He has been assigned to V. D. Clinic, Jaffna, from February 1, 1958. Two more technologists have been sanctioned for the Anti-V. D. Campaign from June 1958. It is planned to establish six serological units within the Anti-V. D. Campaign, during the first three years of the Six Year Plan of the Health Services. When these serological units are established it will reduce the case load considerably at the Medical Research Institute and also afford expansion of routine blood testing for Syphilis.

V. D. Education

A regular public education programme has been maintained in Colombo and outstations. The Superintendent and the staff of the Anti-V. D. Campaign participate in the inservice training programmes of the Department in Colombo and outstations.

V. D. Information

The Local V. D. Film entitled "Shadow on life" has been issued to Public Cinema Companies by the Department of Information with a request that same be shown with "Adults Only" filmshows. Action is being taken to reduce the original 35 mm. film to 16 mm. Several other films, slides, posters and pamphlets are available for lecture demonstrations and group discussions.

Health Education Activities

		1956		1957
Cinema shows	..	151	..	187
Talks and discussions	..	198	..	261
Group talks	..	8	..	273
Lecture demonstrations	..	20	..	94
Exhibitions ..	..	2	..	5
Inservice training	..	—	..	11
Seminars ..	..	—	..	1
No. of pamphlets distributed	..	69,479	..	203,887
No. of posters	..	151	..	2,674
Conferences and Meetings	..	—	..	5

Training of Personnel

Regular classes have been undertaken on V. D. and V. D. epidemiology to both medical and para-medical personnel of the Department, viz., Public Health Inspectors, Public Health Nurses, Midwives, Health Visitors, Nurses in training and Midwives in training.

University Teaching

Lecture demonstrations in Venereal Diseases and its control were given to post-graduate medical officers and D. T. M. & H. Classes. Third and Final Year under-graduates were also given lecture demonstrations in Venereology.

V. D. Dressers

Third-year under-graduates attended the V. D. Clinic, Colombo, in batches for periods of two weeks each from 8 a.m. to 10 a.m. throughout the year. Lecture demonstrations were given by the staff of the Central V. D. Clinic, Colombo. (Data of training personnel are given in Table IX annexed.)

Port V. D. Project

The Port V.D. Clinic building was completed in November, 1957; with the provision of adequate staff. It is planned to establish an adequate V. D. Service at the Port of Colombo for all sea-farers and the various sections of labour forces employed at the Harbour. At present treatment for V. D. is afforded by private practitioners who work for the shipping companies.

A few cases are referred to the Central V. D. Clinic, Colombo, by the Ships' Surgeons. Such cases have been investigated and follow-up personnel cards issued in terms of Brussels' Agreement.

Conferences

The full time Medical Officers attached to the Anti-V. D. Campaign and the Superintendent met in Conference on two occasions during the year 1957. V. D. Control measures and problems encountered in each area were discussed and line of action decided upon. The Superintendent, Anti-V. D. Campaign participated in the Conferences of all Superintendents of Health Services and Heads of Decentralised Units held at the office of the Director of Health Services.

Eradication of Yaws—(Parangi)

PLANNING for Yaws Eradication work in Galle-Matara Divisions started at the beginning of the year with the appointment of Dr. A. K. Black as Officer-in-charge of Yaws Eradiction and V. D. Control for that area. He started by visiting medical institutions in Galle Division to study the problems existing in those areas. Discussions were carried out with field personnel. There was evidence of Late and Latent Yaws in remote villages in Galle District but no evidence of Early Yaws cases. Similar visits and discussions were carried out in the Matara Division.

A Conference was held on 25th October, 1957, at the D. H. S.'s Office to discuss the progress made in the above programme. A programme of Yaws Eradiction with a view to obtaining statistical data regarding Yaws in areas with a past history of Yaws endemicity was started on 18th November, 1957, in the areas of SS. H. S. Galle and Matara. Twenty-six villages were listed for mass blood surveys and treatment programmes. (Figures annexed for villages covered up to 31st December, 1957). This programme is being continued.

Sample blood surveys and treatment programmes were carried out in other remote areas. These surveys were planned by the Superintendent, Anti-V. D. Campaign, and carried out by local Medical Officers with the assistance of two trained Apothecaries and one Attendant from the Central V. D. Clinic. (Data annexed in Table X).

The progress of the V. D. Control programme has been maintained within the available resources and personnel. Public education and inservice training programmes have been intensified. The maximum case load 1000 specimens per day for V. D. serological tests at Medical Research Institute has been exceeded. Decentralisation of V. D. Serology within the Anti-V. D. Campaign has commenced. The establishment of the Port V. D. Clinic is in hand. All the objectives of the W. H. O., V. D. Project in Ceylon have been achieved.

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Table II.—Distribution of Cases Syphilis and Gonorrhoea—By Age Groups—V. D. Clinics, Colombo.

	0—2 years		3—13 years		14—17 years		18—25 years		26—35 years		36—45 years		45 years and over		Total	
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
Syphilis—Early	—	—	1	1	12	5	116	61	81	40	33	4	4	1	247	112
Syphilis—Late	—	—	—	—	—	—	11	25	106	92	85	64	95	52	297	233
Syphilis—Congenital	1	4	4	10	—	4	2	21	—	10	—	2	—	—	7	51
Gonorrhoea	—	—	1	2	8	—	497	23	611	26	130	1	37	—	1,284	52
Presumptive Gonorrhoea	—	—	—	—	—	8	—	161	—	121	—	28	—	2	—	320
Total	1	4	6	13	20	17	626	291	798	289	248	99	136	55	1,835	768

Table III.—Distribution of Cases by Occupation—Males

Occupation	Syphilis					Gonorrhoea				
	1953	1954	1955	1956	1957	1953	1954	1955	1956	1957
Teachers	.. —	.. 1	.. 2	.. 2	.. —	.. —	.. 5	.. 2	.. 2	.. 1
Clerks	.. 43	.. 51	.. 35	.. 31	.. 19	.. 91	.. 119	.. 100	.. 110	.. 88
Domestic Servants	24	.. 15	.. 8	.. 10	.. 12	.. 14	.. 66	.. 13	.. 29	.. 15
Canvassers	.. —	.. 5	.. 11	.. 8	.. 11	.. —	.. 13	.. 33	.. 25	.. 33
Unemployed	.. 150	.. 69	.. 75	.. 61	.. 48	.. 120	.. 102	.. 77	.. 65	.. 56
Cultivators	.. 65	.. 35	.. 30	.. 30	.. 37	.. 60	.. 33	.. 29	.. 23	.. 18
Labourers	.. 334	.. 205	.. 280	.. 230	.. 194	.. 503	.. 432	.. 525	.. 523	.. 462
Students	.. 26	.. 5	.. 13	.. 4	.. 5	.. 24	.. 22	.. 24	.. 23	.. 25
Peons	.. 8	.. 11	.. 13	.. 10	.. 14	.. 18	.. 21	.. 24	.. 21	.. 20
Drivers	.. 43	.. 30	.. 31	.. 36	.. 25	.. 69	.. 101	.. 75	.. 83	.. 72
Mechanics	.. 38	.. 42	.. 27	.. 18	.. 34	.. 53	.. 65	.. 76	.. 84	.. 118
Traders	.. 131	.. 61	.. 56	.. 59	.. 53	.. 241	.. 139	.. 145	.. 181	.. 176
Police Personnel	.. 13	.. 6	.. 14	.. 2	.. 2	.. 4	.. 9	.. 4	.. 4	.. 8
Seamen	.. 4	.. 3	.. 7	.. —	.. 1	.. 3	.. 8	.. 9	.. 3	.. 2
Military Personnel	1	.. 1	.. 9	.. —	.. 1	.. —	.. 1	.. 6	.. 7	.. 8
Tailors	.. —	.. 4	.. 4	.. 6	.. 5	.. —	.. 9	.. 6	.. 12	.. 10
Prisoners	.. —	.. 18	.. 3	.. —	.. 41	.. —	.. 1	.. 2	.. —	.. —
Laundry Workers	.. —	.. 16	.. 1	.. 3	.. 3	.. —	.. 8	.. 3	.. 4	.. 5
Carpenters	.. —	.. 14	.. 17	.. 10	.. 6	.. —	.. 41	.. 17	.. 22	.. 13
Businessmen	.. —	.. 13	.. 16	.. 12	.. 8	.. —	.. 33	.. 32	.. 31	.. 58
Food Handlers	.. —	.. —	.. —	.. 12	.. 26	.. —	.. —	.. —	.. 26	.. 51
Bus Conductors	.. —	.. —	.. —	.. 2	.. 2	.. —	.. —	.. —	.. 11	.. 27
Masons	.. —	.. —	.. —	.. 8	.. 4	.. —	.. —	.. —	.. 16	.. 17
Lawyers	.. —	.. —	.. —	.. —	.. —	.. —	.. —	.. —	.. 1	.. 1
Priests	.. —	.. —	.. —	.. —	.. —	.. —	.. —	.. —	.. 2	.. —
Total	.. 880	605	652	554	551	1,200	1,228	1,202	1,308	1,284

Table IV.—V. D. Clinic Laboratory Data—1957

	Males	Females	Total
Total No. of smears for G. C.	.. 2,647	.. 1,693	.. 4,340
Total No. of smears for G. C.—Positive	.. 1,283	.. 48	.. 1,331
Total No. of smears for Trichomonas.	.. 523	.. 1,369	.. 1,892
Total No. of smears for Trichomonas—Positive	.. 19	.. 337	.. 356
Total No. of smears for T. P.	.. 2,836	.. 589	.. 3,425
Total No. of smears for T. P.—Positive	.. 102	.. 25	.. 127
Total No. of C. S. F. cell count	.. 392	.. 105	.. 497
Blood for W. B. C. & D. C.	.. 2	.. 3	.. 5
Total No. urine tested	.. 796	.. 76	.. 872
Analysis: Albumen	.. 168	.. 45	.. 213
Sugar	.. 232	.. 50	.. 282
Deposits	.. 731	.. 54	.. 785
Total No. of V. D. R. L. tests performed	.. ..	.. ..	.. 17,747
Total No. of V. D. R. L. tests—Positive	.. ..	.. ..	.. 3,892
Total No. of V. D. R. L. tests—Doubtful	.. ..	.. ..	.. 732

Table V.—Analysis of New Cases—Registered in 1957

V. D. CLINIC, COLOMBO

Classification			Males		Females		Total
Syphilis :							
S1. Sero negative primary	..	..	24	..	2	..	26
S2. Sero positive primary	..	..	103	..	22	..	125
S3. Secondary	..	..	64	..	17	..	81
S4. Latent—Early	..	..	56	..	71	..	127
Late	..	..	224	..	198	..	422
S5. Neuro Syphilis	..	..	53	..	6	..	59
S6. Cardio-vascular	..	..	4	..	3	..	7
S7. Other Late Syphilis	..	..	16	..	26	..	42
S8. Congenital—Early (under 2 years)	..	..	1	..	4	..	5
Late (over 2 years)	..	..	6	..	47	..	53
Parangi—Yaws—Early with papules	..	..	—	..	—	..	—
Late	..	..	19	..	1	..	20
Gonorrhoea ..	..	..	1,284	..	52	..	1,336
Presumptive Gonorrhoea	..	..	—	..	320	..	320
Non Gonorrhoea : Urethritis/Cervicitis/Vaginitis	..	..	399	..	55	..	454
Chancroid ..	..	..	428	..	54	..	482
Lympho Granuloma Venereum	..	..	8	..	—	..	8
Granuloma Inguinale	..	..	1	..	—	..	1
Other venereal	..	..	124	..	22	..	146
Non venereal ..	..	..	3,197	..	1,366	..	4,563
Cases under observation	..	..	—	..	1	..	1
Total			6,011		2,267		8,278

Table VI.—Treatment Completed at V. D. Clinics, Colombo

	1954		1955		1956		1957 *	
	<i>Males</i>	<i>Females</i>	<i>Males</i>	<i>Females</i>	<i>Males</i>	<i>Females</i>	<i>Males</i>	<i>Females</i>
Syphilis	318	364	400	332	385	256	337	280
Gonorrhoea and presumptive Gonorrhoea ..	1,146	363	1,174	342	1,302	249	1,284	372

*Including Peripheral V. D. Clinic, Colombo.

Table VIIA.—Contact Investigation & Follow-up

		1956		1957	
		Males	Females	Males	Females
No. of patients interviewed	..	1,778	304	1,804	290
No. of contacts named	..	938	23	1,109	45
No. of contacts traced	..	241	13	561	18
No. of contacts brought to Clinic	..	160	10	402	11
Percentage of contacts brought to contacts named		17%	43%	36%	24%
No. of contacts found positive for Syphilis	..	21	1	95	2
No. of contacts found positive for Gonorrhoea	..	51	5	85	3
No. of contacts treated for Syphilis	..	20	1	92	2
No. of contacts treated for Gonorrhoea	..	15	5	85	3
No. of contacts outside area of follow-up	..	231	—	182	8
No. with insufficient address	..	174	—	156	3
		1956		1957*	
CONTACT SLIPS ISSUED :					
No. of contact slips issued	..	335	189	371	235
No. attended clinic	..	283	386	343	240
Percentage attended clinic	..	84%	204%	92%	102%
No. positive	..	35	34	41	10
Percentage positive (of those attending)	..	12%	9%	12%	4%
FOLLOW-UP-WORK :					
No. of defaulters traced	..	787	911	480	426
No. attended Clinic	..	442	752	262	331

*Including figures of Peripheral V. D. Clinic, Colombo.

Table VII B.—Diagnosis of New Cases by Reasons for Attendance for 1957

V. D. CLINIC, COLOMBO

Reason for coming to Clinic	Early Syphilis		Late Syphilis		Congenital Syphilis		Gonorrhoea		Presumptive Gonorrhoea		Yaws		Non. Gon. Urth. Cereb.		Other Venereal		Non Venereal		Under Observation		Total	
	M F		M F		M F		M F		M F		M F		M F		M F		M F		M F		M F	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Contact Investigation	29..	27..	33..	22..	4..	9..	35..	31..	—	315..	1..	—	10..	9..	12..	6..	420..	271..	—	—	544..	690
Voluntary	122..	6..	80..	32..	1..	3..	1,004..	5..	—	3..	7..	—	280..	21..	390..	27..	1,873..	692..	—	—	3,757..	789
Special Surveys	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Transferred from other V. D. Clinics	1..	1..	1..	1..	—	1..	1..	—	—	—	—	—	1..	—	2..	—	4..	2..	—	—	10..	5
Referred by other Departments and Physicians	90..	57..	158..	163..	2..	35..	223..	2..	—	2..	8..	1..	95..	24..	151..	42..	855..	392..	—	1..	1,587..	719
Pre-employment	3..	—	25..	—	—	2..	—	—	—	—	3..	—	2..	—	—	—	8..	—	—	—	41..	2
Court referrals	—	—	—	—	—	—	—	—	—	—	—	—	—	1..	—	—	—	6..	—	—	—	7
Public education	2..	—	—	—	—	—	16..	—	—	—	—	—	10..	—	6..	—	36..	—	—	—	70..	—
Follow-up	—	21..	—	15..	—	1..	—	14..	—	—	—	—	1..	—	—	1..	1..	3..	—	—	2..	55
V. D. suspects	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	247	112	297	233	7	51	1,284	52	—	320	19	1	399	55	561	76	3,197	1,366	—	1	6,011	2,267

Table VII C.—Analysis of Serological Tests for Syphilis (New Cases), 1957, V.D. Clinic

Reason for Testing	Number of Specimens					Percentage Positive including Doubtfuls
	Total	Positive	Negative	Doubtful	Others	
Pre-Natal	..	185	..	204	..	2.0
[De Soysa Hospital for Women	..	44	..	61	..	2.0
Castle Street Hospital for Women	..	38	..	44	..	2.4
Pre-employment	..	3,514	..	87	153	6.5
Admission to Eye Hospital	..	3,446	..	403	34	14.6
Regular Clinic Cases	..	7,615	..	91	55	13.9
Referred from other clinics	..	1,566	..	..	..	..
Surveys :						
Social workers	..	12	..	..	1	..
Villages	400	..	5	6	3.3
Police recruits	..	1,340	..	3	21	1.0
Midwives	..	167	..	1	2	1.2
Public Health Nurses	..	8	..	..	..	..
Total	42,961	1,237	39,961	899	864	5.1

Note : Percentage has been calculated on the total of Positives, Negatives and Doubtfuls only.

Table VIII A.—Analysis of New Cases for the Year 1957

	Galle		Jaffna		Kurunegala		Negombo		Katugastota		Anuradhapura		Ratnapura		Badulla	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
<i>Syphilis</i> :																
Sero. Negative Primary	..	..	..	..	3..	..	..	..	12..	1..	..	..	1..	..	4..	..
Sero. Positive Primary	4..	4..	3..	2..	13..	5..	9..	3..	18..	6..	7..	2..	6..	3..	3..	1
Secondary ..	3..	..	..	..	5..	2..	5..	4..	6..	13..	2..	3..	5..	3..	3..	1
Latent } Early	1..	2..	1..	..	5..	7..	1..	..	9..	12..	4..	1..	3..	5..	2..	4
	9..	7..	27..	23..	25..	33..	25..	38..	13..	20..	32..	21..	50..	60..	38..	27
Neurosyphilis	1..	..	1..	1..	3..	1..	3..	1..	3..	..	1..	1..	..	..	1..	1
Cardiovascular	3..	1..	1..	..	..	..	..	..	2..	..	..	..	..	..	..	..
Other late syphilis	9..	4..	11..	1..	2..	..	2..	9..	9..	12..	10..	11..	5..	20..	4..	1
Congenital under 2 years	..	1..	..	2..	1..	..	..	..	2..	..	1..	..	..	1..	..	..
Congenital over 2 years	1..	..	1..	..	5..	..	..	..	4..	3..	..	2..	6..	1..	2..	1
<i>Parangi (Yaws)</i> :																
Early with papules	..	..	..	..	11..	1..	..	1..	1..	1..	16..	3..	1..	2..	1..	..
Late ..	83..	34..	..	..	29..	7..	7..	3..	6..	2..	35..	10..	9..	1..	1..	..
Gonorrhoea ..	60..	17..	93..	34..	88..	4..	71..	14..	80..	42..	74..	9..	46..	52..	88..	24
Presumptive Gonorrhoea	4..	15..	..	16..	14..	41..	5..	26..	1..	6..	3..	22..	2..	12..	2..	14
Non. Gon. Urethritis/Cervicitis	..	2..	8..	..	38..	116..	14..	24..	6..	32..	3..	..	49..	156..	6..	4
Chancroid ..	2..	2..	26..	10..	44..	27..	12..	3..	31..	18..	27..	12..	24..	15..	17..	..
Lympho Granuloma Venereum	1..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Granuloma Inguinale	..	..	..	..	..	..	..	..	..	..	..	..	..	1..	..	..
Other Venereal cases	1..	..	..	..	34..	15..	5..	..	..	..	17..	7..	31..	1..	..	1
Non-Venereal cases	249..	215..	2,111..	1,748..	830..	806..	591..	688..	1,101..	536..	1,001..	1,710..	348..	319..	823..	837
Cases under investigation	15..	10..	..	..	66..	59..	81..	71..	5..	1..	24..	24..	2..	1..	3..	9
Total ..	446	314	2,283	1,837	1,216	1,124	831	885	1,309	705	1,257	1,838	588	653	998	925

Table VIII C.—Contact Interview and Investigation for the Year 1957

	<i>Galle</i>	<i>Kurunegala</i>	<i>Jaffna</i>	<i>Negombo</i>	<i>Badulla</i>	<i>Ratnapura</i>	<i>Anuradha-Katugas-pura</i>	<i>Total</i>
No. of patients interviewed :								
Syphilis (Early)	{ S 1 S 2 S 3 S 4 Early	2 14 5 9	— 5 — —	— 12 8 1	4 4 3 5	1 9 4 13	— 8 4 2	12 18 8 12
Syphilis Late (S 4, Late, S 5, S 6, & S 7)	21 75	36 86	54 119	57 84	48 109	135 98	18 79	19 96
Gonorrhoea	82 44 28 — — — — — 10 4	96 85 48 — 3 — 2 4 41 —	76 47 35 — — — — 1 17 —	52 28 28 — — — 1 11 4	64 23 22 — — — — 11 —	30 14 5 — 1 — — 2 2 2	75 16 11 — — — — 4 —	120 83 75 3 — 4 5 33 —
No. of extra-marital contacts	{ Named Traced Brought to Clinic +ve for S 1. +ve for S 2. +ve for S 3. +ve for S 4. Early +ve for Late Syp. +ve for Gon. Under observation	82 44 28 — — — — — 10 4	96 85 48 — 3 — 2 4 41 —	52 28 28 — — — 1 11 4	64 23 22 — — — — 11 —	30 14 5 — 1 — — 2 2 2	75 16 11 — — — — 4 —	120 83 75 3 — 4 5 33 —
No. of extra-marital contacts treated for	{ Syphilis Early Syphilis Late Gonorrhoea Presump. Gon.	— 4 10 1	5 1 41 14	— — 10 14	— 2 11 10	1 — 2 1	— — 4 11	12 5 33 4
No. of C/S issued	{ S 1. S 2. S 3. S 4. Early Late Syphilis Gonorrhoea	— 3 1 — 33 25	— 10 3 — 23 49	— 2 5 — 53 20	1 2 3 1 47 31	— 9 2 12 110 79	— 3 2 1 40 21	6 4 8 10 31 29
No. of family contacts examined	{ M.P. Syphilis Child: Gonorrhoea	14 15 24	45 — 47	79 141 22	60 46 27	59 56 16	— 72 17	57 68 29

Table VIII C.—Contact Interview and Investigation for the Year 1957—(contd.)

	Galle	Kurunegala	Jaffna	Negombo	Badulla	Ratnapura	Anuradha- pura	Katugas- tota	Total
No. of family diagnosed	S 1.	..	..	..	..	..	..	2	2
	S 2.	2	..	1	..	..	1	..	4
	S 3.	..	..	2	..	..	1	..	3
	S 4. Early	..	1	..	..	..	..	5	7
	Late Syphilis	..	7	2	10	17	..	15	60
	Pre-natal Syph.	..	..	..	3	..	1	1	5
	Gonorrhoea	11	9	3	11	3	3	15	79
	Presump. Gonorrh.	12	6	17	13	4	17	3	82
	Under Observation	..	..	10	..	1	..	..	11
	S. Early	1	1	3	1	49	1	7	63
No. of family treated for	S. Late	..	7	2	10	15	1	14	58
	Gonorrhoea	11	9	3	11	3	3	15	79
	Presump. Gon.	12	6	17	13	5	17	3	83

Table VIII D.—Diagnostic Examination for the Year 1957

	<i>Galle</i>			<i>Kurunegala</i>			<i>Jaffna</i>		
	<i>Males</i>	<i>Females</i>	<i>Total</i>	<i>Females</i>	<i>Males</i>	<i>Total</i>	<i>Males</i>	<i>Females</i>	<i>Total</i>
Smear for Gonococci ..	112..	125..	237..	142..	153..	295..	115..	197..	312
Culture for Gonococci ..	—	—	—	—	—	—	4..	2..	6
Darkground for T. P. ..	20..	3..	23..	117..	44..	161..	47..	27..	74
Blood specimens for Syph. ..	2,596..	1,785..	4,381..	2,601..	2,291..	4,892..	2,527..	2,157..	4,684
Spinal fluid for Syphilis ..	7..	5..	12..	6..	—	6..	—	2..	2
Total ..	2,735	1,918	4,653	2,866	2,488	5,354	2,693	2,385	5,078

	<i>Negombo</i>			<i>Badulla</i>			<i>Katugastota</i>		
	<i>Males</i>	<i>Females</i>	<i>Total</i>	<i>Males</i>	<i>Females</i>	<i>Total</i>	<i>Males</i>	<i>Females</i>	<i>Total</i>
Smear for Gonococci ..	95..	362..	457..	170..	77..	247..	73..	155..	228
Culture for Gonococci ..	—	—	—	—	—	—	—	—	—
Darkground for T. P. ..	—	—	—	40..	6..	46..	33..	12..	45
Blood specimens for Syph. ..	1,545..	3,638..	5,183..	2,090..	2,283..	4,373..	1,802..	2,418..	4,220
Spinal fluid for Syphilis ..	1..	1..	2..	—	—	—	18..	3..	21
Total ..	1,641	4,001	5,642	2,300	2,366	4,666	1,926	2,588	4,514

	<i>Anuradhapura</i>			<i>Ratnapura</i>		
	<i>Males</i>	<i>Females</i>	<i>Total</i>	<i>Males</i>	<i>Females</i>	<i>Total</i>
Smear for Gonococci ..	150	112	262	135	470	605
Culture for Gonococci ..	6	5	11	—	—	—
Darkground for T.P. ..	12	10	22	19	6	25
Blood specimens for Syphilis ..	1,760	2,032	3,792	1,848	2,583	4,431
Spinal fluid for Syphilis ..	11	3	14	4	6	10
Total ..	1,939	2,162	4,101	2,006	3,065	5,071

Table VIII E.—Analysis of Serological Test for Syphilis—New Cases—Outstation Full-time V. D. Clinic, 1957

<i>Reasons for Testing</i>	<i>Total</i>	<i>No. of specimens Positive</i>	<i>No. of specimens Negative</i>	<i>No. of specimens doubtful</i>	<i>Others</i>	<i>Percentage Positive Subtracting others.</i>
Pre-natal ..	9,611	116	8,588	71	836	2.1
Pre-employment ..	2,644	40	2,404	23	177	2.55
Admission to Eye Hospital Ward ..	835	30	725	5	75	4.6
Regular Clinic Cases ..	16,609	1,959	12,275	303	2,072	15.56
Referred from other clinics ..	3,025	124	2,456	10	435	5.17
Surveys						
Villages ..	1,775	72	1,473	17	213	5.6
Estates ..	602	16	497	—	89	3.11
Companies ..	—	—	—	—	—	—
Societies ..	308	12	248	3	45	5.7
Others ..	—	—	—	—	—	—

Table IX.—Statement of Training Personnel

Categories of personnel			No. of trainees	Total No. of courses	Nature of Training Programmes	
P. H. II.	..	..	13	1	..	Clinical lectures, demonstrations, V.D. epidemiology demonstration and field training — Health Education, Group talks and discussions on V.D. Clinic routine
P. H. NN.	..	..	1			
Nurses	..	..	1			
M. OO.	..	..	3	22	..	Clinical lectures, demonstrations, V. D. epidemiology demonstration, Health Education talks and discussions and film shows on V.D.
S. P. H. N.	..	..	1			
S. P. H. I.	..	..	1			
OO. I. C.	..	..	4			
D. R. OO.	..	..	5			
P. H. II.	..	..	52			
P. H. NN.	..	..	14			
P. H. MM.	..	..	117			
Public Health Learners	..	..	40			
Pupil Midwives	..	..	49			
Trainee Social workers at Institute of Social Studies	..	..	14	13	..	Clinical lectures, demonstrations, V.D. Epidemiology, Case finding, Health Education on V.D.
Nurses' training school, Colombo	..	..	37			
Homagama, Health Staff	M. O. H.	..	3	9	..	In-Service training
Agalawatta	do. M. OO.	..	3			
Matugama	do. S. P. H. I.	..	1			
Mannar	do. OO. I. C.	..	3			
Welimada	do. P. H. II.	..	63			
Badulla	do. P. H. NN.	..	5			
Hakmana	do. Apos.	..	2			
Koslanda	do. Nurses	..	4			
Kelaniya						
Peliyagoda						
Personnel of Officer of Health	A. S. H. S.	1		44	..	Lecture Demonstration on V. D. Epidemiology
	M. OO. H.	19				
	M. OO.	18				
	S. P. H. I.	1				
	OO. I. C.	13				
	P. H. I. (H.E.)	1				
	P. H. II.	202				
	P. H. NN.	16				
	P. H. MM.	347				
	Nurses	40				
Katugastota, P. H. II.	..	15	..	2	..	Talk, discussion and lecture demonstration
P. H. MM.	..	..	..	2	..	Lecture demonstration in V.D. and its control
G.H. Kandy Nurses in Training	..	50	..	2	..	V.D. talk and discussion
Jaffna, P. H. MM.	..	16	..	1	..	Lectures and discussion
Negombo, P. H. II.	..	—	..	2	..	V.D. and its control
P. H. MM.	..	—	..	1	..	Lectures on V.D.
Post-Graduate M. OO.	..	—	..	1	..	Lectures on V.D.
Final Year Medical Students	..	—	..	1	..	
4th Year Medical Students	..	—	..	1	..	

Table X—Data of Yaws Eradication Programme, 1957

S. H. S. Division	Village	Date of Survey	Population	Number Treated	Number of Blood specimens sent	Number Examined	No. Sero. Reactive	Number not Reactive	Percentage Reactive
Ratnapura	Ranchamadama	3. 5. 57	480	301	220	205	26	179	12.7
	Timbulketiya	3. 5. 57	367	221	175	171	3	168	1.8
	Others	3. 5. 57	—	79	65	62	3	59	4.8
Kurunegala	Karambawa	10. 4. 57	116	35	66	66	8	58	12.1
	Thalambawa	10. 4. 57	353	11	116	116	19	97	16.4
Polonnaruwa	Yakkura	25. 9. 57	219	185	112	101	22	79	21.8
	Kalukelawa	25. 9. 57	56	45	32	31	9	22	29.0
Anuradhapura	Ranorewa	10. 9. 57	369	126	110	101	5	96	5.0
	Others	10. 9. 57	—	100	95	89	15	74	16.9
Galle	Pilana	18.11.57	549	—	—	620	18	602	2.9
	Imaduwa	18.11.57	*936	—	—	1,020	27	993	2.6
	Uduwella	18.11.57	—	—	—	248	33	215	13.3
	Piyadigama East	18.11.57	726	—	—	580	15	565	2.6
	Poddala	18.11.57	*420	—	—	660	26	634	3.9
	Maggala South	18.11.57	2,834	—	—	648	66	582	10.2
	Dodanduwa	18.11.57	*154	—	—	394	23	371	5.8
	Gonapinuwa	18.11.57	—	—	—	786	16	770	2.0
	Ratgama	18.11.57	769	—	—	917	89	828	9.7

* When outsiders have been included in the Survey the number of blood specimens exceeds the population of the village.
Work to be continuing in the area of S. H. S., Galle.

(iii)—ANTI-LEPROSY CAMPAIGN

General

The annual treat by His Lordship the Bishop of Colombo to Leprosy patients was held on January 5, 1957.

On April 2, 1957, a conference was held with Hon'ble Minister of Finance, Hon'ble Minister of Health, Permanent Secretary, Director of Health Services, WHO Leprologist, re allowances to non-infective cases of Leprosy in Leprosy Institutions on their discharge from segregation. The Hon'ble Minister of Finance was not agreeable to the payment of an allowance.

Dr. Paul Brand of Vellore, India, visited the Leprosy Hospital, Hendala, on October 17, 1957, on invitation and a discussion was held regarding Reconstructive Surgery in Leprosy.

As a result of the floods in the Eastern Province—December 25-26—Mantivu Leprosy Hospital was isolated. The patients and the staff were inconvenienced, although the island was not submerged.

Following were suggested:—

- (i) Removal of L. H., Hendala, from present site.
- (ii) Transfer of non-infective cases to Uragama.
- (iii) Establishment of an Agricultural and Industrial Colony.
- (iv) Appointment of a Lay Administrator to L. H., Hendala.

Training in Leprosy (Staff)

Dr. Nicholas Peiris, Medical Officer-in-charge, Leprosy Clinic, Maradana, who was away on a WHO Scholarship for training in Leprosy in India and Australia returned in December, 1957.

Dr. G. S. Arudpragasam, Medical Officer, Leprosy Hospital, Mantivu, left for India on a WHO Scholarship in Leprosy and returned on May 15, 1957, after 4 months' training.

Mr. B. H. M. Sally, Medical Laboratory Technologist, left for India on a WHO Scholarship.

The WHO Project in Ceylon

Dr. B. L. Malhotra, the Senior Officer, W. H. O. Leprosy Project in Ceylon, left the Island after completing 3 years. The all-Island survey was completed and all personnel connected with Leprosy received a general stimulus as a result of the project.

Staff

Distribution of Staff in the Leprosy Campaign as at December 31, 1957, is as follows:—

Grade	Special Institution					Total
	L. C.	L. C.	L. H.	L. H.	L. C.	
	Hendala	Maradana	Hendala	Mantivu	Uragaha	
Medical Officers						
Special A.	..	—	..	—	..	—
Supra Grade	..	1	..	—	..	—
Grade I (1)	..	—	..	1	..	—
Grade II (2)	..	—	1	..	—	..
Preliminary Grade	..	—	1	3	..	1
Hospital Secretary	..	—	..	1	..	—
Apothecaries	..	—	4	2	..	1
Public Health Inspectors	..	—	3	..	—	..
Occupational Therapist	..	—	..	1	..	—
Medical Lab. Technologists	..	—	..	2	1	..

Grade	Special Institution						Total			
	L. C. Hendala	L. C. Maradana	L. H. Hendala	L. H. Mantivu	L. C. Uragaha					
Nursing Staff										
Matrons	—	..	—	..	—	..	—		
Sisters	—	..	—	..	—	..	—		
Nurses	—	..	—	1	..	—	..	1	
Assistant Nurses	..	—	..	—	1	..	—	..	1	
Nurses (Pupils)	..	—	..	—	..	—	..	—	—	
Nurses (Emergency)	..	—	..	1	..	3	..	—	..	4
Tutors	—	..	—	..	—	..	—	..	—
Mothers (Religious)	..	—	..	—	..	1	..	1	..	2
Sisters (Religious)	..	—	..	—	..	13	..	8	..	21
Clerks										
E.C.C. Grade II	..	1	..	—	..	—	..	—	..	1
G.C.C.	1	..	—	..	—	..	—	..	1
D.C.S.	1	..	—	..	—	..	—	..	1
H.C.S.	2	..	1	..	4	..	2	..	9
Temporary Stenographers..	..	1	..	—	..	—	..	—	..	1
Temporary Typists	..	1	..	—	..	—	..	—	..	1
Instructor in Leather Works	..	—	..	—	..	1	..	—	..	1
Supervisor of Guards	..	—	..	—	..	1	..	—	..	1
Kitchen Stewardesses	..	—	..	—	..	1	..	1	..	2
Binders	1	..	—	..	—	..	—	..	1
Ambulance Drivers	..	1	..	—	..	—	..	—	..	1
Minor Employees										
Office Peons	..	2	..	—	..	—	..	—	..	2
Office Orderly	..	—	..	1	..	—	..	—	..	1
Attendants (Male)	..	—	..	—	..	65	..	14	..	80
Attendants (Female)	..	—	..	—	..	20	..	4	..	24
Hospital Orderlies	..	—	..	—	..	1	..	1	..	2
Guards	—	..	—	..	7	..	4	..	12
Engine Drivers	..	—	..	—	..	—	..	1	..	1
Boilermen	..	—	..	—	..	2	..	—	..	2
Ordinary Labourers	..	—	..	—	..	20	..	13	..	34
Conservancy Labourers	..	—	..	—	..	20	..	10	..	32
Cooks	—	..	—	..	9	..	5	..	14
Boatmen	..	—	..	—	..	—	..	6	..	6

Staff Changes

The following appointments were made to Leprosy Campaign, during the year 1957:—

- Dr. A. Puveendran, Medical Officer, on 1.1.1957.
- Dr. K. C. F. Weerasuriya, Medical Officer, on 1.6.57.
- Dr. M. Somasunderam, Medical Officer, on 20.11.57.
- Mr. B. H. M. Sally, Med. Lab. Technologist, on 1.1.1957.
- Mr. M. F. Perera, Med. Lab. Technologist, on 1.1.1957.
- Mr. V. Kandiah, Med. Lab. Technologist, on 1.1.1957.
- Miss S. Renfrew, Staff Nurse, on 18.2.1957.
- Mrs. M. Randeniya, Staff Nurse, on 1.4.1957.
- Mr. H. W. Sugathapala, Clerk, H. C. S., on 15.6.1957.
- Mr. S. Rajagopalan, Clerk, H. C. S., on 15.6.1957.
- Mr. A. William, Clerk, H. C. S., on 20.8.1957.
- Mr. S. Mariyanayagam, Clerk, H. C. S., on 1.9.1957.
- Mr. K. Pillaynar, Clerk, E. C. C. Grade II, on 1.8.1957.
- Mr. P. Alwis, Apothecary, to Uragaha Health Colony, on 1.7.1957.
- Mr. S. A. Croos, Apothecary, to L. H., Mantivu, on 15.8.1957.
- Mr. R. R. Dharmarajah, Apothecary, to Leprosy Hospital, Hendala, on 15.8.1957.
- Sr. M. Felix, Religious Nursing Sister, to L. H., Mantivu, on 17.10.1957.

The following were transferred out of the Leprosy Campaign during the year:—

- Dr. S. J. Bartlett on 1.1.1957.
- Dr. A. Puveendran on 1.7.1957.
- Dr. R. Canagaratnam on 1.7.1957.
- Dr. K. C. F. Weerasuriya on 20.11.1957.
- Mr. R. M. Samarasinghe, Clerk, H. C. S., retired from service on 15.6.1957.
- Mr. S. Kandiah, Clerk, E. C. C. Grade II, on 1.8.1957.
- Mr. W. M. N. Gallella, Clerk, H. C. S., on 15.11.1957.
- Mr. D. C. Ranasinghe, Hospital Overseer, on 1.1.1957.
- Miss A. Perera, Emergency Nurse, on 1.4.1957.
- Mrs. Keerthisinghe, Apothecary, on 1.5.1957.
- Sr. M. Melece, R. N. S., resigned on 30.11.1957.

Activities

In Ceylon there is accommodation for 996 patients and there are only 1,022 open cases according to the last survey. Where institutional isolation is practicable it is the control measure adopted in all these cases. Effective isolation combined with sanitary clean up and an increased Public Health consciousness are still the measures needed in this infection.

Domiciliary isolation of open cases in a country like Ceylon will not have the desired effect due to the lower economic status of the people, their poor hygienic standards and their customs. In spite of the new domiciliary approach to the control of leprosy the Leprosarium yet fills an important place in the Leprosy Control Programme.

The following activities are now carried on by the Leprosy Campaign:—

(1) Isolation of infective cases:—

- (a) Institutional,
- (b) Domiciliary.

All infective cases cannot be admitted into the institutions as many beds are blocked up by non-infective cases. The proposal to release these cases from segregation on a monthly subsistence allowance did not find favour with the Government.

- (2) Domiciliary treatment of cases.
- (3) Periodic examination of contacts.
- (4) Prophylactic Treatment to contacts of infective cases.
- (5) Free Milk, Cod Liver Oil and Worm Treatment to all contacts below the age of 20 years.
- (6) Health Education.
- (7) Training of Medical and para-medical personnel.
- (8) Orthopaedics.
- (9) Physiotherapy.
- (10) Occupational Therapy.
- (11) Laboratory Work.
- (12) Propaganda.

Accommodation in Hospitals

- (a) Leprosy Hospital, Hendala: Extent=25 acres.
702 beds.
- (b) Leprosy Hospital, Mantivu: Extent=100 acres.
260 beds.
- (c) Leprosy Colony, Uragaha: Extent=103 acres.
34 beds.

Clinics

Most of the Special Leprosy Clinics have been closed down and treatment is now carried out by the local hospitals and dispensaries.

The Special Clinics now functioning are:—

Central Leprosy Clinic—Maradana, and

Special Clinics at: Panadura, Moratuwa, (Galle) Katugoda, Matara and Kalutara.

Work Done**INSTITUTIONAL**

During the year 28 patients died as against 35 in 1956 and 38 in 1955.

The general health of the patients was good throughout the year.

Hunger strikes continued to be staged on occasions to obtain redress of grievances both real and imaginary.

GENERAL TREATMENT

General treatment on the following conditions was carried out during the year under review:—

- (a) Malnutrition,
- (b) General debility,
- (c) Anky and other intercurrent diseases like:
- (d) Influenza,
- (e) Malaria,
- (f) V. D., &c.

SPECIAL TREATMENT

- (a) Sulphone therapy with D. D. S. and Promin.
- (b) Thiosemicarbasone or Conteben.
- (c) Hydnocarpus oil injections.
- (d) A trial of new drug—Dimethyl Amino Diphenyl Thiourea.
- (e) Treatment of T. B. cases in a special ward.

TREATMENT OF COMPLICATIONS AND SEQUELAE

The infirmaries at both hospitals, Hendala and Mantivu, gave special attention to inmates for the following:—

- (a) Lepra reactions,
- (b) Trophic ulcers,
- (c) Peripheral neuritis.
- (d) Acute iritis,
- (e) Surgical cases, and diseases like:
- (f) Diarrhoea, dysentery, typhoid fever, and
- (g) few cases of jaundice.

SPECIAL CLINICS

The following specialised clinics were conducted at Hendala with the consultation of staff invited from General Hospital, Colombo.

- (a) Chest Clinic—once a week.
- (b) Eye Clinic—once a week.
- (c) Dental Clinic—once a week.
- (d) Psychiatric Clinic—once a week.

Besides, the patients from L. H., Hendala, are sent to the Rectal Clinic, Orthopaedic Clinic, Skin Clinic and Heart Clinic at the General Hospital, Colombo, on respective clinic days for specialised attention.

At Mantivu, specialised officers from G. H., Batticaloa, are invited whenever the need arises. The Eye Clinic is held once a fortnight.

SURGICAL TREATMENT

The surgical operations performed during the year are listed below:—

1. Metatarsectomy	..	..	..	47
2. Symes amputations	..	..	..	2
3. Decapsulation of nerve	..	..	..	1
4. Amputation of thigh	..	..	..	1
5. Hernia ..	..	..	..	2
6. Hydrocoele	..	..	..	3
7. Removal of nodule in spermatic cord	..	..	..	1
8. Removal of Lipoma	..	..	..	1
9. Haemorrhoidectomy	..	..	..	4

EYE OPERATIONS

Thirteen major operations were carried out during the year.

The above surgical and eye operations were performed by Surgeons summoned from G. H., Colombo, and V. M. Eye Hospital, Colombo, and Medical Officers attached to the Leprosy Hospitals.

ORTHOPAEDICS

The Orthopaedic Surgeon attached to the G. H., Colombo, has been instructed to visit L. H., Hendala, once a fortnight for reconstructive surgery in Leprosy.

Laboratory Work

ROUTINE

<i>Type of Examinations</i>				<i>No. of Examinations</i>
R.B.C.	..	..	..	727
W.B.C.	..	..	..	485
D.C.	..	..	..	457
Hb %	..	..	..	730
Urines	..	..	..	1,197
Stools	..	..	..	170
Sputum	..	..	..	215
Microfilariae	..	..	..	19
Malarial Parasites	..	..	..	07
E.S.R.	..	..	..	276
Smears for M'Leprae	..	..	..	4,983
Specimens sent to M.R.I. and Welisara	..	..	..	53

The above work was carried out in the Laboratories at Hendala, Mantivu, Uragaha and Maradana.

GENERAL

- (a) Smears from patients in the institutions and field were examined to determine the bacillary index for purposes of classification, giving employment to patients, discharge of patients from institutions and evaluation of the results of treatment.

(b) *New Tests*

Concentration Method—Choloroform Method for making smears with biopsied sections from skin and nerves in certain types of Leprosy—borderline and doubtful—have been carried out.

(c) *New Laboratory at Maradana Central Clinic*

A new laboratory fitted with WHO equipment will be opened at Maradana Clinic when it is shifted to the new premises at Deans Road, Colombo 10.

Occupational Therapy

A qualified Occupational Therapist has taken up duties at Leprosy Hospital, Hendala.

ACTIVITIES

L. H., Hendala

- (a) **Shoe Factory:** About 13 patients are engaged in shoe-making and in 1957 the number of shoes turned out is 340. These are being used by the inmates of all leprosy institutions.

- (b) Weaving Centre: There are 14 patients working in the Weaving Centre at Hendala and the following articles were turned out during the year:—

Dusters	...	...	232 pieces
Grey Shirting	...	...	52 yards
Towels	...	...	92 pieces

- (c) Needle Work: Seven patients are engaged in needlework at present in charge of an instructress selected out of the patients. The following were executed during 1957:—

Pillow cases	...	...	861
Screen cloths	...	...	12
Mattress covers	...	...	100
Banians	...	...	339
Jackets	...	...	571
Sarongs	...	...	50
Towels	...	...	50

L. H.. Mantivu

The old Weaving Centre at Mantivu was re-organised and eight patients started work on the 9th of December, 1957. Out of the 8 patients, 5 have previous experience and 3 are learners. An instructor appointed by the Department of Rural Development visits the Centre twice a week.

Health Colony, Uragama

There are 9 patients engaged in weaving at present. The following items were turned out during the year:—

Grey Shirting	...	...	500 yards
Check cloth	...	...	190 pieces
Dusters	...	...	500 yards
Towels, grey	...	...	71 pieces
Towels, white	...	...	65 pieces
Shirting, twill	...	...	89 yards

The products of all units under Occupational Therapy are used by the inmates of all the 3 Leprosy Institutions in the Island.

Hospital Statistics at End of 1957

Number of inmates remaining in each institution at the end of 1957:—

(a) Leprosy Hospital, Hendala	...	...	704
(b) Leprosy Hospital, Mantivu	...	...	255
(c) Health Colony, Uragama	...	...	37

Detailed statistics are given in the following table:—

<i>Statistics</i>		<i>Hendala</i>		<i>Mantivu</i>		<i>Uragaha</i>
Remained at the end of 1956	..	702*	..	248	..	34
Admissions in 1957	..	133	..	22	..	6
Discharges in 1957	..	110	..	8	..	3
Deaths in 1957	..	21	..	7	..	—
No. remaining at the end of 1957	..	704*		255		37

*This number is inclusive of those on leave.

Field Work

Field and institutional work is co-ordinated at the Central Clinic, Maradana.

Records of all patients of the Island are now being maintained at the Central Clinic. Each patient has a Charted Survey Card at this clinic. The Survey was completed in June, 1957, and proper figures are now available.

Patients are also examined at the Central Clinic on Wednesdays and Saturdays. Cases are referred to this clinic by various hospitals, private practitioners and Public Health Inspectors.

Statistics

358 New Cases have been detected during the year 1957 as against 475 last year.

Statistical Analysis of New Cases

(BY AGE-GROUPS, TYPE AND SEX)

Age-groups	Lepromatous :						Neural :					
	Males		Females		Total		Males		Females		Total	
0 - 4	..	—	..	—	..	—	..	1	..	3	..	4 = 4
5 - 9	..	1	..	—	..	1	..	13	..	6	..	19 = 20
10 - 14	..	1	..	5	..	6	..	12	..	5	..	17 = 23
15 - 19	..	6	..	—	..	6	..	11	..	2	..	13 = 19
20 - 29	..	20	..	5	..	25	..	26	..	9	..	35 = 60
30 - 39	..	32	..	4	..	36	..	27	..	12	..	39 = 75
40 - 49	..	19	..	—	..	19	..	19	..	17	..	36 = 55
50 - 59	..	17	..	3	..	20	..	24	..	17	..	41 = 61
60 - 69	..	5	..	3	..	8	..	12	..	6	..	18 = 26
70+	..	5	..	—	..	5	..	7	..	3	..	10 = 15
Total	..	106+		20=		126		152+		80=		232 = 358

Racial Distribution of New Cases

Sinhalese	..	..	..	..	264
Ceylon Tamil	..	..	..	..	33
Indian Tamil	..	..	..	..	40
Ceylon Moors	..	..	..	..	17
Indian Moors	..	..	..	..	2
Burghers	..	..	..	..	2
Others	..	..	..	..	—
Total					358

Provincial Distribution

Western Province :

Colombo Municipality	..	..	..	..	37
Outside	..	..	..	..	129
Sabaragamuwa	..	..	..	..	52
Southern Province	..	..	..	..	41
Eastern Province	..	..	..	..	27
North-Western Province	..	..	..	..	26
Central Province	..	..	..	..	19
Northern Province	..	..	..	..	14
Uva Province	..	..	..	..	11
North-Central Province	..	..	..	..	2
Total					358

Field Work: Leprosy Surveys

Leprosy Surveys in the whole Island were completed during the year. Statistical information up to the end of December, 1957, is given in the following tables:—

Racial Distribution

Sinhalese	..	..	..	..	1,975
Ceylon Tamil	..	..	..	..	280
Indian Tamil	..	..	..	..	247
Moors	..	..	..	..	148
Burghers	..	..	..	..	22
Malays	..	..	..	..	12
Others	..	..	..	..	1
Total					2,685

Provincial Distribution

Province	Population	Cases		Total	Cases per 1000 Population	
		L.	N.		1957	1945
Western	.. 2,447,000	.. 548	.. 871	.. 1,419	.. .6	.. .82
Central	.. 1,506,800	.. 45	.. 99	.. 144	.. .1	.. .18
Southern	.. 1,232,000	.. 125	.. 205	.. 330	.. .4	.. .54
Northern	.. 626,800	.. 53	.. 56	.. 109	.. .2	.. .23
North-Western	.. 968,400	.. 44	.. 48	.. 92	.. .09	.. .09
North-Central	.. 283,600	.. 9	.. 13	.. 22	.. .08	.. .19
Uva	.. 527,400	.. 26	.. 74	.. 100	.. .2	.. .32
Sabaragamuwa	.. 979,200	.. 99	.. 177	.. 276	.. .3	.. .35
Eastern	.. 410,500	.. 73	.. 129	.. 193	.. .3	.. .96
Total	.. 8,972,700*	1,022	1,663	2,685	.3	.5

*Approximate—detail figures not yet available.

Statistical Analysis of Total Number of Cases in the Island by Age-groups, Sex and Type of Disease

<i>Age-groups</i>	<i>Lepromatous</i>						<i>Neural</i>						<i>Total</i>
	<i>Males</i>	<i>Females</i>	<i>Total</i>				<i>Males</i>	<i>Females</i>	<i>Total</i>				
0 - 4	.. 1	.. —	.. 1	..	..	.. 3	.. 7	.. 10	=	11			
5 - 9	.. 2	.. 2	.. 4	..	..	.. 33	.. 27	.. 60	=	64			
10 - 14	.. 4	.. 8	.. 12	..	..	.. 43	.. 42	.. 85	=	97			
15 - 19	.. 36	.. 15	.. 51	..	..	.. 67	.. 30	.. 97	=	148			
20 - 29	.. 140	.. 48	.. 188	..	..	.. 206	.. 82	.. 288	=	476			
30 - 39	.. 225	.. 41	.. 266	..	..	.. 243	.. 88	.. 331	=	597			
40 - 49	.. 189	.. 31	.. 220	..	..	.. 206	.. 79	.. 285	=	505			
50 - 59	.. 135	.. 31	.. 166	..	..	.. 175	.. 86	.. 261	=	427			
60 - 69	.. 75	.. 20	.. 95	..	..	.. 114	.. 58	.. 172	=	267			
70+	.. 14	.. 5	.. 19	..	..	.. 58	.. 16	.. 74	=	93			
Total	.. 821	.. 201	.. 1,022	..	..	.. 1,148	.. 515	.. 1,663	=	2,685			

Training Courses and Lecture Demonstrations

A short training of two days duration in the latest methods of diagnosis and treatment of leprosy cases and also treatment of contacts and contact investigation, was given to 34 Medical Officers of Health.

A training Course for the Public Health Inspectors also was conducted during the 2nd quarter of the year.

Lecture Demonstrations

Lecture Demonstrations were given to the following Medical and Paramedical personnel :—

Post-Graduate Medical Officers,
 Medical Students,
 Pupil Nurses of the N. T. S., Colombo,
 Public Health Learners,
 Public Health Nurses.

The Control of Leprosy

Special instructions have been sent to all Health Officers, Public Health Inspectors and officers treating cases to treat the contacts on the following lines:—

Contacts of Infectious Cases :

- (1) D.D.S. (Prophylactic) Dose given in Treatment Notes.
- (2) Codliver Oil.
- (3) Worm Treatment.
- (4) Milk.
- (5) B.C.G. Vaccination after Mantoux Testing as in T.B.

Contacts of Non-infectious Cases :

- (1) Codliver Oil.
- (2) Worm Treatment.
- (3) Milk.

The institutional treatment was overhauled and steps were taken to introduce reconstructive surgery in leprosy in conjunction with Physiotherapy and Occupational Therapy to:—

- (a) prevent deformity,
- (b) to correct existing deformity,
- (c) to rehabilitate patients who can be rehabilitated.

Once fear and prejudice are removed it is possible to treat leprosy as just another mildly communicable disease and the patients are able to come for treatment without any social stigma.

In a chronic disease like leprosy with a long incubation period, the progress of work can only be assessed accurately once in ten years. The rates per 1,000 in 1945 and in 1957 are given for comparison.

The Maradana Leprosy Clinic is to be converted into a Diagnostic, Treatment and Teaching Centre so that it will become the focal point of all activities connected with leprosy and this too would eventually assist in the control of the disease to a large measure.

Building Progress

The Resident Medical Officer's Quarters at Hendala was completed by the middle of the year and was occupied by a Medical Officer.

A new Weaving Centre for female patients was opened at Hendala in July, 1957, with a female instructress from the Cottage Industries Department as in charge.

The reconditioning of Vavasseur's Buildings at Dean's Road, Maradana, for the Central Leprosy Clinic was started by the P. W. D.

At the Health Colony, Uragaha, the construction of quarters for the Medical Officer and Apothecary and the kitchen were completed. The construction of the new ward is nearing completion.

MEDICO-LEGAL WORK**General**

THERE has been a significant increase in the volume of work done in every section of the Department of the Judicial Medical Officer, Colombo.

The Judicial Medical Officer has been appointed a Visiting Lecturer and an external Examiner in Forensic Medicine.

As in previous years the Judicial Medical Officer and his Assistants are called upon by the Provincial Judiciary, Police and the Attorney-General's Department to assist them in the more important and difficult cases. Frequently, outstation Medical Officers consult him on difficult cases, or summon him to assist in the post-mortem examinations.

Among some of the more important cases handled by the Judicial Medical Officer are the Koggala Lake Murder Case, Mannar Police Shooting Case, and the Hanwella River Murder Case.

The new Medico-Legal Morgue and the Laboratory was opened in August. This was a long felt need which had been stressed by all previous Judicial Medical Officers. An X-Ray Plant has been installed at the Medico-Legal Morgue.

Staff

Dr. W. D. L. Fernando was appointed Judicial Medical Officer, Colombo, with effect from 1.2.57.

Dr. D. C. P. Amerasekera was appointed Deputy Judicial Medical Officer, Colombo, with effect from the same date. This is a new appointment.

Dr. D. A. Jayasinghe, Assistant Judicial Medical Officer, was transferred to Kegalle as D.M.O., in July, and Dr. G. E. Gajanayake has succeeded him.

Mr. B. D. Priya, Medical Laboratory Technologist, met with a tragic death in March. The vacancy thus created has been filled by Mr. S. D. P. Gunawardena.

Three additional labourers were appointed to the new Medico-Legal Morgue and Laboratory.

Professional Staff :

Judicial Medical Officer	..	..	..	1
Deputy Judicial Medical Officer	..	..	..	1
Assistant Judicial Medical Officers	..	..	..	2

Technical and Clerical Staff :

Toxicological Chemist	..	..	..	1
Medical Laboratory Technologist	..	..	..	1
Clerk, G. C. C.	..	..	..	1
Typist	..	..	..	1
Minor staff	..	..	..	12

Work Done

The total number of post-mortem examinations held during the year 1957 was 565, made up as follows :—

(a) Natural Causes	..	..	..	249
(b) Homicide by—				
(1) Stabbing and cutting	..	..	28	
(2) Shooting and bombs	..	..	9	
(3) Clubbing and assault	..	..	22	
(4) Strangulation	..	..	1	
			—	60
(c) Suicide by—				
(1) Train, &c.	..	..	3	
(2) Poisoning	..	..	17	
(3) Hanging	..	..	12	
(4) Drowning	..	..	8	
(5) Gun shot	..	..	2	
(6) Cut throat	..	..	1	
			—	43

(d) Accidents by—

(1) Motor and train	..	..	96	
(2) Others	..	..	59	155
				<hr/>
(e) Criminal abortion	..	..	..	6
(f) Infanticide	..	..	..	1
(g) Misadventure	..	..	..	20
(h) Open verdict	..	..	..	31
				<hr/>
				565
				<hr/>

Of the above, 9 were outstation post-mortem examinations, of which 4 were after exhumation.

The total number of "Assault" cases, &c., examined during the year 1957 was 10,304 made up as follows :—

(a) Injuries caused by blunt instruments	..	..	8,324
(b) Injuries caused by sharp instruments	..	..	848
(c) Gun shot injuries	..	..	86
(d) Injuries caused by burns	..	..	114
(e) Cases of poisoning	..	..	38
(f) Cases of alleged rape	..	..	21
(g) Cases of alleged abortion	..	..	6
(h) Cases of dog bite	..	..	113
(i) Explosives (bombs)	..	..	42
(j) Age	..	..	26
(k) Unnatural offence	..	..	14
(l) Cases of alleged drunkenness	..	..	672
			<hr/>
			10,304
			<hr/>

Of these—(1) 1,010 were "grievous hurt".

(2) 8,164 were "non-grievous hurt".

The following Medico-Legal Laboratory examinations were carried out :—

(1) Morbid histology	..	..	212
(2) Smears for G. C., spermatozoa, &c.	..	..	74
(3) Identification of hair, fibres, blood stains, &c.	..	..	17
(4) Preparation and mounting of Museum specimens	..	..	38
(5) Pregnancy tests	..	..	1

Photographic work was done in connection with five Medico-Legal cases. The Medical Laboratory Technologist is now undergoing a course of training in Photography at the School of Fine Arts.

The following Refresher Courses in Forensic Medicine were held for Police personnel and Village Headmen :—

19. 1.57	..	Lecture at Police Training School
26. 9.57	..	Lecture—Village Headmen
22.11.57	..	Lecture—Sub-Inspectors
6.12.57	..	Lecture at Police Training School

Dr. T. R. Arulampalam was given training in Forensic Medicine, in November, before he was appointed Judicial Medical Officer, Galle.

Buildings

The new Medico-Legal Morgue and Laboratory was opened in August 1957. It has a cold room with twin refrigerators to accommodate eight bodies; an Air-Conditioned Autopsy room with two post-mortem tables; a Pathological Laboratory; a Chemical Laboratory; Coroner's room; Office room; Waiting Hall for the public; an X-Ray and Photography section; a room for the professional staff; a room for the clerical staff and a Police Post.

Statistics of Judicial Medical Work—Out-stations, 1957

(1) Total post-mortems :	1,772
(a) Accidents	492
(b) Suicide	335
(c) Alleged homicide	356
(d) Natural causes and open Verdict	589
(2) Assault cases :	32,331
(a) Grievous	4,184
(b) Non-grievous	28,147
(3) Other cases examined	5,304
Rape	233

AMBULANCE SERVICE

THE ambulance service functioned satisfactorily during the year under review. This was due to the fact that on no occasion was an ambulance allowed to be off the road for a long period, as a result of special Treasury authority, for the expeditious repairs to ambulances. Every Provincial Hospital is served by one or more ambulances while there is an ambulance at a number of District Hospitals. There are 95 ambulances in the Department. The distribution is as follows:—

Angoda Fever Hospital .. 2	Anuradhapura 4
Anuradhapura Chest Clinic .. 1	Awissawella 2
Badulla 2	Balangoda 1
Balapitiya 1	Batticaloa 1
Castle Street Hospital for Women 2	Chilaw 1
Chavakachcheri 1	Colombo S., H.S. .. 1
Dambulla 1	Deniyaya 1
De Soysa Hospital for Women .. 1	Dick Oya 1
Eheliyagoda 1	Galle 3
Gampaha 1	Gampola 1
General Hospital, Colombo .. 7	Giriulla 1
Haputale 1	Hambantota 1
Hendala Leprosy Hospital .. 1	Homagama 1
Horana 1	Ingiriya 1
Jaffna 1	Jaffna Chest Clinic .. 1
Kahawatte 1	Kalutara 1
Kuliyapitiya 1	Kandy 4
Kandy Chest Clinic 1	Kalmunai 2
Kankasanturai G.H. 1	Karawanella 1
Kegalle 1	Kurunegala 4
Kurunegala Chest Clinic .. 1	Kilinochchi 1
Lady Ridgeway Children's Hospital 1	Mannar 1
Marawila 1	Matara 1
Mental Hospital, Angoda .. 1	Matale 1
Moratuwa 1	Mullaitivu 1
Moneragala 1	Nawalapitiya 1
Negombo 1	Nikaweratiya 1
Nuwara Eliya 1	Panadura 1
Pimbura 1	Polonnaruwa 1
Point Pedro 1	Puttalam 1
Ragama Chest Hospital .. 1	Ratnapura 2
Ratnapura Chest Clinic .. 1	Tangalle 1
Trincomalee 1	Tissamaharama 1
Udugama 1	Vavuniya 1
Wathupitiwela 1	Walasmulla 1
Welisara Chest Hospital .. 1	Colombo North Hospital .. 1

LEGISLATION

THE Nursing Homes Advisory Board considered the regulations necessary for the fixing of charges at Nursing Homes. With the approval of the Ministry they are now in the hands of the Legal Draughtsman for the framing of necessary legislation.

TRAINING OF MEDICAL AND PARA-MEDICAL PERSONNEL

DURING the year 19 Medical Officers left the Island on Departmental Scholarships to pursue studies abroad and specialize in various fields of Medicine.

2. Of the officers on study leave abroad 17 Medical Officers obtained specialist qualifications during the year under review. The qualifications obtained are as follows :—

<i>Speciality</i>	<i>Number</i>	<i>Qualifications</i>
General Medicine	2	{ 1 M.R.C.P. (Lond.) 1 M.R.C.P. (Edin.)
General Surgery	3	{ 2 F.R.C.S. (Eng.) 1 F.R.C.S. (Edin.)
Radiology	4	D.M.R.D. (Lond.)
Obstetrics and Gynaecology	2	F.R.C.S. (Eng.) M.R.C.O.G. (Gt. Br.)
E.N.T.	1	F.R.C.S. (Edin.) in E.N.T.
Orthopaedics	1	F.R.C.S. (Eng.) & Special work
Ophthalmology	3	{ 1 F.R.C.S. (Eng.) F.R.C.S. (Edin.) D.O. (Lond.) M.R.C.P. (Edin.) 2 D.O. (Lond.)
Physical Medicine	1	D. Phys. Med. (Eng.)

Local Courses of Training

3. Six Medical Officers in Grade II completed the Postgraduate Course conducted by the University of Ceylon in June and a further batch of six officers joined the course in July, 1957.

4. Ten Medical Officers completed the Diploma Course in Obstetrics conducted by the University of Ceylon. Six Medical Officers completed the course for the Diploma in Child Health. Seven Medical Officers commenced the Diploma course in Tuberculosis Diseases.

5. Seven Medical Officers of Health completed the D.T.M. & H. Course in June, 1957, conducted by the University of Ceylon.

Courses of Training in U. K. in Lieu of Local P. L. Course

6. Out of the eight Medical Officers who proceeded to the United Kingdom to do their Postgraduate Course in lieu of the local Post-Licentiate Course, six officers returned after completing the courses. The remaining two officers obtained extensions of one year to further their postgraduate studies.

BUILDINGS—DIVISION OF MEDICAL SERVICES

A sum of approximately Rs. 23,300,000 was provided in the General Estimates for expenditure on buildings during the financial year 1956/57. Out of this a sum of approximately Rs. 13,465,000 has been spent during the financial year 1956/57.

The programme of developing existing Provincial, Base and District Hospitals and Peripheral Units was continued. The new Wards completed provided an additional bed-strength of 680 and the Wards nearing completion will provide another 870 beds.

The programme begun in the previous years regarding augmentation of water supply in hospitals where it was inadequate and provision of pipe-borne water supply to Peripheral Units which do not have it at present was continued. The programme of providing electricity to hospitals which do not have this amenity at present was also continued.

The building programme could be classified under the following heads :—

- (a) New Medical Institutions
- (b) Colombo Group of Hospitals
- (c) Provincial Hospitals
- (d) Base Hospitals
- (e) District Hospitals
- (f) Peripheral Units out of Prefabricated Materials
- (g) Other Prefabricated Buildings
- (h) Water, Sewerage and Electricity
- (i) Building under Colombo Plan Aid

(a) New Medical Institutions

Anuradhapura Hospital. Work on the new hospital which is designed to have 300 beds and which is estimated to cost Rs. 4,000,000 has commenced. Building work on the Administration Block, 9 general Wards, Maternity Ward, Kitchen and Mortuary has been completed. Quarters for D. M. O., 2 House Officers, Apothecary and X-Ray Technician also have been completed.

Colombo South Hospital. Work on this new hospital is in progress. Building work is nearing completion on the Administration Block, X-Ray Block, Operating Theatre and Kitchen and work on the other items is scheduled to commence early. A provincial type of Laboratory has been planned and is being included in the Estimates.

Ratnapura Hospital. All work except water supply and sewerage and provision of telephones on this new hospital has been completed. Work on water supply and sewerage too is nearing completion. The hospital is expected to be ready for use in 1958.

Mulleriyawa Psychopathic Hospital and House of Observation. Construction work on both institutions has been completed and the work on the Combined Water, Sewerage and Electricity Scheme is nearing completion. There is delay in putting these institutions into use as the requisite quarters have not been provided for. Action is being taken to seek additional money provision for the requisite quarters.

(b) Colombo Group of Hospitals

General Hospital Colombo. Work on the Five-Storeyed Block was completed and will be opened early in 1958.

Children's Hospital Colombo. The New Administration Block and O. P. D. Block were completed and occupied. Work on Path. Laboratory and Mortuary and Nursing Mothers' Waiting Hall was commenced. Action was taken to call for tenders for the 2nd Ward Block. The bed-strength will be increased to 500 when the full scheme of extensions is completed.

Victoria Memorial Eye Hospital. The second stage of the building is in progress and is expected to be completed during the course of 1958. The bed-strength of this New Block is 346 and this will bring the total bed-strength to 470.

Castle Street Hospital for Women. The Obstetrics Ward Block and the Pathological Laboratory are nearing completion. When the full scheme of extensions is completed the bed-strength will be increased to 332.

(c) Provincial Hospitals

Kandy Hospital. Work on foundation of the 4-Storeyed Block has been completed. Work on the super structure will be taken up in 1958.

Galle Hospital. The New Administration Block and Maternity Ward have been completed except for the provision of electricity and sewerage. The Medical Officers' Quarters also have been completed.

Jaffna Hospital. Work on the Maternity Ward of 76 beds is in progress.

Badulla Hospital. The New Administration Block, Operating Theatre and X-Ray Block have been completed. A Ward of 88 beds is nearing completion and the conversion of the existing Administration Block into Paying Wards was commenced.

Batticaloa Hospital. A Ward Block of 104 beds is nearing completion. The Kitchen is completed except for the provision of electricity for cooking facilities. The Operating Theatre is completed except for electrical and air conditioning.

(d) Base Hospitals

Colombo North Hospital, Ragama. The Administration Block, Operating Theatre, X-Ray Block, Isolation Ward and House Officer's Quarters have been completed except for the water supply and sewerage. Minor Staff Quarters have been completed and taken over. Extensions to Nurses Quarters also have been completed. The construction of the 2 Storeyed Wards of 124 beds each and the Maternity Ward is in progress.

Negombo Hospital. The Administration Block and X-Ray Block have been completed and put into use.

Matara Hospital. Due to inadequacy of funds work could not be started. Action is being taken to obtain Cabinet sanction for the construction of the New Administration Block, Operating Theatre, 2-Storeyed Ward Block of 104 beds and Quarters for Nurses.

Chilaw Hospital. A Light Construction Ward of 24 beds, extensions to Maternity Ward, Operating Theatre and Kitchen are nearing completion.

Polonnaruwa Hospital. The Administration Block and Male and Female Surgical Wards with the Operating Theatre is nearing completion.

Matale Hospital. The New Administration Block was completed.

New Hospital, Kegalle. Due to the financial stringency, work on the new hospital could not be started. It is expected to commence work in 1958.

Trincomalee Hospital. Work on the construction of a 2-Storeyed Ward Block and Kitchen has been commenced.

Karawanella Hospital. A Kitchen Block and extensions to Nurse's Quarters are under construction.

Kalutara Hospital. Three Light Construction Wards and a Childrens' Ward were completed.

(e) **District Hospitals**

Panadura Hospital. The Administration Block and Mortuary were completed. Extensions to an existing building were carried out in order to convert it into quarters for 1 Matron and 8 Nurses.

Gampaha Hospital. The Maternity Ward has been completed. Administration Block and the Kitchen could not be taken up for want of funds.

Chavakachcheri Hospital. Due to lack of funds work on the New Administration Block could not be taken up. Some extensions to the existing Administration Block will be effected in 1958.

New Hospital, Avissawella. Due to the financial stringency work on the new hospital could not be started. It is expected to commence in 1958.

New Hospital, Deltota. A new hospital on a different site is to be constructed and work is expected to commence shortly.

Mannar Hospital. The proposed extensions could not be undertaken. Action is however being taken to commence work on the Kitchen and Male and Female Surgical Wards.

Horana Hospital. Work on the New Administration Block, Kitchen, Mortuary and Nurses, Quarters has been completed.

Vavuniya Hospital. Constuction of a Ward of 24 beds and a New Kitchen has been commenced. Work will commence shortly on the Administration Block, Mortuary and Apothecary's Quarters.

Point Pedro Hospital. Work is in progress on 2 Light Construction Wards and Kitchen. Work will commence shortly on the Administration Block and the Operating Theatre.

Wathupitiwela Hospital. Due to lack of funds no work could be done. Work will, however, commence shortly on the Administration Block and Mortuary.

Medawachchiya Hospital. Two Wards of 24 beds each, a Kitchen Block, Quarters for D. M. O. and Apothecary and 3 sets of Minor Staff Quarters are under construction.

Balapitiya Hospital. Work is in progress on the New Administration Block, Kitchen Block, Mortuary and Cart Shed.

Ragama Chest Hospital. A new Kitchen could not be built due to lack of funds. It is proposed to carry out this work in 1958.

Kandana Sanatorium. A new Kitchen for this hospital will also be built in 1958.

Leprosy Hospital, Hendala. Work on the M. O's Quarters has been completed.

Leprosy Hospital, Urugaha. The M. O's Quarters and Apothecary's Quarters have been completed. A Light Construction Ward of 24 beds and a Kitchen are nearing completion.

Dambulla Hospital. Construction of a New Administration Block has been completed.

Ragama Convalescent Home. Work was completed and occupied.

(f) **Peripheral Units out of Prefabricated Materials**

The programme for the development of medical facilities for rural areas by the construction of new Peripheral Units or of buildings for incomplete Units was continued. Work is in progress on the following buildings :—

C. D. & Apo's Qrs. Hanguranketa
 Apo's Qrs., Meegahajandura
 Maternity Home, Hakuruwela
 Peripheral Unit, Kataragama
 Maternity Home, Mawanella
 Maternity Home, Santhamaranthu
 Maternity Home, Bibilegama
 C. D. & Apo's Qrs., Bingiriya
 Ward and Kitchen, Kinniyai
 M. O's Qrs., Bibile
 Apo's Qrs., Ginigathena
 C. D. & Apo's Qrs., Padiyatalawa
 M. O's Qrs., Alawwa
 Central Dispensary, Bambaradeniya
 Apo's Qrs., Meegahakiula
 Maternity Home, Tanamalwila
 Maternity Home, Kalawana
 C. D., Ja-Ela
 C. D. & Apo's Qrs., Kiriella
 Apo's Qrs., Velvettiturai
 Apo's Qrs., Angunakolapelessa
 C. D. & Apo's Qrs., Kokillai
 M. H., C. D. & Apo's Qrs., Pallegama
 M. O's Qrs., Galgamuwa
 M. O's Qrs., Pallai
 M. H., Madahapola
 Administration Block, Bandarawela
 Ward and Kitchen, Narawelpita

The following Central Dispensaries and Maternity Homes were completed by the Public Works Department :—

Central Dispensary	..	..	Yakgahapitiya
Maternity Home	..	..	Gallella
Maternity Home	..	..	Ambanpola
Maternity Home	..	..	Kobeigane
Maternity Home	..	..	Kattankudi
Maternity Home	..	..	Gonagama

Other Pre-fabricated Buildings

Work is in progress on the following buildings .—

Mawatagama	..	..	1 ward
Kayts	..	..	1 ward
Pimbura	..	..	Children's ward
Ambalangoda	..	..	M.O's Quarters
Mirigama	..	..	2 wards
Puttalam	..	..	Maternity ward & M.O's Quarters
Madipola	..	..	M.O's Quarters
Eheliyagoda	..	..	Maternity ward

Matale	..	..	1 ward
Medagama	..	..	1 ward
Giriulla	..	..	2 wards
Galle	..	..	Nurses' Quarters
Batticaloa	..	..	1 ward

Nurses' Training Schools

It is proposed to have New Nurses' Training Schools at Badulla, Anuradhapura and Ratnapura. Work will be commenced shortly.

Water Supply and Sewerage Schemes

The following Water Supply and Sewerage Schemes are in progress :—

Kurunegala	..	..	Water Supply
Talagolla	..	..	do. do.
Teldeniya	..	..	do. do.
Mulhalkelle	..	..	do. do.
Galle N.T.S.	..	..	do. do.
Horona	..	..	do. do.
Kurunegala Field Training Centre	..	..	do. do.
Jaffna	..	..	Water Supply and Sewerage
Pelawatta Mental Hospital	..	..	Water Supply
Kandy	..	..	do. do.
Welisara Chest Hospital	..	..	Water Supply Stage II
Kandana Sanatorium	..	..	Water Supply
Mawatagama	..	..	do. do.
Matale	..	..	do. do.
Induruwa	..	..	do. do.
Panadura	..	..	do. do.
Kirama	..	..	do. do.
Dickwella	..	..	do. do.

Work will commence shortly on the following :—

Kuliyapitiya	..	..	Sewerage Scheme
Mirigama	..	..	do. do.
Karawanella	..	..	Water Supply
Wirawila Sanatorium	..	..	do. do.
Talampitiya	..	..	do. do.
Ridigama	..	..	do. do.

Work is in progress on the provision of Combined Water Supply and Electricity to the following Peripheral Units :—

Hiripitiya	Horawapotana
Nalanda	Marassana
Gokerella	Medawela.

In the following Hospitals work in connection with electricity is in progress :—

Galle (Extension)	Aranayake
Nikaweratiya	Divulapitiya
	Pelawatta

Buildings under Australian Aid

Work is in progress on the Chest Clinic at Badulla.

Tenders called for the work on Batticaloa have been unsuccessful and it is proposed to do the work departmentally.

Buildings under New Zealand Aid

A Dental Nurses' Training School has been constructed at Maharagama and it is proposed to have it opened early in 1958.

IV—DIVISION OF PUBLIC HEALTH SERVICES

THE Health Areas were reviewed during the course of the year and were re-arranged to be co-terminus with the Revenue Districts. By this re-arrangement the 96 areas were reduced to 94; 44 of these were in charge of Medical Officers of Health, 3 in charge of District Medical Officers doing part-time Public Health work, and the other 47 in charge of Supervising Public Health Inspectors designated as Officers-in-Charge.

The number of Medical Officers further decreased during the year and there were only 80 in service towards the end of the year. Even though the services are unified it is not possible to get volunteers for Public Health work. This is attributed to the refusal on the part of the Government to recognize qualifications in Public Health as a specialist qualification so as to entitle medical men working in this field to the non-practising allowance paid to those holding specialist qualifications in clinical medicine. The work of the Division is in imminent danger of considerable deterioration as a result of this. If the position does not improve the activities of the Division will deteriorate to such an extent that it would take several years to bring it to the same standard of efficiency that existed.

The para-medical personnel employed by the Division increased during the year but the output of work has not shown any signs of improvement.

A considerable degree of ill-health is still caused by poor environmental factors. It is found that about sixty per cent of the population is infested with hookworm and about seventy per cent. of the children with round-worm. Over twenty per cent of the cases treated in the medical institutions suffer from preventible diseases spread through environmental causes. Very little progress has been made in improving environmental sanitation, chiefly due to the lack of funds.

The Pilot Environmental Sanitation Project at Kurunegala continued with UNICEF and WHO assistance. Satisfactory progress has been maintained. A population of about 3,800 has been completely provided with latrines and protected water supplies. From the pre-operational health survey carried out it was found that about 59 per cent of the pre-school children were affected with hookworm and about 50 per cent of the children with roundworm. A few children were also found to be carriers of salmonella and shigella infections.

The main functions of this project are to train health personnel and experiment with suitable types of latrines and wells. At the project Supervising Public Health Inspectors in charge of Health Areas and Public Health Inspectors and other personnel have had courses of training during the year.

The progress of latrine construction throughout the country to ensure safe disposal of excreta has not been satisfactory. Considerable difficulty has been encountered in putting into effect the aided scheme of latrine construction. The actual sum provided was insufficient and further from these funds commitments for the previous year had to be met. Still about one out of three dwellings in Ceylon has proper sanitary conveniences. The method of assistance under the aided scheme was altered to one of payment of a grant of Rs. 25 for each sanitary latrine constructed according to the type plans of the Department. This scheme was put into operation towards the end of the year. It is expected that this will simplify the scheme and improve considerably the progress of construction of latrines.

Sanitation of large festivals continued to be a problem. Both the religious and local authorities do not take sufficient interest. It is essential in case of places of pilgrimage like Kataragama to have permanent sanitary facilities and a pipe-borne water supply.

Food control work was carried out in urban areas through the local authorities and in the rural areas by the Departmental officers. Considerable importance was attached to the sanitation of food and the hygienic production of milk and allied foods. The food regulations were enforced in Colombo and Kandy Municipal areas, and other local authorities were encouraged to implement these. The examination of samples of milk from the areas of local authorities showed that there was a considerable degree of adulteration of milk.

Drug control was effected through the Department. For this purpose there were four Drug Inspectors covering the whole Island. Informal samples were taken from drug dealers. 28 per cent of these samples did not conform to the standard. These dealers were cautioned.

Health protection continued to be given to estate workers. More inspections of estates were carried out during the year compared to previous years.

There has been an increase in the number of Colonisation Schemes; in fact 19 new schemes came into operation during the year. Necessary health staff has been provided to these schemes.

The Chief Public Health Engineer continued to carry out the construction of hospitals buildings and water supply schemes, sewerage schemes and surface drainage schemes for the Department as well as for Local Authorities. During the course of the year various proposals were made for the re-organisation of this sub-division. As a result of recommendations made by foreign Consultants and finally on a directive from the Cabinet a Special Committee consisting of the Director of Development, the Commissioner of Local Government and the Deputy Director of Health Services (Public Health), were appointed to examine the working of this Division and make recommendations. The Committee completed its work towards the latter part of the year and submitted its report.

There was an outbreak of smallpox which started at Kalpitiya and spread to Colombo. In all there were 19 cases with 7 deaths. The actual source of this infection could not be traced. The spread of the disease in Colombo was chiefly due to missed diagnosis of three cases at the General Hospital, Colombo. Because of this outbreak vaccination was intensified and 357,551 primary vaccinations were done and nearly 2,000,000 people were given secondary vaccination.

There was an increased incidence of poliomyelitis compared to the previous year. In 1956 the number of cases was 68 with 5 deaths, but in 1957 it was 334 with 27 deaths. Gamma globulin was used to protect some of the immediate contacts; and for the first time Salk vaccine was made available in the country and prophylactic inoculations were given to selected children.

There were two outbreaks of diarrhoea: one in Punguditivu in Jaffna District and the other in Dehiowita area. In the Punguditivu outbreak there were 68 cases. The source of infection was traced to the main water supply on this island. In the Dehiowita outbreak there were 40 cases with two deaths.

There was a slight reduction in the number of cases of Typhoid Fever reported. An outbreak of the disease was reported from the area of the Medical Officer of Health, Tangalle. There were 26 cases but there were no fatalities and all the cases were treated at institutions. The source of

infection was from a case that had come from an outside area. Another outbreak of Typhoid Fever occurred in Kurunegala. This was in connection with a farewell party given at a school. Out of the 42 persons who participated in the dinner, 25 contacted the disease and there were two deaths. The exact source could not be traced. It was presumed that the infection was from fresh lettuce that was consumed as a salad.

The Maternal and Child Health work continued to be carried out as a dual responsibility of the Division of Public Health and of the Medical Services. The former was responsible for this in the areas of the Medical Officers of Health and the latter for the rest of the Island. There has been considerable disorganisation of this work owing to the Medical Officers at institutions finding it difficult to give the required attention and time for this work due to pressure of other work. In some places, clinics were even closed for several months due to lack of medical staff. This disorganisation of work as a result of Medical Officers on the curative side not giving proper attention will result in a deterioration of work, and would generally result in a lowering of the progress that had been made.

There has been a considerable increase in the number of infants and pre-school children attending clinics. This is partly due to the issue of free skimmed milk at these Centres. Owing to the large attendance the work at some of the clinics had to be duplicated. This appears to have adversely affected the domiciliary work of Public Health auxiliary staff.

School Medical Inspections showed a slight improvement compared to the previous year. This is because the services of curative officers were utilized to a greater extent than before. However, the sanitation of the schools continues to be an unsatisfactory feature. Still there are schools without even the minimum of sanitary requirements. The Department of Education is conscious of this fact and is making every effort to provide the required sanitary facilities.

Of the children examined nearly 71 per cent showed defects, the chief of which were malnutrition (18.5 per cent), diseases of the teeth and gums (14.4 per cent), hookworm infestation (11.5 per cent), and anaemia (11 per cent). Action was taken wherever possible to correct these defects, and over 40 per cent of the defects were corrected. The School Dental Service was strengthened by the nurses who completed their training at the new school. There were 10 School Dental Clinics functioning with 14 school dental nurses. The work done by the dental nurses has been of immense value in protecting the teeth of the school children. These dental nurses performed 35,011 dental operations during the year. The total attendance at the clinics was 14,698.

The School for Dental Nurses had its first Graduation Ceremony at which 10 Nurses graduated. The new clinic building was completed and occupied in May, 1957. The clinic has now 1,897 pupils enrolled for treatment, and the total operations done during the last year was 18,068.

To determine the nutritional status of school children a nutritional survey was carried out in certain selected areas and a total of 18,592 pupils were examined. 9,392 were boys and 9,200 were girls. This survey determined the incidence of angular stomatitis, erosion of tongue, Bitot's spots, and phrynoderma. According to these deficiency signs, the nutritional status of the pupils was estimated. It was found that 11.7 per cent of the boys and 10.7 per cent of the girls examined showed nutritional

deficiency. More boys had angular stomatitis and Bitot's spots, while more girls showed phrynoderma. As regards malnutrition the boys were significantly more affected.

The assessment of nutritional status according to height and weight was also determined and it was found that 24 per cent of the boys and 27.6 per cent of the girls were nutritionally sub-standard. This investigation will be continued and it will help to assess any change in the nutrition due to the widespread distribution of skimmed milk in schools.

The Quarantine Services function as an administrative sub-division of the Department of Health. From a legal standpoint the Quarantine Department is an independent department. This sub-division continued to exercise strict vigilance over passengers who arrived in the Island. Some of the quarantine measures in respect of passengers were relaxed during the year.

During the year there was the danger of an outbreak of Influenza due to the new strain of Influenza virus that caused an outbreak in the East and started spreading throughout the world. Strict precautions were taken to prevent the introduction of this disease to Ceylon. Fortunately there were no outbreaks.

Illicit immigrants continue to be a danger to the health of the people of the country. However, there were no actual records of any definite outbreaks of major infectious diseases due to them.

Health Education work is now organised and is carried out in the areas of the 15 Superintendents of Health Services and in the Specialised Campaigns by specially trained Health Educators, some of whom have had training abroad. This work was also strengthened at the Kalutara Training Centre by the appointment of a Health Educator so that all trainees would get a proper course of training in Health Education. In-service training in Health Education of all Public Health staff was carried out. Most of the Public Health Inspectors have had this training now. The training of Midwives will be completed early next year.

Health Education work in schools was also carried out and for the better organisation and effective implementation of Health Education programmes in schools the services of a Consultant have been obtained. He is now working in the Department of Education and is planning a Health Education programme in close collaboration with the Department of Health.

Health Education activities were carried out in respect of estates and also voluntary organisations. To advise the Directorate on Health Education a National Committee was set up; and to advise the Superintendents of Health Services, Committees at the Divisional level have been set up. More staff will be recruited to the Health Education Materials Production Unit during the course of next year so that it could take its proper place as a materials production unit.

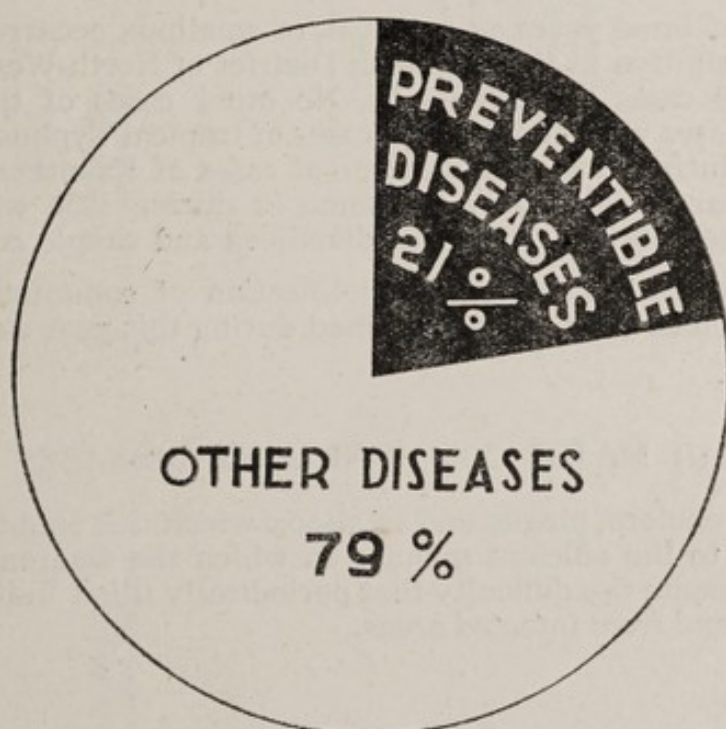
The Film Library continued to play an important part in the education of the public.

Quite a number of leaflets and pamphlets were prepared for distribution during the year.

Local training of Medical Officers and para-medical personnel was satisfactorily carried out. However, the response from Medical Officers for training in Preventive Health work abroad was very poor.

Table XXIV—Summary Return of Cases Treated and Deaths from Preventable Diseases in Government Institutions, 1957

No.	Disease	In-Patients			Percentage to total Deaths
		Cases	Percentage to total cases	Deaths	
I—INSECT-BORNE DISEASES					
1.	Malaria	5,410	0.400	9	0.035
2.	Filaria	469	0.035	1	0.004
3.	Plague	—	—	—	—
4.	Typhus fever	42	0.003	—	—
II—EPIDEMIC DISEASES					
1.	Small-pox	19	0.001	6	0.024
2.	Cerebro-spinal fever	—	—	—	—
3.	Poliomyelitis	743	0.055	85	0.335
4.	Cholera	—	—	—	—
III—ENDEMIC DISEASES					
1.	Leprosy	1,265	0.094	30	0.118
2.	Tuberculosis	12,992	0.960	875	3.444
3.	Yaws	65	0.005	—	—
4.	Venereal Diseases	1,133	0.084	7	0.028
IV—WATER-BORNE BOWEL DISEASES					
1.	Acute or Choleraic Diarrhoea	2,099	0.155	70	0.276
2.	Dysenteries (Bacillary and Un-specified)	8,792	0.650	245	0.964
3.	Enteric, Typhoid and Paratyphoid and Pyrexia of Unknown Origin—Salmonella infections	15,004	1.109	267	1.051
4.	Amoebiasis	6,963	0.515	66	0.260
5.	Gastro-enteritis and Colitis	64,614	4.777	2,518	9.911
V—HELMINTHIC DISEASES					
1.	Hookworm	19,019	1.406	118	0.464
2.	Other diseases due to helminths (mainly Round Worm)	50,615	3.742	1,582	6.227
	Other diseases classified as parasitic and infectious	23,732	1.754	898	3.534
VI—NUTRITIONAL DISORDERS					
1.	Beriberi	66	0.005	1	0.004
2.	Pellagra	7	0.001	—	—
3.	Scurvy	128	0.009	2	0.008
4.	Rickets	399	0.029	14	0.055
5.	Avitaminosis	15,269	1.129	177	0.697
6.	Anaemia of pregnancy	19,063	1.409	38	0.150
7.	Other and Unspecified Anaemia	35,362	2.614	854	3.361
		283,270	20.941	7,863	30.948
Total—All diseases		1,352,720	—	25,407	—



ADMINISTRATION

The set-up of the Public Health Administration Staff and Field Personnel was as depicted in Chart III.—(See page 157).

There was no change in the Staff of the Central Administration during the year.

The Health Areas of the Island which were set up soon after the Malaria epidemic during 1934-35 were redefined to coincide with areas of Divisional Revenue Officers. This resulted in the 96 health areas that hitherto existed being reduced to 94: 44 areas in charge of Medical Officers of Health, 3 areas in charge of District Medical Officers, and 47 areas in charge of Supervising Public Health Inspectors.

GENERAL EPIDEMIOLOGY

After a lapse of three years an outbreak of smallpox occurred in February this year at Kalpitiya in the Puttalam District of North-Western Province. There were 19 cases with 7 deaths. No other cases of the major communicable diseases were reported. 19 cases of tropical Typhus were reported as against 16 during 1956. The number of cases of Exanthematous disease during this year is practically the same as during 1956 while there is a reduction in the number of cases of diarrhoea and simple continued fever.

The improvement shown in the notification of communicable diseases during the previous year was maintained during this year as well.

(i) MAJOR COMMUNICABLE DISEASES

Freedom from cholera, plague and smallpox which this country experiences is largely due to the efficient manner in which the Quarantine measures are enforced despite the difficulty that periodically illicit Indian immigrants come to the Island from infected areas.

Plague

Plague had not occurred in this country for the past 20 years.

Anti-Plague Measures

		1956		1957
Number of rats caught	..	8,824	..	4,837
Number of rats examined	..	220	..	12
Number of rats infective	..	—	..	—

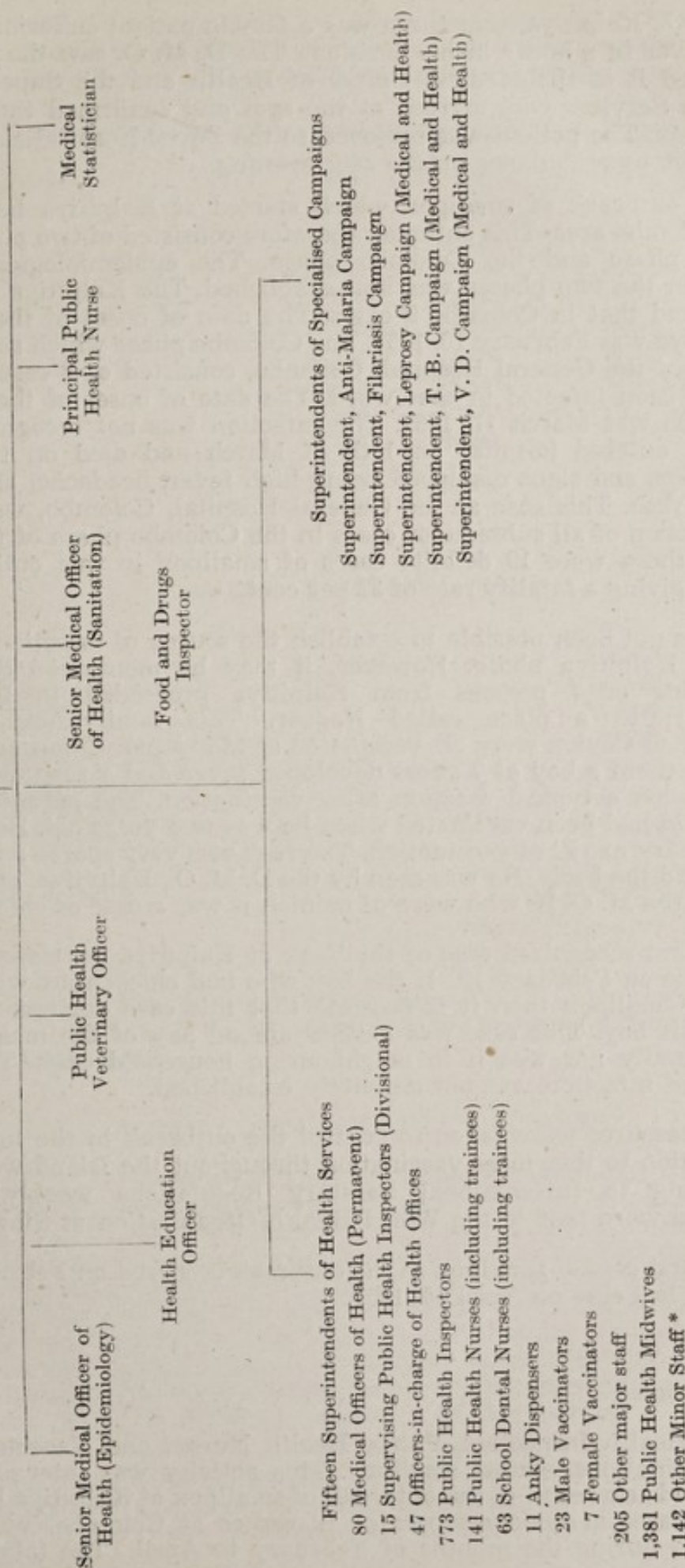
Smallpox

Smallpox reappeared after nearly three years in February at Kalpitiya in the Puttalam District. Kalpitiya is a small town situated about 30 miles from Puttalam on the peninsula which lies west of the Puttalam lagoon. On the 23rd of February, 1957, the Headman of the area reported to the

CHART III

DIRECTOR OF HEALTH SERVICES

Deputy Director of Health (Public Health Services)



* Some Minor Staff have been shown under Medical Services.

D. M. O., Kalpitiya, that there was a female patient suffering from a rash and fever in a house in his division. The D. M. O. saw the case first and reported it to the Medical Officer of Health and the Superintendent of Health Services who arrived at the spot and confirmed the diagnosis of smallpox. The patient was removed to the Fever Hospital at Angoda near Colombo by ambulance on the 24th evening.

The outbreak of smallpox which started at Kalpitiya later spread to the Colombo area. This outbreak therefore consisted of two phases, the Kalpitiya phase and the Colombo phase. The epidemiological connection between the two phases was not established. The Kalpitiya phase had 10 cases and that in Colombo 9 cases. The date of onset of the first case at Kalpitiya was February 10, 1957. The Colombo phase which started in ward No. 26 of the General Hospital, Colombo, consisted of 9 cases, 7 of which having been infected in that ward. The date of onset of the first case in Colombo was March 11, 1957. The infection was not recognized and this patient entered hospital on 11th of March and died on the 14th. The symptoms and signs displayed being high fever, headache, and a haemorrhagic rash. This case at the General Hospital, Colombo, was the source of infection of all subsequent cases in the Colombo phase of this outbreak. In all there were 19 definite cases of smallpox in this outbreak with 7 deaths giving a fatality rate of 37 per cent.

It has not been possible to establish the source of infection of the cases in the Kalpitiya phase. However, it may be mentioned that a family consisting of 7 persons from Kalpitiya proceeded to India on 7th January, to a place called Nagoor. This family on their return journey to Ceylon were all vaccinated at Mandapan Camp on January 21. Among them a boy of 7 years developed fever and a rash on January 25. He showed a typical reaction after vaccination. The parents stated that this child had been vaccinated when he was two years old. But there were no primary marks of vaccination. The rash was very sparse and was on the chest and the back. He was seen by the D. M. O., Kalpitiya, on January 28, and by the M. O. H. who were of opinion it was a case of chickenpox.

The first recognized case of smallpox at Kalpitiya developed fever with headache on February 12. If the boy who had chickenpox was a modified case of smallpox then it is possible that this case derived the infection from this boy. This case was neither among any of the members of this boy's family nor was it in neighbouring household case. Therefore the source of infection was not definitely established.

All measures were taken to control the outbreak in the infected areas. In addition to this, mass vaccination throughout the Island was organised. According to International Sanitary Regulations weekly telegraphic bulletins were sent to the World Health Organisation at Singapore.

The first case of smallpox in the outbreak occurred on February 10, 1957, and the last case on April 10, 1957.

Vaccination

Public Health Inspectors, Public Health Nurses and Vaccinators carried out vaccinations against smallpox. This activity was intensified all over the Island as a result of the outbreak of smallpox at Kalpitiya having given rise to cases at widely separated places as at Colombo, Wadduwa, and Kalutara during the months of February to April. The total number of

primary vaccinations done was 357,551 which was more than the number done in 1956 which was 248,021. The following two tables give the number of primary vaccinations and re-vaccinations done during the year 1957 :—

Table XXV—Primary Vaccinations, 1957

<i>Province</i>	<i>Total</i>	<i>Successful</i>	<i>Unsuccessful</i>	<i>Unknown</i>
Western ..	92,960	66,973	2,009	23,978
Central ..	69,656	60,659	979	8,018
Southern ..	45,479	34,544	648	10,287
Northern ..	24,619	19,982	176	4,461
Eastern ..	15,732	11,763	495	3,474
North Western ..	36,122	32,270	429	3,423
North Central ..	20,409	18,860	647	902
Uva ..	17,935	15,262	478	2,195
Sabaragamuwa ..	34,639	29,649	820	4,170
Total ..	357,551	289,962	6,681	60,908

Table XXVI—Re-vaccinations, 1957

<i>Province</i>	<i>Total</i>
Western ..	786,860
Central ..	321,632
Southern ..	334,539
Northern ..	95,507
Eastern ..	36,001
North-Western ..	193,767
North-Central ..	28,590
Uva ..	44,116
Sabaragamuwa ..	143,595
Total ..	1,984,607

The number of primary vaccinations done is 110.0 per cent of the previous year's births. This is probably the highest percentage ever recorded in recent years.

(ii) OTHER COMMUNICABLE DISEASES

Table No. XXVII shows the incidence of notifiable communicable diseases. The figures shown here include cases notified from the seven Municipal urban areas as well. Infectious Hepatitis was made notifiable in September, 1956. The number of cases of Anterior Poliomyelitis notified during this year shows an undue increase over that of 1956. From 1953 it appeared as if Acute Anterior Poliomyelitis was showing a downward trend. It will be seen from the figures given in Table XXIX that the number of cases recorded this year is more than any recorded since 1948. The number of cases of Pulmonary Tuberculosis reported is slightly less compared to the previous year. There is a distinct reduction in the number of Puerperal Pyrexia reported.

Devastating floods occurred during the last week of December in eight out of the fifteen divisions of Superintendents of Health Services. Measures to prevent any outbreak of illnesses were planned on a nation-wide scale.

Table XXVII—Cases of Communicable Diseases Notified to Medical Officers of Health

	1956		1957	
	Cases	Deaths	Cases	Deaths
Acute anterior poliomyelitis ..	68	5	334	27
Acute or choleraic diarrhoea ..	806	11	276	6
Acute infantile diarrhoea ..	104	1	72	2
Cerebro-spinal fever ..	—	—	—	—
Chickenpox ..	10,663	5	8,953	6
Cholera ..	—	—	—	—
Diphtheria ..	554	43	414	41
Dysentery ..	2,696	37	2,432	72
Infectious hepatitis ..	285	2	647	17
Measles ..	4,702	8	3,806	4
Mumps ..	2,558	1	2,128	1
Plague ..	—	—	—	—
Puerperal Pyrexia ..	212	1	89	1
Pulmonary tuberculosis ..	5,111	156	4,836	115
Rubella ..	125	—	9	—
Simple continued fever ..	2,025	12	1,152	16
Smallpox ..	—	—	19	7
Trypanosomiasis ..	—	—	—	—
Typhoid ..	2,542	46	2,035	38
Typhus fever ..	16	—	19	—
Whooping cough ..	1,025	5	971	9
Yellow fever ..	—	—	—	—
Total ..	33,492	333	28,192	362

Pulmonary Tuberculosis

The Superintendent, T. B. Campaign, decided during the year to integrate the campaign's activity with that of the general Public Health programme of the country. This scheme will come into operation during the year 1958. It will be possible under this scheme to co-ordinate the work done by the Health Visitors with the work done by the Public Health Inspectors in the field. 4,836 cases of Pulmonary Tuberculosis with 115 deaths were reported to Health Officers. The corresponding figures for 1956 were 5,111 with 156 deaths.

Acute Diarrhoea

There has been a noticeable reduction in the number of cases of Acute Diarrhoea. There were 276 cases with 6 deaths as against 806 cases and 11 deaths in 1956. Two outbreaks of diarrhoea were reported, one in Pungudutivu in the Kayts Health Area and the other in Dehiowita Health Area.

In the Pungudutivu outbreak, 68 cases of diarrhoea occurred from September 28, 1957, to October 17, 1957, i.e., within a period of 20 days on the Island. The source of infection was traced to the main water supply on this island. Due to drought, water had been doled out from May 20, 1957. This

water had been collected from suspicious sources. The decline in the incidence of diarrhoea was observed after frequent chlorination of water in the tanks and in the wells. There were no deaths reported during the outbreak.

In the Dehiowita outbreak the villages of Imbulpitiya, Kanpitikanda and Ambalapitiya were involved. There were in all a total of 40 cases with 2 deaths. The source of infection in this outbreak was traced to a stream running through this village. The people living in houses adjoining this stream used the water from this stream for domestic purposes and ablution.

A house-to-house inspection was carried out from December 13 to December 15 and 33 cases were detected. The first intimation of this outbreak was from a newspaper report on December 12, 1957, Chlorination of wells and an intensive health education campaign were carried out.

Dysentery

The number of cases of dysentery reported during the year was 2,432 with 72 deaths as against 2,696 cases with 37 deaths during 1956. The number of deaths is almost double that of the previous year though the incidence was slightly less compared to last year. No reasons can be adduced for this high mortality.

Typhoid Fever

There is a slight reduction in the number of Typhoid cases reported. There were 2,035 cases with 38 deaths as against 2,542 and 46 deaths during the year 1956. Two outbreaks of Typhoid fever were reported.

One outbreak of Typhoid fever occurred in the area of M. O. H., Tangalle. These cases occurred in Palatuduwa village. This village consists of 426 houses and of these 12 households were affected. There was a total of 26 cases all of whom were treated at the Government District Hospital, Tangalle, and there were no deaths.

The source of infection was a patient who had returned from Gal Oya for treatment. This patient had been taking Ayurvedic treatment and the case was not notified to the Health Authorities. As a result it was not possible to take any preventive measures in time.

However, as soon as the first case was reported by the D.M.O., Tangalle, on January 2, 1957, preliminary investigations were carried out and preventive measures were instituted. Inoculations were carried out by the Medical Officer of Health and 400 persons including 79 direct contacts were inoculated. All the wells in the village were chlorinated during the outbreak.

The other outbreak of Typhoid fever was at Kurunegala after a farewell dinner party in July. At this party the food that was served was obtained from one restaurant and ice-cream from another. Out of the 42 persons who participated in the dinner, 25 had Typhoid fever and para-Typhoid fever. Salm. Typhosus was isolated from one case and Salm. Para-typhosus from 3 cases. The outbreak was a mixed one and the first case occurred 10 days after the meal. The presumption arrived at after investigating

into the single article of food consumed by all those who were present was that a lettuce salad could have been the source of infection. There was no bacteriologically incriminated food served at the dinner. Of the 25 cases 14 were admitted to Kurunegala Hospital and two had a fatal termination.

Control measures were immediately carried out in Kurunegala town and the entire school population of St. Anne's School, where the dinner was served, was given T.A.B. inoculations. Chlorination of wells in the school compound and in the neighbourhood was also carried out. The outbreak did not spread to other parts of the town.

Table XXVIII—Anti-Typhoid Inoculations

				1956		1957
First Dose	..	..	..	268,302	..	257,700
Second dose	..	..	..	210,881	..	200,994
Booster dose	..	..	..	3,637	..	4,203

Infectious Hepatitis

Infectious Hepatitis was made a notifiable disease from September, 1956, consequent on an outbreak of the disease at the Government Training College at Uyanwatte in the area of Superintendent of Health Service, Kandy. A total of 647 cases with 17 deaths were reported in 1957 as against 285 cases and 2 deaths from September in the previous year. An outbreak of Infectious Hepatitis was reported in September in Kukulpona village four miles from Warakapola bazaar area. There were in all 8 cases with 2 deaths. The first case occurred on the 28th of August and the last case on 3th September. All the patients had jaundice, fever, abdominal discomfort and vomiting. The results of the diagnostic laboratory tests carried out were negative for Weil's disease. The sources of infection in this outbreak probably was the infected water from the well in the area. Each house had its own latrine and a well for drinking water. There is also a common well which all inhabitants of the 5 houses totalling about 40 persons use for washing. This well is about 6 ft. square and 4 ft. deep, dug out of the rock. During this period the level of the water was about a foot from the top. Presumably, the people immersed themselves in the water when washing so that gross pollution occurred. One of the patients with jaundice who refused medical attention at the hospital had returned to the village and used this well. Obviously he must have infected the water. The contracts were given Gamma Globulin. Wells in the infected area were chlorinated.

Acute Anterior Poliomyelitis

There has been a significant increase in the incidence of this disease during the year. 334 cases with 27 deaths were reported as against 68 cases with 5 deaths during the year 1956. The number of cases reported is almost 5 times that reported in 1956. The number of cases this year is the highest since this disease was made notifiable in 1948.

Table XXIX—Acute Anterior Poliomyelitis

<i>Year</i>			<i>Cases</i>	<i>Deaths</i>
1948	..	..	301 ..	37
1949	..	..	109 ..	15
1950	..	..	190 ..	27
1951	..	..	212 ..	19
1952	..	..	241 ..	30
1953	..	..	155 ..	15
1954	..	..	114 ..	15
1955	..	..	78 ..	8
1956	..	..	68 ..	5
1957	..	..	334 ..	27

Parangi (Yaws)

A total of 625 cases was reported which shows a slight increase compared to 409 cases reported during the year 1956. Of these 625 cases 315 were infective and 310 non-infective. All the infective cases reported were treated.

An analysis of these cases by provinces is given in Table No. XXX. It will be observed that once again the largest number of cases are from the Southern Province with the North-Western Province coming second. Officers of the Anti-V. D. Campaign carried out a special survey in the Southern Province and North-Western Province areas. The treatment of Parangi cases was carried out by Medical Officers attached to the Anti-V. D. Campaign as well as by Medical Officer of Health. Details of treatment given are in Table No. XXX (*see page 164*).

(iii) ANKYLOSTOMIASIS

During 1957 there were only 11 Anky Dispensers. Certificate of Competency to administer Mass Anky Treatment under medical supervision were issued to 58 Public Health Inspectors and 7 Public Health Nurses. The number treated during 1957 was 2,571,613 as compared with 2,235,180 in 1956. Treatment given in 1957 is summarised in the following table:—

Table XXXI—Ankylostomiasis Treatment by all Agencies in 1956 and 1957

	1956		1957		
	<i>Total</i>		<i>Treatments</i>		<i>Total</i>
			<i>First</i>	<i>Subseq.</i>	
Govt. Institutions :					
(1) At institutions	.. 1,413,217	..	1,518,647	.. 34,691	.. 1,553,338
(2) Outside institutions	.. 373,616	..	487,500	.. 31,693	.. 519,193
Campaign Dispensers :					
(1) School children	.. 170,123	..	139,042	.. 100	.. 139,142
(2) Villagers	.. 37,391	..	84,841	.. —	.. 84,841
(3) Estate Labourers	.. 228,058	..	265,365	.. 400	.. 265,765
Estate Medical Staff	.. 12,775	..	8,463	.. 871	.. 9,334
Mandapam Camp	.. —	..	—	.. —	.. —
Total	.. 2,235,180	..	2,503,858	.. 67,755	.. 2,571,613

Table XXX—Parangi (Yaws), 1957

Province	No. of Cases			No. of Injections given						No. of Cases at the end of Year after Treatment			
	Total	Infectious	Non-Infectious	Treated	1st	2nd	3rd	4th	5th	Total	Total	Infectious	Non-Infectious
Western	..	..	..	..	..	..	..	..	..	..	..	..	..
Central	35	5	30	..	..	..	..	..	..	..	35	5	30
Southern	418	228	190	282	268	109	95	75	64	611	356	217	139
Northern	2	..	2	..	..	..	..	..	..	..	2	..	2
Eastern	16	..	16	..	..	..	..	..	..	..	16	..	16
North-Western	140	82	58	31	31	31	..	..	..	62	140	82	58
North-Central	12	..	12	..	..	..	..	..	..	..	12	..	12
Uva	..	..	..	..	..	..	..	..	..	..	..	..	..
Sabaragamuwa	2	..	2	2	2	2	2	2	..	8	2	..	2
Total..	625	315	310	315	301	142	97	77	64	681	563	304	259

CAMPAIGNS AGAINST SPECIAL DISEASES

(i)—Anti-Malaria Campaign

STAFF—ANTI-MALARIA CAMPAIGN, 1957

MAJOR STAFF	..	120	
S. A. M. C.	..	..	1
M. O., Grade I	..	..	1
M. O., Grade II	..	..	6
Entomologist	..	..	1
Secretary	..	..	1
<i>Clerks :</i>			
E. C. C., Grade I	..	..	1
E. C. C., Grade II	..	..	2
G. C. C.	..	..	15
A. C. S.	..	..	2
M. C. S., Grade I	..	..	1
M. C. S., Grade II	..	..	1
Q. C. S.	..	..	1
Temporary	..	..	1
Stenographer	..	..	1
P. H. I., Special Class	..	..	8
P. H. I., Class I	..	..	6
P. H. I., Class II	..	..	45
Transport Foreman	..	..	1
Entomological Assistants	..	..	11
Laboratory Assistants, Grade I	..	..	1
Laboratory Assistants, Grade II	..	..	12
Storekeeper	..	..	1
			<hr/> 120
MINOR STAFF	..	470	
(a) <i>Monthly-paid</i>	..	209	
Driver Overseers	..	..	19
Drivers	..	..	35
Overseers, Grade I	..	..	31
Overseers, Grade II	..	..	69
Field Attendants	..	..	24
Laboratory Sub-Assistants, Grade I	..	..	3
Laboratory Sub-Assistants, Grade II	..	..	2
Laboratory Cleaners	..	..	2
Peons	..	..	6
Office Orderlies	..	..	1
Watchers	..	..	2
Labourers	..	..	15
			<hr/> 209
(b) <i>Daily-paid</i>	..	261	
Hood makers	..	..	1
Motor Mechanics	..	..	1
Electrician	..	..	1
Welder	..	..	1
Tinkers	..	..	2
Mechanics	..	..	6
Assistant Mechanics	..	..	6
Blacksmith	..	..	1
Carpenters	..	..	2
Painter	..	..	1
Watcher	..	..	1
Labourers	..	..	238
			<hr/> 261

(i)—ANTI-MALARIA CAMPAIGN

Introduction

The beginning of the year 1957 saw the wave of malaria transmission that had been resumed at the end of 1956 reach its peak level. Residual spraying of houses in the Dry Zone was therefore carried out on an extensive scale, together with an intensive effort to detect and treat malaria cases within the limits of the available resources.

The year 1957 ended with environmental conditions particularly favourable for mosquito life in the Dry Zone though the seasonal rise in transmission in this Zone was subdued in spite of these adverse conditions.

The Government of Ceylon accepted a Scheme for Malaria Eradication in Ceylon, to be attained in five years. The results achieved during the year indicate that the principles on which the eradication scheme was drawn up have been sound.

The I. C. A. through the United States Operations Mission in Ceylon gave assistance to the Malaria Eradication Scheme to the extent of U. S. \$ 388,840 in 1957, with the prospect of further assistance to the extent of U. S. \$ 850,000 during the next four years.

A W. H. O. Malaria Assessment Team visited Ceylon during the year.

The personnel of the Anti-Malaria Campaigns were subjected to severe strain during the year as both large-scale spraying and some vigilance work had to be carried out by numbers that had been recruited in the past for spraying operations only.

Meteorological Conditions

The ranges of temperatures and humidities obtaining in malarial areas were always favourable for mosquito longevity. The rainfall during the year was such that while river conditions in the Wet and Intermediate Zones were not generally favourable for vector breeding, the conditions in the Dry Zone were, however, particularly favourable for malaria transmission.

Vigilance Work

General. A total of 32 Vigilance Units and 43 Vigilance Sub-Units functioned during the year. The Vigilance Sub-Units had to be depleted in order to provide Overseers for the new spraying units established for the large-scale spraying of the Dry Zone.

Vigilance work in the Wet and Intermediate Zones was mainly directed towards the detection of the vector species in the area where spraying remains interrupted. One focus of transmission which occurred in the Intermediate Zone was detected and cleared. Cases of malaria imported from the Dry Zone were also treated. In the Dry Zone the accent on vigilance. Work was on the detection and treatment of cases.

The Wet Zone. Three Vigilance Units and 1 Vigilance Sub-Unit were stationed in the area.

1. ENTOMOLOGICAL FINDINGS**1. Adult Mosquito Surveys (Vide Tables I & II)**

14,150 houses were examined by the "spray-catch" method and 3.8 per cent of the houses were found positive for Anophelines. Of a total of 634 Anophelines collected only 1 was *A. culicifacies*. 4,470 houses were examined by the "hand-catch" method and 19.4 per cent of these were positive for Anophelines. 3,262 Anophelines were collected by this method and there was only 1 *A. culicifacies* among them.

2. Larval Collections (*vide* Tables III & IV)

22,199 breeding places.

were examined for larvae and 22,581 larvae collected. Of these larvae 84 were *A. culicifacies*. 69 subsidiary observation sites on rivers were examined on 1,131 occasions. A total of 3,223 anopheline larvae were collected and 5 *A. culicifacies* were collected on one occasion.

2. EXAMINATION OF BLOOD SMEARS FROM FEVER CASES

1. A total of 3,948 blood smears were obtained from fever cases visiting medical institutions in Wet Zone and 21 were found to be positive for malaria parasites (*vide* Table V).
2. A further 172 blood smears were obtained in the course of field visits in the Western Province (*vide* Table VI) and only 1 was found to be positive.
3. All cases of malaria detected in the Wet Zone were cases imported from the Dry Zone areas.

The Intermediate Zone.—Eight Vigilance Units and 8 Vigilance Sub-Units were functioning in this area.

1. ENTOMOLOGICAL FINDINGS

1. Adult Mosquito Surveys (*vide* Tables I & II).

A total of 34,233 houses were examined by the "spray catch" method and 11.1% of these houses were positive for anophelines. A total of 9,126 anophelines were detected of which 57 were *A. culicifacies*. 14,570 houses were examined by the "hand-catch" method and 14.9% of these houses were positive for anophelines. Among them there were only 5 *A. culicifacies*.

2. Larval Collections (*vide* Tables III & IV).

51,576 breeding places were examined and 51,681 anopheline larvae collected. Of these larvae 224 *A. culicifacies* were collected from rivers and 49 from village breeding places.

117 subsidiary observation sites on rivers were examined on 2,046 occasions. Of 10,667 anopheline larvae collected a total of 57 larvae of *A. culicifacies* were found on 8 occasions.

2. EXAMINATION OF BLOOD SMEARS FROM FEVER CASES (*vide* Table V.)

12,740 blood smears were obtained from fever cases visiting medical institutions in the area and 146 of these were positive for malaria parasites. Except for one focus of transmission that occurred in the banks of the Maha Oya where 30 positives were detected and where the focus was soon cleared of transmission, the remaining cases were those imported from the Dry Zone.

Except for the focus mentioned, no transmission occurred in the Intermediate Zone during the year.

The Dry Zone.—Twenty-one Vigilance Units and 34 Vigilance Sub-Units functioned in this area during the year.

1. ENTOMOLOGICAL FINDINGS

1. *Adult Mosquito Surveys (vide Tables I & II).*

65,582 houses were examined by the "spray-catch" method and 8.9% of these were positive for anophelines. 20,263 anophelines were collected of which 1,493 were *A. culicifacies*. 23,162 houses were examined by the "hand-catch" method of which 7.6% were positive for anophelines. Of these 245 were *A. culicifacies*.

2. *Larval Collections (vide Tables III & IV).*

26,884 breeding places were examined from which 34,647 anophelines larvae were collected. Of these, 656 *A. culicifacies* were collected from rivers and 178 from village breeding places.

There were no *A. culicifacies* in 7 subsidiary sites on rivers examined 71 times during the year. The majority of the collections of *A. culicifacies* in the Dry Zone were from new huts detected in new clearings before they were sprayed. The Vigilance Staff here have now become adept at locating new clearings as well as in searching for *A. culicifacies*. Even so the number of *A. culicifacies* detected during this year when spraying was resumed on a large scale, have been markedly lower than that found last year.

2. EXAMINATION OF BLOOD SMEARS FROM FEVER CASES (*vide Tables V & VI*).

A total of 62,277 blood smears were obtained from fever cases at medical institutions, and 3,276 of these were positive for malaria parasites. The great majority of the 26,992 smears obtained from villages were during visits to treat the earlier mentioned positives. Among these, there were a further 3,368 positive cases.

Residual Spraying

A total of 31 mobile units were engaged in spraying during the year. Fourteen of these units were large Truck Units, while 17 of these were Jeep Units.

The staff employed in spraying were 10 Public Health Inspectors, 15 Driver Overseers, 15 Drivers, 47 Overseers and 206 spraying labourers.

The spraying was confined to the Dry Zone areas where all dwellings permanent and temporary, except those situated in a few urban areas, were sprayed.

No spraying was done in the Wet and Intermediate Zones except for the spraying of a focus on the banks of the Maha Oya. This spraying here was discontinued after 2 applications at 3-monthly intervals.

Spraying was generally carried out at intervals of three months. The insecticide mainly used during the year was 50% W/W Dieldrin. Various dosages were tried out but it appeared that at least .25 Grms/m² had to be applied at intervals of 3 months for effective mosquito control to be maintained on the type of houses in existence in sprayed areas.

Some cases of fits among labourers using Dieldrin were reported and these are being investigated.

Dieldrin was however popular with people who were impressed by its higher toxicity to other household pests.

Analysis of Blood Smears Examined (vide Tables V & VI)

A total of 105,957 blood smears were examined during the year, of which 6,811 were positive for malaria parasites. 4,245 of these positives were detected during the first quarter and were the result of transmission that had commenced during the last quarter of the previous year.

From January onwards there was a progressive and rapid decline in the number of positives being detected. The usual increase in numbers that were seen in previous years during October to December was also not evident this year, though rainfall in the Dry Zone was favourable for transmission.

In past years *P. vivax* infections and *P. falciparum* infections appeared to compete with each other for pride of place, but during this year *P. falciparum* infections have receded greatly and this was markedly in evidence as the year progressed.

An analysis of smears examined in respect to diagnosis made at institutions yielded the following results:—

Total No. of all fever cases sampled and analysed	..	53,064
Total No. of all fever cases positive for malaria parasites	..	1,555
Percentage positive in 1957 ..	..	2.9
Percentage positive in 1956 ..	..	3.5
Percentage positive in 1955 ..	..	2.2
Number diagnosed malaria ..	..	313
Number diagnosed malaria and positive	..	108
Percentage positive in 1957 ..	..	34.5
Percentage positive in 1956 ..	..	7.3
Percentage positive in 1955 ..	..	7.1
Number not diagnosed malaria	..	52,751
Number not diagnosed malaria but positive ..	..	1,447
Percentage positive in 1957 ..	..	2.7
Percentage positive in 1956 ..	..	3.4
Percentage positive in 1955 ..	..	2.0

The number of smears from institutions this year was less than in previous years, as personnel doing this work at institutions were withdrawn for spraying. It would however appear that the diagnosis of malaria is now being made more cautiously, but a very great number of cases are yet being missed at these institutions.

Malaria Morbidity (Vide Tables VIII & VII A)

1. There were 6,999 malaria diagnoses made at outdoor dispensaries during the year.
2. The number of positive smears obtained by part-time work at these institutions was 3,443.
3. The total number of positive smears detected including those from foci of transmission was 6,811.

The recurrence of transmission during the latter part of 1956 and in 1957 appears to have brought malaria once more to the minds of officers at these institutions and the situation appears to be a great deal better than that of last year when the number of diagnoses at institutions was less than half the number of positive detected by vigilance work.

Malaria Mortality

Thirty-one deaths were reported as due to malaria during the year and 28 of them were investigated. Eight of those investigated appeared to be due to malaria while the remaining 20 appeared to be due to other causes.

Health Education

The Division participated in the Central Health Exhibition held at Kandy during the All-Ceylon Health Week. An exhibit on malaria was prepared for the Faculty of Medicine of the University of Ceylon. A folder "Eradicate Malaria" was prepared for the use of Vigilance Personnel and Medical Institutions.

The Repair Workshop

The workshop attached to this Division carried out the maintenance and repairs of all 55 vehicles belonging to the Anti-Malaria Campaigns. All repairs to spraying equipment were also carried out in this workshop. The cost of maintenance and repairs of the 55 vehicles of this Division exclusive of fuel costs was Rs. 44,150.00. Major and minor repairs to 82 other vehicles of the Department of Health Services were carried out at a cost of Rs. 26,522.00.

Consumption of Drugs and Insecticides for the Year

The insecticides used during the year were those purchased in previous years. 123,250 lb. of Dieldrin, 50% w/w Powder, 43,559 lb. of B. H. C. P. 520 and 114,575 lb. of 75% w/w D. D. T. were used during the year.

A total of 105,600 (200 mgm.) tablets of Amodiaquine and 222,275 (7.5 mgm.) tablets of Primaquin were used in treatment of fever cases during the year. The cost of Amodiaquine was Rs. 7,392.00 and that of Primaquin Rs. 7,779.63. The total cost of anti-malaria drugs used was Rs. 15,171.63. The only purchases in drugs were, however, that of 125,000 tablets of Primaquin. The rest of the drugs used were from stocks remaining over from previous years.

Statement of Costs (Vide Tables X, XI & XII)

The total sum of Rs. 1,700,443.00 was expended out of funds voted for the year. Of this sum Rs. 1,250,821.00 was spent on salaries and wages, Rs. 212,200.00 on travelling expenses of personnel and Rs. 199,000.00 on repair and maintenance of vehicles including fuel costs.

The cost of residual spraying alone was Rs. 1,467,124.72 inclusive of the costs of insecticides previously purchased. The cost of insecticides used was Rs. 845,542.33. The cost of application per house was Rs. 1.74.

The total costs incurred during the year's operations was Rs. 2,555,408.88. The cost per capita protected was Rs. 0.47. The increase in per capita cost of .10 cts. has occurred over that of last year due to the additional expenditure incurred on the extension of spraying in the Dry Zone.

The Malaria Eradication Project

The plan for the eradication of malaria from Ceylon was accepted by the Government during the current year. The expanded spraying programme which was contemplated during the initial stages of this plan has been already undertaken to almost its full extent. The expansion of the Vigilance Programme has not been possible due to the lack of additional accommodation required for this purpose, in respect of the additional laboratory and office needs.

It is hoped however that these additional needs of accommodation will be satisfied, and that the programme will have been fully implemented during 1958.

I. C. A. Assistance through the U. S. O. M. in Ceylon

The assistance for the project for the five years of its operation would be U. S. \$ 4,914,260. Of this sum the expenditure on insecticides, motor vehicles, laboratory equipment and material, and other off-shore supplies was estimated to be U. S. \$ 1,238,840.

Ceylon is grateful to I. C. A. for the offer of assistance to the extent of U. S. \$ 1,238,840 for this five-year period for the purchase of all off-shore supplies required for the project.

A sum of U. S. \$388,840.00 has been already granted for the purchase of 400 tons of 75 per cent. w/w D. D. T., 42 motor vehicles, 45 microscopes and other laboratory equipment and supplies which are now arriving. A further sum of U. S. \$ 144,000.00 has been allocated for the year 1958, while it is anticipated that an additional \$ 700,000.00 will be made available during the three succeeding years.

W. H. O. Assessment Team

Consisting of Dr. S. Avery Jones, Malariologist, Dr. W. Buttiker, Entomologist, and 2 technicians visited Ceylon from February to June, 1957. Dr. M. Farinaud was Consultant to the Team. Their investigations confirmed our findings as regards the problems of residual foci of transmission occurring in Ceylon. An interesting report was submitted by the Team at the conclusion of its work after discussions with Dr. Farinaud and Dr. D. K. Visvanathan, the Regional Adviser for Malaria, S. E. A. R.

Accommodation

The problem of lack of accommodation continues to be acute and holds up progress of the Malaria Eradication Project. The buildings allocated to the Division at Narahenpitiya will be reconditioned and made available early.

Summary and Conclusions

The first quarter of the year was marked by a high rate of transmission which was occasioned by the re-invasion of settled areas by the vector species. As the year progressed and affected areas came under spraying,

while at the same time cases were detected and treated, this transmission rapidly declined, and continued to decline through the period of seasonal transmission which takes place at the end of the year.

The proportion of cases of infection with *P. falciparum* also continued to decline as the year progressed.

The incidence of malaria in Sabaragamuwa and Southern Provinces, where more intense work was possible within the limited resources available, declined to negligible proportions during the year. It would therefore appear that interruption of transmission can be accelerated in a large-scale programme by the use of both drugs and insecticides. Such a low level of transmission as appears to be obtaining at present does not appear to have obtained even after 10 years of uninterrupted spraying alone.

It would also appear that certain parts of the Island are now ripe for interruption of spraying, but it is not possible for this to be done before further large-scale surveys are carried out for the purpose of ascertaining the gametocyte reservoir present in these areas, and before an organisation which is capable of the early detection of resumption of transmission if it does occur, is set up.

Though malaria is at a low ebb at the moment it is not likely that within the available resources it could be reduced to much lower proportions. It is however a propitious moment for the commencement of the Eradication Scheme which could progress rapidly from this point, if undertaken immediately before another transmission season commences.

Staff

The staff assigned to the Division are detailed in Annexure A.

Except for one post, the Entomological Assistants have been replaced by Public Health Inspectors.

Five Public Health Inspectors and one Entomological Assistant experienced in anti-malaria work were appointed to assist the Regional Public Health Inspectors in the supervision of work in the four regions.

Visitors to the Anti-Malaria Campaign

The following visited the Campaign during the year :—

- Dr. M. C. Balfour—Associate Director, Rockefeller Foundation.
- Dr. V. Sandhinand—Thailand.
- Dr. Mao Tsing Wu—China.
- Dr. H. C. Hsieh—Formosa.
- Mr. S. Y. Lieu—Formosa.
- Mr. J. Henderson—C. D. C., Atlanta.
- Dr. T. Baker—I. C. A., India.
- Dr. D. K. Visvanathan, W. H. O. Regional Adviser for Malaria, S. E. A. R.
- Dr. S. Avery Jones, Dr. W. Buttiker, Miss T. Lowey and Mr. P. Beales, all of the W. H. O. Assessment Team.
- Dr. Treis Johnson, Public Health Adviser, U. S. O. M.

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Table I—Summary of Anopheline Investigations, 1957

(COMPARED WITH 1956)

ADULT MOSQUITOES (SPRAY CATCH)

Locality	No. of Houses examined		Percent. Houses pos. for Anop.		No. Anophelines			No. Culicines	
	1956	1957	1956	1957	Total	No. A. culicif		1956	1957
						1956	1957		
Dry Zone :									
1. Hill-Country	..	2,143 ..	2,535 ..	1.1 ..	0.6 ..	60 ..	37 ..	1,327 ..	1,476
2. Low-Country									
(a) Kurunegala District	..	5,055 ..	10,671 ..	5.4 ..	7.9 ..	493 ..	2,250 ..	1,014 ..	5,564
(b) Chilaw and Puttalam Districts	..	7,176 ..	7,020 ..	16.7 ..	8.6 ..	3,570 ..	1,918 ..	3,358 ..	4,267
(c) Anuradhapura District	..	10,241 ..	10,555 ..	9.6 ..	9.1 ..	9,746 ..	4,581 ..	1,760 ..	4,083
(d) Vavuniya and Mannar Districts	..	8,813 ..	6,387 ..	7.9 ..	12.8 ..	4,476 ..	4,463 ..	868 ..	2,163
(e) Jaffna District	..	10,039 ..	6,998 ..	17.2 ..	21.5 ..	4,269 ..	3,344 ..	4,036 ..	5,816
(f) Matale District	..	2,647 ..	3,986 ..	1.5 ..	0.9 ..	183 ..	64 ..	192 ..	495
(g) Kandy District	..	1,286 ..	2,390 ..	4.9 ..	2.8 ..	129 ..	123 ..	1,011 ..	617
(h) Badulla District	..	1,641 ..	3,686 ..	2.3 ..	0.3 ..	399 ..	15 ..	400 ..	982
(i) Batticaloa District	..	5,504 ..	9,159 ..	6.6 ..	7.4 ..	1,389 ..	2,414 ..	3,800 ..	5,236
(j) Hambantota and Embilipitiya areas	..	384 ..	2,195 ..	4.9 ..	13.8 ..	29 ..	1,054 ..	123 ..	1,813
Total	..	54,929	65,582	9.9	8.9	24,743	20,263	17,889	32,512
Intermediate Zone :									
1. Hill Country	..	5,752 ..	5,709 ..	1.9 ..	1.9 ..	192 ..	179 ..	1,685 ..	1,909
2. Low-Country									
(a) Northern Section	..	24,492 ..	22,863 ..	10.5 ..	15.5 ..	5,541 ..	8,110 ..	23,203 ..	28,557
(b) Southern Section	..	5,413 ..	5,661 ..	4.5 ..	2.9 ..	1,413 ..	837 ..	760 ..	781
Total	..	55,657	54,233	8.3	11.1	7,146	9,126	25,648	31,247
Wet Zone	..	7,494 ..	14,150 ..	4.1 ..	3.8 ..	432 ..	634 ..	2,845 ..	8,327

Table III—Summary of Anopheline Investigations, 1957

(COMPARED WITH 1956)

ANOPHELINE LARVAE

Locality	B. P.P. Exd.			Larvae		Larval Rate		A. culicifacies			
								River		Village	
	1956	1957	1956	1956	1957	1956	1957	1956	1957	1956	1957
<i>Dry Zone:</i>											
1. Hill-Country ..	1,392	792	2,225	1,350	3.7	9.5	3.7	3	19	—	—
2. Low-Country—											
(a) Kurunegala District ..	4,623	5,105	5,163	6,903	4.9	8.9	4.9	200	142	61	13
(b) Chilaw and Puttalam Districts ..	4,183	2,387	17,635	6,072	10.6	13.9	10.6	1,170	79	291	4
(c) Anuradhapura District ..	5,511	4,965	6,541	3,665	5.3	6.8	5.3	800	114	12	8
(d) Vavuniya and Mannar Districts ..	2,272	1,057	4,444	3,459	10.5	13.5	10.5	2	159	262	85
(e) Jaffna District ..	4,678	3,912	6,880	3,043	10.0	19.9	10.0	21	—	79	27
(f) Matale District ..	739	1,069	1,759	2,003	7.4	10.2	7.4	4	32	26	18
(g) Kandy District ..	1,840	1,819	2,591	2,011	9.7	8.6	9.7	106	33	13	10
(h) Badulla District ..	1,264	1,391	2,251	965	3.7	11.3	3.7	48	23	10	9
(i) Batticaloa District ..	1,251	3,199	1,960	4,370	9.1	6.8	9.1	58	41	2	2
(j) Hambantota and Embilipitiya areas ..	1,191	1,188	736	806	5.0	6.1	5.0	27	14	—	2
Total ..	28,944	26,884	52,185	34,647	6.8	10.9	6.8	2,439	656	756	178
<i>Intermediate Zone:</i>											
1. Hill-Country ..	11,054	2,965	15,180	6,146	13.0	8.2	13.0	33	92	1	17
2. Low-Country—											
(a) Northern Section ..	40,944	36,786	54,748	34,263	6.8	9.6	6.8	468	125	47	32
(b) Southern Section ..	12,849	11,825	9,578	11,272	9.9	7.1	9.9	1	7	—	—
Total ..	64,847	51,576	79,506	51,681	7.9	8.9	7.9	502	224	48	49
<i>Wet Zone</i>											
..	17,211	22,199	17,904	22,581	9.2	8.9	9.2	1	84	—	—

Wet Zone

Table IV—Summary of Anopheline Investigations carried out at Observation Stations—1957

(COMPARED WITH 1956)

Zone	No. of Sites		No. of Exams.		No. of times River in spate		No. of times pos. for Anop. larvae		Anop Larv.		A. culicif.		Times pos. for A. culicif.		Months pos. for A. culicif	
	1956	1957	1956	1957	1956	1957	1956	1957	1956	1957	1956	1957	1956	1957	1956	1957
Dry Zone	7	7	176	71	56	17	34	10	520	339	1	—	1	—	July	—
Intermediate Zone	114	117	2,869	2,046	584	627	1,256	728	18,353	10,667	472	57	29	8	..	..
Wet Zone	72	69	1,455	1,131	449	329	318	240	4,206	3,223	10	5	4	1	..	..

Table V—Blood Smear examinations from Medical Institutions, 1957
Wet, Intermediate and Dry Zones

Zone	No. Exd.	No. Pos.	B. T.	M. T.	Q.	Mix.	% Pos.
Wet	.. 3,948	.. 21	.. 18	.. 3	.. —	.. —	.. 5
Intermediate	.. 12,740	.. 146	.. 93	.. 53	.. —	.. —	.. 1.1
Dry	.. 62,277	.. 3,276	.. 2,093	.. 1,160	.. 18	.. 5	.. 5.3
Total	.. 78,965	3,443	2,204	1,216	18	5	4.4

Table VI—Blood Smears received from Village Visits, 1957

Province	No. Exd.	No. Pos.	B. T.	M. T.	Q.	Mix.
Western	.. 172	.. 1	.. 1	.. —	.. —	.. —
Central	.. 1,524	.. 339	.. 204	.. 133	.. 1	.. 1
Southern	.. 996	.. 12	.. 10	.. 2	.. —	.. —
Northern	.. 4,215	.. 285	.. 136	.. 149	.. —	.. —
Eastern	.. 3,941	.. 390	.. 177	.. 211	.. 1	.. 1
North-Western	.. 3,547	.. 1,005	.. 591	.. 413	.. —	.. 1
North-Central	.. 9,269	.. 896	.. 681	.. 210	.. 3	.. 2
Uva	.. 3,174	.. 434	.. 132	.. 300	.. —	.. 2
Sabaragamuwa	.. 154	.. 6	.. 3	.. 3	.. —	.. —
Total	.. 26,992	3,368	1,935	1,421	5	7

Table VII—Blood Smear examinations from Villages by Districts, 1957

District	No. Exd.	No. Pos.	B.T.	M.T.	Qc.	Mixed
Colombo	.. 73	.. 1	.. 1	.. —	.. —	.. —
Negombo	.. 99	.. —	.. —	.. —	.. —	.. —
Kalutara	.. —	.. —	.. —	.. —	.. —	.. —
Kandy	.. 349	.. 59	.. 29	.. 30	.. —	.. —
Matale	.. 1,155	.. 280	.. 175	.. 103	.. 1	.. 1
Nuwara Eliya	.. 20	.. —	.. —	.. —	.. —	.. —
Galle	.. —	.. —	.. —	.. —	.. —	.. —
Matara	.. 34	.. 5	.. 4	.. 1	.. —	.. —
Hambantota	.. 962	.. 7	.. 6	.. 1	.. —	.. —
Jaffna	.. 1,204	.. 63	.. 33	.. 30	.. —	.. —
Vavuniya	.. 1,806	.. 105	.. 86	.. 19	.. —	.. —
Mannar	.. 1,205	.. 117	.. 17	.. 100	.. —	.. —
Batticaloa	.. 2,928	.. 354	.. 151	.. 202	.. 1	.. —
Trincomalee	.. 1,013	.. 36	.. 26	.. 9	.. —	.. 1
Kurunegala	.. 3,234	.. 984	.. 581	.. 402	.. —	.. 1
Puttalam	.. 85	.. 8	.. 1	.. 7	.. —	.. —
Chilaw	.. 228	.. 13	.. 9	.. 4	.. —	.. —
Anuradhapura	.. 6,811	.. 639	.. 474	.. 161	.. 2	.. 2
Tamankaduwa	.. 2,458	.. 257	.. 207	.. 49	.. 1	.. —
Badulla	.. 3,174	.. 434	.. 132	.. 300	.. —	.. 2
Ratnapura	.. 137	.. 2	.. 1	.. 1	.. —	.. —
Kegalla	.. 17	.. 4	.. 2	.. 2	.. —	.. —
Total	.. 26,992	3,368	1,935	1,421	5	7

Table VIII—Malaria Morbidity (Clinical Diagnosis and Positive Smears detected), 1957

<i>Name of District</i>	<i>No. of Smears from Fever cases</i>	<i>No. Positive for malaria parasites</i>	<i>Malaria cases (Clinical diag- nosis) at Outdoor Dispensaries</i>
Colombo	414	13	12
Negombo	476	6	1
Kalutara	5	3	—
Kandy	4,965	62	43
Matale	5,178	502	320
Nuwara Eliya	1,227	7	—
Galle	4	—	—
Matara	850	2	—
Hambantota	5,298	15	3
Jaffna	4,120	221	96
Mannar	4,386	250	177
Vavuniya	3,968	207	45
Batticaloa	10,971	382	1,769
Trincomalee	1,584	78	56
Kurunegala	6,611	892	1,045
Puttalam	1,701	43	303
Chilaw	2,532	25	220
Anuradhapura	5,027	418	1,625
Tamankaduwa	542	91	1,250
Badulla	8,475	206	30
Ratnapura	8,441	10	4
Kegalla	2,190	10	—
Total	78,965	3,443	6,999

TABLE VIIIA

Malaria Morbidity for the Island

(Clinical Diagnosis)

<i>Year</i>	<i>* Estimated Population</i>	<i>Number of Malaria Cases</i>	<i>Morbidity Rate per 1,000</i>
1936	5,642,000	2,947,555	522
1937	5,725,000	2,308,976	403
1938	5,826,000	2,053,079	352
1939	5,916,000	3,210,795	543
1940	5,972,000	3,413,618	572
1941	6,178,000	3,220,360	521
1942	6,179,000	3,225,477	522
1943	6,296,000	2,141,329	340
1944	6,442,000	1,672,478	260
1945	6,650,000	2,539,949	382
1946	6,854,000	2,768,385	404
1947	7,037,000	1,459,880	207
1948	7,244,000	775,276	107
1949	7,455,000	727,769	98
1950	7,678,000	610,781	80
1951	7,876,000	448,100	57
1952	8,074,000	269,024	33
1953	8,290,000	91,990	11
1954	8,520,000	29,650	3.5
1955	8,723,000	7,317	0.84
1956	8,929,000	3,100	0.35
1957	9,165,000	6,999	0.76

* Source : Registrar-General's Report on Vital Statistics, 1956

TABLE X

Cost of Residual Spraying, 1957

		<i>Rs.</i>	<i>c.</i>
Number of applications	.. 843,464		
Salary and allowances	..	176,876	57
Wages	..	309,159	53
Travelling	..	74,426	72
Transport	..	61,119	57
Materials and equipment	..	845,542	33
Total cost	..	1,467,124	72
Cost per application	..	1	74

TABLE XI

Total Cost of Malaria Control, 1957

		<i>Rs.</i>	<i>c.</i>
Personal emoluments	..	1,250,821	0
Travelling	..	212,200	0
Transport	..	199,000	0
Materials (Insecticides)	..	852,277	33
Capital expenditure	{ on vehicles	—	
	{ on spraying	—	
Rent of stores and garage	..	241	0
Drugs	..	15,171	63
Stationery and office furniture	..	3,525	0
Uniforms and holiday warrants	..	18,041	0
Miscellaneous	..	2,819	0
Laboratory requisites	..	1,312	92
Total cost	..	2,555,408	88
Population protected	..	5,427,400	
Cost per capita	..		47 Cts.

TABLE XII

Expenditure on Malaria Control, 1957

		<i>Rs.</i>	<i>c.</i>
Personal emoluments	..	1,250,821	0
Travelling	..	212,200	0
Transport	..	199,000	0
Materials	..	6,735	0
Capital expenditure	{ on vehicles	—	
	{ on spraying equip-	—	
	ment		
Rent of stores and garges	..	241	0
Drugs	..	7,061	0
Stationery and office furniture	..	3,525	0
Uniforms and holiday warrants	..	18,041	0
Miscellaneous	..	2,819	0
Total	..	1,700,443	0

(ii) ANTI-FILARIASIS CAMPAIGN

General

Activities of the Filariasis Campaign carried out during the year were mainly restricted to the following areas of Bancroftian Filariasis and as in previous years the detection and treatment of microfilaria cases and reduction of insect vector were the main activities carried out.

Bancroftian Areas :

- | | |
|-------------------------------------|------------------|
| (1) Dehiwala-Mt. Lavinia U. C. area | (8) Beruwela |
| (2) Kotte | (9) Kalutara |
| (3) Kolonnawa | (10) Induruwa |
| (4) Peliyagoda (Ja-Ela) | (11) Ambalangoda |
| (5) Negombo | (12) Galle |
| (6) Moratuwa | (13) Weligama |
| (7) Panadura | (14) Matara |
| | (15) Unawatuna |

Malayi Areas

Malayi Filariasis is not a Public Health problem now, but residual follow up work had to be carried out in the following Malayi Areas :—

- | | |
|----------------|---------------|
| (1) Walasmulla | (3) Bingiriya |
| (2) Wariyapola | (4) Toppur |

Staff

The staff consisted of the following :—

- Superintendent, Filariasis Campaign
- Assistant Superintendent, Filariasis Campaign
- 5 Clerks
- 2 Medical Laboratory Technologists (permanent)
- 1 Medical Laboratory Technologist (temporary)
- 2 Temporary Technicians
- 1 Laboratory Sub-Assistant
- 21 Public Health Inspectors
- 2 Apothecaries
- 1 Nurse
- 1 Draughtsman (temporary)
- 2 Field Attendants
- 23 Overseers (temporary)
- 136 Labourers (temporary)
- 1 Peon
- 1 Watcher
- 2 Drivers (permanent)
- 2 Drivers (temporary)

Vector Control

Urban Filariasis. The towns mostly affected by this type of Filariasis are those in the coastal belt extending from Negombo in the North to Matara in the South.

TABLE XXXII gives a sample of breeding places in Dehiwala-Mt. Lavinia areas.

TABLE XXXII

		Dehiwela-Mt. Lavinia								
Type of breeding place	1949	1950	1951	1952	1953	1954	1955	1956	1957	
Catchpits ..	3,249..	4,063..	4,173..	4,266..	4,616..	6,156..	6,339..	6,579..	5,885	
Pools ..	— ..	68..	125..	138..	170..	642..	884..	1,914..	929	
Borrow pits ..	1,392..	412..	561..	582..	709..	1,423..	1,619..	1,619..	1,814	
Other breeding places ..	702..	1,624..	2,035..	2,093..	3,998..	8,906..	9,171..	9,276..	16,808	
Total ..	5,343	6,167	6,894	7,079	9,493	17,127	18,013	19,388	25,436	

Control of the vector of Urban Filariasis (i.e., *Culex Fatigans*—common household mosquito) was tackled in two ways during the year:

- (i) Chemical methods.
- (ii) Eradication of breeding places.

Chemical Methods

Larval Control: Systematic application of larvicides to catchpits and other breeding places was carried out in the following areas on a weekly cycle:—

Dehiwala, Peliyagoda, Wattala, Kotte, Kolonnawa, Ratmalana, Moratuwa, Panadura, Kalutara, Beruwala, Ambalangoda, Galle M. C., Weligama, Matara and Negombo M. C.

The main larvicide used during the year was B. H. C. in diesel oil. This larvicide is now getting less and less effective and will be used only till the present stocks are over.

On an experimental scale insecticides of the phosphate group were introduced, preparations used being malathion in diesel oil. In Dehiwala and other areas where satisfactory results could not be obtained with Gammaxene, Malathion in diesel oil was used fully in the larvicidal programme. The results are satisfactory, but it has to be restricted to catchpits only till further experience is gained. At present it is not used in open water collections in gardens which are accessible to domestic animals.

In huskpits at Matara dieldrin emulsion was used with satisfactory results, but the results obtained now are not satisfactory. Problem of controlling breeding of mosquitoes in huskpits is now a problem of testing new insecticides every year.

With all these difficulties efficiency rates on treated breeding places have been maintained by using larger quantities of insecticides and using different types.

TABLE XXXIII gives details of larvicides used and the efficiency rates maintained during the year.

TABLE XXXIII

Areas	No. of Catchpits treated	No. of other Breeding places treated	Larvicides Used	Efficiency Rate
Dehiwela ..	5,885 ..	19,551 ..	B.H.C. 30%, 2% Malathion in Diesel Oil B.H.C. Dust 5% ..	97%
Ratmalana ..	61 ..	222 ..	B.H.C. Dust in Diesel Oil ..	100%
Peliyagoda ..	139 ..	1,366 ..	B.H.C. 3%, 10% in Diesel oil with Malathion ..	96%

<i>Areas</i>	<i>No. of Catchpits treated</i>	<i>No. of other Breeding places treated</i>	<i>Larvicides Used</i>	<i>Effi- ciency Rate</i>
Kotte ..	2,224 ..	270 ..	B.H.C. 10% in Diesel Oil ..	98%
Kolonnawa ..	900 ..	1,337 ..	B.H.C. 3%.. 10% and Malathion in Diesel Oil ..	98%
Moratuwa ..	944 ..	8,511 ..	B.H.C. 12%, 5% and Malathion in Diesel Oil ..	93%
Panadura ..	862 ..	7,551 ..	Tech. Malathion & B.H.C. in Diesel Oil ..	93%
Kalutara ..	868 ..	1,773 ..	Malathion in Diesel Oil ..	98%
Beruwala ..	269 ..	1,869 ..	B.H.C. 10%, 3% and Malathion in Diesel Oil ..	91%
Ambalangoda ..	320 ..	165 ..	B.H.C. 3%, 12% and Malathion in Diesel Oil ..	97%
Galle ..	640 ..	4,263 ..	D.D.T. in Diesel Oil and Dieldrine 20 ..	95%
Weligama ..	397 ..	1,352 ..	B.H.C. 5%, 10% and Malathion in Diesel Oil ..	96%
Matara ..	871 ..	6,770 ..	B.H.C. 30% in Diesel Oil and Dieldrine 20% and Dieldrine Flakes ..	78%

Adult Control

In addition to the anti-larval measures described above, insecticidal fogging directed against the adult mosquitoes was carried out on an experimental basis in selected areas, i.e., Ratmalana, Mount Lavinia, Dehiwala, Angoda and Polhena (in Matara). These areas were selected due to the intensity of the mosquito breeding where application of larvicides was not giving satisfactory results. This work could not be carried out continuously throughout the year as the land-rover used for transporting equipment was required for weedicidal work during the first and second quarters of the year. The vehicle had again to be withdrawn during July, October and November for other work.

The fogging unit consisted of one land-rover with driver, one overseer, two labourers, one dyna-fog machine and one swing-fog machine. The fogging formulation was light diesel oil mixed with 30 per cent. B. H. C. and 2 per cent malathion. Several mixtures had been used previously and the present preparation has been found to give the best results. Fogging was carried out between 5 p.m. and 7 p.m. and an average of 50 houses can be fogged with one fogging machine. An economical unit should consist of at least 6 fogging machines to enable 300 houses to be fogged in one evening. The work will have to be carried out on a weekly cycle as the maximum period of effectiveness does not exceed a week.

In Polhena area of Matara the numerous huskpits presented a special problem and a fogging unit was also established at Matara during the year.

In order to evaluate results mosquitoes were caught twice a week by spray catching in the selected houses in the fogged area. Comparison of the numbers caught before and after the experiment has indicated that fogging could be adopted as an effective anti-mosquito measure. This fact is borne out by the many demands made by the public to have their premises fogged.

Eradication of Breeding Places

With a view to reducing the number of catchpits a scheme of converting catchpits to seal pits was started during the year. Government aid was given to the householder at the rate of Rs. 60 per catchpit. Unfortunately

the scheme could have been put into operation only in the latter part of the year. Due to this reason only 535 catchpits have been converted during the year.

The problem of eradicating other breeding places is primarily a problem that comes under the local authorities in Urban areas and the commonest breeding places are : quarries, burrow pits, abandoned wells, obstructions in drains, empty containers, etc. It is almost impossible to control breeding in such places without the co-operation of the householder and the local authorities who should be held responsible for filling up large excavations. Special P. H. II attached to the campaign have taken action, in certain cases, under the Mosquito Borne Diseases (Prevention) Ordinance to compel householders and owners of property to keep their premises clean and free from mosquito breeding. But such action should be the normal work of the Range P. H. II in each health area and not be confined to the special staff attached to the campaign.

The installation of proper sewerage and water schemes in the towns immediately to the North and South of Colombo where Filariasis is endemic will go a long way in solving this problem. It is observed that installation of water schemes is already under way and the authorities concerned should see that every action is taken to complete the work without undue delay in the following towns :—

Peliyagoda	Weligama	Matara
Kolonnawa	Dehiwala	Moratuwa
Galle	Panadura	Kalutara
		Ambalangoda

Rural Filariasis

The closing of the year has been marked by a satisfactory conclusion in the fight against at least one aspect of this disease—Rural Filariasis. During the last few years, rapid strides were taken both in the reduction of the insect vector and the incidence of microfilariasis in the Malaya areas. The reduction of the insect vector (*Mansonia mosquito*) was achieved by destroying their natural breeding grounds—*Pistia* plants—which grow profusely on the water surfaces, of tanks, canals, elas, etc. The destruction of this plant was carried out by chemical means, i.e., spraying of weedicides (Phenoxyline 30P) on the leaves. Only those *pistia* infestations which were within one mile radius of human habitation were subjected to such treatment as the flight of the mosquito does not usually exceed this distance. The weedicial unit visited these areas during the middle of February, 1957, and covered parts of North-Western, North-Central, Southern and Eastern Provinces and a total extent of 316 acres were treated with weedicides. For details vide table XXXIV.

TABLE XXXIV
Statement showing Weedicial Work done during the Year 1957

Areas	Period	No. of <i>Pistia</i> Infect- tion	Areas treated	Gallons <i>Phenoxyline</i> 30P.
<i>North-Western Province</i>				
Wariyapola ..	15. 2.57 to 2. 3.57	42	57	31
Kuliyapitiya ..	11. 3.57 to 24. 3.57	22	43½	27
<i>North-Central Province</i>				
Maho ..	4. 3.57 to 9. 3.57	9	14	8
<i>Southern Province</i>				
Walasmulla ..	6. 2.57 to 13. 2.57	39	52	38
Hambantota ..	14. 2.57 to 21. 2.57	25	41	83
Matara ..	22. 2.57	3	6½	1½
Weligama ..	23. 2.57	3	½	1½
Unawatuna ..	23. 2.57 to 26. 2.57	2	37½	19
Ambalangoda ..	27. 2.57 to 1. 3.57	14	39	12½
<i>Eastern Province</i> ..	8. 4.57 to 18. 4.57	29	25½	35½
	6. 2.57 to 18. 4.57	188	316½	255

Usually two programmes are arranged for each year but the extent of *Pistia* infestations during the second half of the year, when drought conditions prevailed, did not warrant the despatch of the unit to these areas. Rural Filariasis is no longer a problem and the two special P. H. II. stationed at Wariyapola and Walasmulla were withdrawn and the posts suppressed.

Parasite Control

Detection, treatment and freeing of microfilaria cases are the main functions of parasite control.

In order to detect microfilaria cases in the community blood surveys were carried out according to programmes in the various endemic areas. Blood sampling is done in the night between 9 p.m. and 11 p.m. During the year under review a total of 127,757 blood films were collected. Of these, 117,392 blood films were collected by the special P. H. II. attached to the campaign and 10,365 blood films by the range P. H. II. The total number found positive was 2,941 including 484 blood films taken from persons who had been previously positive. Leaving out the subsequent examinations, 127,273 persons had been blood-filmed during the year and 2,457 were found positive for microfilariae. Microfilaria rates for the last three years are given in Tables XXXV and XXXVI.

(For Table XXXV see page 187)

Table XXXVI—Blood and Entomological Findings

	Micro filaria Rate			Catching Rate per Man Hour			Infection Rate Percent.		
	1955	1956	1957	1955	1956	1957	1955	1956	1957
Dehiwala ..	2.3 ..	1.4 ..	2.3 ..	5.9 ..	7.1 ..	5.4 ..	8.4 ..	6.6 ..	11.6
Kolonnawa ..	1.9 ..	2.3 ..	3.1 ..	8.5 ..	21.0 ..	10.4 ..	6.8 ..	3.3 ..	2.9
Weligama ..	2.7 ..	0.93 ..	2.7 ..	4.9 ..	8.9 ..	5.0 ..	10.9 ..	6.0 ..	4.3
Beruwala ..	— ..	— ..	— ..	— ..	— ..	— ..	— ..	— ..	—
Kotte ..	1.2 ..	1.2 ..	1.3 ..	10.2 ..	15.2 ..	5.3 ..	5.8 ..	1.6 ..	2.8
Moratuwa ..	0.34 ..	0.17 ..	0.10 ..	6.5 ..	10.4 ..	5.4 ..	4.1 ..	2.1 ..	1.6
Matara ..	2.4 ..	1.8 ..	2.5 ..	23.5 ..	20.9 ..	35.4 ..	12.0 ..	9.1 ..	0.69
Ja-ela ..	3.2 ..	1.7 ..	3.7 ..	14.9 ..	29.1 ..	4.3 ..	6.4 ..	2.1 ..	2.02
Walasmulla ..	0.17 ..	— ..	— ..	— ..	— ..	— ..	— ..	— ..	—
Unawatuna ..	2.18 ..	2.6 ..	1.8 ..	4.7 ..	12.3 ..	5.2 ..	4.2 ..	3.5 ..	1.4
Ambalangoda ..	0.69 ..	0.97 ..	1.06 ..	3.2 ..	21.2 ..	4.1 ..	3.6 ..	0.8 ..	2.2
Panadura ..	— ..	— ..	— ..	— ..	— ..	6.9 ..	— ..	— ..	3.1
Wariyapola ..	0.05 ..	— ..	— ..	— ..	— ..	5.9 ..	— ..	— ..	—
Bingiriya ..	0.05 ..	— ..	— ..	— ..	— ..	— ..	— ..	— ..	—
Negombo ..	2.2 ..	1.7 ..	0.94 ..	— ..	— ..	9.2 ..	— ..	— ..	2.2
Kalutara ..	2.6 ..	2.0 ..	0.73 ..	— ..	— ..	5.8 ..	— ..	— ..	3.2

All microfilaria cases detected during the year have been afforded the necessary treatment. In all 2,888 cases including those from previous years were treated both in the field and at the various clinics. Details with regard to numbers treated and freed are given in Table XXXVII.

Table XXXV—Number of Blood Films taken, Number found Positive for Microfilaria for the Current Year and the Two Previous Years

Locality	1955			1956			1957		
	Blood Films taken	Number Positive	Percentage Positive	Blood Films taken	Number Positive	Percentage Positive	Blood Films taken	Number Positive	Percentage Positive
M. O. H., O. I. C., H. O., Area	..	367	2.4	..	247	1.4	..	379	2.3
Dehiwala	15,383	..	..	17,174	..	..	16,150	..	..
Kotte	15,238	189	1.2	7,625	98	1.3	16,548	223	1.3
Moratuwa	7,233	25	0.3	7,467	13	0.2	5,475	6	0.1
Induruwa	8,188	40	0.5	12,067	28	0.2	9,777	13	0.1
Ja-ela	5,833	190	3.3	8,273	146	1.8	7,419	278	3.7
Wariyapola	7,606	4	0.1	4,073	—	—	275	—	—
Mutur	212	—	—	—	—	—	—	—	—
Unawatuna	5,731	162	2.8	9,866	256	2.6	5,696	106	1.9
Weligama	9,235	254	2.8	4,364	41	0.9	6,481	181	2.8
Ambalangoda	8,818	61	0.7	13,592	132	1.0	8,824	94	1.1
Galle	3,399	143	4.2	7,193	234	3.3	4,759	298	6.3
Walasmulla	6,504	31	0.5	7,326	62	0.8	2,488	2	0.1
Matara	15,340	372	2.4	14,789	279	1.9	13,704	347	2.5
Bingiriya	3,977	2	0.1	931	—	—	—	—	—
Hambantota	440	1	0.2	253	—	—	—	—	—
Kolonnawa	18,393	355	1.9	3,603	84	2.3	3,064	98	3.2
Panadura	6,043	287	4.7	8,928	187	2.1	10,197	168	1.6
Negombo	5,580	125	2.2	8,107	142	1.8	4,451	42	0.9
Kalutara	10,235	275	2.7	13,606	284	2.1	5,697	42	0.7
Beruwala	1,465	19	1.3	—	—	—	4,094	161	3.9
Weeraketiya	—	—	—	—	—	—	—	—	—
Kurunegala	—	—	—	—	—	—	—	—	—
Special Survey	3,973	36	0.9	—	—	—	—	—	—
Kochchikade	—	—	—	438	—	—	—	—	—
Trincomalee	—	—	—	431	—	—	442	—	—
Casual	—	—	—	310	6	1.9	967	3	0.3
Kelaniya	—	—	—	—	—	—	765	16	2.1
	158,826	2,938	1.8	150,416	2,239	1.5	127,273	2,457	1.9

Table XXXVII—Treatment of Clinical and Microfilaria Cases, 1957

<i>Areas</i>	<i>No. of Clinics held</i>	<i>No. of Clinical Cases treated</i>	<i>No. of Microfilaria Cases treated</i>	<i>No. freed of Microfilaria</i>
Dehiwala ..	191 ..	514 ..	499 ..	384
Kotte ..	27 ..	25 ..	157 ..	52
Kolonnawa ..	47 ..	379 ..	88 ..	60
Ja-ela ..	49 ..	712 ..	319 ..	126
Moratuwa ..	48 ..	381 ..	6 ..	5
Panadura ..	48 ..	602 ..	191 ..	128
Kalutara ..	48 ..	129 ..	94 ..	80
Beruwala ..	50 ..	309 ..	181 ..	56
Induruwa ..	52 ..	114 ..	11 ..	12
Ambalangoda ..	67 ..	304 ..	106 ..	52
Galle ..	91 ..	1,136 ..	203 ..	45
Unawatuna ..	37 ..	94 ..	103 ..	139
Weligama ..	76 ..	136 ..	274 ..	171
Matara ..	97 ..	773 ..	597 ..	338
Walasmulla ..	5 ..	4 ..	2 ..	8
Wariyapola ..	— ..	1 ..	— ..	—
Negombo ..	49 ..	136 ..	57 ..	43
Total ..	982	5,749	2,888	1,699

Majority of the microfilaria cases were treated in the field by the special P. H. II. attached to the campaign. At Dehiwala and Matara two apothecaries functioned as Health Visitors and carried out house to house visits investigating and treating microfilaria cases and their contacts.

The current instructions regarding the treatment of microfilaria cases were revised late in the year to obtain quicker results. This was made possible as the cost of the drug, Diethylcarbamazine, had come down very considerably. Action was also taken to treat the contacts of microfilaria cases by giving them a course of 42 tablets while treating the patients. The patients themselves were given 126 tablets during a period of 22 days. This obviated the necessity of re-blood filming cases after treatment every six months for two years. According to the new instructions blood testing was necessary only at the end of two years, and follow-up work was cut down to the minimum.

Treatment of Clinical Cases

Clinical cases were treated at 17 clinics established in the following areas :—

<i>Station</i>	<i>Officer conducting clinic</i>
Dehiwala	Asst. Supdt., F. C.
Ratmalana	do
Moratuwa	M.O.H., Moratuwa
Ambalangoda	M.O.H., Ambalangoda
Matara	M.O.H., Matara
Peliyagoda	A.I.C/M.O.H., Jaela
Kolonnawa	M.O.H., Kolonnawa
Panadura	M.O.H., Panadura
Kotte	M.O.H., Kotte
Kalutara	Ch. M.O.H., Kalutara
Weligama	M.O.H., Weligama
Beruwela	D.M.O., Kalutara
Galle	M.O., O.D.D., Galle
Induruwa	M.O., P.U.
Bingiriya	M.O., P.U.
Wariyapola	D.M.A., Wariyapola
Walasmulla	M.O.H., Walasmulla

1,680 clinical cases have been detected during the year. An analysis of the clinical cases who attended the central clinic at Dehiwala is given below :

Elephantiasis of the leg	..	..	..	18
Lymphangitis of the leg	..	..	..	234
Lymphangitis of the arm	..	..	..	19
Adenitis	..	..	..	66
Hydrocele	..	..	..	8
Epididymitis	..	..	..	58
Lymphangitis of hand and leg	..	..	..	4
Lymphangitis of both legs	..	..	..	6
Others	..	..	..	101
Total				514

Health Education

The control of Filariasis is practically impossible without public co-operation. The health education activities of this Division have been directed with this end in view, i.e., to solicit the active co-operation of the public. Information with regard to the cause of the disease, mode of transmission, facilities available for the treatment of cases and the bodily deformities that could result due to failure to take timely treatment, has been given to the public by means of group talks, keroscope and cinema lectures. At the Central Health Exhibition at Kandy a special section on Filariasis was installed and wide publicity was given to the activities of the campaign. Literature on Filariasis in all three languages have been printed and these were distributed during house-to-house visits carried out in the course of night blood surveys.

Though the appeal to the curative aspect (i.e., blood filming and treatment) has met with a considerable measure of success, there is still scarcely any public health consciousness on the part of the residents in urban areas where filariasis is endemic. Complaints with regard to mosquito breeding nuisance have often been traced to mosquito-breeding in empty containers, cess pools, gutters, &c., of the premises of those who make these complaints. The breeding sources have been pointed out to the householders and instructions given with regard to their eradication. In a few cases there has been good response to the instructions and advice given by the special staff employed by the campaign, but the general attitude has been one of indifference and apathy.

Experiments

During the year the following experiments were carried out :

Experiments with Diasinon—Thiophosphoric acid—(2—isopropyl—4—Methylprimidyl—(6) diethylester) were continued in huskpits at Matara. Dosage used was one ounce of Diazinon 40 per cent water wettable powder dissolved in one gallon of water and applied at the rate of two ounces per square yard. Results were satisfactory to control *Culex fatigans* in husk-pits.

Experiments with an emulsion preparation of Malathion had been tried in catchpits. Technical Malathion in diesel oil is already used satisfactorily in the campaign. The emulsion preparation does not require the use of

diesel oil. Results are satisfactory in controlling *Culex fatigans* and the comparative cost of the two preparations have been worked out but there is not much difference.

Experiments with dieldrin flakes in the proportion of one ounce to one gallon of diesel oil were carried out in the huskpits at Matara. The results obtained were satisfactory.

Experiments with a new insecticide of the Phosphate group—Phosdrin 2 E.C—were carried out in catchpits. The preliminary experiments were very encouraging in that a very small quantity as 2cc can control the breeding in catchpits. If the costs are favourable many problems we have to face now in the application of larvicides can be solved.

Comments

Buildings. The office and the clinic are still located in buildings belonging to the Urban Council, Dehiwala, although the Urban Council has requested the release of the buildings.

Store accommodation available is also inadequate and a proper building to store the equipment and insecticides is urgently necessary.

(iii) ZOONOSES AND RABIES CONTROL

Rabies Control

Although the central authority for the eradication of rabies has now been vested with the Health Department and a scheme of eradication of Rabies has been prepared and finalised, a satisfactory campaign to entirely eradicate rabies in the Island could not be launched during the year owing to the difficulty of finding the necessary funds for the scheme. A batch of 15 Public Health Inspectors were given a comprehensive course of training in Rabies Control Work.

The Department also made attempts to get assistance from various International Agencies and also from United States Operation Mission to get two million doses of *avianized* anti-rabic vaccine for the purpose of carrying out a mass vaccination campaign in Ceylon. These attempts proved futile.

The Medical Research Institute examined 1,014 specimens of brains for rabies of which 678 proved positive, 228 samples were found negative and 108 samples were unfit for examination. A total of 331 specimens had to be subjected to biological test. Details are shown in Table XXXVIII.

Rabies occurred in the Island amongst the following categories: Dogs, cats, goats, calves, monkeys, jackals, and mongoose.

A total of 21,875 dogs were destroyed in the Island during the year, which is an improvement of nearly 5,000 over last year's figures for this activity. The number of dogs vaccinated also has increased by about the same figure for the year. A total of 21,993 dogs were vaccinated against rabies. A total of 11,548 people received post exposure anti-rabic treatment at various hospitals in the Island. The number of registered human deaths during the year was thirty-one.

A summary of the rabies situation and action taken by various Superintendents of Health Services Divisions during the year is contained in Table XXXIX.

Table XXXVIII

Province	Positive	Negative	Unfit	Total
C. M. C. (Exclusive Western)	115A ..	74E ..	3 ..	192
(Exclusive C. M. C.)	401B ..	90F ..	63J ..	554
Central	77C ..	30G ..	8 ..	115
Sabaragamuwa	12 ..	8 ..	3 ..	23
Uva	9 ..	7 ..	5K ..	21
Northern	5 ..	7H ..	5 ..	17
N. W. P.	8D ..	1 ..	5L ..	14
N. C. P.	9 ..	— ..	4 ..	13
Southern	37 ..	4(I) ..	6 ..	47
Western	5 ..	7 ..	6 ..	18
Total	678	228	108	1,014*

* Includes results of 331 biological tests.

A Includes 2 cats.

B Includes 6 cats, 2 calves, 3 human, 1 goat.

C Includes 2 cats.

D Includes 1 monkey.

E Includes 5 cats, 1 human.

F Includes 3 cats, 1 calf, 1 monkey.

G Includes 1 cat.

H Includes 1 jackal.

I Includes 1 mongoose.

J Includes 2 cats.

K Includes 1 monkey.

L Includes 1 jackal.

Table XXXIX

Area	No. of Dogs Destroyed	No. of Dogs Vaccinated	No. of Persons received Pasteur Treatment	No. of Human Deaths due to Rabies
C. M. C.	2,842	5,169 109*	5,031	10
SS. H. S.				
Anuradhapura	3,095	663	225	Nil
Badulla	1,124	1,981	876	1
Batticaloa	1,826	1,039	36	1
Colombo	750	3,103	847	Nil
Galle	1,843	1,566	1,640	9
Jaffna	1,249	15	5	Nil
Kalutara	169	926	923	2
Kandy	1,672	6,019	457	Nil
Kegalla	454	217	89	1
Kurunegala	733	389	472	Nil
Matale	796	15	303	Nil
Matara	2,618	391	504	5
Puttalam	795	196	124	Nil
Ratnapura	320	39	1	Nil
Vavuniya	1,589	156	15	2
Total	21,875	21,993	11,548	31

* From outstations.

Action was also taken to improve the enforcement of the Dog Registration Ordinance. There has been a satisfactory response from the local authorities in this respect.

4,333 dogs were seized in Colombo city. Of this number 1,178 dogs were redeemed after providing protective inoculations. The Colombo Municipal Veterinary Department has detailed two Veterinary Surgeons on full-time rabies control work to produce vaccine and to run an anti-rabic clinic.

Other Zoonoses

Owing to the absence of proper laboratory facilities a survey to carry out investigation to determine the incidence of other Zoonoses was not undertaken. During the year two persons died of anthrax and the Department took all precautions to prevent the spread of this disease.

Meat and Milk Hygiene

During the course of the year the Department inaugurated a scheme for the training of Public Health Inspectors in Food Control Work. Fifteen Public Health Inspectors underwent a course of training for a period of six weeks in all aspects of meat and milk hygiene and were awarded Certificates. The Department also lent a hand to the Agricultural Department in that the Public Health Veterinary Officer was made a member of the Inter-Departmental Committee on meat supply set up by the Minister of Food and Agriculture. The Committee has now recommended the formation of a National Meat Board in the country to deal with the unhygienic conditions prevailing at various stages of production handling and distribution of meat.

PERSONAL HEALTH SERVICES

(i)—MATERNITY & CHILD HEALTH

THERE has been a steady improvement in the Infant Mortality Rates and also in the Maternal Mortality Rates. However, in the case of pre-school children a similar improvement has not been noticed.

Among measures taken during the year for improving Maternity and Child Health work, arrangements were made for the hospitalisation of those expectant mothers whose haemoglobin index was below 40 per cent. Action taken in this direction has been encouraging and it is felt that by admitting such cases to institutions it would be possible to effect a further reduction in the Maternal Mortality Rate. Amongst other measures suggested for dealing with anaemia in expectant mothers are adequate antenatal care and treatment of severe anaemia with liver extract preparations where necessary, in addition to the routine treatment given with iron preparations. The assistance given at the Milk Feeding Centres was made freely available to expectant mothers to a greater degree than had hitherto been done.

Another measure taken during the year was to pay particular attention to eye defects among school children. The Vote provided by the Department of Education for the provision of spectacles to needy children was fully exhausted, and a supplementary estimate had to be obtained for this purpose.

Health Centres and Clinics

During the year under review 829 Health Centres functioned in various parts of the Island as compared with 807 in 1956. The number of clinics held during the year compares favourably with the number of clinics held in 1956. It is encouraging to note that a larger number of infants and pre-school children visited the clinics in 1957 than in 1956.

As it has been observed that in view of the very large attendance at Antenatal Clinics an efficient and good service is impossible, a system by which

the expectant mothers could visit the clinics by appointment was introduced during 1957. An appointment card was prepared and the system has now been introduced as a trial.

Table XL—Health Centres and Clinics

			1956		1957
Number of Health Centres	..	..	807	..	829
Number of Clinics held	..	..	32,893	..	32,153
Number under care—					
(i) Expectant mothers	..	..	495,429	..	486,152
(ii) Infants	..	..	375,518	..	383,444
(iii) Pre-school children	..	..	234,490	..	212,159
Visits to Clinics by—					
(i) Expectant mothers	..	..	438,777	..	402,545
(ii) Infants	..	..	496,314	..	560,066
(iii) Pre-school children	..	..	198,745	..	245,108

Public Health Nurses

The number of Public Health Nurses in 1957 was 128 as compared with 129 in the year 1956. Although there is no appreciable reduction in the number of Public Health Nurses, the number of homes visited by them as well as the number of visits to expectant mothers, infants and pre-school children have been less than in 1956.

Table XLI—Work of Public Health Nurses

			1956		1957
Number of Public Health Nurses	..	..	129	..	128
Number of Homes visited	..	..	84,485	..	82,762
Number of visits to—					
(i) Expectant mothers	..	..	58,937	..	48,435
(ii) Infants	..	..	75,296	..	71,984
(iii) Pre-school children	..	..	81,138	..	76,660

Field Midwives and their Work

The number of Public Health Midwives engaged in Domiciliary Midwifery work in 1957 was 1,381 as compared with 1,281 in 1956. Fifteen Midwives were appointed during 1957 to supervise the work of field midwives. It is encouraging to note that these midwives who function in a supervisory capacity are serving a very useful purpose.

The number of cases delivered by Field Midwives in 1957 was 73,857 as compared with 79,638 in 1956. The number of homes visited by field midwives in 1957 was 344,745 as compared with 358,455 in 1956. This, as in the case of the Public Health Nurses, is indicative of the general deterioration in the efforts of the Public Health Division of the Health Services.

Table XLII—Work of Field Midwives

			1956		1957
Number of Midwives	..	..	1,281	..	1,381
Number of homes visited	..	..	358,455	..	344,745
Number of cases delivered by Field Midwives	..	..	79,638	..	73,857
Number of cases sent to hospitals for delivery	..	..	36,651	..	33,308
Number of cases sent to Maternity Homes for delivery			14,131	..	14,547
Number of post-partum visits	..	..	622,984	..	656,691
Number of maternal deaths	..	..	37	..	37

(ii) SCHOOL HEALTH WORK

Owing to the shortage of medical personnel it has not been possible for Medical Officers to carry out medical inspection of school pupils at regular intervals in all schools as is required. Therefore, it was considered desirable that the services of Officers-in-charge, Health Offices, should be utilized for keeping pupils in schools under "health surveillance" on a form specially got up for the purpose when medical inspection is infrequent or not possible. This work entrusted to them is not of a highly technical nature and they have been called upon to go into defects which are the commoner ones and which can be detected by para-medical personnel. The advantage of this scheme is that any cases requiring special attention could be referred by these para-medical officers to a Medical Officer.

In 1957 there has been an increase in the number of personnel engaged in School Health work. The number of Medical Officers of Health and Apothecaries and Public Health Nurses engaged in this activity in 1957 was 56, 182 and 89 respectively as compared with 49, 174 and 43 in 1956.

(For Table XLIII, see page 195)

Medical Inspection of Pupils

The number of scholars examined in 1957 was 169,404 as compared with 151,072 in 1956. This increase in the number of scholars examined is due to the increased personnel allotted for this important activity. Of these scholars examined 120,534 had defects. This amounts to 71 per cent of the pupils in the schools examined had one or more defects. A large number of defects has been detected among the scholars examined and a larger proportion of defects detected has been corrected in 1957 than in 1956.

Table XLIV—Scholars Examined, 1957

Province			Total	Boys	Girls
Western	..	..	58,505	30,218	28,287
Central	..	..	21,740	11,532	10,208
Southern	..	..	27,113	13,842	13,271
Northern	..	..	19,620	10,464	9,156
Eastern	..	..	13,910	7,817	6,093
North-Western	..	..	14,013	7,572	6,441
North-Central	..	..	3,985	2,407	1,578
Uva	..	..	3,544	1,977	1,567
Sabaragamuwa	..	..	6,974	3,682	3,292
Total	..	..	169,404	89,511	79,893

Table XLIII—Personnel engaged in School Health Work in 1957

Province	Medical Officers of Health	School Medical Officers	M. O. doing Health Work	Women Medical Officers	School Health Nurses	Apothecaries	Public Health Inspectors	Public Health Nurses	School Dental Surgeons	School Dental Nurses	OO. % of Health Offices
Western	17	6	7	1	5	29	168	63	3	14	7
Central	6	1	13	—	1	43	65	6	—	—	3
Southern	8	2	6	—	1	11	52	—	—	—	8
Northern	5	—	18	1	1	23	62	4	—	—	5
Eastern	4	—	6	2	—	22	38	2	—	—	3
North-Western	8	—	16	—	—	15	72	10	—	—	4
North-Central	2	—	2	—	—	26	21	—	—	—	2
Uva	2	—	8	—	—	—	27	—	—	—	3
Sabaragamuwa	4	—	12	—	—	13	68	4	—	—	8
Total..	56	9	88	4	8	182	573	89	3	14	43

Table XLV—Schools visited for Medical Inspection of Children, 1957

Province	No. of Schools Examined	Visits to Schools				No. of Defective Children	Percentage Defectives to Scholars Examined	No. of Defects	Defects per Defective Child
		First	Second	Third	Special				
Western	866	866	579	286	327	44,970	77	207,319	5
Central	370	370	209	65	126	13,027	60	23,071	2
Southern	645	645	330	133	234	17,853	66	33,849	2
Northern	426	426	163	48	64	12,240	62	22,827	2
Eastern	306	306	57	51	107	13,266	95	25,214	2
North-Western	626	626	126	68	49	9,183	66	67,096	7
North-Central	162	162	34	2	5	2,775	70	7,202	3
Uva	103	103	35	8	7	2,241	63	4,264	2
Sabaragamuwa	313	313	68	21	18	4,979	71	11,545	2
Total	3,817	3,817	1,601	682	937	120,534	71	402,387	3

School Sanitation

5,669 schools were visited by the Public Health Staff in connection with the sanitation of schools. The work carried out in this connection has shown a slight improvement in 1957.

Health Education in Schools

Health Education Procedures continued to be carried out in most of the schools. In this connection the Society of Medical Officers of Health of Ceylon offers annually three prizes comprising of a School Health Shield, a Challenge Cup and a Certificate for annual competition among the Junior and Senior Secondary Schools of the Island awarded to the best three Health Programmes carried out during the year. It is a pleasure to report that the first prize (School Health Shield) has been won for the third time in succession by the Nanduwa Mixed Buddhist School; the second prize has been awarded to St. Therese's School, Atchuvally, and the third prize to St. Thomas' School, Pt. Pedro.

(For Tables XLVI and XLVII see page 197)

Defects Found

The commonest defect detected during 1957 was malnutrition which amounted to 18.54 of the total defects. Incidence of uncleanness and defects of teeth and gums, anaemia and hookworm infestation were also high. The number of unvaccinated cases detected in 1957 was 23,657 which is far in excess of the number unvaccinated in 1956 which was 18,505.

(For Table XLVIII see page 198)

Defects Corrected

A good percentage of uncleanness, unvaccinated children and cases of malnutrition, defective vision and hookworm infestation have been corrected. A large number of children with pediculosis has also been attended to.

(For Table XLIX see page 199)

Hookworm Treatment and Roundworm Infestation

During the year a new memorandum on Hookworm and Roundworm infestation was issued. School children have invariably a double infestation with hookworm and roundworm. During the year the use of oil of Chinapodium was abandoned and Piperazine compounds were made available for cases of roundworm infestation.

Diseases of Teeth and Gums

The diseases of the teeth and gums form 14.42 per cent. of the total defects found during School Medical Inspections. With the limited resources available 38.16 per cent. of the defects detected have been corrected as compared with 35.43 per cent. in 1956.

Table XLVI—Sanitation of Schools

	W.P.	C.P.	S.P.	N.P.	E.P.	N.-W.P.	N.-C.P.	Uva	Sab.	Total
Schools inspected	1,328	728	727	661	358	629	279	289	670	5,669
School children	371,184	199,625	241,909	147,675	65,235	161,611	32,917	50,933	166,100	1,437,189
Schools with latrines	1,239	684	579	614	281	562	244	289	618	5,110
Total seats	3,561	1,869	1,448	1,826	660	1,316	614	572	1,132	12,998
Schools with urinals	521	216	171	356	63	191	23	78	155	1,774
Total urinal compartments	1,422	667	515	1,320	200	400	56	212	258	5,050
Schools with covered vessels for water storage	515	371	262	343	52	275	76	172	210	2,276

Table XLVII—Number of Schools carrying out Procedures, 1957

	W.P.	C.P.	S.P.	N.P.	E.P.	N.-W.P.	N.-C.P.	Uva	Sabara-gamura	Total
Daily morning inspection	1,148	620	567	579	290	561	247	289	523	4,824
Scoring of Health Habit booklet	40	142	73	34	50	115	10	12	68	544
Weighing and measuring	651	425	216	148	220	202	51	184	131	2,228
Use of handkerchief	796	523	467	229	69	321	76	163	385	3,029
Proper storage of drinking water	678	425	332	333	73	370	82	161	261	2,715
Use of individual drinking cups	489	446	300	308	67	393	85	75	400	2,563
Pupil participation, &c.	952	568	534	511	99	411	207	191	474	3,947
Mid-day meals	1,010	698	575	616	274	607	266	289	572	4,907
Health Clubs	189	87	66	65	10	117	9	4	65	612
Organised play	908	586	485	578	88	510	166	172	444	3,937

Table XLVIII—Defects Found

Defect	Total	% to Total Defects	W.P.	C.P.	S.P.	N.P.	E.P.	N.-W.P.	N.-C.P.	Uva	Sub.
Malnutrition	74,598	18.54	43,448	2,943	8,614	3,296	1,782	10,801	1,465	627	1,622
Uncleanliness	15,979	3.97	3,711	1,193	1,259	1,293	1,536	5,056	651	407	873
Unvaccinated	23,657	5.88	8,762	1,569	1,870	2,847	2,055	4,557	291	207	1,499
Eyes	3,744	0.93	1,379	226	203	129	223	903	513	48	120
Ears	3,354	0.83	1,668	112	147	104	98	1,139	55	9	22
Defective vision	3,596	0.89	3,011	227	70	30	25	202	15	1	15
Defective hearing	445	0.11	246	5	14	9	2	78	78	—	13
Enlarged glands	5,496	1.37	4,575	101	106	38	23	524	19	61	49
Enlarged spleens	79	0.02	37	1	—	4	5	25	6	1	—
Lymph glands	2,235	0.56	1,005	53	75	164	15	674	23	—	226
Dental caries	37,821	9.40	20,879	3,493	2,754	826	1,512	5,421	582	898	1,456
Teeth and gums	58,015	14.42	32,773	1,949	3,599	2,269	6,723	8,580	605	444	1,073
Nose	1,706	0.42	914	194	43	79	43	363	4	25	41
Adenoids and tonsils	24,171	6.01	13,652	945	1,400	782	1,560	4,753	250	207	622
Anaemia	44,157	10.97	15,745	2,287	6,108	3,867	4,129	9,408	885	471	1,257
Heart	948	0.24	546	35	43	53	67	171	—	13	20
Lungs	2,233	0.55	1,894	112	55	34	44	62	—	9	23
Hernia	118	0.03	33	3	8	1	15	54	—	—	4
Orthopaedic	634	0.16	451	21	21	14	23	89	4	8	3
Nervous system	213	0.05	117	14	10	12	7	25	23	1	4
Rickets	169	0.04	83	4	55	2	1	21	—	—	3
Skin	13,739	3.41	8,515	1,393	504	213	223	2,316	230	107	238
Scalp	805	0.20	636	17	12	14	16	91	1	2	16
Hookworm	46,135	11.47	24,254	2,384	3,806	4,303	3,525	5,175	1,044	349	1,295
Malaria	55	0.01	14	—	—	1	29	7	4	—	—
Abnormal behaviour	86	0.02	48	4	1	2	—	24	2	—	5
Mental deficiency	186	0.05	98	9	7	12	10	42	2	1	5
Speech	389	0.10	301	7	10	11	4	41	12	1	2
Scabies	877	0.22	280	41	61	208	92	64	109	1	21
Pediculosis	18,474	4.59	7,531	2,110	2,148	1,004	890	3,711	263	231	586
Ringworm	484	0.12	104	42	148	20	28	86	37	8	11
Other defects	17,789	4.42	10,609	1,577	698	1,186	509	2,633	29	127	421
Total	402,387	100.00	207,319	23,071	33,849	22,827	25,214	67,096	7,202	4,264	11,545

Table XLIX—Defects Corrected

	Found	Corrected	% to Defects Found	W.P.	C.P.	S.P.	N.P.	E.P.	N.W.P.	N.C.P.	Uva	Sub.
Malnutrition	74,598	32,869	44.06	21,184	1,634	5,146	1,842	621	698	482	627	635
Uncleanliness	15,979	9,578	59.94	2,814	929	1,067	1,091	1,311	1,076	426	407	457
Unvaccinated	23,657	13,918	58.83	4,256	1,332	1,731	2,757	1,311	1,268	198	207	858
Eyes ..	3,744	972	25.96	674	50	84	67	18	9	54	5	11
Ears ..	3,354	1,003	29.90	832	26	41	13	14	69	3	—	5
Defective vision	3,596	1,347	37.46	1,285	21	24	14	—	—	1	—	2
Defective hearing	445	87	19.55	82	2	3	—	—	—	—	—	—
Enlarged glands	5,496	1,507	27.42	1,393	21	24	4	11	41	4	—	9
Enlarged spleens	79	33	41.77	29	1	—	—	—	3	—	—	—
Lymph glands	2,235	213	9.53	53	6	65	81	4	3	—	—	1
Dental caries	37,821	8,173	21.61	4,423	1,275	911	245	167	349	215	42	546
Teeth and gums	58,015	22,137	38.16	15,890	630	2,196	932	1,322	451	119	191	406
Nose ..	1,706	607	35.58	390	127	25	12	—	32	1	—	20
Adenoids and tonsils	24,171	7,209	29.82	4,880	194	919	228	703	175	25	—	85
Anaemia	44,157	15,147	34.30	4,540	975	3,820	2,711	1,197	818	471	—	615
Heart ..	948	114	12.03	88	—	5	8	6	3	—	—	4
Lungs ..	2,233	769	34.44	724	16	23	3	—	1	—	—	2
Hernia..	118	7	5.93	6	—	1	—	—	—	—	—	—
Orthopaedic	634	133	20.98	123	3	—	2	5	—	—	—	—
Nervous system	213	46	21.60	42	—	1	3	—	—	—	—	—
Rickets	169	65	38.46	61	—	3	—	—	1	—	—	—
Skin ..	13,739	5,325	38.76	4,202	432	296	115	86	83	37	—	74
Scalp ..	805	82	10.19	68	2	7	—	3	—	—	—	2
Hookworm	46,135	23,040	49.94	11,328	461	2,741	3,129	2,007	1,700	874	28	772
Malaria	55	2	3.64	1	—	—	—	—	1	—	—	—
Abnormal behaviour	86	9	10.47	7	—	—	1	—	1	—	—	—
Mental deficiency	186	26	13.98	26	—	—	—	—	—	—	—	—
Speech..	389	135	34.70	134	—	—	1	—	—	—	—	—
Scabies	877	437	49.83	172	7	57	108	15	10	56	—	12
Pediculosis	18,474	9,667	52.33	4,655	833	1,636	834	541	655	88	65	360
Ringworm	484	150	30.99	41	2	77	—	1	1	10	8	10
Other defects	17,789	6,245	35.11	4,369	405	397	822	66	157	—	—	29
Total	402,387	161,052	40.02	88,772	9,384	21,300	15,023	9,409	7,605	3,064	1,580	4,915

School Dental Clinics

No new clinics were established during 1957. School dental clinics are now established at ten schools, as follows:—

All Saints' (Borella)
 Ananda (Maradana)
 Good Shepherd (Kotahena)
 Hapugaskande (Kadawatte)
 Havelock Town
 Kotelawalapura (Ratmalana)
 Royal College
 St. Benedict's (Kotahena)
 St. Peter's (Bambalapitiya)
 Zahira College (Maradana)

At these clinics, preventive dental care is given by school dental nurses to children up to thirteen years of age. In addition, treatment for relief of pain and for children referred by the School Medical Officers after school medical inspections, is carried out by the two School Dental Officers who work at these clinics in rotation.

The original staff of 12 New Zealand-trained school dental nurses has now been reduced to seven by a third resignation.

On 1st October, 1957, seven newly qualified school dental nurses from Maharagama Dental Nurses Training School joined the staff, making a total of 14 school dental nurses.

The dental operations performed during 1957 are given in Table II.

(For Table L see page 201)

School for Dental Nurses, Maharagama

This institution for training School Dental Nurses, which was started with New Zealand funds and staff on 1st March, 1955, was completed. On 15th July, the New Zealand Principal, Mr. F. B. Rice, officially handed over to his Ceylon understudy. Prior to this, (in May) the new School building had been occupied, thereby providing much-needed relief from the overcrowded conditions previously prevailing. In January, 1957, the two New Zealand dental sister tutors (Misses B. V. Webber and K. M. Salter) were replaced by two others, Misses E. S. Smith and M. A. Garland.

In August, a scheme to augment the water supply was commenced. Extension of hostel accommodation is also being planned.

On 28th September the first Graduation Ceremony was held, when the Minister of Health presented medallions and certificates to ten school dental nurses who had been successful in their Final Examinations.

The following statistics are given as at December 31, 1957 :—

Student Dental Nurses in Training

Draft 1 (1955)	7
" 2 (1956)	16
" 3 (1957)	25
	<hr/> 48

Note: Third Draft (1957) entered training on 4th July, 1957

Staff

Principal	1
Dental Officers	3
Dental Sister Tutors	4 (2 from New Zealand).

Table L

I—Operations performed by Dental Officers :

<i>Fillings</i>		<i>Extractions</i>			<i>Total Attendance</i>
<i>In Permanent Teeth</i>	<i>In Deciduous Teeth</i>	<i>Total</i>	<i>Of Permanent Teeth</i>	<i>Of Deciduous Teeth</i>	
705 ..	77 ..	782 ..	2,124 ..	1,318 ..	3,442 ..
					551 ..
					2,144 ..
					6,919 ..
					5,834

II—Operations performed by School Dental Nurses :

<i>Fillings</i>		<i>Extractions</i>			<i>Total Attendance</i>
<i>In Permanent Teeth</i>	<i>In Deciduous Teeth</i>	<i>Total</i>	<i>Of Permanent Teeth</i>	<i>Of Deciduous Teeth</i>	
5,804 ..	7,876 ..	13,680 ..	—	6,315 ..	6,315 ..
					4,529 ..
					10,487 ..
					35,011 ..
					14,698

The total number of patients receiving six monthly treatment was 3,240.

Children's Dental Clinic, Maharagama

This clinic is an integral part of the School for Dental Nurses and all dental operations are performed by the senior student dental nurses under the strict and direct supervision of qualified Dental Surgeons and Dental Sister Tutors. The clinic now has a waiting list of children whose parents wish them to be enrolled for regular six-monthly revision treatment. The actual number of patients enrolled as at 31st December was 1897.

The following operations were carried out during 1957:—

Fillings in permanent teeth	..	..	1,592
Fillings in deciduous teeth	..	..	6,193
<i>Total fillings</i>	..	..	7,785
Extractions (deciduous teeth only)	..	..	1,601
Cleaning and scaling	..	..	1,748
Other operations	..	..	6,934
<i>Total operations</i>	..	..	18,068
<i>Total attendances</i>	..	..	10,201

Control of Communicable Diseases

A study of the figures in Table LI reveals that there has been in 1957 an undue increase in the incidence of diphtheria in the schools. This high incidence exclusively refers to schools in the Western Province. The situation is being carefully watched and action will be taken to immunize the children if the position warrants it.

(For Table LI see page 203)

Anti-Typhoid Inoculations

In 1957 the number of first inoculations given was 132,439 as compared with 116,215 in 1956.

With regard to the second inoculation also it is satisfactory to note that the number given exceeds the number given in 1956.

The improvement in this activity is due to the fact that the work has been intensified by getting the Officers-in-charge of Health Offices also to administer anti-typhoid inoculations.

Table LII.—Anti-Typhoid Inoculation in Schools, 1957

<i>Province</i>	<i>First Dose</i>	<i>Second Dose</i>	<i>Booster Dose</i>
Western	21,680	18,164	—
Central	22,076	18,161	—
Southern	9,795	4,079	—
Northern	27,358	22,328	199
Eastern	6,098	2,336	—
North Western	17,466	11,096	—
North Central	7,029	4,801	385
Uva	1,057	1,057	—
Sabaragamuwa	19,880	18,010	—
Total	132,439	100,032	584

Anti-Smallpox Vaccination

It is pleasing to record that during the year under review 39,879 primary vaccinations and 271,146 secondary vaccinations were given as compared with 15,446 primary and 1,505 secondary in 1956.

This had been possible as a special vaccination campaign was organised during 1957 as a result of the outbreak of smallpox during the year.

Table LIII.—Anti-smallpox Vaccination in Schools, 1957

<i>Province</i>	<i>Primary</i>	<i>Secondary</i>	<i>Total</i>
Western ..	22,669 ..	161,194 ..	183,863
Central ..	1,562 ..	14,610 ..	16,172
Southern ..	1,553 ..	20,425 ..	21,978
Northern ..	5,348 ..	15,600 ..	20,948
Eastern ..	993 ..	923 ..	1,916
North Western ..	3,649 ..	45,153 ..	48,802
North Central ..	1,136 ..	7,869 ..	9,005
Uva ..	89 ..	169 ..	258
Sabaragamuwa ..	2,880 ..	5,203 ..	8,083
Total ..	39,879	271,146	311,025

(iii) ASSESSMENT OF NUTRITIONAL STATUS
OF SCHOOL CHILDREN

The purpose of the scheme is to provide data from year to year regarding some aspects of the nutrition of children. This work is carried out in the areas of the School Medical Officers, Colombo, Galle, Matara, Moratuwa, Panadura and Kandy. The children examined are those of the first, fourth, and seventh years in school. This sample has been selected to meet the administrative set-up, and not done on a strictly statistical basis. The following clinical examinations are carried out:—

- (a) Age
- (b) Height
- (c) Weight
- (d) Average weight for height and weight
- (e) Under-weight and over-weight
- (f) Deficiency signs—Bitot's spots, angular stomatitis, erosion of the tongue, phrynoderma.

All observers submit a return for each school examined to the Nutrition Division of the Medical Research Institute.

During the year 1957 a total of 167 reports were received and 18,592 children were examined. The Table LIV shows the prevalence of nutritional deficiencies among the children for the year 1957.

Table LIV

	Boys				Girls					
	1st	4th	7th	Total	%	1st	4th	7th	Total	%
No. examined	4,068	3,416	1,908	9,392	—	3,763	3,291	2,146	9,200	—
No. with—										
Ang. stomatitis	173	102	31	306	3.3	132	84	37	253	2.8
Erosion of tongue	219	152	58	429	4.6	183	127	98	408	4.4
Bitots spots	90	83	16	189	2.0	53	24	10	87	0.9
Phrynoderma	120	132	49	301	3.2	141	126	84	351	3.8
No. with Vitamin A deficiency signs in terms of Bitots spots	90	83	16	189	2.0	53	24	10	87	0.9
No. with riboflavin deficiency signs in terms of AS and ET	373	244	79	696	7.4	298	197	121	616	6.7
Malnutrition in terms of AS, ET, BS and Phry.	532	429	139	1,100	11.7	449	331	204	984	10.7

AS: Angular stomatitis.

BS: Bitots spots.

ET: Erosion of tongue.

Phry: Phrynoderma.

It reveals that more boys have angular stomatitis and Bitots spots while most girls had phrynoderma.

The following Table shows the assessment of nutrition status in terms of height and weight :—

Table LV

	Boys					Girls				
	1st	4th	7th	Total	%	1st	4th	7th	Total	%
No. examined	4,068	3,416	1,908	9,392	—	3,763	3,291	2,146	9,200	—
No. underweight	915	806	530	2,251	24.0	781	1,076	686	2,543	27.6
No. overweight	276	251	171	698	7.4	247	203	151	601	6.5
No. standard weight	2,615	2,219	1,065	5,899	62.8	2,442	1,822	1,197	5,461	59.4
No. outside range	262	140	142	544	5.8	293	190	112	595	6.5

It shows a significant difference in the sub-nutrition rate (underweight) for boys and for girls the rates being 24.0 per cent. for boys and 27.6 per cent. for girls.

SANITATION

(i) ENVIRONMENTAL SANITATION

Environmental Sanitation still remains the chief Public Health problem in Ceylon. The over-crowding in hospitals all over the Island including the General Hospital, is due chiefly to the large influx of bowel diseases from bacterial infection and parasitic worms as a result of impure water and improper disposal of excreta. Excepting in a few of the larger cities in Ceylon there is no treated pipe-borne water supply and it is also only in the cities that the majority of house holders has sanitary conveniences.

So long as this unhealthy environment remains unremedied there will be impaired health and a high incidence of diseases. Although the road to complete success remains long and arduous a determined effort is necessary in the years to come to remedy these defects.

Environmental Sanitation Pilot Project, Kurunegala

The Environmental Sanitation Pilot Project at Kurunegala was continued in the Dry Zone with UNICEF and W.H.O. assistance. The Wet Zone Project could not be put into operation due to lack of staff. The progress of the Project has been satisfactory and an efficient organization and procedure for performing rural sanitation work has been developed. Progress in developing effective techniques for inducing the rural public to accept and use the sanitary facilities provided has also been made. The Project has also been helpful in training personnel, and also in demonstrating the effect of improved sanitation in the health of the rural population. The procedure of work carried out by the Project can be considered to occur in three phases—surveys, pilot operation and full scale work. In all phases the Public Health Inspector (P. H. I.) who heads the education and construction Units is the chief operator. In the first phase surveys were made. The surveys consisted of an attitude survey, a sanitary survey and a materials survey by the P. H. I. and a geological or ground water survey by the Engineering Staff. In the second phase the P. H. I. began the work of organising public co-operation by acquainting the public with the Project's aims, at all public meetings. This was continued by the organization of special small meetings of the public in the neighbourhood to discuss sanitary problems with project staff. Such neighbourhood meetings were easy where the people felt the need for additional water supply which the Project can supply. During the second phase the P. H. I. constructed some experimental sanitary facilities. After the completion of the surveys and after experiment and the initial sanitary education of the public, full scale construction and education work was begun. The educational work was done primarily during house to house visits and many such visits were found to be necessary.

The Project has worked out a technique for improving school sanitation practices through discussions and simple health education rather than by the use of compulsion. This technique has been successful in this Project early even though the density of population is so low that the people do not feel the need for a sanitary convenience for aesthetic reasons or for reasons of privacy or convenience. The need to work out this technique is evident from the fact that in the first two areas chosen for working by the Project, it failed to get public acceptance of the facilities provided.

By the end of 1957 the Project had four education and construction units, constructing wells and sanitary conveniences in rural areas. During 1957 these units practically completed construction work in Tissawa Korale, completed the sanitary surveys and began construction

work in Tiragandahaya Korale East ; and also began the sanitary surveys of the third Korale namely Ganthida. During this period the following sanitary facilities were constructed :—

	Number	Persons Served
Wells completed in a sanitary fashion and equipped with pumps	71 ..	4,185
Wells substantially completed except for pump installation	58 ..	3,400
Latrine Units completed for Schools ..	8 ..	1,063
Latrine pits lined and plates placed for families	796 ..	3,800
Latrine superstructures completed by private individuals and latrines placed in use ..	1,096 ..	5,300

The pre-operational health survey was completed in Tiragandahaya East Korale which will be made sanitary, and Tiragandahaya West Korale which will be left as a control. As before children under 5 and over were chosen at random for the survey from the Ration Book lists.

The full report in respect of the completed first and second pairs of Korales are given below :—

1st Pair—Tissawa Korale (worked) :

No. of children from whom 3 samples were taken	..	150
<i>Giritalawa Korale (control)</i>		
No. of children from whom 3 samples were taken	..	150

	<i>Tissawa Korale (worked)</i>			<i>Giritalawa (worked)</i>		
	No.	%		No.	%	
No. examined ..	150 ..	—	..	150 ..	—	..
No. positive for Hookworm ..	107 ..	71.3	..	108 ..	72.0	..
Positive for Ascaris ..	38 ..	25.3	..	33 ..	22.0	..
Positive for Salmonella ..	11 ..	7.3	..	9 ..	6.0	..
Positive for Shigella ..	11 ..	7.3	..	4 ..	2.7	..
Positive for E. Hist ..	15 ..	10.0	..	21 ..	14.0	..

2nd Pair.—Tiragandahaya East Korale (worked) :

No. of children from whom 3 samples were taken	..	150
<i>Tiragandahaya West Korale (control) :</i>		
No. of children from whom 3 samples were taken	..	150

	<i>Tiragandahaya East (worked)</i>		<i>Tiragandahaya West (control)</i>	
	No.	%	No.	%
Positive for Hookworm ..	64	42.7	76	50.7
Positive for Ascaris ..	120	80.0	107	71.3
Positive for Salmonella ..	2	1.3	2	1.3
Positive for Shigella ..	1	0.7	9	6.0
Positive for Ent. Hist. ..	8	5.3	15	10.0

During this year one class was held for the training of the Project's health education overseers ; two classes for Departmental Public Health Inspectors and three classes for Departmental Officers in-charge of Health Offices (OO.I.C.). The Project's health education overseers were given instruction in health education techniques, with particular emphasis upon the technique of home visiting for sanitary purposes.

The P.H.II. and O.O.I.C. were given general instruction on the environmental sanitation problems of Ceylon.

Water Supply

The sources of rural water supplies are chiefly wells, and the work of providing protected wells in rural areas is not sufficiently progressive. The Local Authorities as well as Rural Development Societies undertake the provision of Public Wells. But the development of a properly co-ordinated scheme is only possible if adequate financial provision is made by the Local Authorities for the protection and the maintenance of the wells necessary for every hamlet.

Disposal of Excreta

Under the Aided Schemes of latrine construction concrete squatting plates or water-seal syphons and a bag of cement were issued to needy householders. This had to be restricted to the areas of Superintendents of Health Services of Kandy and Colombo only, as the funds available for the purpose for the year 1957 were utilized to pay for material supplied during 1956. Consequently it was possible to have only 25,928 new latrines as compared with 32,166 in 1956. As considerable difficulty has been experienced in the past in providing the syphons and squatting plates and also owing to the excessive cost of transport, action was taken during the year under review to simplify the procedure for rendering this assistance by giving financial assistance for the construction of latrines, payment to be made only when the latrines have been constructed according to the Departmental type plan under the supervision of a Public Health Inspector. The amount suggested to be paid for each latrine so constructed would not exceed Rs. 25. This would be in the form of a subsidy to assist those who are unable to provide themselves with latrines. This amount would really help the people to purchase the material required for the construction of the latrine, so that with a spirit of self help they would be able to provide themselves with sanitary latrines. When this scheme is put into action, it is hoped to have more latrines constructed from the 1957-1958 Vote of Rs. 400,000.

Table LVII—Condition of Latrines

			1956		1957
(1) Existing :—					
Public latrines	..	..	2,343	..	2,527
Private latrines	..	..	454,437	..	488,773
School latrines	..	..	11,477	..	12,191
(2) Newly built :—					
Public latrines	..	..	235	..	125
Private latrines	..	..	32,166	..	25,928
School latrines	..	..	604	..	885
(3) Found defective :—					
Public latrines	..	..	1,145	..	1,018
Private latrines	..	..	73,953	..	66,708
School latrines	..	..	4,413	..	3,950
(4) Restored to sanitary type :—					
Public latrines	..	..	150	..	160
Private latrines	..	..	9,556	..	9,383
School latrines	..	..	260	..	322

	1956	1957
(5) Types of latrines restored :—		
Pit	7,167	6,324
Bored hole	—	—
Dry earth	1,061	1,435
Water carriage	32	364
Water seal	1,706	1,742
(6) Conservancy : Disposal of night soil :—		
Number of Towns—		
Composting	2	8
Trenching	286	296
Incinerating	1	1

Scavenging and Disposal of Refuse

Sanitary methods of disposal of refuse continued to be carried out in the Local Authorities areas. However, in certain towns and village bazaar areas satisfactory scavenging remained a problem for some Local Authorities. Disposal of refuse was carried out chiefly by dumping and in a few places by incineration.

During the year under review action was taken with the Department of Local Government to request the Local Authorities, where they decided to convert bucket latrines into water-seal latrines, to have the appropriate by-laws amended. A provision in the By-laws for the people to provide water-seal latrines in Local Authority area where by-laws provide only for bucket latrines was also recommended.

Scheme of Rural Sanitation

This activity continued satisfactorily during 1957. The use of boiled cooled water was specially stressed as a special and simple method for the control of bowel diseases. 216,311 houses were worked under this scheme in 1957 as compared with 206,671 in 1956, and 81 per cent. of the houses were using boiled cooled water. Table below gives details of work carried out :—

Table LVIII—Scheme of Rural Sanitation

	1955	1956	1957
No. of houses worked	195,923	206,671	216,311
No. of new houses taken up	79,140	71,426	73,802
No. of new houses completed	19,225	26,128	17,487
No. of houses where the following work is carried out :—			
(a) Compost making	82,765	117,942	115,734
(b) Kitchen Gardens	117,429	158,846	134,943
(c) Boiled and Cooled water	138,206	179,326	174,166
(d) Ventilation and Light	93,057	112,158	99,888
(e) Latrine	71,570	80,137	93,328

Drainage

The Chief Public Health Engineer continued to give assistance to Local Authorities with regard to the provision of surface drains in urban areas by carrying out surveys, drawing up of plans and attending to the supervision of their construction.

Licenses and Offensive Trades

Table below shows details regarding the work carried out in connection with the licensing of trades and of offensive trades.

Table LIX—Licensed and Offensive Trades

	1956	1957
(1) Licensed Trades :—		
Number existing ..	45,384	44,718
Number inspected ..	44,867	43,969
Number of inspections ..	349,261	301,087
Number of defects ..	743,707	434,275
Number of defects corrected ..	267,446	223,689
Number of defects improved radically ..	17,368	14,413
(2) Offensive Trades :—		
Number existing ..	3,038	2,952
Number inspected ..	2,532	2,436
Number of inspections ..	13,426	13,214
Number of nuisances created ..	3,987	3,406
Number of nuisances abated ..	2,329	2,237

Anti-Fly Measures

This activity continued to be carried out by the Public Health Inspectors. 67,643 fly breeding places were dealt with during the year under review.

Table LX—Anti-Fly Measures

	1956	1957
Fly breeding places found ..	95,748	76,712
Fly breeding places dealt with ..	83,720	67,643

Sanitary Inspection of Premises

As numerous complaints had been received from the members of the Public regarding the unsatisfactory sanitary condition of the Rural Bazaar areas, action was taken during the year to carry out a survey of all Bazaar areas. The Superintendent of Health Services have been requested to study the various recommendations made and to implement these recommendations in consultation with the Assistant Commissioner of Local Government of the area and the respective Local Authorities.

Action was also taken to enforce the requirements of the Housing and Town Improvements Ordinance in areas where this Ordinance is operative.

Table LXI—Housing and Town Improvements

	1956	1957
(A)—Building applications for :—		
(i) <i>New Building</i> :		
Reported as—		
(a) recommended ..	4,473	3,903
(b) not recommended ..	2,014	1,869
(ii) Additions and Alterations :		
Reported as—		
(a) recommended ..	1,433	1,498
(b) not recommended ..	680	733
(iii) Certificates of conformity :		
Reported as—		
(a) recommended ..	1,397	1,397
(b) not recommended ..	760	554

	1956	1957
(B)—Insanitary Dwellings :—		
Number existing	3,586	4,084
Number reported on for action	814	1,845
Number unfit for human habitation	1,967	1,708
Closing orders obtained	37	53
Number improved—		
(a) Voluntarily	288	1,055
(b) Compulsorily	—	112
Demolition orders obtained	1	11
Demolished	3	11

Fares and Festivals

The total number of proclaimed festivals and fares in 1957 was 15 which is the same as in 1956. Some of the major festival centres such as Anuradhapura, Mahiyangana, Kataragama, and Sri Pada would require sanitary conveniences and water supplies of a more permanent nature. With regard to Sri Pada festival there is a proposal to open up a road from Dalhousi to Gangulatenna. When this is done Gangulatenna could become the chief base. It will be necessary therefore to plan out this place in orderly fashion, by zoning out the area for commercial purposes, pilgrims rest, and other amenities.

Food Sanitation

The Public Health Inspectors of this Department supervise the slaughter of cattle and goats and control of milk supplies in all areas excepting those within the Municipalities of Colombo, Kandy and Galle. The number of samples of milk analysed in 1957 is 607 and of these 190 samples were found to be adulterated. The number of samples adulterated is 31 per cent. of the samples analysed.

Table LXII—Food Sanitation

	1956	1957
Cattle—		
No. inspected	94,599	113,491
No. passed for slaughter	92,729	109,749
Goats :—		
No. inspected	63,199	67,003
No. passed for slaughter	61,824	64,704
Milk Supply :—		
No. of samples analysed	800	607
No. of samples found adulterated	346	190
Food :—		
No. sampled	9	10
No. condemned	8	10

(ii)—FOOD AND DRUGS CONTROL

The Regulations framed under the Food and Drugs Act are being implemented by the local authorities as relating to the control of food, and the Director of Health Services as relating to the control of drugs.

(a) Control of Food

During the year under review, the Act and the Regulations continued to be actively enforced in the Colombo and Kandy Municipal areas. Five other

Local Authorities have initiated action to enforce the Act in their administrative areas. With the assistance of the Commissioner of Local Government, it is hoped that all the Municipal and Urban areas, ere long, will implement the Act and the Regulations.

Analysis of Food. Only one Public Analyst functioned under the Act for the Colombo and Kandy Municipal Councils. The extent of the work done by him for these Local Authorities is summarised in Table LXIII.

This Table gives a comparative statement of the number of food samples analysed during the years 1956 and 1957. The majority of the samples analysed did not conform to the standards prescribed in the Regulations. In Colombo City, 60 per cent. of milk samples did not conform to the standards and 45 per cent. of other food samples were not up to standard as compared with 62 per cent. and 36 per cent. respectively during the previous year. These figures reveal that regular sampling and follow-up action are necessary to ensure purity standards of the various food items as sold to the purchaser.

In the Kandy Municipal Area 84 per cent. of the milk samples and nearly 95 per cent. of the other food samples did not conform to the standards prescribed. In the previous year too, 82 per cent. of milk samples did not conform to the standards.

More health education of the traders too relating to the Food and Drugs Act requirements is necessary to achieve better results in safeguarding the health of the consumer.

Table LXIII—Results of Analysis of Food Samples

(A)—COLOMBO MUNICIPAL AREA

Nature of Sample	1956			1957		
	Total No. examined	Total not up to standard	Percent not up to standard	Total Examined	Total not up to standard	Percent not up to standard
Milk (Cow)	926	571	61.7	978	590	60.3
Milk (Buffalo)	7	5	71.4	10	9	90.0
Butter	—	—	—	—	—	—
Cheese	1	—	—	—	—	—
Aerated Water	2	—	—	—	—	—
Chillies (dried)	3	2	66.7	19	11	57.9
Coconut Oil (edible)	11	4	36.4	30	10	33.3
Coffee (berry)	5	1	20.0	9	3	33.3
Coffee (ground)	81	24	29.6	58	11	19.0
Coriander	8	7	87.5	25	20	80.0
Cummin Seed	6	2	33.3	13	8	61.5
Curry Powder	4	4	100.0	11	11	100.0
Dhall (Mysore)	25	2	8.0	53	11	20.8
Ghee (other than vegetable ghee)	—	—	—	5	1	20.0
Ghee (Vegetable)	—	—	—	1	—	—
Gingelly Oil (Edible)	6	2	33.3	14	7	50.0
Gram	6	1	16.7	8	2	25.0
Garlic	2	—	—	7	1	14.3
Honey (Bees)	3	—	—	—	—	—
Tea	56	—	—	33	4	12.1
Turmeric	7	5	71.4	14	13	92.9
Vinegar	57	45	78.9	67	49	73.1
Total	1,216	675	55.5	1,355	761	56.2

(B)—KANDY MUNICIPAL AREA

Milk	110	90	81.8	189	159	84.1
Other Foods	—	—	—	59	56	94.9
	110	90	81.8	248	215	86.7

B. Control of Drugs

The Regulations framed under the Act to control the purity standards of drugs are in operation in its third year. Up to the end of the year, 1,439 licences have been issued to dealers of Drugs other than "Common Household Drugs", as given in the first schedule of the Regulations for the sale of which licence is not required.

The control staff was increased by one Inspector who will work the Southern Zone. This brings a total of four trained Food and Drugs Inspectors for this activity. In addition, they also function as Advisory Officers to the Local Authorities in the implementing of the Food Regulations. The survey of drug dealers continued to be carried out. As a result, unlicensed dealers of drugs are now obtaining licences.

Sampling of Drugs. During the year 100 informal samples were taken among the dealers of drugs in the city of Colombo to determine as to whether they conform to the standards prescribed for drugs as sold to the consumer. Of this number, 28 samples did not conform to the standards. The offending dealers were written to cautioning them against a repetition.

The Government Analyst functions as the Public Analyst for analysis of drug samples for all the administrative areas of the Island.

Table LXIV—Results of Analysis of Drug Samples

<i>Nature of Sample</i>	<i>Formal or Informal</i>	<i>No. Examined</i>	<i>Total not up to standard</i>	<i>Percent not up to standard</i>
Epsom Salts ..	.. Informal ..	10	.. —	.. —
Tincture of Iodine	10	.. —	.. —
Rectified Spirits	6	.. —	.. —
Spirit of Chloroform	3	.. —	.. —
Camphorated Oil	10	.. 2	.. 20.0
Aspirin Powder	10	.. 3	.. 30.0
Boric Acid	4	.. —	.. —
Boric Acid Ointment	4	.. 4	.. 100.0
Sulphur Sublime	5	.. 3	.. 60.0
Sulphur Ointment	5	.. 2	.. 40.0
Salicylic Acid	5	.. —	.. —
Salicylic Ointment	5	.. 4	.. 80.0
Glycerine	5	.. 1	.. 20.0
Glycerine of Phenol	5	.. 5	.. 100.0
Spirit of Turpentine	5	.. 2	.. 40.0
Liniment of Turpentine	5	.. —	.. —
Lime Water	3	.. 2	.. 66.7
Total	100	28	28.0

(C) Advisory Committee

The Inter-Departmental Committee on Food and Drugs Act and the Special Committee for the Control of Drugs continued to function during the year. The advice of the Committee was available to the Directorate in respect of various matters pertaining to the Act and the Regulations framed thereunder. The services rendered by the members of these Committees are acknowledged with thanks.

(iii) ESTATE HEALTH WORK

One meeting of the Medical Wants Committee was held to discuss matters affecting Estate Health Work. The report form on Estate Sanitation and Medical Facilities now used by Inspecting Medical Officers was amended and it will be in use next year. The Superintendents of Estates who receive free grant of drugs can now send their requisitions direct to the Superintendent, Civil Medical Stores, instead of sending them to this Office, as had hitherto been done. This arrangement will expedite the supply of Drugs.

Area

Approximately 2,611 estates were scheduled in 1957 under the Medical Wants Ordinance, as compared with 2,198 estates in 1956. The labour population on these estates approximately amounted to 1,278,583.

Staff

Inspecting Medical Officers (Estates)	..	2
Medical Officers	..	17
Medical Officers of Health	..	20

Medical Facilities

The Government continued to maintain 66 Hospitals and 116 Dispensaries in the Estate Medical Districts for the purpose of rendering medical aid to the estates in addition to the indigenous population.

The Estate authorities maintain 116 estate hospitals and 434 estate dispensaries including the dispensaries attached to estate hospitals.

Estate Hospitals

All Estate Hospitals were inspected in 1957 for granting of rebate. The majority of estate hospitals continue to do good work and are satisfactorily maintained.

Sanitary Inspection of Estates

The total number of estates inspected was 566, as compared with 450 in 1956. Although this is a definite improvement, yet it is not satisfactory. The aim is to get about 900 estates inspected each year so that all the scheduled ones are inspected once in three years.

*Summary of Work**General Sanitary Conditions on Estates Inspected*

Very Good	..	..	..	16
Good	..	..	..	177
Fair	..	..	..	229
Poor	..	..	..	131
Bad	..	..	..	13

Hookworm Treatment

Number of estates visited	..	..	404
Number of persons treated	..	..	147,772

*Maternity and Child Welfare Work**(a) Registered Estate Midwives*

(i) In all estates	..	..	330
(ii) Number inspected	..	..	113
(iii) Number of estates served by them	..	..	300
(iv) Number of estates served by outside registered Midwives	..	..	197

(b) Unregistered Midwives —

(i) In all estates	..	..	60
(ii) Number inspected	..	..	6
(iii) Number of estates served	..	..	36

(c) Births—

(i) On estates visited	..	..	7,863
(ii) On estates having registered Midwives	..	..	13,230
(iii) Of (ii) attended by registered Midwives	..	..	10,803

Vaccination against Small-pox—

(a) Number of estates in which vaccination was carried out	..	..	527
(b) Number of persons vaccinated	..	..	63,213
(c) Vaccination—Successful	..	..	32,043
Unsuccessful	..	..	2,359
Unknown	..	..	28,811

Anti-typhoid Inoculations—

(a) Number of estates visited	..	..	70
(b) Number of persons inoculated (First Dose)	..	..	3,473
(c) Number of persons inoculated (Second Dose)	..	..	2,359

Mandapam Camp—

(1) Number of estate labourers passed	..	..	1,072
(2) Number of others passed	..	..	33,357
(3) Number of labourers rejected	..	..	—
(4) Number of others rejected	..	..	1
(5) Number of passengers subjected to surveillance	..	..	32,780
(6) Number of passengers completed surveillance	..	..	32,728

*Tattapparai Camp—**Number of passengers who passed through Tattapparai Camp—*

(i) Number of estate labourers passed	..	..	—
(ii) Number of others passed	..	..	10
(iii) Number of labourers rejected	..	..	—
(iv) Number of others rejected	..	..	—

Estate Births 1957—

In Hospitals	..	..	2,319
In Maternity Wards	..	..	8,489
In Lines	..	..	6,256

(iv) HEALTH WORK IN LAND DEVELOPMENT AND COLONIZATION SCHEME

Public Health Work was carried out in 65 Colonization Schemes covering 1,414 square miles with a population of 230,864 as compared with 46 schemes in the year 1956. The number of Colonization Schemes looked after, for Public Health Work has shown a definite increase. In these colonies where quarters have been provided, a full complement of Public Health field personnel has been appointed. Public Health Inspectors looked after these Colonization Schemes as a full time duty in addition to their other duties

in the surrounding rural areas. In the case of Padaviya Colony, a special Public Health Inspector was appointed in 1957. The following Colonization Schemes were provided with midwives during the year under review :—

- | | |
|------------------|-------------------------|
| (1) Kekirawa | (7) Periyapandivirichan |
| (2) Kotiyagala | (8) Kinbulwana |
| (3) Weherayaya | (9) Siyabalangamuwa |
| (4) Pallam | (10) Galmadu |
| (5) Chemmamadura | (11) Unnichchi |
| (6) Pavatkulam | (12) Badagiriya |

During the latter part of 1957 extensive damage occurred in the Colonization Schemes as a result of unprecedented floods. The extent of the damage done to housing, sanitary conveniences, water supply schemes, &c., is not yet known and during the years to come it will be necessary to undertake extensive rehabilitation work in order to maintain the standard of Public Health which has been an important feature in the development of colonization schemes in Ceylon. A complete list of colonization schemes showing the location by provinces and areas of Superintendent of Health Services is given below :—

List of Colonization Schemes

<i>Area of Superintendent of Health Services</i>	<i>Province</i>	<i>Number</i>	<i>Name</i>
Kalutara	Western	6	(1) Yatagampitiya (2) Omatta (3) Pelenda (4) Morapitiya (5) Meegahatenna (6) Kobawaka
Kandy	Central	1	(1) Minipe
Matale	Central	2	(1) Dewahuwa (2) Kandalama
	North-Central	5	(1) Parakrama Samudraya (2) Giritale (3) Minneriya (4) Elahera (5) Galamuna
Badulla	Uva	9	(1) Bathmedilla (2) Okkampitiya (3) Yudanganawa (4) Soraborawewa (5) Mapakadawewa (6) Weherayakelle (7) Katugahagalge (8) Kotiyagala (9) Handapangala
Matara	Southern	4	(1) Akurugoda (2) Beragama (3) Malay (4) Badageriya
Jaffna	Northern	6	(1) Old Colony, Kilinochchi (2) DIO Paranthan D8 Kilinochchi (3) Cattle Farm, Kilinochchi (4) Iranamadu Extension, Marasmoddai (5) Vaddakachchi (6) Iranamadu R.B. Extension
Vavuniya	Northern	7	(1) Periyamadukulam (2) Periyapandivirichan (3) Chemamadu (4) Pavatkulam (5) Muhatankulam (6) Kalmadukulam (7) Periyathambanai
Batticaloa	Eastern	2	(1) Amparai (G.O.D.B.) (2) Unnichchai

<i>Area of Superintendent of Health Services</i>	<i>Province</i>	<i>Number</i>	<i>Name</i>
Anuradhapura ..	North-Central ..	6 ..	(1) Nuwarawewa (2) Kagama Old (3) Kagama Track 10 (4) Kattiyawa (5) Huruluwewa (6) Padaviya
	Eastern ..	2 ..	(1) Kantalai (2) Allai
Kurunegala ..	North-Western ..	7 ..	(1) Attaragalla (2) Ridibendi Ela (3) Ambakolawewa (4) Palukaduvela (5) Kadigawa (6) Kinbulwana Oya (7) Siyambalangamuwa
Puttalam ..	North-Western ..	6 ..	(1) Mahauswewa (2) Uriyawa (3) Tabbowa (4) Kottukachchiya (5) Mudalakuliya (6) Katupotha
Ratnapura ..	Sabaragamuwa ..	2 ..	(1) Madalagama (2) Delgoda

Standing Committee of Land Development

Co-ordination of work effected by the Land Development and the Department of Health was satisfactory in 1957. A representative of the Department of Health Services served on this Committee during the year.

Water Supply

It will be necessary to emphasise again the urgency of providing pipe borne water supplies to the Colonies. Until such time water from protected wells will have to be used. However, due to severe drought the water supply in many of these wells run dry.

Sanitation

2,332 latrines were constructed in 1957 as compared with 2,418 latrines in 1956.

Communicable Diseases

215 cases of dysentery and 74 cases of typhoid fever occurred during the year as compared with 162 cases of dysentery and 43 cases of Typhoid fever in 1956. 16,505 anti-typhoid inoculations were given in 1957 as compared with 8,060 first and 4,817 second during the year 1956.

Maternity and Child Welfare Work

There was a total of 22 health centres at which child welfare clinics were held. The Public Health Midwives conducted 1,443 deliveries compared with 2,190 in 1956. The maternal mortality rate in the colonization schemes is low and is 0.3 per 1,000 live births. The infant mortality rate is 57.7 per 1,000 live births. The crude death rate in the Colonization schemes is 4.2 per 1,000. The improvement of the mortality rates recorded for the year 1957 has been due to the protection afforded to the colonists against malaria and also due to the care and attention given to them by the Department of Health Services in the form of medical facilities and maternal and child health care.

Medical Facilities

Table No. LXV gives details regarding the provision of medical facilities in Land Development and Colonization areas.

Table LXV.—Particulars in Respect of Land Development and Colonisation Schemes

Name of Scheme	Area in Square miles	Population	District Hospitals	Peripheral Units	Rural Hospitals	Maternity Homes	Central Dispensaries	Branch Dispensaries	Visiting Stations	Births	Deaths	Infant Deaths	Maternal Deaths
1. Yatagampitiya	3.0	230	..	..	..	..	..	..	1	6	3	..	..
2. Omatta	3.0	231	..	..	..	..	..	..	..	8	2	..	..
3. Pelenda	2.0	185	..	..	..	..	..	1	..	14	4	..	..
4. Morapitiya	15.0	2,176	..	..	..	..	..	..	..	28	1	1	..
5. Meegahatenna	12.0	772	..	1	..	..	..	..	..	8	..	..	..
6. Kobawaka	3.0	250	..	..	..	..	..	..	..	14	1	..	..
7. Minipe	15.0	4,713	..	1	1	2	..	..	2	674	149	38	..
8. Dewahuwa	15.0	5,038	..	..	..	..	1	..	..	99	16	16	..
9. Kandalama	1.5	1,582	..	..	..	..	..	..	..	58	8	8	..
10. Akurugoda	28.0	105	..	..	..	..	..	..	..	..	..	..	..
11. Beragama	..	..	..	1	..	..	..	..	..	..	..	..	..
12. Malay	35.0	1,241	..	..	..	..	..	..	1	17	4	..	..
13. Badageriya	..	..	..	..	..	..	..	..	..	..	..	..	..
14. Old Colony, Kili- nochi	2.0	390	1	..	..	..	..	..	..	9	2	..	..
15. D. 10 Paranthan, D. 8. Kilinoch- chi	10.0	1,794	..	..	..	..	..	1	..	18	4	..	..
16. Cattle Farm, Ki- linochi	2.0	300	..	..	..	..	..	..	..	3	..	..	..
17. Iranamadu Ext. Murasmoddai	8.5	1,188	..	..	..	..	..	1	..	12	4	..	..
18. Vaddakachchi	8.0	1,727	..	..	..	..	1	..	..	28	3	1	..
19. Iranamadu RB. Extn	5.5	2,000	..	..	..	..	..	1	..	36	4	..	1
20. Periyamaduku- lam	2.0	794	..	..	..	..	1	..	..	6	1	1	..
21. Periyapandiviri- chan	2.0	476	..	..	..	..	..	..	1	2	..	..	..
22. Chenamadu	2.0	726	..	..	..	..	..	1	..	1	1	..	..
23. Pavatkulam	5.0	1,055	..	..	..	..	..	1	..	6	1	..	..
24. Muhatankulam	2.0	724	..	..	..	..	..	..	..	34	5	2	..
25. Kalmadukulam	1.0	370	..	..	..	..	..	1	..	..	..	..	..
26. Periyathambanai	1.0	323	..	..	..	..	..	1	..	..	..	..	..
27. Amparai (G.O.D.B.)	523.0	53,612	2	1	..	..	5	..	2	1,382	255	88	..
28. Unnichai	4.0	5,970	..	..	..	..	1	..	2	11	2	7	..

	8	7	5	7	22	20	38	6,702	969	387	2
29. Kantalai ..	12-0	..	..	..	..	1	1	549	..	11	..
30. Allai ..	15-0	..	..	..	..	1	4	169	..	8	..
31. Nuwarawewa ..	0-75	..	..	..	..	—	—	9	..	1	..
32. Kagama Old ..	2-5	..	..	..	..	—	—	115	..	5	..
33. Kagama Track 10 ..	6-8	..	..	1	2	1	—	160	35	15	1
34. Kattiyawa ..	3-5	..	..	..	..	1	—	123	15	4	..
35. Huruluwewa ..	15-0	..	..	..	1	2	—	223	34	10	..
36. Padaviya ..	....	..	..	..	1	—	—	—	..	—	..
37. Parakrama Samudraya ..	25-0	..	1	..	1	1	4	832	134	64	..
38. Giritale ..	1-5	..	..	..	..	1	—	134	27	22	..
39. Minneriya ..	32-0	..	..	1	..	1	4	605	68	37	..
40. Elahera ..	23-0	..	..	1	2	..	2	367	23	11	..
41. Galamuna ..	1-0	..	..	..	..	..	—	63	6	4	..
42. Attaragalla ..	2-2	..	..	1	1	..	1	75	4	2	..
43. Ridibendi Ela ..	2-7	..	..	..	..	..	1	13	4	..	..
44. Ambakolawewa ..	1-9	..	..	1	1	..	1	41	6	3	..
45. Palukadawela ..	3-25	..	..	..	..	..	—	17	..	—	..
46. Kadigawa ..	1-92	..	..	..	..	..	1	—	1	—	..
47. Kimbulwana Oya ..	2-03	..	..	..	..	..	1	28	6	3	..
48. Siyambalanga- muwa ..	1-56	..	..	..	..	..	1	17	2	1	..
49. Mahauswewa ..	0-63	..	..	..	..	..	—	29	4	1	..
50. Uriyawa ..	0-63	..	..	..	..	1	—	17	1	..	..
51. Tabbowa ..	3-4	..	..	..	1	..	—	111	13	6	..
52. Kottukachchiya ..	2-5	..	1	..	..	..	—	34	4	1	..
53. Mudalakuliya ..	0-859	..	..	..	..	..	1	—	..	—	..
54. Katupotha ..	2-7	..	..	..	..	..	1	9	4	1	..
55. Bathmedilla ..	3-0	..	..	..	1	..	1	79	10	1	..
56. Okkampitiya ..	6-0	..	1	..	..	1	1	138	14	3	..
57. Yudanganawana ..	2-0	..	1	..	..	..	1	27	4	..	..
58. Soraborawewa ..	2-0	..	..	..	..	..	1	92	17	3	..
59. Mapakadawewa ..	1-5	..	..	..	15	..	1	108	16	5	..
60. Weharayakelle ..	6-0	..	1	..	..	..	1	27	6	2	..
61. Katugahagalge ..	2-0	..	1	..	..	..	1	—	..	..	..
62. Kotiyagala ..	....	..	..	..	..	..	1	16	2	2	..
63. Handapangala ..	2-0	..	1	..	..	..	—	2	3	..	..
64. Madalagama ..	215-0	..	..	..	..	..	—	—	..	..	..
65. Delgoda ..	300-0	..	..	..	..	..	—	3	1	..	..
Total	1414-329	230,864	8	7	22	20	38	6,702	969	387	2

PUBLIC HEALTH ENGINEERING DIVISION

A Committee consisting of the Director of Developments, Commissioner of Local Government, and the Deputy Director of Health (Public Health Services), was appointed during the year, to report on the organisation and functions of this division the report of this Committee will be available early in 1958.

The services of the USOM Public Health Engineering Consultant, Mr. R. D. Bates, who is attached to the Public Health Engineering Division have been of value in the technical and organisation aspects of the work of this division.

This division experienced difficulty in filling vacancies in the engineering and technical grades. The question of improving the staff position awaits the recommendation of the above Committee.

Consultative Work

(a) *Estate Sanitation.* This division dealt with consultative work with regard to estate sanitation, housing, refuse disposal, and other allied problems.

(b) *Advice to local authorities, M. O. H., S. P. H. II. and other allied personnel.* From time to time various problems of sanitation were referred to this division by M. O., Local Authorities, Public Health Inspectors, and other allied personnel for advice and report. Comments and advice on these were rendered and wherever necessary personal inspections were also made before finalising the proposals.

(c) *Water analysis, treatment, and maintenance of standards of purity.* The consultative work includes routine inspections and reports and recommendations on water analysis reports of pipe-borne and other water supplies all over the Island. During the year under review approximately 2,000 water analysis reports were commented on and recommendations made as to the treatment.

Public Health Engineering Laboratory

The Public Health Engineering Laboratory has suffered for want of a Chemist specialised in the field of work for carrying out investigations for chemical analysis and assisting in experiments in connection with water treatment, sewage treatment and maintenance and operation of water and sewage treatment plants. A considerable amount of work in relation to water pollution investigation awaits comprehensive analysis and surveying. Experiments were carried out in relation to pollution of wells by latrines.

Central Designs Office

Several designs of water supply schemes, and sewerage schemes, were completed during the year. A list of major designs and drawings turned out in the Central Designs Office is in Statement No. I.

Water Supplies

Apart from the consultative work, time was spent on several hospital and allied water supplies. Several water supplies in connection with the Buddha Jayanthi Celebrations were also executed. These included many places other than the usual major festivals at Kataragama, Anuradhapura, Madhu, and Mahiyangana. The list of all the investigations and construction works carried out both in major hospital water supplies and in other festival water supplies are given in Statement No. II.

Sewerage and Sewage Disposal

A number of sewerage and sewage disposal schemes were investigated and constructions undertaken. These include the major sewerage schemes for Ratnapura New Hospital, Mulleriyawa Psychopathic Hospital and House for Observations. A list of works undertaken is given in Statement No. III.

Surface Drainage Scheme

Delay in investigations and designs has held up construction work for which money provision was made. A list of works investigated and constructed are given in Statement No. IV.

Medical Buildings

A very large programme of building construction for medical institutions all over the island was carried out. Owing to the severe shortage of engineering and technical staff, this had to be carried out at the expense of other essential public Health Engineering works. A list of buildings undertaken during the years is in Statement No. V.

Statement No. I

Drawing Office (P. H. E. Division)

WATER SUPPLIES

Drawing No.

1104	..	Bandaragama C.D. & Apothecarie's Quarters—Design of well.
1106	..	Kalawana P.U.—Design of Well.
1109	..	Nikaweratiya District Hospital—Site Plan.
1110	..	Nikaweratiya District Hospital—Design of Pump House.
1115	..	Victoria Home for Incurables—Rajagiriya—Site Plan.
1115/1	..	Victoria Home for Incurables—Long Section.
1115/2	..	Victoria Home for Incurables—Rajagiriya—Long Section.
1116	..	Pungudutivu Maternity Home—Detail of Pump House and Collecting Chamber.
1122	..	Rikiligaskada Hospital—Site Plan.
1122/1	..	Rikiligaskada Hospital—Long Section
1122/2	..	Rikiligaskada Hospital—Collecting Chamber.
1129	..	Paranthan Chemical Co-operation—Design of Water Tower.
1129/1	..	Paranthan Chemical Co-operation—Schedule of Reinforcements.
1129/2	..	Paranthan Chemical Co-operation—Design of Filter House.
1131	..	Dickwella Hospital—Design of Well.
1134	..	Mawatagama District Hospital—Design of well.
1135	..	Medagama Hospital—Design of well.
1140	..	Ridigama Hospital—Design of well.
1141	..	Pallegama P.U.—Site Plan.
1141/1	..	Pallegama P.U.—Long Sections.
1141/2	..	Pallegama P.U.—Detail of Dam.
1154	..	Anuradhapura Hospital—Detail of Chlorinator House, &c.
1161	..	Wattegama Rural Hospital—Site Plan.
1161/1	..	Wattegama Rural Hospital—Long Sections.
1161/2	..	Wattegama Rural Hospital—Details of Collecting Chamber.
1170	..	Kokkilai C.D. & Apothecaries Quarters—Details of well.
1181	..	Madampe Hospital—Site Plan.
1187	..	Mulleriyawa—Alterations to R.C.C. Cover of well.
1189	..	Design of Overhead Tank (Capacity 800 gallons).
1194	..	Madhu Camp—Festival Water Supply—Pump House Chlorinator House.
1196	..	Mirigama Hospital—Layout of Distribution System.
1196/1	..	Mirigama Hospital—Layout of Pumping Main.
1196/2	..	Mirigama Hospital—Design of Filter House.
1198	..	Civil Hospital, Horana—Site Plan showing Pump House and wells.
1198/1	..	Civil Hospital, Horana—Design of Pump House.
1202	..	Badalkumbura Hospital—Sketch showing Water Supply Scheme.
883A	..	Type Plan of 1600 gallons capacity Tank P.UU.

BUILDINGS

Drawing No.

1101	..	Prefab. Children's Ward of 8 beds.
1112	..	Kinniya—Ward & Kitchen—Detail of foundation.
1114	..	Aranayake Hospital—Foundation for Generator House.
1119	..	Prefab. Ward—Kayts—Proposed Temporary Shed.
1120	..	Civil Hospital, Badulla—Isolation Ward of 32 beds.
1124	..	Jaffna Hospital—Lavatory Annexe, Kitchen Staff Nurses, Quarters.
1127	..	Chest Hospital, Welisara—Office, Laboratory & Stores.
1128	..	Mawanella Hospital—Proposed Maternity Home.

DRAWINGS

Drawing No.

1144	..	Kalutara N.T.S.—Site Plan.
1144/1	..	Kalutara N.T.S.—Administration Block.
1144/2	..	Kalutara N.T.S.—Details of R.C.C.
1144/3	..	Kalutara N.T.S.—Quarters for 112 Nurses.
1144/4	..	Kalutara N.T.S.—Quarters for 112 Nurses.
1144/5	..	Kalutara N.T.S.—Quarters for 112 Nurses—Detail of R.C.C.
1144/6	..	Kalutara N.T.S.—Kitchen Block.
1144/7	..	Kalutara N.T.S.—Tutor Nurses Quarters.
1144/8	..	Kalutara N.T.S.—Tutor Nurses Quarters for 4 Nurses.
1144/9	..	Kalutara N.T.S.—Tutor Nurses Quarters.
1144/10	..	Kalutara N.T.S.—Garage.
1144/11	..	Kalutara N.T.S.—Details of Covered Way Ect.
1144/12	..	Kalutara N.T.S.—Details of Cupboards.
1144/13	..	Kalutara N.T.S.—Details of Roof Truss.
1144/14	..	Kalutara N.T.S.—3' dia. Grill.
1144/15	..	Kalutara N.T.S.—1'11"X2'-6" Grill.
1144/16	..	Kalutara N.T.S.—16½"X3'-9" Grill.
1145	..	Ratnapura N.T.S.—Detail of Covered Way.
1146	..	Ratnapura N.T.S.—Spiral Staircase.
1148	..	E.S.P., Kurunegala—Extension to Stores—Site Plan.
1148/1	..	E.S.P., Kurunegala—Proposed Extension to Stores.
1149	..	E.S.P., Kurunegala—Proposed Extension to Workshop.
1152	..	Badulla Hospital—Site Survey for Isolation Ward.
1153	..	Hanguranketa Hospital—M.O's Quarters.
1155	..	Bandarawela P.U.—Retaining Wall for outlets.
1163	..	Civil Hospital, Kandy—Proposed Site for D.M.A's Quarters.
1169	..	N.T.S., Kalutara—Site Plan.
1169/1	..	N.T.S., Kalutara—Administration Block.
1169/2	..	N.T.S., Kalutara—Kitchen Block.
1169/3	..	N.T.S., Kalutara—Quarters for 56 Nurses.
1175	..	Mulleriyawa House of Observation—Alterations Covered Way.
1176	..	Civil Hospital, Horana.—Nurses Quarters—Parapet wall.
1177	..	Civil Hospital, Badulla—Isolation Ward of 34 Beds.
1188	..	Rest Room—Agricultural Department—Peradeniya.
1190	..	N.T.S., Jaffna—Temporary Bath Rooms.
1191	..	Anuradhapura New Hospital—Detail of Glass Screen and covered way.
1195	..	School Dental Clinic.
1197	..	Model Fish Market—Chankanai.
1199	..	Civil Hospital, Horana—Servants' Bath and Lavatory for Nurses Quarters.
1156	..	Type Plan of Meat Stall.

SEWERAGE SCHEMES

Drawing No.

1103	..	Maharagama Dental Nurses' Training School.
1103	..	Maharagama Dental Nurses' Training School—Site Plan.
1103/1	..	Maharagama Dental Nurses' School—Long Sections.
1103/2	..	Maharagama Dental Nurses' Training School—Details of Soakage Pit.
1111	..	Avissawella New Hospital—Site Plan.
1118	..	Dehiwela—Mt. Lavinia—Layout of Treatment Plant.
1118/1	..	Dehiwela—Mt. Lavinia—Design of Digester.
1118/2	..	Dehiwela—Mt. Lavinia—Detail of Pipe Arrangements.
1118/3	..	Dehiwela—Mt. Lavinia—Design of Pump House.
1118/4	..	Dehiwela—Mt. Lavinia—Design of Drying Beds.
1137	..	Kotuwegoda—Design of Bio Filter Units.
1137/1	..	Kotuwegoda—Design of Primary Sedimentation Tank.
1137/2	..	Kotuwegoda—Design of R.C. Sludge Digester.
1138	..	Diyatalawa Army Camp—Site Plan.
1138/2	..	Diyatalawa Army Camp—Design of Rough Settling Tank.

Drawing Nos.

1138/3	..	Diyatalawa Army Camp—Design of Aeration Tank.
1138/4	..	Diyatalawa Army Camp—Design of Final Settling Tank.
1138/5	..	Diyatalawa Army Camp—Design of Digester.
1138/6	..	Diyatalawa Army Camp—Detail of Digester, Valve Chambers etc.
1138/7	..	Diyatalawa Army Camp—Design of Pump House.
1138/8	..	Diyatalawa Army Camp—Design of Drying beds.
1138/9	..	Diyatalawa Imperial Camp—Site Plan.
1138/9A	..	Diyatalawa Imperial Camp—Long Sections.
1138/9B	..	Diyatalawa Imperial Camp—Long Sections.
1138/9C	..	Diyatalawa Imperial Camp—Long Sections.
1138/9D	..	Diyatalawa Imperial Camp—Long Sections.
1138/9E	..	Diyatalawa Imperial Camp—Long Sections.
1138/9F	..	Diyatalawa Imperial Camp—Long Sections.
1138/10	..	Diyatalawa C.V.F. & Cy. R.A.F. Camp—Site Plan.
1138/10A	..	Diyatalawa C.V.F. & Cy.R.A.F. Camp—Long Sections.
1138/10B	..	Diyatalawa C.V.F. & Cy.R.A.F. Camp—Long Sections.
1138/10C	..	Diyatalawa C.V.F. & Cy.R.A.F. Camp—Long Sections.
1138/10D	..	Diyatalawa C.V.F. & Cy.R.A.F. Camp—Long Sections.
1138/10E	..	Diyatalawa C.V.F. & Cy.R.A.F. Camp—Long Sections.
1138/10F	..	Diyatalawa C.V.F. & Cy.R.A.F. Camp—Long Sections.
1138/10G	..	Diyatalawa C.V.F. & Cy.R.A.F. Camp—Long Sections.
1138/10H	..	Diyatalawa C.V.R. & Cy.R.A.F. Camp—Long Sections.
1138/10I	..	Diyatalawa C.V.F. & Cy.R.A.F. Camp—Long Sections.
1138/11	..	Diyatalawa A.R.T.D. Camp—Site Plan showing Sewer Lines.
1138/11A	..	Diyatalawa A.R.T.D. Camp—Long Sections.
1138/11B	..	Diyatalawa A.R.T.D. Camp—Long Sections.
1138/11C	..	Diyatalawa A.R.T.D. Camp—Long Section.
1138/11D	..	Diyatalawa A.R.T.D. Camp—Long Sections.
1138/11E	..	Diyatalawa A.R.T.D. Camp—Long Sections.
1138/11F	..	Diyatalawa A.R.T.D. Camp—Long Sections.
1138/11G	..	Diyatalawa A.R.T.D. Camp—Long Sections.
1138/11H	..	Diyatalawa A.R.T.D. Camp—Long Sections.
1138/11I	..	Diyatalawa A.R.T.M. Camp—Long Sections.
1138/12	..	Diyatalawa Layout of Sewer Lines connecting A.R.T.D. & C.D.F. Camps.
1150	..	Kandy Civil Hospital—Site Plan.
1150/1	..	Kandy Civil Hospital—Layout Plan.
1150/2	..	Kandy Civil Hospital—Design of Rough Settling Tank.
1150/3	..	Kandy Civil Hospital—Aeration Tank.
1150/4	..	Kandy Civil Hospital—Design of Final Settling Tank.
1150/5	..	Kandy Civil Hospital—Design of Treatment Plant.
1150/6	..	Kandy Civil Hospital—Design of Digester.
1150/7	..	Kandy Civil Hospital—Pump House.
1150/8	..	Kandy Civil Hospital—Drying Beds.
1150/9 to 20	..	Kandy Civil Hospital—Long Sections. (12 Sheets)
1150/21	..	Details of Columns for supporting pipes.
1157	..	Anuradhapura New Hospital—Site Plan.
1157/1	..	Anuradhapura New Hospital—Layout Plan.
1157/2	..	Anuradhapura New Hospital—Rough Settling Tank.
1157/3	..	Anuradhapura New Hospital—Aeration Tank.
1157/4	..	Anuradhapura New Hospital—Final Settling Tank.
1157/5	..	Anuradhapura New Hospital—Treatment Plant.
1157/6	..	Anuradhapura New Hospital—Digester.
1157/7	..	Anuradhapura New Hospital—Pump House.
1157/7B	..	Anuradhapura New Hospital—Detail of G.I. Tank, Hydrant Etc.
1157/8	..	Anuradhapura New Hospital—Drying Beds.
1157/7A	..	Anuradhapura New Hospital—Lifting Pump House.
1166	..	Jaffna Rest House—Site Plan.
116/1	..	Jaffna Rest House—Layout Plan of Sewers.
1166/2	..	Jaffna Rest House—Long Sections.
1173	..	Ratnapura Hospital—W.C. & Bath.
1174	..	Ratnapura Hospital—Detail of 2" Pipe and Washing Platform.
1178	..	Civil Hospital, Badulla—Site Plan.
1178/1	..	Civil Hospital, Badulla—Long Sections.
1178/2	..	Civil Hospital, Badulla—Long Sections.
1178/3	..	Civil Hospital, Badulla—Long Sections.
1178/4	..	Civil Hospital, Badulla—Long Sections.
1178/5	..	Civil Hospital, Badulla—Long Sections.
1178/6	..	Civil Hospital, Badulla—Long Sections.
1178/7	..	Civil Hospital, Badulla—Layout Plan.
1178/8	..	Civil Hospital, Badulla—Design of Rough Settling Tank.
1178/9	..	Civil Hospital, Badulla—Design of Aeration Tank.
1178/10	..	Civil Hospital, Badulla—Design of Final Settling Tank.

Drawing Nos.

1178/11	..	Civil Hospital, Badulla—Design of Treatment Plant.
1178/12	..	Civil Hospital, Badulla—Design of Digester.
1178/13	..	Civil Hospital, Badulla—Lifting Pump House.
1178/14	..	Civil Hospital, Badulla—Design of Drying Beds.
1179	..	Ceylon Army Cantonment—L.S. Trough line A.J.
1185	..	Ceylon Army Cantonment—Site Plan.
1185/1	..	Ceylon Army Cantonment—Layout of Treatment Works.
1185/2	..	Ceylon Army Cantonment—Design of Screen Chambers.
1185/3	..	Ceylon Army Cantonment—Design of Settlement Tank.
1185/4	..	Ceylon Army Cantonment—Design of Aeration Tank.
1185/5	..	Ceylon Army Cantonment—Detail of Aeration Tank & Settlement Tank.
1185/6	..	Ceylon Army Cantonment—Design of Drying Beds.
1185/7	..	Ceylon Army Cantonment—Design of Digester.
1185/8	..	Ceylon Army Cantonment—Detail of Digester & Drying Beds.
1185/9	..	Ceylon Army Cantonment—Design of Pump House.
1185/10	..	Ceylon Army Cantonment—Reinforcement Detail of Pump House.

SURFACE DRAINAGE SCHEMES

Drawing Nos.

1102	..	Kuliyapitiya U.C.—L. Sections & Site Plan.
1102/1	..	Kuliyapitiya U.C.—Storm Water overflow weirs etc.
1108	..	Madampe T.C.—L. Section on Kurunegala-Madampe Road.
1121	..	Dehiwela-Mt. Lavinia—Site Plan.
1121/1	..	Dehiwela-Mt. Lavinia—Long Sections.
1121/2	..	Dehiwela-Mt. Lavinia—Long Sections.
1125	..	Wariyapola Hospital—Long Sections.
1126	..	Ratnapura U.C.—Long Sections.
1126/1	..	Ratnapura U.C.—Long Sections.
1136	..	Wattala, Mabola, Peliyagoda—Site Plan.
1136/1	..	Wattala, Mabola, Peliyagoda—Long Sections.
1136/2	..	Wattala, Mabola, Peliyagoda—Long Sections.
1136/3	..	Wattala, Mabola, Peliyagoda—Cross Sections.
1136/4	..	Wattala, Mabola, Peliyagoda—Cross Sections.
1136/5	..	Wattala, Mabola, Peliyagoda—Cross Sections.
1165	..	Civil Hospital, Puttalam—Outlet Drain.
1167	..	Moratuwa Housing Scheme—Outlet Drain.
1167/1	..	Moratuwa Housing Scheme—Long Section.
1167/2	..	Moratuwa Housing Scheme—Long Section.
1167/3	..	Moratuwa Housing Scheme—Long Section.
1167/4	..	Moratuwa Housing Scheme—Long Section.
1168	..	Mill Street, Trincomalee.

MISCELLANEOUS

Drawing Nos.

1100	..	Public Health Engineering Division Organisation Chart 1957/58.
1105	..	Dankotuwa Hospital—Plan showing Electrical Points.
1107	..	Lunuwila P.U.—Site Plan.
935B	..	Ginigathena Apothecaries Quarters—Site Plan.
1113	..	I.D.H. Angoda—Site Plan.
1117	..	Padirippu P.U.—Site Plan.
1123	..	Minuwangoda Hospital—Site Survey.
1130	..	Gokarella Hospital—Plan showing Electrical Points.
1132	..	Muthur Maternity Ward—Site Plan.
1135	..	Mandativu Maternity Ward—Site Plan.
1139	..	Sainthamaruthu P.U.—Site Plan.
1142	..	Ankumbura Hospital—Detail of Electrical Fittings.
1143	..	Milk Waste Disposal Scheme, Central Dairy, Narahenpita.
1143/1	..	Milk Waste Disposal Scheme, Central Dairy, Treatment Plan.
1451	..	Beliatta P.U.—Site Plan.
1160	..	Hiripitiya Hospital—Plan showing Electrical Points.
1162	..	Ragama Branch Hospital—Site Plan.
1164	..	Madipola Hospital—Plan Showing Electrical Points.
1171	..	Nalanda P.U.—Plan showing Electrical Points.
1172	..	Marassana P.U.—Plan showing Electrical Points.
1180	..	Public Health Engineering Division Organisation Chart (Functions and Staff).
1182	..	Map of Ceylon showing population of towns.
1184	..	Public Health Engineering Division Skeleton Organisation Chart—Public Health Engineering Personnel.
1186	..	Public Health Engineering Division Skeleton Organisation Chart (Functions and Staff).

1192	..	Environmental Sanitation Project—Experimental Well Design D. & E.
1193	..	Environmental Sanitation Project—Design F.
1201	..	Hiripitiya P.U.—Outlet Drain.
	..	19 Name Boards for Head Office (Sinhalese).
	..	16 Name Boards for Head Office (Sinhalese), 1 Inquiry Board.
	..	3 Pay Sheets for Head Office.
	..	Printing Names and dates on Nurses Certificates 121.
	..	Printing Names and dates on Apothecaries Certificates 71.
	..	Printing Names and dates on Midwives Certificates 136.
	..	Printing Names and dates on Pharmacists Certificates 34.
	..	Printing and issuing Type Plans 979.
	..	Printing various other plans for contract etc. 2368.
	..	Issuing Type Plans Printed by Surveyor-General 246.

QUANTITIES

..	Norton Bridge Sewerage Scheme—Pump House (976/6).
..	Septic Tank—No. 38—Type A.
..	Dust Bin (1057).

Statement No. II

WATER SUPPLY

WESTERN DIVISION

Completed during the year

1. C. D. & Apo's Quarters, Bandaragama.
2. Hospital, Homagama.

Under Construction

1. Horana Hospital.
2. House of Observation, Mulleriyawa.
3. Kaltota Hospital.
4. Panadura Hospital.
5. Maharagama Hospital.
6. Kolonnawa Housing Scheme.

Under Investigation

1. Kalawana P. U.
2. Kiriella P. U.
3. Mawalattenne C. D. & Apo's Quarters.
4. Nambulawe C. D. & Apo's Quarters and Maternity Home.

NORTH-WESTERN DIVISION

Completed and Under Construction

1. Puttalam Chest Hospital (Completed)
2. Dankotuwa P. U. (Completed)
3. Mahamukalanyaya P. U.
4. Gokarella P. U.
5. Hiripitiya P. U.
6. Kalpitiya P. U.
7. Buluwela P. U.
8. Insect-borne Diseases Field Training Centre, Kurunegala—Under Construction.
9. Ridigama District Hospital.
10. Mawatagama District Hospital.
11. Matale Civil Hospital, Stage 1.
12. Nalanda P. U., Stage 2.

Under Investigation

1. Nikaweratiya Hospital.
2. Hettipola Hospital.
3. Sammanturai Rural Hospital.
4. Talampitiya Hospital.
5. Giriulla Hospital.
6. Sandalankawa Maternity Home.
7. Kandanagedara P. U.
8. Bingiriya Hospital.
9. Chilaw Hospital.
10. Batticaloa Hospital.
11. Kurunegala Hospital.
12. Galawela M. O's Quarters.
13. Madampe Hospital.
14. Allawa Hospital.
15. Midipola Hospital.
16. Matale North Hospital.

SOUTHERN DIVISION

Completed during the Year

1. Induruwa P. U.

Under Construction

1. Kirima Maternity Home.
2. Dickwella Maternity Home.
3. Balapitiya Hospital.

CENTRAL DIVISION

1. Maldeniya Hospital.
2. Akkaraipattu Hospital.
3. Bandarawela Hospital (New Scheme).
4. Rikillagaskada Hospital.
5. Wattegama Hospital.
6. Uduwela Hospital.
7. Madulkelle Hospital.
8. Bibile Hospital. P. U.
9. Medagama Hospital.
10. Deltota Hospital.
11. Badalkubura Hospital.

Statement No. III

SEWERAGE AND SEWAGE DISPOSAL

Completed during the Year

WESTERN DIVISION

1. Stage 1. Dental Nurses' Training School, Maharagama.
2. Ratnapura New Hospital Sewerage Scheme.
3. Mulleriyawa Psychopathic Hospital and House of Observation.

Under Investigation

NORTH-WESTERN DIVISION

1. Kurunegala Hospital.
2. School of Nursing, Kurunegala.
3. New Town and Kachcheri Quarters, Polonnaruwa.
4. Batticaloa Hospital.
5. Allawa M. O's Quarters.
6. Dambulla Hospital.
7. Marawila Hospital.

Under Investigation

CENTRAL DIVISION

1. Badulla Hospital.

Statement No. IV

SURFACE DRAINAGE SCHEMES

1. Sammanthurai T. C.
2. Moratuwa V. C.
3. Aluthgama T. C.
4. Panadura U. C.
5. Nugegoda outlet, 1st Lane.
6. Dehiwala U. C., Sunshine Avenue Outlet.

PREPARATION OF DESIGNS AND ESTIMATES

1. Ratnapura U. C.
2. Kolonnawa U. C.
3. Dehiwala U. C.
4. Moratuwa U. C.
5. Rambukkana U. C.
6. Wattala-Mabole-Peliyagoda U. C.
7. Panadura U. C.

CONSTRUCTIONS

1. Negombo M. C.

THE SCHEMES FOR WHICH TENDERS WERE CALLED FOR

1. Rambukkana T. C.
2. Dehiwala U. C.
3. Ratnapura U. C.
4. Wattala-Mabole-Peliyagoda U. C.
5. Kolonnawa U. C.
6. Kegalle U. C.

CONSTRUCTIONS

1. Mirigama Hospital Sewerage Scheme.
2. Supply of water seal syphons and squatting plates to various Health Offices.

INVESTIGATIONS AND DESIGNS

1. Panadura Hospital—Outlet Drain.
2. Dompe Hospital—Outlet Drain.
3. Police Station, Gampaha—Administration Block Sewerage Scheme.

4. Tangalla Rest House Sewerage Scheme.
1. Installation of Septic Tank—T. B. Preventorium, Paratta Farm, Moratuwa.
2. Ja-ela Housing Scheme. Conversion of Bucket Latrines to Water Seal Latrines.
3. Home for the Aged—Panadura. Re-conversion of Bucket Latrines to Water Seal Latrines.

UNDER CONSTRUCTION

1. Kurunegala M. C. Town Drainage Scheme.

UNDER INVESTIGATION

1. Wariyapola Hospital.
2. Kuliapitiya Hospital.
3. Galewala Hospital.

Statement No. V

MEDICAL BUILDINGS

WESTERN DIVISION

Completed during the Year

1. Maternity Home—Eheliyagoda.
2. C. D. and Apothecaries Quarters—Mawalatenna.
3. Maternity Ward—Kalawana.
4. C. D., Ja-ela.
5. Convalescent Home, Ragama.
6. Children's Ward—Pimbura.
7. Nurses' Quarters—Welisara.
8. C. D. and Apothecaries Quarters—Kiriella.
9. Wards, Wathupitiwela.

Under Construction

1. Two Pre-fab Wards—Mirigama.
2. M.O.'s Quarters—Minuwangoda.
3. Nurses' Quarters—Horana.
4. Maternity Home, Mawanella.
5. Maternity Home—Nambuluwa.
6. House of Observation—Mulleriyawa.

NORTH-WESTERN DIVISION

Completed during the Year

1. Two Pre-fab Wards—Giriulla.
2. Maternity Ward—Madahapola.
3. M.O's Quarters—Allawa.
4. Pre-fab Ward—Wawatagama.
5. C. D. and Apothecaries Quarters—Bingiriya.
6. M. O's Quarters, Galagamuwa.
7. Nurses' Quarters—Puttalam C. H.
8. M.O's Quarters—Puttalam C. H.
9. Maternity Ward—Puttalam D. H.
10. Administration Block—Madapola.

Under Construction

1. C. D. and Apothecaries Quarters—Lunuwila.
2. Maternity Home—Sainthamarathan.

Under Investigation

1. C. D. and Apothecaries Quarters—Marawila (In lieu of Koswatta).
2. Nurses' Aides School—Matale.
3. Maternity Home—Illukkumbura.
4. Paying Ward—Maternity Home, D. H., Puttalam.
5. C. D. and Apothecaries Quarters—Uhumiya.
6. 20 Nurses' Quarters—Kurunegala G.H.
7. C. D. and Apothecaries Quarters—Leliambe.
8. M. O's Quarters—Mawategama.
9. Pre-fab Ward—Dambulla.
10. C. D. and Apothecaries Quarters—Palugama.
11. Rural Hospital—Paddiruppu.

SOUTHERN DIVISION

Completed during the year

1. Maternity Home—Pallegama.
2. C. D. and Apothecaries Quarters—Pallegama.
3. Maternity Home—Tanamalwila.
4. Ward Extension—Balapitiya.
5. Apothecaries Quarters—Angunakolapelessa.
6. Maternity Home—Hakuruwela.

Under Construction

1. Ward and Kitchen—Kataragama.
2. C. D. and Apothecaries Quarters—Kataragama.
3. M. O's Quarters—Ambalangoda (Polwatta Hospital).
4. Apothecaries Quarters—Meegahayandura.
5. Central Dispensary—Beliatta.

CENTRAL DIVISION

Completed during the year

1. Administration Block—Marassana.
2. Administration Block—P. U., Ginigathena.
3. M. O's Quarters—P. U., Bibile.
4. Central Dispensary and Apothecaries Quarters—Padiyatalawa.
5. Apothecaries Quarters—Ginigathena.
6. Central Dispensary—Bambaradeniya.
7. Pre-Fab Ward—Medagama.
8. Children's Ward—Hataraliyadde.
9. Children's Ward—Meegama.
10. Children's Ward—Bibile P. U.
11. Apothecaries Quarters—Buttala.

Under Construction

1. C. D. & Apothecaries Quarters—Hanguranketa.
2. Apothecaries Quarters—Meegahakirula
3. Maternity Home—Bibilegama.

Under Construction

1. D. M. A's Quarters—Kandy Hospital.
2. Isolation Ward—Badulla.
3. Nurses' Training School, Kandy.
4. Central Dispensary and Apothecaries Quarters, Maldeniya (Hospital).
5. Additions and Improvements to P. U., Bandarawela.

HEALTH EDUCATION AND PUBLICITY

Central Organization

THERE was no change in the Central Organization from the set-up that existed in 1956.

The Health Education Officer at Headquarters assumed duties in August, 1957, after one year of training at the University of North Carolina in U. S. A., followed by a field training programme in an American Indian Village in Mexico and a training programme for youth leaders on group dynamics and community organization at Bethel in the State of Maine.

Field Organization

Two Health Educators returned from U. K. after a course of training in Health Education at the University of London and assumed duties.

Health Education Work in the Divisions :

The most important activities carried out in the field are as follows :—

- (a) *In-Service Training.* In-Service training of Public Health Inspectors and Public Health Nurses was completed in almost all Superintendents of Health Services' Divisions. This was given priority as it was felt that these categories of Public Health personnel should have a knowledge of the new principles and philosophy of Health Education to enable them to carry out their Public Health activities more successfully and efficiently. It is believed that this in-service training programme would give the incentive to these categories of Public Health personnel to carry out active Health Education work on correct lines in the community with the aid of Voluntary Organisations, in Schools and in Medical Institutions. The knowledge gained at this training would make them competent to carry out special survey studies, research and demonstration projects in their respective areas.

In-service Training of Public Health Midwives has already been undertaken in most of the areas and will be completed by the end of 1958. This training would enable the Public Health Midwives to carry out Health Education work with special groups, like expectant mothers in Maternity and Child Welfare Clinics, Maternity Homes and in little Mothers' Classes.

- (b) *Community Health Work.* The Health Educators are also carrying out active Health Education work with Voluntary Agencies and local leaders. Leaders of Rural Development Societies, Community Centres and Mahila Samities were given a basic training in the fundamentals of Health Education, and guidance was given to enable them to carry out active Health Education work in the community. Health Education activities were also carried out by the Public Health Inspectors under the guidance of the Health Educator with special groups in the community itself.
- (c) *School Health Education.* School Health Education activities were undertaken by the Health Educator with the assistance of other health personnel. In many divisions teachers at their special monthly conferences were made aware of the importance of Health Education in schools, and what methods and materials could be effectively used in educating the school child in health matters.

Health Education work was also undertaken in most of the Teacher Training Colleges. The Health Educator carries out part 'B' of the Syllabus of Training namely, Methods and Materials of Health Education. The training in the technical aspects of Health

Education is usually given by a Medical Officer. It is hoped that this scheme would be re-organized shortly by the United States Operation Mission Advisor in School Health Education who has had long experience in Health Education work in many of the Latin American countries and has taken up an assignment in Ceylon. He is presently attached to the Education Department and works in close collaboration with this Department.

- (d) *Health Education Work in Estates.* Health Education activities in Estates were undertaken chiefly in the Divisions of Badulla and Ratnapura. In the Badulla division, pioneer activities in Health Education in Estates were undertaken by the Health Educator of this division. In Telbedda Estate representatives from each line room were given training in Public Health and Health Education. Health Education work in other Estates will also be undertaken shortly with the primary purpose of educating the labour classes on these estates in the value of good health habits, and knowledge in the prevention and control of communicable diseases etc. It is gratifying to note that Superintendents of these Estates are taking a very keen interest in fostering Health Education activities in their estates.
- (e) *Health Education work with Voluntary Organization.* Voluntary Organizations, like, Rural Development Societies, Mahila Samities, Kantha Societies, Co-operative Societies, Agricultural Societies, etc., provide a useful place for Health Education work. Members of these Societies who are leaders in their respective communities are taking a great interest in their local health problems, and assistance is being given by the Health Educator in understanding community health problems in helping them to solve these problems on a self-help basis. Classes have been organized for these voluntary leaders with a view to giving them a knowledge and understanding of subjects like Public Health Community organization and group methods of working.
- (f) *Health Education work in Special Projects.* Special Projects have been organized for intensive Health Education work in each of the Superintendents of Health Services' Divisions. Small villages were carefully selected for this work. An initial survey to determine local health problems was undertaken and a programme for solving these problems were drawn up. The villagers are given the responsibility of carrying out this work successfully under the guidance of the local Public Health Inspector.
- (g) *Preparation of Health Education Materials by Field Units.* Although most of the necessary Health Education materials for Field Units are produced at the Central Production Unit, the Health Educators are encouraged to produce their own Health Education materials locally. It was considered desirable for the Divisional Officers to prepare materials locally to suit their local conditions. For this purpose the necessary financial provision is made available to the Superintendents of Health Services.

Health Education work in related Government Departments

As health education is broad in its scope of activity it is very necessary for this Department to co-ordinate Health Education activities with other Departments engaged in community development work. To bring in closer co-ordination and co-operation with the related Government Departments, a National Co-ordinating Committee has been set up at top level.

National Advisory Committee in Health Education

The inaugural meeting of this Committee was held this year and the following Departments participated :

Education Department,
Information Department,
Rural Development & Cottage Industries Department,
Public Health Department of the Colombo Municipal Council.

A representative was also present from the All-Ceylon Head-Masters' Conference.

Divisional Co-ordinating Committees in Health Education

Action was also taken to form Divisional Advisory Committees in Health Education in each S. H. S.'s area, to advise the Superintendents of Health Services on priorities to be assigned for Health Education work in a particular division. This committee also acts as a co-ordinating committee with regard to other development activities undertaken in the division. The Committee consists of local heads of other related Government Departments, representatives from important Voluntary Agencies and experienced educationalists and social workers of the area. These Committees have been functioning satisfactorily in most areas. It is hoped that these Advisory Committees will be more useful in the future.

Health Education Training of Personnel of other Departments

With a view to emphasising the need for Health Education of the Public, attempts were made by this Department to conduct Health Education training of personnel of other Departments engaged in Community Development work. The training was given to officers of the following Departments :

- (i) Rural Development and Cottage Industries—(In Rural Development Training Centres).
- (ii) Education Department—(In Schools and Training Colleges).
- (iii) Agricultural Department—(In several Farm Schools).
- (iv) Co-operative Department—(At the Polgolla Training School).

The interest and enthusiasm displayed and assistance rendered to this Department by these Departments in the promotion of Health of the Nation is appreciated.

Health Education Work in the Specialized Campaigns

Health Educators were appointed at the out-set to the Superintendents of Specialized Campaigns of Tuberculosis, Anti-Venereal Diseases and Anti-Malaria. These officers carry out Health Education work connected in their speciality. In-service Training programmes were also an important activity undertaken. These officers are expected to educate the public in the special disease concerned, and contacts are made with necessary voluntary agencies, special groups, and the General Public. They work in close collaboration with Divisional Health Educators and other Health personnel in various Divisions.

Special Activities of the Department

- (a) *All-Ceylon Health Week.* The 19th "All-Ceylon Health Week" was celebrated throughout the Island from 3rd to 9th June, 1957. In the celebrations emphasis was given to important

local health problems, to problems connected with Maternity and Child Health, Environmental Sanitation, School Health, etc. In accordance with the recommendations of the W. H. O. the World Health Day was celebrated on 4th June, 1957. In most areas the initiative was taken by Voluntary Organizations and other Government Departments. Special mention has to be made of the assistance given by the Education Department in making this Health Week Celebrations a success.

- (b) *Central Health Exhibition.* Apart from Local Exhibitions held in various Health Districts in connection with the "All-Ceylon Health Week" activities, it has been the practice to conduct a Central Health Exhibition sponsored by the Department to coincide with the Health Week. This year the Central Health Exhibition was held at Kandy at the Government Pushpadana Senior Girls' School. Great initiative and enthusiasm were shown by the officers in this Division and this Exhibition roused public interest in the prevalent health problems in the area.
- (c) *Michael Gunaratne Challenge Shield.* This Shield is awarded every year to the best organized Health Week Celebrations. This year the Shield was awarded to the Matugama Health Week Celebrations Committee.
- (d) *Physical Drill Competitions.* Two Challenge Cups offered by the Health Department Sports Club for the best physical drill display from the schools in the Kandy Division were awarded to the following :
 - (i) Challenge Cup for boys.
Awarded to : K/Pujapitiya Junior School, Pujapitiya, Kandy.
 - (ii) Challenge Cup for girls.
Awarded to : St. Anthony's Girls English School, Kandy.
- (e) *Universal Children's Day Motorcade.* The Department also participated in a motorcade organized by the "All-Ceylon Coordinating Council for Child & Youth Welfare" on 7.10.57, and the tableau put-up by this Department was awarded a Special Prize.
- (f) *Radio Talks.* Through the courtesy of the Rural Service of Radio Ceylon the Department was able to continue a monthly Feature in the form of discussions, dialogues and talks on various health subjects. During the year under review 12 programmes in Sinhalese and 9 in Tamil were put on the air.

During the "All-Ceylon Health Week" in June, 1957, a detailed programme in English, Sinhalese and Tamil was carried out and this included special talks and features got up to emphasise the activity on the Health Week programme on each day.

In addition a special talk on "Influenza" was put on the Air in all three languages during the outbreak of Influenza in June, 1957.
- (g) *Publications.* The monthly "News-Letter" of the Department was published regularly. Action was initiated to commence a new quarterly health magazine entitled "OUR HEALTH" to replace the "HEALTH TOPICS". The new magazine will contain articles of general interest relating to health, and it is hoped that this magazine would be useful to a wider public.

Training Institute, Kalutara

THE Department recognized the great need for Health Education training for all Public Health personnel receiving training at the Training Institute at Kalutara. For this purpose, the Health Educator who returned recently from the United Kingdom after postgraduate training in Health Education was appointed.

The Training Institute also undertakes the special training programmes for officers of other Government Departments such as Divisional Revenue Officers, Probation Officers, Rural Development Officers and Voluntary Leaders; and with the appointment of the Health Educator steps were taken to give a prominent place for Health Education in the Syllabus of Training.

Library Service

LIBRARY Services have progressed quite smoothly during the year under review. A large number of books and periodicals were added to the Central Library and to the Divisional Health Education Libraries. Steps were taken to co-ordinate the activities of the large net work of libraries in the various Institutions of the Department.

The Librarian of the Department was afforded the opportunity of following a short course in practical library work sponsored by the Ceylon Institute of Scientific and Industrial Research. About Rs. 10,000 was spent during the year for the purchase of books and periodicals for the Central Library and the 15 Divisional Libraries. The Central Library has over 2,500 volumes and each of the Divisional Libraries has been equipped with the important books on health education and the basic reference books and dictionaries. The Central Library received nearly 75 periodical publications during the year whereas the Divisional Libraries were provided with best journals on the field of health education.

In addition to these there are a large number of reference Libraries in various other institutions of the Department like Hospitals, Health Offices, Nurses' Training Schools, Specialized Campaigns etc. Acquisitions were made for most of these Libraries and they were well equipped with the recent works in the various branches of medical science.

These various institutions also receive quite a considerable number of Periodicals.

Another branch of the Library Services of the Department is the feature—'Gleanings from Current Health Literature'. During the year under review the following articles were sent to all officers as digests or reproductions from current Medical Literature:—

- (1) Neurotropic Virus Diseases.
- (2) Present state of Child Health in Ceylon
- (3) Tuberculosis : the position today
- (4) The Epidemiology of Salmonella Infections in Man
- (5) How the Industrial Nurse Contributes to Accident Prevention.
- (6) Practical Management of Common Poisoning
- (7) Field Trial of Typhoid Vaccines
- (8) Clean Food
- (9) Rabies Prophylaxis in Man
- (10) The application of Modern Techniques to the detection of a Typhoid Carrier.

Health Education Productions Unit

THIS Unit is expected to provide Health Education Materials and Equipment for general use in the field units.

The staff attached to this Unit remained the same as in previous year.

A Photographer, Cinema Technician, Artist-Modeller and a Photo-Lab. Assistant were sanctioned in 1957-1958 Financial Year and appointments will be made shortly. With the appointment of this staff, a Photographic Section and a Technical Section will be established at this Unit, and this will enable it to undertake the preparation of photographs, art materials, cinema slides and film-strips required for the use of the Health Education Field Units attached to Health Divisions. The appointment of the Cinema Technician and the establishment of the Technical Unit will minimise the delays and expenditure involved in repairing and maintenance of Cinema and other Health Education equipment, which work is now being done by private firms.

Film Library

THE film Library was strengthened with an additional 15 films received from the National Film Board of Canada and 5 films from the Information Department of Ceylon. At present there are 72 films and 29 film-strips in the library and they are sent to Field Health Education Units on request. During the year 1,761 shows were conducted with these films in various parts of the Island.

Apart from the above 104 films were received on loan from the U.S.I.S. and they were circulated monthly among various divisions in batches for conducting cinema shows in different areas.

Models

The following models were prepared during 1957:—

- (i) 216 Wax Models for new Health Education Vans and for use in different field units.
- (ii) Repairing of wax models.
- (iii) 5 Sets of cut-out models for Health Education Vans.

Posters, Illustrations, Sketches and other Miscellaneous items

One of the major items of work done was the preparation of a Tableau for the Department to participate in the Motor-Cade held in connection with the Universal Children's Day. Assistance was also given in the preparation of a similar Tableau for the Child Protection Society. A large number of posters, and sketches on various health subjects and activities, such as All-Ceylon Health Week, Influenza, Flood, Blood Bank Service, ventilated house, Bowel diseases, Polio, Typhoid Fever, Rural Sanitation, Health Habits, Hookworm, Rabies, Infectious Hepatitis were prepared and distributed for use in various Health Education Programmes.

Distribution of Health Materials

A large number of printed leaflets on various subjects such as Typhoid Fever, Filariasis, Rabies, "A word from your Medical Officer", C.N.A.P.T., Eradication of Malaria, Floods, Family Planning, Breast Feeding, Influenza, Admission to Hospitals and Maternity Homes, Tuberculosis, &c., and posters on "You have saved another life", "I gave my blood to save a life", Venereal Diseases, Influenza, were printed and distributed to various institutions and personnel.

Booklets on Hospital and Kitchen Hygiene, Meat Inspection, and Health Topics were also made available to various institutions and other personnel.

International Assistance

Several International Agencies have helped this sub-division by providing valuable Health Education materials, and fellowships for training of Health Educators. The U. S. O. M. has agreed to give two fellowships every year. The U. S. O. M. has also contributed equipment and other Health Education materials to the value of \$44,000. Orders for these equipment were placed during the year under review, and they are expected to be received by the Department shortly.

The following equipment were received as assistance from UNICEF for the expansion of the Health Education Scheme in the Island:—

- 1 Bell and Howell Projector ;
- 1 Cine Screen ;
- 1 Tape-Recorder ;
- 1 Action Movie Editor for 16 mm ;
- 6 Film Storage Chests ;
- 1 Tilting Machine for film-strips ;
- 30 Film Cans for 16 mm.

These and other items received in the previous year were distributed to the Health Education Materials Production Unit and to Divisional Health Education Field Units.

The Department is grateful for all assistance given by these International Agencies for furthering of activities in connection with the Health Education Programme.

QUARANTINE AND INTERNATIONAL HEALTH

General

The Quarantine Services now function as an administrative division of the Department of Health Services in accordance with the integration of the Service of this Department.

However, from the legal standpoint, the Quarantine Department is still an independent Department, the Director of Quarantine being the Director of Health Services. Such an arrangement secures unity of policy and administrative co-ordination.

It is unfortunate to record an increase in the number of illicit immigrants ("sneak entrants") arriving in Ceylon. Illicit immigrants are always a potential danger in the introduction of quarantinable disease from India.

During the latter part of the year a waive of influenza was reported in several Asian Countries and strict precautions were taken at all International Ports and Airports in Ceylon to isolate cases of influenza arriving by ships and aircraft, and to reduce non-essential contacts between infected ships and the shore. No quarantinable diseases were reported at ports and airports in Ceylon during 1957.

For the first time in the Port of Colombo Hydrogen Cyanide fumigation of rice bags was performed experimentally in the holds of ships to eliminate the long delay where such cargoes are fumigated after loading into lighters. The question of substituting Methyl Bromide in place of HCN is being investigated.

QUARANTINE DISEASES

Plague

Plague has not occurred in Ceylon for the 19th year in succession. The last case of human plague occurred on May 29, 1938, while the last case of rat plague was discovered in August of the same year. The fumigation of all cargo landed in the Port of Colombo from plague-infected countries is mainly responsible for the prevention of plague being re-introduced into this Island. The fumigant used is Hydro-cyanic Acid Gas.

Anti-Plague Measures in Colombo City

This is the second line of defence after Port fumigation. Anti-plague measures are taken by the Colombo Municipality. The staff consists of one Public Health Inspector, 7 Overseers and 48 Labourers. Of these 3 Overseers and 16 Labourers are engaged in fumigation work and 4 Overseers and 22 Labourers in rat trapping work.

The following is a summary of work carried out by the Municipal fumigation staff during the period under review in Colombo :—

Number of premises gassed	..	..	..	675
Number of rat holes gassed	..	..	..	2,501
Number of rats killed by gas	..	..	..	4,907
Number of rat nests found	..	..	..	1,204
Number of rats sent to the City Microbiologist for examination				4,907
Number of rats found infected	..	..	..	Nil
Number of premises disinfected	..	..	..	6,023

The following is a summary of the work done by the Municipal rat trapping staff in Colombo City :—

Number of traps laid	..	..	..	122,192
Number of rats trapped	..	..	..	13,009
Number of dead rats found	..	..	..	1
Number of rats sent to the City Microbiologist for examination			..	1,017
Number of plague-infected rats	..	..	..	Nil

Rats are sent daily to the City Microbiologist for examination and reports are regularly received from him. The City continues to maintain its reputation of being free from Plague, mainly due to the strict vigilance exercised in this work by the Anti-plague staff.

Anti-Plague measures elsewhere than in Colombo also continue. Rat trapping is also carried out at Talaimannar.

QUARANTINE CAMPS

(a) MANDAPAM CAMP

THE following retrenchments in staff were effected during the year to give effect to the policy of eventually closing down Mandapam Camp and moving to Talaimannar :—

1 Assistant Teacher, 1 Office Peon, 8 Ward Peons, 1 Maistry, 1 Disinfecting Peon, 5 Sweepers, 1 Artificer, D.GP, 2 Artificers C.GP, and 1 Overseer.

Staff

The strength of the staff at the end of the year consisted of : One Medical Officer (Superintendent, Mandapam Camp), One Office Assistant, One Apothecary, 21 Clerical and other subordinate staff, 14 employees of other grades not categorised above including technical and skilled grades ; and 83 minor employees including peons and sweepers.

Immigration

1,072 estate labourers were passed to enable cross-over to Ceylon during the year 1957 as against 2,363 during the preceding year. 33,357 miscellaneous passengers were passed through to Ceylon in 1957 as against 38,396 during the preceding year.

Rejection

The number of miscellaneous passengers rejected for leprosy during the year was 1 as against 4 in 1956.

Steamer Crew

3,495 members of crew were passed after disinfection and vaccination. The number of steamer crew passed through to Ceylon during 1956 was 3,172.

Disinfection

5,520 packages were disinfected, while 5,950 packages were disinfected during 1956. The reduction was due to the fact that only articles that should be disinfected are disinfected.

Vaccination

223 estate labourers and 8,468 passengers were vaccinated during the year 1957, as against 2,065 estate labourers and 9,287 passengers last year.

Resident Population

According to the Annual Census taken in Camp the number of residents was 888 as against 1,024 in the previous year. The classification is as follows :—

124 Ceylon Government Employees and	..	..	554 dependants
7 Indian Government Employees and	..	..	28 dependants
5 Quasi Government Employees and	..	..	20 dependants
28 Private Employees and	..	..	122 dependants
164			724 Total .. 888

The reduction in the resident population is due to the retrenchment of staff.

Works

All buildings and roads were maintained in good condition as far as funds permitted. No special undertakings were permitted during the year under review.

Sewage Disposal

The Sewage system was maintained in a satisfactory condition as Sewage pits have been functioning quite satisfactorily. Refuse and other waste matters were dumped into a low-lying land and covered with a heavy layer of sand to avoid fly-breeding.

Sanitation

The sanitation of the Camp was maintained throughout the year at its reputed level of cleanliness.

Welfare

The Welfare Club is functioning very efficiently, though the number of members dwindled on account of retrenchment. The Club consists of five sections :—

- (1) Out-door sports such as Tennis, Cricket, Foot-ball, Volley-ball, Badmington and Tennicoit, &c.
- (2) Art, Drama and Music.
- (3) Literary (English and Tamil Reading Rooms) and indoor recreational facilities such as Ping-Pong, Carrom, Bridge, &c.
- (4) Canteens.
- (5) Children's (Playgrounds and Amusement Parks).

Camp Hospital

Twenty beds were provided in the Camp Hospital—Observation Ward 1 bed, Special Ward 1 bed, and Miscellaneous Ward 2 beds and in the general Ward 10 beds for males and 6 beds for females. There were 113 admissions to the Camp Hospital during the year 1957.

Out-door Dispensary

7,354 out-door patients were attended to at the Out-door Dispensary. They were as follows :—

First Visits	..	..	..	2,903
Subsequent Visits	..	..	..	4,451
Total				7,354

Camp School

There were 213 pupils on the Roll in the Camp School at the end of 1957.

Annual Expenditure

The total expenditure was Rs. 290,683.13 as against Rs. 327,783.97 in 1955/56. The revenue earned for the year was Rs. 52,884.33.

Future Programme of Work

Steps are being taken to close down this Camp and to transfer it to Talaimannar.

(b) TATTAPPARAI CAMP

THIS camp which was in existence for over 59 years was handed over with all the assets to the Government of India on the 23rd December, 1957, in accordance with an arrangement reached between the Governments of India and Ceylon.

PORT HEALTH SERVICES

(a) COLOMBO

THE Port Development Scheme has not yet been completed and as a result the port area is being dug up periodically at different spots. This not only creates many breeding places for mosquitoes but makes the place very unsightly.

Staff

The Staff consists of 5 Medical Officers including the Assistant Port Health Officer for Immigration. A Chief Fumigation Inspector with 4 Public Health Inspectors and 12 Fumigation labourers attend to fumigation. An Apothecary, 3 firemen, 4 labourers attend to disinfection work ; 5 clerical officers, a female receptionist, 10 peons and 1 labourer attend to Port Health Office work. There is also one rat-labourer.

Shipping

3,473 vessels entered the Port of Colombo during the year and were granted pratique. A comparative statement for the last six years is given below :—

Year	No. of Ships
1952	3,594
1953	3,563
1954	3,571
1955	3,624
1956	3,559
1957	3,473

Of the total of 3,473 vessels which entered harbour in 1957, 320 were sailing vessels and 3,153 were oil and coal burning vessels.

Pilgrim Ships to Jeddah

The following pilgrim ships called at this port on their way to Jeddah :—

1. SS "Mozaffari"
2. SS "Anking"
3. SS "Mohamedli"

123 pilgrims from Ceylon embarked on SS "Mozaffari".

Ships in Quarantine

There were no cases of quarantinable diseases during the year.

The Ship SS "Garbeta" which had a case of smallpox on voyage arrived during the year. The patient was landed at Rangoon and hence she was

granted restricted pratique. There were six other ships which had a number of cases of suspected Asian influenza. They were—

1. SS "Demodocus"
2. SS "Chusan"
3. SS "Carthage"
4. SS "Straat Madura"
5. SS "Clan Cameron"
6. SS "Sirdhana"

The crew and the passengers of the above vessels were not allowed ashore; visitors from the shore were banned, with the necessary exceptions due to business or emergency needs.

Immunization

Vaccinations and inoculations to meet the requests of passengers going abroad were carried out at the Port Health Office, Office of the Assistant Port Health Officer for Immigration and the Disinfecting Station. Fees were charged in accordance with the schedule of charges as prescribed in the Quarantine Regulations and the money recovered was credited to Revenue. No charges were made for vaccinations and inoculations imposed as a quarantine measure on arrival.

	<i>Small-pox</i>	<i>Cholera</i>	<i>Yellow Fever</i>	<i>Plague</i>
As a quarantine measure ..	3,662 ..	288 ..	— ..	—
On request ..	5,010 ..	6,670 ..	1,592 ..	—

474 persons received anti-typhoid inoculations and of these 417 were inoculated on request and a sum of Rs. 683 was collected and credited to Revenue.

Anti-Plague Measures

The following is a summary of anti-plague measures:—

Number of rats trapped ..	1,882
Number of lighters and sailing vessels inspected in harbour for rat indications ..	609
Number of vessels showing evidence of rat harbourage ..	44
Number of rats killed in sulphurdioxide fumigation ..	58
Number of vessels and craft inspected as to fitness for docking ..	20
Number of vessels inspected for issue of International Certificates of Fumigation ..	99
Number of vessels issued with deratting exemption certificates ..	70
Number of vessels issued with deratting certificates ..	5
Number of vessels found with cargo in holds and suitably dealt with to meet individual requirements ..	24
Number of rats collected from ships fumigated with HCN ..	45

Rat-trapping at this Port was carried out as a routine measure by the Colombo Municipality and 1,882 rats were trapped during the year.

In addition Tomorin trays were used by the Public Health Inspectors of the Port Commission as a rodenticide.

Cargo Fumigation

Cargo of grain and the fumigable cargo from plague-infected sources were fumigated with Hydro-cyanic Acid Gas, before landing.

5,794,973 bags of rice and 236,562 bags of other merchandise were fumigated during the year as compared to 5,656,234 bags of rice and 128,901 bags of other merchandise in 1956.

For the first time in 21 years fumigation of cargo was undertaken in the holds of the ships due to the crisis created by labour strikes. Two ships with rice cargo and a small ship with pulses were concerned. This was done after inspection, re-stacking of bags with facilities for gas and air circulation.

Comparative Tabulation

<i>Nature of Cargo fumigated</i>		<i>1955</i>	<i>1956</i>	<i>1957</i>
Bags of rice ..	..	3,835,944 ..	5,656,234 ..	5,794,973
Bags of paddy ..	..	— ..	— ..	—
Bales of cotton ..	..	— ..	— ..	—
Other merchandise ..	..	68,894 ..	128,901 ..	236,562

The quantity of HCN used during the year is as follows :—

	<i>lbs.</i>
(a) Cargo fumigation	5,665
(b) Ship fumigation	107½
(c) For fumigation of rice and other cargo in the ships' holds ..	164½
	<hr/> 5,936½

Ship Inspection

During the year 75 ships were inspected for the granting of deratting certificates or deratting exemption certificates. Twenty ships were inspected for rats prior to entering dry dock.

Fumigation of Sailing Vessels and Lighters with Sulphur

111 Sailing vessels and 578 lighters were fumigated with sulphur during the year. The sailing vessels fumigated were those plying between South Indian Ports or the Maldiv Islands and Colombo. Fifty-eight dead rats were collected from fumigated lighters and sent to the City Microbiologist for examination. Lighters which carried fumigable cargo and were consequently fumigated with HCN were exempted from fumigation with sulphur.

Medical Surveillance of Passengers

398 air passengers and 440 ship and train passengers were kept under surveillance by the Port Health Officer whilst the Assistant Port Health Officer for Immigration kept under surveillance 37,938 air, train and ship passengers as against 40,538 in the previous year. There were 1,646 defaulters as against 1,724 in the previous year. Two cases of chicken-pox and one case of measles occurred among the passengers kept under surveillance.

Disinfecting Station

No passengers were disinfected at the Disinfecting Station during the year 1957.

3,322 seamen arriving from India to join vessels at this Port were disinfected and accommodated at the Disinfecting Station, prior to joining vessels.

Six cases of minor infectious diseases were landed through the Disinfecting Station.

735 cradles of soiled linen and 194 cradles of hoses of water-boats were disinfected during the year and a sum of Rs. 1,840 was collected and credited to Revenue.

Inspection of Food Stuffs

149 bags of food articles were inspected and condemned as unfit for human consumption. All the items consisted of onions.

Accidents

553 accidents were reported in the Port of Colombo during the year as compared to 676 in the previous year. First Aid was rendered at the Port Health Office for minor injuries, and on the spot by the Port Health Officers in serious cases. All cases needing further medical care were referred to the General Hospital, Colombo. In addition the Port Health Officers also attended to accidents on board ships in harbour.

Water Boats

176 inspections were made of 32 water-boats which were passed for transporting water to ships as fit. Quarterly certificates were issued and a sum of Rs. 144.75 was collected and credited to Revenue.

Two samples of water from hydrants in the harbour were examined chemically and bacteriologically by the City Microbiologist and by the Government Analyst. There was no evidence of faecal contamination.

The water-boat employees were medically examined during the first quarter of the year, and were immunized against typhoid and para-typhoid as required by the Quarantine Regulations.

The water-boats were disinfected and cement washed once a quarter and were maintained in a sanitary condition.

Sanitation of Port Commission Area

The sanitation of the Port Commission area is looked after by two Public Health Inspectors who have under them 2 overseers and 5 sub-overseers and one clerk. The Public Health Inspectors, though not working directly under the Port Health Officer, are technically supervised by the Port Health Officer. They submit their programmes of work to the Port Health Officer. Periodical inspections of the area were carried out by the Assistant Port Health Officers during the year and necessary action was taken to correct the defects.

Births and Deaths Registration

One birth and 15 deaths were registered in the Medical Registrar's Division, Fort, of the Colombo Municipality, including the Port Commission Area.

Lectures and Demonstrations

The Port Health Officer gave the usual lectures and demonstrations on Port Health Work including fumigation with HCN and S 02 and steam disinfection to the following :—

1. Post-Graduate Medical Officers.
2. Medical Students.
3. Public Health Learners.

Mosquito Control Work

The Port Commission voted a sum of Rs. 2,525 for Anti-Mosquito work within the Port Commission area for the year 1956-57.

The Port Commission has been requested to increase the number of labourers for this work to increase efficiency.

(b) GALLE

Staff

The staff consists of 1 Port Health Officer who is a part-time officer (his primary appointment is Assistant Superintendent of Health Services, Galle), 1 Supervisor, Disinfecting Station, and two minor employees.

Work Done

During the year 67 vessels consisting of 49 steamers and 18 sailing vessels called at this Port, as compared to 57 in the preceding year. One steamer called outside the harbour for Medical Aid. No cases of infectious diseases were detected on the vessels.

Vaccination against smallpox and cholera was done on request, and also as a quarantine measure in the case of crews of the Indian sailing vessels. Disinfection is mainly confined to linen, &c., sent from the General Hospital, Galle.

A new boiler was installed at the Port Health Office in December, as the existing one was defective.

(c) TRINCOMALEE

The D.M.O., Trincomalee, is the part-time Port Health Officer at this Port.

139 vessels consisting of 74 steamers, 62 Ceylon Coastal Boats and 3 Indian Coastal Boats arrived at Trincomalee. 108 aircraft also arrived at Trincomalee. All these arrivals were granted pratique.

No infectious diseases were found on arrival.

TALAIMANNAR

The staff consists of the Medical Officer, Talaimannar, who is also the Port Health Officer, one boatman-cum-peon, and a few guards and labourers to guard illicit immigrants.

Work Done

Two ferry boats plying between Danushkodi Pier and Talaimannar Pier called on 303 occasions and were granted pratique. No coastwise vessels called at this port during the year. No case of infectious disease was detected on arrival.

853 illicit immigrants were kept under observation at the Quarantine Camp. One chickenpox case was detected among them and was sent to the Infection Diseases Hospital, Mannar. 115 passengers reported to the Port Health Officer during their period of surveillance.

(e) KAYTS

The staff consists of the Medical Officer, Kayts, who is a part time Port Health Officer, four boatmen, one labourer and a few guards (temporary) who were taken over by the Police Department since September, 1957.

Work Done

160 vessels consisting of 8 motor launches, 1 schooner, 105 cargo boats, 16 lighters and 30 Dhoneyes called at this Port during this year compared to 153 last year, and were granted pratique. There were no infectious diseases.

770 illicit immigrants were kept under surveillance in the Kayts Quarantine Camp. No communicable diseases were detected among the illicit immigrants.

Two vessels were sulphur fumigated. Ninety-two passengers from India were kept under surveillance. Twenty-nine passengers were issued International Vaccination Certificates after vaccination.

(f) MINOR PORTS

Batticaloa

149 vessels called at this Port during the year and all of them were granted pratique. No infectious diseases were detected.

All persons who did not possess valid certificates of vaccination were vaccinated.

Beruwela

There was no activity at this port during the year. 112 persons were kept under surveillance by the District Medical Officer, Beruwela.

Dodanduwa

During this year 14 sailing vessels called at this port, of which, 4 were schooners and 10 boats. All of them were granted pratique.

Jaffna

The staff consisted of a part-time Port Health Officer and two boatmen.

364 vessels consisting of 346 cargo boats, 3 motor vessels, 14 motor launches and 1 steam ship called at this port during the year as compared with 342 in the previous year. Of these, 322 cargo boats called from Indian Ports.

All these vessels were granted pratique. There was no case of communicable disease.

The number of persons vaccinated against smallpox was 389 and the number inoculated against Cholera was 743.

Kalpitiya

No records called and no port health work was carried.

Kankasanturai

Seventy-seven sailing vessels arrived at this port. Of these, 34 were given restricted pratique due to the influenza epidemic in India while the others were granted ordinary pratique.

Mannar

Sixty-seven vessels called at this port during the year and all were granted pratique. No case of infectious disease was detected.

Mullaitivu

Six sailing vessels and two motor launches arrived at this port on coast-wise clearance and were granted pratique.

Negombo

Seventy four vessels called at this port during the year and all of them were granted pratique. No case of infectious disease was detected.

Pt. Pedro

160 cargo boats called at this port during the year. Of these 16 were from Indian Ports while the others were from local ports. There was no case of communicable disease in any of the vessels. All of them were granted pratique.

Pesalai

No vessels called at this port during the year and therefore no port health work was carried out at this port.

Valvettiturai

Three sailing vessels arrived at this port during this year and all of them were granted pratique.

AIRPORT HEALTH SERVICES

A. COLOMBO AIRPORT (RATMALANA)

The staff consists of one Medical Officer, three Public Health Inspectors, three Orderlies, one Overseer and three Mosquito-Control labourers.

In addition one Entomological Assistant and two Field Assistants were also working under the direct supervision of the Research Officer in charge of the Division of Medical entomology.

The following International Airlines operated scheduled services during the year under review :—

- (i) Air Ceylon Regional
- (ii) Air Ceylon International
- (iii) Indian Airlines
- (iv) B. O. A. C. till 9th September, 1957
- (v) Qantas
- (vi) T. W. A.
- (vii) K. L. M.

Work Done

1,590 Aircraft landed at Ratmalana. Of these 1,073 Aircraft were granted pratique at Ratmalana. Air Ceylon planes were granted pratique at Kankasanturai Airport before proceeding to Ratmalana.

Aircraft Arrivals by Months

	<i>J.</i>	<i>F.</i>	<i>M.</i>	<i>A.</i>	<i>M.</i>	<i>J.</i>	<i>J.</i>	<i>A.</i>	<i>S.</i>	<i>O.</i>	<i>N.</i>	<i>D.</i>	<i>Total</i>
Air Ceylon (R)	.. 44..	40..	45..	47..	48..	50..	46..	42..	45..	41..	45..	25..	518
Air Ceylon (I)	.. 9..	8..	10..	8..	9..	9..	8..	10..	8..	9..	9..	8..	105
Ind. Airlines	.. 33..	32..	37..	30..	32..	35..	31..	31..	30..	31..	31..	53..	406
Air India (I)	.. 2..	1..	—	—	—	—	—	—	—	—	—	—	3
B. O. A. C.	.. 23..	20..	23..	21..	22..	23..	23..	20..	12..	1..	1..	5..	194
Qantas	.. 10..	8..	9..	6..	9..	9..	9..	9..	9..	9..	8..	8..	103
T. W. A.	.. 8..	8..	9..	8..	10..	8..	8..	9..	8..	8..	10..	8..	102
K. L. M.	.. 9..	8..	8..	8..	9..	9..	8..	9..	9..	9..	8..	9..	103
Other International Services	.. 2..	2..	3..	7..	11..	14..	9..	1..	4..	2..	—	1..	56
	140	127	144	135	150	157	142	131	125	110	112	117	1,590

(R) — Regional

(I) — International

Types of Aircraft arriving by years (International Flights)

	1952	1953	1954	1955	1956	1957
Dakotas	.. 731	.. 749	.. 613	.. 406	.. 544	.. 616
Vikings	.. —	.. —	.. 140	.. 358	.. 364	.. 302
Argonauts	.. 202	.. 191	.. 239	.. 229	.. 222	.. 190
Constellations	.. 96	.. 171	.. 284	.. 173	.. 229	.. 193
Sup. Constellations	.. —	.. —	.. —	.. 185	.. 209	.. 266
Sky Masters	.. 102	.. 63	.. 24	.. 1	.. —	.. —
Comets	.. 37	.. 52	.. 2	.. —	.. —	.. —
Viscounts	.. —	.. —	.. —	.. —	.. —	.. 14
Others	.. 149	.. 26	.. 25	.. 21	.. 11	.. 9
Total	.. 1,317	1,252	1,327	1,373	1,579	1,590

Passenger Arrivals and Departures

	<i>Disembarking</i>	<i>Transit</i>	<i>Embarking</i>
January ..	.. 2,209	.. 1,085	.. 2,020
February ..	.. 1,899	.. 824	.. 1,927
March ..	.. 1,989	.. 883	.. 2,079
April ..	.. 1,774	.. 843	.. 2,133
May ..	.. 1,894	.. 1,211	.. 1,922
June ..	.. 2,053	.. 1,202	.. 2,176
July ..	.. 1,459	.. 1,247	.. 1,459
August ..	.. 1,393	.. 1,119	.. 1,426
September ..	.. 1,347	.. 950	.. 1,326
October ..	.. 1,023	.. 592	.. 1,078
November ..	.. 1,529	.. 510	.. 1,282
December ..	.. 1,913	.. 726	.. 1,758
Total	.. 20,482	11,192	20,586

Comparative Statement of Passenger Arrivals, Transits and Departures By Years

	<i>Disembarking</i>	<i>Transits</i>	<i>Embarking</i>
1952 ..	.. 15,445	.. 2,967	.. 16,778
1953 ..	.. 16,902	.. 6,689	.. 19,427
1954 ..	.. 15,100	.. 3,882	.. 20,528
1955 ..	.. 17,079	.. 8,925	.. 21,473
1956 ..	.. 19,702	.. 11,968	.. 20,643
1957 ..	.. 20,482	.. 11,192	.. 20,586

Local figures are not included in the above table.

Water Supplies

The water supply at the Airport continues to be inadequate and unsatisfactory. There is still no regular supply of water available. The canteen and the conservancy services have been badly affected as a result. The P. W. D. has during the year under review commenced work to sink a new well, with a storage tank, to supply water to the Airport.

Latrine Accommodation and Sanitation

The latrine accommodation provided for the passengers in the present temporary terminal building is inadequate and unsatisfactory. However, provisions for increased and better toilet facilities have been made in the new terminal building, which is now nearing completion.

Sewage Disposal

Sewage from Aircraft continues to be disposed of by trenching. This method of disposal is unsatisfactory and a source of danger to public health. Recommendations made in this respect for a concrete ramp and septic tank have not yet been implemented. The Director of Civil Aviation has reported that financial provision has now been made for a complete Sewage Scheme for the Airport area.

Refuse Disposal

Refuse is disposed of by trenching and burning in pits provided at the wind sock site. A type plan incinerator has been recommended for disposal of refuse but it had not been given effect to yet. The provision of sanitary dust bins is recommended for the collection of all refuse at the various hangars and other buildings in place of tar barrels, some of which are without lids.

B. KATUNAYAKE AIRPORT

The R. A. F. Station, Negombo, which was the official service name of the Katunayake Airport, became the R. Cey. A. F. Station, Katunayake, with effect from 1st October, 1957. This is classed as a sanitary airport under Article 19 of the International Sanitary Regulations.

Owing to increase in work an additional Public Health Inspector was appointed on 5th December, 1957.

The number of aircraft which called at this airport during the year is as follows: Tudors 129; Hastings 218; Bristol 30; Valetta 132; Comet 167; Canberra 26; Neptunes 3; York 14; Super Constellation 3; C. 54 A/E 5; DC 4. 4; B. O. A. C. Britannia 61; Hermes 3; Pembroke 1; North Star 3; Valiant 12; Shankelton 10; Dove 1; Skymaster 1; Netherland Navy Marines 1—Total 824.

Of the total 824 planes which landed at this Airport, all were granted pratique. No cases of any communicable diseases were detected.

An aedes survey and efficiency tests were carried out by an Entomological Assistant and two Field Assistants of the Division of Laboratory Services.

Quarantine regulations were adhered to and enforced on all planes engaged in International flights and landings at the Airport and this work was simplified by the ready co-operation of the R. Cy. A. F. and R. A. F. authorities.

C. KANESANTURAI AIRPORT

The date of inauguration of the service at Kankesanturai Airport was December 4th, 1947—(Non-scheduled Service). On December 10th, 1947, a regular service was started.

The staff consists of one Airport Health Officer whose primary appointment is Medical Officer of Health, Tellippalai, one Public Health Inspector, one Entomological Assistant, one Office Peon and one Field Assistant.

Frequency of Service

Only Air Ceylon Dakotas called at this airport during the year. There was daily service to Madras and Trichy during the year up to the 24th December. On the 25th of December there was no service from India due to bad weather, and from the 26th to the end of the year the service to India was discontinued as all Air-Ceylon aircraft were commandeered by Government for flood relief work. The time table of 15th February 1956 is now being continued.

Comparative Study of the Number of Aircraft that arrived from India each Month from January 1953 to December 1957

Month	1953		1954		1955		1956		1957	
	Mad.	Tri.	Mad.	Tri.	Mad.	Tri.	Mad.	Tri.	Mad.	Tri.
January	.. 31	.. 31	.. 32	.. 32	.. 31	.. 32	.. 31	.. 31	.. 31	.. 16
February ..	.. 28	.. 28	.. 28	.. 28	.. 28	.. 29	.. 23	.. 23	.. 28	.. 16
March	.. 32	.. 31	.. 31	.. 32	.. 31	.. 31	.. 31	.. 18	.. 32	.. 18
April	.. 30	.. 38	.. 32	.. 30	.. 30	.. 30	.. 30	.. 17	.. 30	.. 17
May ..	.. 32	.. 30	.. 31	.. 31	.. 31	.. 31	.. 31	.. 17	.. 31	.. 18
June ..	.. 30	.. 30	.. 30	.. 30	.. 30	.. 31	.. 30	.. 18	.. 30	.. 17
July ..	.. 35	.. 31	.. 31	.. 31	.. 32	.. 31	.. 31	.. 17	.. 31	.. 18
August ..	.. 31	.. 31	.. 31	.. 31	.. 31	.. 32	.. 31	.. 18	.. 31	.. 18
September	.. 30	.. 29	.. 30	.. 30	.. 30	.. 30	.. 30	.. 17	.. 33	.. 16
October ..	.. 31	.. 31	.. 31	.. 31	.. 31	.. 31	.. 31	.. 18	.. 34	.. 18
November	.. 30	.. 30	.. 30	.. 30	.. 29	.. 30	.. 30	.. 18	.. 30	.. 15
December..	.. 32	.. 31	.. 31	.. 31	.. 32	.. 40	.. 31	.. 18	.. 25	.. 12
	372	371	368	367	366	377	366	230	366	199

Comparative Statement of the Number of Passengers that arrived from India each Month for the Years 1953 to 1957

Month	1953	1954	1955	1956	1957
January ..	.. 1,025	.. 869	.. 814	.. 731	.. 939
February ..	.. 766	.. 601	.. 601	.. 368	.. 646
March ..	.. 955	.. 879	.. 773	.. 660	.. 716
April ..	.. 1,024	.. 1,090	.. 888	.. 839	.. 968
May ..	.. 953	.. 795	.. 690	.. 691	.. 824
June ..	.. 550	.. 392	.. 436	.. 515	.. 528
July ..	.. 726	.. 538	.. 591	.. 451	.. 394
August ..	.. 560	.. 449	.. 492	.. 463	.. 332
September ..	.. 809	.. 665	.. 703	.. 735	.. 505
October ..	.. 646	.. 379	.. 504	.. 580	.. 398
November ..	.. 462	.. 429	.. 418	.. 508	.. 507
December ..	.. 1,091	.. 943	.. 1,428	.. 1,080	.. 644
	9,567	8,029	8,338	7,621	7,401

There was one special flight from Trichy and seven from Madras during the year. There was a regular service to Madras and Trichy during the year up to the 24th of December. The service was cancelled for seven days of the year from 25th to 31st December 1957 due to floods.

Dates on which no passenger arrived during the year : Nil.

Infectious diseases detected in the aircraft during the year : Nil.

Office accommodation provided for the Assistant Port Health Officer and his staff in the new building is spacious and adequate for the examination of passengers. An isolation room with sanitary facilities has been provided at this airport.

The general sanitation of the airport is satisfactory, but latrine and urinal accommodation is inadequate. The existing water closets have been provided with satisfactory overhead flushing cisterns.

Anti-Mosquito Work

Aedes Aegypti surveys are carried out at the Airport regularly.

Illicit Landers

1,624 illicit landers were kept under surveillance during this year. 853 were kept at Talaimannar, 770 were kept at Kayts and 1 was kept at Colombo Disinfecting Station.

A comparative statement of the number of illicit immigrants kept under surveillance during the past five years is furnished below :—

1953	..	..	..	..	2,868
1954	..	..	..	..	392
1955	..	..	..	..	1,530
1956	..	..	..	..	911
1957	..	..	..	..	1,624

LEGISLATION

Quarantine and Prevention of Diseases Ordinance (Chapter 173)

1. During the year Leprosy (Preventive Measures) Regulations, 1957, were framed and published in *Gazette* No. 11,187 of October 25, 1957. These regulations prohibit persons infected or who have cause to believe they are suffering from Leprosy being engaged in certain trades, and require contacts of cases to appear twice a year before the Medical Officer of Health of the area, for examination.

2. Steps were taken during the year to get two Consultants in Public Health Legislation from W. H. O. to review Public Health Legislation in the country as well as to report on additional legislation required. Their advice would also be sought on the feasibility of a general consolidating Public Health Act.

TRAINING OF PUBLIC HEALTH PERSONNEL**(A) Training Abroad**

(i) *Medical Officers of Health*. One Medical Officer of Health left for a course in Epidemiology at the School of Public Health, Michigan, U. S. A., on a W. H. O. Fellowship in September. Two Medical Officers returned to the Island after obtaining the D. P. H. (London).

(ii) *Health Educators*. Two Health Educators proceeded to U. S. A. on a U. S. O. M. fellowship in August.

(iii) *Public Health Engineers*. One Public Health Engineer left for training in U. S. A. on a U. S. O. M. fellowship in August.

(iv) *Public Health Nurses*. Three Public Health Nurses went abroad for further training in August. Two of them left on W. H. O. Fellowship for U. K. and the other on a U. S. O. M. fellowship to U. S. A.

(B) Local Training

(i) *Diploma in Tropical Medicine and Health*. In all 7 officers followed the Course for the Diploma in Tropical Medicine and Health during the year.

(ii) *Medical Officers-in-charge of Peripheral Units*. A batch of 10 Medical Officers-in-charge were given a course of training for two weeks in September in accordance with the Syllabus prepared for the Training of Medical Officers-in-Charge of Peripheral Units.

(iii) *Medical Undergraduates*. Twenty-three Fourth-year Medical Students were given lecture demonstrations on work done at Kalutara Health Unit in August.

(iv) *Training of Apothecaries-in-charge of Dispensaries in Public Health Work*. Nine Apothecaries were given a course of training in Public Health for a period of two weeks in September.

(v) *Apothecary Students*. Eighty-five Apothecary Students attended lecture demonstrations in Public Health and Health Unit Work at Kalutara in March.

(vi) *Special Grade Public Health Nurses*. A Public Health Nurse was given a three months' course of training prior to appointment to a S. H. S.'s Division.

(vii) *Refresher Course for Public Health Nurses*. Eight Public Health Nurses attended a Refresher Course for two weeks in September.

(viii) *Refresher Courses for Public Health Midwives*. 125 Public Health Midwives attended the Refresher Course during the year.

(ix) *Training of Supervising Public Health Inspectors*. A training course for one month in January was given to a batch of 20 Senior Public Health Inspectors at the Kalutara Health Unit. This was in connection with the new scheme of selection of Public Health Inspectors for the special grade.

(x) *Training of Public Health Inspectors.* Forty Public Health Learners to be appointed as Public Health Inspectors commenced their training in February and completed it in August. Another batch of 37 Public Health Learners commenced their training in October.

(xi) *Training of Public Health Nurses.* Twenty-one Public Health Nurses were given a training at the Kalutara Health Unit during the year.

(xii) *Training of Public Health Midwives.* Eighty-three Pupil Midwives underwent training at the training centres at Kalutara, Panadura, Kurunegala and Jaffna.

(xiii) *Environmental Sanitation Project, Kurunegala.* Nineteen Public Health Inspectors were given a training at this Project in Environmental Sanitation. The period of training lasted four weeks.

Twenty-one Officers-in-Charge of Health Offices were also given a two weeks' training at the Environmental Sanitation Project area.

FREE MILK DISTRIBUTION SCHEME

THE "Milk Feeding Scheme" which functioned as a part of the Food Department was taken over by the Ministry of Health with effect from October 1, 1956, and subsequently by the Department of Health with effect from January 1, 1957. On the scheme being taken over by the Health Department, the title was changed to "Free Milk Distribution Scheme".

When the Scheme was taken over by this Department, the administration was decentralised and handed over to the fifteen Superintendents of Health Services. The clerks who were attached to its Head Office excepting a few were transferred to the divisional offices to attend to the additional clerical work involved. The District Supervisors' areas were divided according to Health Areas and their offices and stores closed down and shifted to the Health Office of the area. The staff, namely District Supervisors, Clerk-Storekeepers, Peons and Watchers, were attached to the Health Offices and placed under the supervision of Medical Officers of Health and Supervising Public Health Inspectors who are in charge of Health Areas. According to this arrangement, it was made possible for the Clerk-Storekeepers, Peons and Watchers to attend to other work in Health Offices in addition to the Free Milk Distribution work. The M. O. O. H. and S. P. H II. are now responsible to the Superintendent of Health Services of the Division for the proper functioning of the scheme in their areas. In addition to the inspection of the Centres carried out by the District Supervisors, the Centres are also inspected by the Officers of the Department of Health in their normal course of duties and by the administrative officers of the division.

At the end of the year there were 3,193 Free Milk Distribution Centres functioning in the Island of which 1,352 were distributing fresh milk. The yearly consumption of milk powder came down to 917,212 lbs. while that of fresh milk increased to 6,185,521 pints. It would be observed that there has been a considerable increase in the quantity of fresh milk consumed during the year when compared to the figures for the previous years. This is mainly due to the conversion of more skim-milk centres to fresh milk centres and also due to the increase in the attendance at the fresh milk centres. It is an admitted fact that the attendance at fresh milk centres is much greater than at skim-milk centres, as the children,

expectant and nursing mothers who patronise the centres prefer fresh milk to skim-milk. The Department had with regret turned down several applications for the conversion of existing skim-milk centres to fresh milk centres as there was no financial provision available for this purpose. The majority of the fresh milk centres are now supplied with fresh milk by the Government Farms, Milk Board and Co-operative Dairies. Only a few centres are supplied with milk from private sources.

The Department has experienced certain difficulties in the transport of pasteurised milk to distant places due to the fact that the milk despatched to these stations sometimes arrives late at the destination due to disorganisation of the train service, and get spoilt. This causes loss to the Government and deprives the beneficiaries of their regular quota of milk. The Department has therefore decided to obtain their requirement of fresh milk from the local co-operative dairies, if there are any, and thus eliminate the loss to Government funds due to spoilage, &c.

The change of the administration of the scheme from the Food Department to the Department of Health and the consequent decentralisation has effected a considerable saving in the expenditure involved in the running of the Scheme.

At the end of the year a Committee was appointed by the Hon'ble Minister of Health to inquire into and report on the re-organisation of the various schemes for distribution of milk that are at present functioning under the Department of Health. The Committee had not completed its report by the end of the year reported on.

V—DIVISION OF LABORATORY SERVICES

General

The development and expansion of Laboratory Services according to an approved plan continued during the year. Although no new Provincial Laboratories were built, additional accommodation has been found for the laboratories at Kandy, Jaffna, Kurunegala and Galle. This accommodation is sufficient for immediate needs. Several District Hospital laboratory rooms have been provided in new buildings.

Fully qualified pathologists now function at Kandy, Jaffna, Kurunegala and Galle. At these laboratories Assistant Pathologists too have been appointed. Provision has been made for the appointment of Biochemists to Jaffna and Kurunegala.

The scope of work has expanded considerably. The four Provincial Laboratories mentioned above now undertake nearly the whole range of diagnostic hospital pathology and a certain amount of Public Health laboratory work. The bacteriological examination of water has been decentralized and can now be undertaken in these laboratories.

During the year the new decentralized scheme for entomology work was started, and reports so far indicate that it is progressing satisfactorily.

Administration

The administration pattern inaugurated four years ago is now beginning to take definite shape.

The Administrative Chart below shows the present position:—

CHART IV

DIRECTOR OF HEALTH SERVICES I DEPUTY DIRECTOR (LABORATORY SERVICES)

<i>Medical Research Institute</i>	<i>Laboratories of the Colombo Group of Hospitals</i>	<i>Labs. of Special Campaigns (AMC ; TB ; FC ; LP.)</i>	<i>General Purpose Laboratories (Provincial and District)</i>
4 Selection Grade Officers ..	2 Pathologists ..	2 Entomologists ..	*4 Pathologists
17 Research Officers ..	11 Asst. Pathologists	43 M. L. Techno- gists	4 Asst. Patholo- gists
2 Medical Officers—Grade I.	1 Biochemist ..	13 Lab. Sub-Assist- ants	3 Biochemists
9 Medical Officers—Grade II.	48 Medical Lab. TT.	16 Minor Staff ..	68 M. L. Techno- logists
2 Medical Officers—Pre : Grade	14 Lab. Sub-Assist- ants		30 Lab. Sub-Assts.
52 Medical Lab. Technolo- gists	— ..	— ..	61 Minor Staff
30 Trainees ..	— ..	— ..	—
29 Lab. Sub-Assistants ..	— ..	— ..	—
2 Technical Assistants ..	— ..	— ..	—
2 Nutritional Assistants ..	— ..	— ..	—
3 Public Health Inspectors ..	— ..	— ..	—
24 Entomological Assistants ..	— ..	— ..	—
1 Workshop Technician ..	— ..	— ..	—
14 Laboratory Orderlies ..	— ..	— ..	—
26 Other Staff ..	— ..	— ..	—
49 Labourers (Laboratory) ..	— ..	— ..	—
30 Field Attendants ..	— ..	— ..	—

*Includes
Two Foreign
Specialists

Laboratories

(i)—MEDICAL RESEARCH INSTITUTE

In spite of decentralisation and development of outstation laboratories, the volume of routine work has not shown an appreciable decrease.

The conversion of the old students' laboratory into four rooms has made it possible to improve the media section considerably.

During the Smallpox outbreak in 1957 about 5 million doses of calf lymph were prepared which in normal times would be the consumption for over 6 years.

New Appointments

The following new appointments were made during the year 1957:—

	On
One Workshop Technician ..	1. 3.57
Two Labourers (unskilled) Lab.	1. 3.57
One Foreign Specialist (Indian)	31. 5.57
One Peon ..	1. 8.57
One Additional Storekeeper ..	10. 9.57
One Overseer ..	15. 9.57
One Typist ..	1.10.57
One Temporary Clerk ..	26.11.57

Retirements

Dr. G. F. Bartholomeusz, Specialist Officer, Entomology, retired from service with effect from April 7, 1957, for superannuation. The vacancy in the Specialist Officer Grade created thereby was filled by the appointment of Dr. A. S. Outschoorn as Specialist Officer on April 8, 1957.

Training of Personnel

21 Medical Laboratory Technologists appointed on December 15, 1956, completed their training in August, 1957, and were posted to the new stations with effect from September 1, 1957. 31 Medical Laboratory Technologists were appointed to the training class on October 1, 1957, and were undergoing their training.

The following training classes and lectures were conducted by the Officers of the Medical Research Institute:—

Ceylon University D. C. H. Course.
Medical Officers-in-charge Peripheral Units.
Post-graduate Nurses.
Refresher lectures, Public Health Inspectors, Nurses and Apothecaries.
Public Health Learners.
Institute of Social Work.
Lanka Mahila Samiti Sevakas.
Rural Development Training Centres.
Grama Sevakas.

Articles and Reports

(i) Dr. J. Gulasekharam, A. Sathasivam and M. P. M. Cooray.—“Some studies on Diphtheria with special reference to virulence of strains isolated from extra-faucial sources.”—(Read before the Ceylon Association of Science Session in 1957).

(ii) “The Lysis of ‘Sensitised’ sheep red blood cells by guinea pig complement”—R. L. Wickremasinghe (Paper read at 14th Annual Sessions of Ceylon Association for the Advancement of Science, December, 1957).

(iii) A paper on “The age, sex incidence and anatomical distribution of ringworm of the body” was read at the 13th Annual Sessions of the Ceylon Association for the Advancement of Science.

(iv) A paper read at the Health Week Celebrations Seminar, Kandy, on “Nutrition as it affects the health of the Nation” by K. Mahadeva.

Publications

Nagaratnam, N., Wickremasinghe, R. L., Jayawickreme, U. S., and Maheson, V. S.—“Haemoglobin E syndromes in a Ceylonese family”—British Medical Journal (in press).

De Silva, C. C., and Wickremasinghe, R. L.—“Haemoglobinopathies in Ceylon”—paper read at the CIOMS Symposium on Abnormal Haemoglobins, Istanbul, September, 1957.

Wickremasinghe, R. L., and De Silva, E. Maureen—“An assessment of the Widal test for *Salmonella typhi* O agglutinins in Ceylon”—Medical Journal (in press).

Katugampola, D. C., and Assim, T. H.—“Coliform organisms in domestic water supplies in Ceylon.” (Awaiting publication in the Ceylon Journal of Science).

An article titled “Chromoblastomycosis” has been submitted to the “British Journal of Dermatology” for publication.

Gunasekera, D. B., and Mahadeva, K.—A paper on "Heights and Weights of Ceylonese children"—Ceylon Medical Journal, November, 1957.

De Mel, Beatrice V.—"Age of Menarche in Ceylon girls"—work done prior to joining this department.

Seneviratne, R. D. de A., Gunasekara, D. B., and Mahadeva, K.—"An experimental investigation of anaemia in rabbits" Ceylon Journal of Medical Science, Vol. IX, Part II—69.

Jayawardena, L. G.—"A study of Parasitic Infection in School Children"—Ceylon Medical Journal, 4. 1957.

Jayawardena, L. G.—A paper entitled "The Merthiolate Iodine Formaldehyde concentration test for examination of faecal samples" is in print in Parasitology (University of Cambridge).

A paper entitled "The effect of some Antibiotics on *Trichomonas vaginalis*" by R. Weerakone is ready for publication.

Gunawardene, K.—"Observations on the development of *Dirofilaria repens* in *Aedes* (*Stegomyia*) *albopictus* and other common mosquitoes of Ceylon". Published in the Ceylon Journal of Science, Section D.

Antonipillai, P.—"Some Field Observations on the Breeding Places of *S. Funicola* (Diptera Oscinidae) in Ceylon". Contributed to the Ceylon Journal of Science. Section B.

Antonipillai, P., David, H. V., and Karunaratne, M. R. R.—"Control of *T. (M) uniformis* (Theobald) the chief vector of rural filariasis in Ceylon by residual spraying of houses by D. D. T., and some observations on its habits." Contributed to the Ceylon Journal of Science. Section B.

David, H. V.—"A simple method for Breeding the Eye fly—*Siphunculina funicola* (Diptera Oscinidae) in the Laboratory and some observations on its life cycle."—Submitted to Ceylon Journal of Science for publication.

(A)—DEPARTMENT OF BACTERIOLOGY

CLINICAL BACTERIOLOGY

Work Done

Throat and other swabs

		Total examined		Number positive for Diphtheria
Throat swabs	..	12,488	..	604
Nasal swabs	..	2,693	..	188
Vaginal swabs	..	2,090	..	42
Miscellaneous	..	803	..	26

Virulence Tests

Total done	Virulent
256	144

Other specimens for culture (General)

		Total number examined
Blood	..	961
C.S.F.	..	981
Urine	..	1,217
Sputum	..	530
Stools (Staphylococci and Cholera)	..	12
Antibiotic sensibility tests	..	1,119
Bloods for Anti-Streptolysin titre	..	425
Pus and aspirated fluids	..	792
Smears for microscopic examination for G.C.	..	141
G.C. cultures	..	10
Bacteriology testing of steam sterilisers in hospitals	..	16

Special Work

Investigations were carried out in collaboration with the "Medical Research Group" and Dr. T. A. Cockburn (WHO).

Etiology of Short Fevers

Blood sera were sent to laboratories in Poona and the U. S. A. Results have been received of a few specimens. Further results are awaited. Laboratory examination was carried out at the Medical Research Institute on these same specimens to eliminate the common conditions known to occur here.

Brucellosis

A *Brucella* was isolated for the first time in Ceylon. It was obtained from a cow in a farm at Polonnaruwa. The results were confirmed by the *Brucella* reference laboratory in the U. K. This will be published shortly.

<i>Specimen</i>	<i>Total No. Examined</i>	<i>No. Culturally Positive</i>	<i>No. Microscopi- cally Positive</i>	
Sputum and Gastric contents :				Specimens exam- ined for
(i) Only culturally examined	1,218	93	—	M. . . 23
(ii) Only microscopically examined	1,847	—	29	
(iii) Both culturally and microscopically examined	2,942	127	14	
C. S. F.	849	6	—	
Pus and all other pathological fluids—	608	7	—	
Urine	94	1	—	
Stools	15	—	—	
Laryngeal, ear, nose, throat and dis- charge swabs	15	—	—	
Other pathological specimens esp. Glands and Tissues	12	2	—	

Specimens examined by "Animal Inoculation"—54.

BACTERIAL VACCINES

T.A.B. VACCINE

(1) Gross volume prepared	..	..	572,330 ml.
Passed after ampouling	..	..	508,630 ml.
Balance from 1956	..	..	46,900 ml.
Issued	..	..	379,800 ml.
Balance in hand	..	..	175,730 ml.

ANTI-CHOLERA VACCINE

(2) Gross volume prepared	..	..	57,210 ml.
Passed after ampouling	..	..	36,470 ml.
Balance from 1956	..	..	6,600 ml.
Issued	..	..	32,970 ml.
Balance in hand	..	..	10,100 ml.
(3) No. of Auto-genous vaccine sets prepared	..	..	10
(4) No. of Sterility tests on Pharmaceutical preparations	..	..	220

Water and Food Bacteriology

WATER BACTERIOLOGY

Arrangements are being made to decentralize bacteriological examination of water samples. The laboratories that have been selected are those at Kandy, Kurunegala, Jaffna and Galle.

A special collecting apparatus for collection of water samples under aseptic conditions from deep sources, e.g., wells, was designed. A number of these were turned out at the Government Factory, and are in use now.

Work Done

The following is a summary of the bacteriological examination of water samples carried out during the year.

S. H. S' Area	Source	Total No. examined	No. found satisfactory	No. found unsatisfactory		Total
				B Coli Type I Present	Due to other Bacterio- logical Reasons	
(1) Colombo ..	Wells	38	3	14	21	35
	Taps	72	41	11	20	31
	Tanks	2	2	—	—	—
	Ponds	2	1	1	—	—
	Pools	15	12	—	3	3
	(All sources)	(129)	(59)	(26)	(44)	(70)
(2) Kalutara ..	Wells	9	—	3	6	9
	Taps	8	—	3	5	8
	Storage Tanks	1	—	—	1	1
	(All sources)	(18)	—	(6)	(12)	(18)
(3) Kandy ..	Wells	8	2	2	4	6
	Taps	9	1	4	4	8
	Tanks	7	2	2	3	5
	Other sources	2	—	1	1	2
	(All sources)	(26)	(5)	(9)	(12)	(21)
(4) Matale and Polonnaruwa	Wells	4	1	2	1	3
	Taps	2	—	1	1	2
	Springs	4	—	3	1	4
	Reservoirs	4	—	2	2	4
	(All sources)	(14)	(1)	(8)	(5)	(13)
(5) Badulla and Nuwara Eliya	Wells	1	—	—	1	1
	Streams	1	—	1	—	1
	Reservoirs	1	—	1	—	1
	Taps	6	—	3	3	6
	(All sources)	(9)	—	(5)	(4)	(9)
(6) Galle ..	Wells	1	—	1	—	1
	Taps	3	—	2	1	3
	(All sources)	(4)	—	(3)	(1)	(4)
(7) Matara and Hambantota	Wells	8	1	2	5	7
	Taps	10	3	2	5	7
	Reservoirs, &c.	6	2	2	2	4
	(All sources)	(24)	(6)	(6)	(12)	(18)
(8) Jaffna ..	Wells	17	—	13	4	17
	Taps	1	—	1	—	1
	Tanks	1	—	—	1	1
	(All sources)	(19)	—	(14)	(5)	(19)
(9) Mannar and Mullaitivu	Wells	4	—	4	—	4
	Taps	1	1	—	—	—
	(All sources)	(5)	(1)	(4)	—	(4)

<i>S. H. S' Area</i>	<i>Source</i>	<i>Total No. examined</i>	<i>No. found satisfactory</i>	<i>No. found unsatisfactory</i>		<i>Total</i>
				<i>B Coli Type I present</i>	<i>Due to other Bacterio- logical Reasons</i>	
(10) Anuradhapura and Trincomalee	Wells ..	8 ..	— ..	5 ..	3 ..	8
	Taps ..	12 ..	1 ..	2 ..	9 ..	11
	Storage tanks ..	10 ..	1 ..	2 ..	7 ..	9
	Tanks ..	2 ..	— ..	2 ..	— ..	2
	(All sources) ..	(32) ..	(2) ..	(11) ..	(19) ..	(30)
(11) Batticaloa ..	Wells ..	4 ..	— ..	2 ..	2 ..	4
	Taps ..	4 ..	— ..	1 ..	3 ..	4
	Tanks ..	1 ..	— ..	— ..	1 ..	1
	(All sources) ..	(9) ..	— ..	(3) ..	(6) ..	(9)
(12) Kurunegala ..	Wells ..	15 ..	1 ..	2 ..	12 ..	14
	Taps ..	6 ..	— ..	2 ..	4 ..	6
	Storage tanks and reservoirs ..	3 ..	1 ..	2 ..	— ..	2
	(All sources) ..	(24) ..	(2) ..	(6) ..	(16) ..	(22)
(13) Puttalam and Chilaw	Wells ..	11 ..	3 ..	— ..	8 ..	8
	Taps ..	6 ..	— ..	2 ..	4 ..	6
	Tanks ..	1 ..	— ..	1 ..	— ..	1
	(All sources) ..	(18) ..	(3) ..	(3) ..	(12) ..	(15)
(14) Ratnapura ..	Taps ..	1 ..	— ..	— ..	1 ..	1
	Streams ..	1 ..	— ..	— ..	1 ..	1
	(All sources) ..	(2) ..	— ..	— ..	(2) ..	(2)
(15) Kegalle ..	Wells ..	6 ..	— ..	3 ..	3 ..	6
	Taps ..	1 ..	— ..	— ..	1 ..	1
	(All sources) ..	(7) ..	— ..	(3) ..	(4) ..	(7)
Island ..	(All sources) ..	(340) ..	(79) ..	(107) ..	(154) ..	261

FOOD BACTERIOLOGY

A special feature was an exhibition stall on Food Hygiene at the All-Ceylon Health Week Central Exhibition held in Kandy. This stall was arranged at the request of the Director of Health Services, and was perhaps, the first attempt made to give an idea to the public on Food Hygiene and Food Poisoning at a public exhibition.

Work Done

<i>Nature of Sample</i>	<i>No.</i>	<i>Fit for Human Consumption</i>	<i>Unfit for Human Consumption</i>
1. Skim Milk Powder "CARE" ..	23 ..	7 ..	16
2. "CARE" Flour ..	12 ..	10 ..	2
3. Bottles ..	39 ..	22 ..	17
4. Canned Foods ..	6 ..	3 ..	3
5. Sterilized Milk "Milk Board" ..	15 ..	12 ..	3
6. Specimens for food poisoning ..	8 ..	7 ..	1
7. Coffee Mixture ..	1 ..	— ..	1
8. Agricultural samples ..	11 ..	11 ..	—
	115	72	43

SEROLOGY

New Laboratory Examinations Undertaken

1. Reiter Protein Complement Fixation Test for Syphilis.
2. Alkali—denaturation test for foetal haemoglobin.

Special Work

1. Assessment of Widal Test for typhoid in Ceylon.
2. Blood groups, MN factor, Rh Genotype and haemoglobin types of Veddahs.
3. Haemoglobinopathies in Ceylon.
4. Mechanism of lysis of "sensitised" sheep erythrocytes by guinea pig complement.
5. Haemoglobin E. Syndromes.

Work Done

<i>Nature of Test</i>	<i>Total No. of samples examined</i>	<i>No. of samples positive</i>	<i>Percentage of samples positive</i>
Kahn & V. D. R. L. ..	169,755 ..	9,166 ..	5.4
G. F. T. ..	154 ..	5 ..	3.2
W. R. Kahn, V. D. R. L. & "full report" (C. S. F. samples) ..	1,206 ..	62 ..	5.1
C. F. T. for Weils disease ..	289 ..	2 ..	0.7
C. F. T. for lymphogranuloma venereum ..	15 ..	7 ..	46.7
R. P. C. F. for Syphilis ..	27 ..	— ..	—
(S. typhi H (titre 1/250 or more) ..	19,275	2,528 ..	13.1
(S. typhi O (titre 1/125 or more) ..		2,179 ..	11.3
(S. typhi Vi (titre 1/10 or more) ..		1,013 ..	5.3
S. A. T. (S. paratyphi AH 1/250 or more)		634 ..	3.3
(Proteus OXK (A.H 1/500 or more)		108 ..	0.6
(Proteus OX 2 (AH 1/250 or more)		26 ..	0.1
(Proteus OX 19 (AH 1/250 or more)		98 ..	0.5
Microscopic Widal Test ..	13 ..	3 ..	23.1
Paul Bunnell Test ..	151 ..	— ..	—
Brucella agglutination Test ..	198 ..	6 ..	3.0
Henry's Test ..	22 ..	1 ..	4.5
Direct Coombs Test ..	125 ..	3 ..	2.4
Cold Agglutination ..	40 ..	— ..	—
Grouping, MN factor and Rh genotypes ..	220		
Rh Antibodies ..	15		
Paper electrophoresis of haemoglobin ..	249		
Alkali—denaturation test for foetal haemoglobin ..	249		

VIRUS

Special Features

Influenza Laboratory Diagnostic work was undertaken for the first time in June, 1957, consequent on the outbreak of an Influenza-like infection which reached epidemic proportions during the second half of the year. The infection was concurrent with the mild Influenza Pandemic which originated in the East being first recognised as Influenza Type A in Malaya and spreading to other parts of the globe.

Rabies in Bats

An investigation was begun to determine whether there was a reservoir of infection of Rabies in Bats.

Work Done

VIRUS DIAGNOSIS

Influenza. A total of 25 Throat Washings were examined. Influenza Virus was isolated from 10 specimens. Two of these specimens were sent to the World Influenza Centre for typing of strains. Both strains belonged to Influenza Type A. One was found to be the characteristic Asian flu' strain and the other was closely related antigenically to PR 8. The strains have been passed in the laboratory together with other known standard Influenza Strains obtained from Melbourne, Australia. Viruses are stored as infected allantoic fluids in a deep freeze cabinet at -70° C.

Anti-Rabies Section

Examination of Dogs' and other Animals' Brains

<i>Province</i>		<i>Positive</i>	<i>Negative</i>	<i>Unfit</i>	<i>Total</i>
C. M. C. (Excluding Western)	..	115A	74E	3	192
Western (Excluding C.M.C.)	..	401B	90F	63J	554
Central	..	77C	30G	8	115
Sabaragamuwa	..	12	8	3	23
Uva	..	9	7	5K	21
Northern	..	5	7H	5	17
N. W. P.	..	8D	1	5L	14
N. C. P.	..	9	—	4	13
Southern	..	37	4I	6	47
Eastern	..	5	7	6	18
Total	..	678	228	108	1014

A includes 2 cats

B „ { 6 cats, 2 calves
2 humans, 1 goat

C „ 2 cats

D „ 1 monkey

E „ 5 cats, 1 human

F „ 3 cats, 1 calf, 1 monkey

G „ 1 cat

H „ 1 jackal

I „ 1 mongoose

J „ 2 cats

K „ 1 monkey

L „ 1 jackal

Rabies Biological Tests

All brains microscopically negative were subjected to biological tests in mice.

Number of tests done	..	331
Number of positives	..	127

Laboratory Investigation, Rabies in Bats

A total of 43 brains were examined by microscopic and biological tests. All the tests were negative. The investigation will be continued.

Smallpox

As a result of an outbreak of smallpox in February, 1957, this section was called upon to undertake an unprecedented amount of work.

Total number of specimens examined	..	144
Number positive for smallpox	..	18

In the course of these investigations 6 specimens gave a positive result for vaccinia.

Vaccine Preparations**VACCINE LYMPH**

Consequent on the outbreak of smallpox there was a severe drain on the stocks of lymph during the period.

Statement of Vaccine Lymph prepared and issued

No. of doses in stock on 31.12.56	..	2,903,560
Wt. of pulp in stock on 31.12.56	..	16,523 gms.
No. of doses prepared in 1957	..	3,582,480
No. of doses issued in 1957	..	3,051,976
No. of doses in stock on 31.12.57	..	3,434,064
Wt. of pulp in stock on 31.12.57	..	12,629 gms.

(3,030,960 doses approximately)

No. of Patients Vaccinated at M. R. I.

Primary vaccinations	..	1,238
Re-vaccinations	..	17,694
		<hr/>
		18,932
		<hr/>

Anti-Rabies Vaccine

Vaccine prepared and issued from this institute is a 1 per cent suspension of Rabies Fixed Virus infected sheep brain in 0.5 per cent carbolized saline. In order to bring up our vaccine to standards recommended by WHO a 5 per cent suspension was prepared and samples sent to the Central Research Institute, Kasauli, India, for potency testing. The results showed that the potency of the vaccine was satisfactory.

Batches of 5 per cent vaccine are now being prepared and tested and a stock is being built up. Issues of this vaccine will commence early in 1958.

Statement of Anti-Rabies Vaccine Prepared and Issued

Vaccine in stock on 1.1.57	..	225.6 litres
Vaccine prepared in 1957	..	1787.8 „
Vaccine issued in 1957	..	1762.8 „
Vaccine in stock on 31.12.57	..	250.6 „

MYCOLOGY

Equipment

Additional equipment is being obtained and this section is being rapidly expanded.

Work Done

As hardly any specimens are sent to the Mycology Laboratory from the Dermatology clinic, the staff from this Department visits the clinic on four afternoons a week to collect the specimens. Very little material is received from other institutions and practitioners.

Routine Examinations

No. of specimens examined .. 1,672

<i>The corresponding figures</i>		<i>No. examined</i>	<i>No. positive</i>
For 1954	..	261	145
For 1955	..	284	55
For 1956	..	—	—

	<i>Number</i>	<i>No. Positive</i>	
		<i>Microscopically</i>	<i>Culturally</i>
Materials from Skin Clinic	.. 1,599	.. 602	.. 426
Materials from other sources	.. 73	.. 2	.. 5

<i>Conditions</i>	<i>No. Examined</i>	<i>No. Positive</i>	
		<i>Microscopically</i>	<i>Culturally</i>
1. Actinomycosis	.. 11	.. —	.. —
2. Alapoccia Areata	.. 6	.. —	.. —
3. Blastomycosis	.. 1	.. —	.. —
4. Chromoblastomycosis	.. 1	.. 1	.. 1
5. Moniliasis (a) Skin	.. 28	.. 17	.. 21
(b) Sputum	.. 26	.. —	.. —
(c) Vag. Swab	.. 3	.. —	.. —
(d) Stools	.. 1	.. —	.. —
(e) Blood	.. 4	.. —	.. —
(f) Other Path. Fluids..	.. 3	.. —	.. —
6. Pitycosis Verucalor	.. 39	.. —	.. —
7. Taenia capitis	.. 16	.. 4	.. 4
8. „ corporis	.. 728	.. 325	.. 233
9. „ cruris	.. 247	.. 172	.. 134
10. „ imbricata	.. 3	.. 3	.. 3
11. „ nigro	.. 11	.. 3	.. 2
12. „ pedis	.. 81	.. 9	.. 6
13. „ unguim	.. 28	.. 2	.. 1
14. „ barbrae	.. 8	.. 2	.. 1
15. Ulcer Swab	.. 19	.. —	.. —

A case of Chromoblastomycosis in a Ceylonese was investigated. The specimens were found to be microscopically (direct examination), histologically and culturally positive. What is believed to be a case of *T. nigra* of the face is under investigation.

CLINICAL PATHOLOGY

Routine clinical pathology continues to form the bulk of the work in this section. However, some experimental work was done during the year on anaemia, transplantation of lymph glands and investigations into the relationship between oral cancer and the betel-chewing habit.

Work Done

Blood for :—

Count (HB per cent, R.B.C., W.B.C., D.C., &c.)	753
E.S.R.	27
Vandenbergh Test	288
Icterus Index	8
Takata—Ara Test	18
Treponema Tecurrentis	1
Fragility	2
Carboxy Haemoglobin	1
Bleeding Time.	2
Clotting Time	2

Urine for :—

Chemical and Microscopical Examination ..	3,017
Occult Blood	1
Urea concentration	4
Diastase Index	8
Diczo Reaction	3
Phosphorine	2
Bence Jones Proteins	10
Glucose Tolerance Test	2

Pleural Fluid for :—

Full examination	84
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Ascitic Fluid for :—

Full examination	4
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C.S.F. for :—

Full examination	279
Gastric Analysis	17

Sputum for :—

Malignant Cells	1
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Stools for :—

Occult blood	9
Stercobilin	10
Fat Estimation	3
Bile	1

Toad Test for :—

Pregnancy	718
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Friedeman's Test for :—

Pregnancy	1
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Sections for :—

Examination	179
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5,455

(B) DEPARTMENT OF PHARMACOLOGY

Research Work

Pharmacology and Chemistry.—Investigations on the isolated active principles of plants used in Ayurvedic Medicine have been continued. Studies have been extended to the class of compounds, viz. the Triterpenes to which the previously isolated Ursolic Acid is a member.

Endocrinology.—Assays of urine for Gonadotrophins, 17 Ketosteroids, and Pregnandiol have been carried out for hospitals in various parts of the Island. The method of quantitative assay of Gonadotrophins was further investigated to adopt it for routine work, and especially for the assay of F. S. H. in human menopausal gonadotrophins and other Pituitary gonadotrophins.

Routine

Hormone assays :—

Total Neutral 17 Ketosteroids	..	56
Gonadotrophins	..	26
Pregnandiol	..	20
Total	..	102

Pharmaceutical preparations :—

	Batches	Ampoules or Bottles	Litres
N. Saline 0.9% Parenteral	.. 8	.. 1,059	.. 42
N. Saline 0.9% for laboratory use	.. 31	.. 147	.. 314
N. Saline 0.85% for laboratory use	.. 49	.. 430	.. 860
N. Saline 0.85% for Vaccine preparation	.. 79	.. 936	.. 2,555
Distilled water pyrogen free parenteral..	.. 48	.. 5,460	.. 272
Total	.. 215	.. 8,032	.. 4,043

Workshop

The Institute Workshop administered by the section of Pharmacology is working satisfactorily. The jobs carried out were :—

New apparatus constructed in workshop	..	42
Wooden boxes—special sizes	..	293
Wooden boxes—standard sizes	..	4,978
Covers for Mice Boxes	..	110
Miscellaneous workshop jobs	..	255
Total	..	5,678

(C)—DEPARTMENT OF NUTRITION

There was no marked changes in the nature of the work of this department for the year under review.

Work—Research

The studies of Human Energy expenditure under various conditions begun the previous year were continued. Much data has been collected but it is expected that the work will take some time longer.

The investigation (on a wider scale than the one earlier reported) into the variations in the quantity and composition of human breast milk was continued. Unfortunately, owing to lack of laboratory space following building alterations, the work was temporarily stopped during the latter part of the year.

The findings of the survey done the previous year to determine the food consumption of families of the higher income brackets of Colombo were finally studied and analysed, for publication.

The study of the heights and weights of Ceylonese children was completed.

The findings of the experimental investigation of anaemia in rabbits were analysed and a paper prepared.

Further studies of dietary surveys done in former years and of the national food balance sheet (Depart. of Census & Statistics) were carried out.

Education

The total number of lectures given during the year were as follows:—

			<i>Lectures</i>		<i>Hours</i>
Ceylon University D.C.H. Course	..	..	4	..	4
Medical Officers i/c peripheral units	..	..	1	..	2
Post-Graduate Nurses	..	..	9	..	9
Refresher lectures, Public Health Inspectors, Nurses and Apothecaries	..	..	7	..	13
Public Health Learners	..	..	9	..	9
Institute of Social Work	..	..	6	..	6
Lanka Mahila Samiti Sevikas	..	..	8	..	8
Rural Development Training Centre Grama Sevakas	..	..	2	..	2

In connection with the Health Week Celebrations, the M.O.H. of this Department arranged a Nutrition Section at the Kandy Health Exhibition, and also took part in a Radio Forum discussion on Nutrition.

Request Work

The amount of request work, where the department was consulted or its assistance sought on various nutritional matters, was no less than in other years.

The department was represented on the National Committee on Health and Vital Statistics, and at two Divisional Conferences of Public Health Staff held at Batticaloa and Matara.

The scheme begun in 1956 for obtaining regular data regarding the nutrition of school children through trained School Medical Officers continued to be operated throughout the year. The findings were analysed and reports submitted each term. Unfortunately, standard equipment, such as proper beam balances, is not yet available to all officers and this detracts from the value of the data obtained.

Visit of FAO/WHO Nutrition Consultants

It is a pleasure to record visits of Dr. F. W. Clements of the WHO and Mrs. D. L. Bocobo of the FAO who were in Ceylon on a Nutrition Assignment for the greater part of three months during the latter half of the year. This department was closely associated with them in some aspects of

their work and extended them as much co-operation as possible by making available the results of all work done by the department in the previous years. In addition, on their behalf, two dietary surveys by the food weighing method were conducted at Koholana and Padeniya. The findings were analysed on a per consumption unit basis to permit comparison with earlier surveys. Further, an investigation by the questionnaire method to assess the extent of nutritional knowledge among nursing mothers and school children was carried out.

Accommodation

The problem of inadequate accommodation has been partially solved. The additional room with laboratory facilities allocated to this department the previous year is expected to be available shortly.

(D)—DEPARTMENT OF PARASITOLOGY

New Activities Undertaken

Work has been undertaken to determine whether reservoir hosts of human filaria are present in this country.

Attempts are also being made to infect laboratory animals with human filarial worms.

A study of the development, in the mosquito, of a filarial worm from the cat, has been made.

New Laboratory Technique

A new concentration technique "The Merthiolate Iodine Formaldehyde Concentration Technique" has been introduced as a routine method of investigation for all faecal samples.

The laboratory staff has also been trained to breed different species of mosquitoes so as to maintain laboratory-bred strains to be available whenever required for experimental purposes. Earlier this work was done by the Entomological Division.

Routine Work

Figures pertaining to the routine work done are given below :

Examinations made during January to December, 1957

	<i>Total examined</i>
Stools for Amœbae, Ova and Cysts (Direct Smear) ..	1,717
Stools for Amœbae, Ova and Cysts (M.I.F. Concentration) ..	1,293
Stools for Amœbic Culture	317
Blood for Malarial Parasites	369
Blood for Microfilaria	239
Aspirated fluid for Amœbic Culture	1
Sputum for Amœbic Culture	2
Worms for Identification	1
Snakes for Identification	2
Fly for Identification	1

Examinations made for the Ankylostomiasis Campaign—January to December, 1957

	No. of speci- mens required	No. of empty tins	No. of speci- mens examined by Stoll's method	No. of Posi- tives	No. of Nega- tives	No. of speci- mens examined by Will's method	No. of Posi- tives	No. of Nega- tives
January	776..	86..	169..	17..	152..	521..	152..	369
February	642..	5..	92..	12..	80..	545..	143..	402
March ..	779..	44..	151..	27..	124..	584..	149..	435
April ..	259..	16..	68..	17..	51..	175..	86..	89
May ..	402..	27..	103..	13..	90..	272..	51..	221
June ..	641..	49..	79..	13..	66..	513..	74..	439
July ..	981..	41..	77..	14..	63..	863..	143..	720
August	895..	21..	118..	15..	103..	756..	376..	380
September	1,093..	48..	71..	14..	57..	974..	551..	423
October	2,073..	129..	112..	25..	87..	1,832..	1,025..	807
November	2,848..	329..	57..	19..	38..	2,462..	1,577..	885
December	323..	28..	51..	10..	41..	244..	151..	93
Total ..	11,712	823	1,148	196	952	9,741	4,478	5,263

(E)—DEPARTMENT OF MEDICAL ENTOMOLOGY

There have been several changes and the main feature has been the re-organisation of the work of the Entomological Assistants.

Seven Entomological Assistants were given a short refresher course and posted to work at seven Superintendents of Health Services Divisions. The stations selected were Matara, Kalutara, Colombo, Kurunegala, Vavuniya, Anuradhapura and Jaffna. Till now Entomological Assistants have been doing only routine work in the field. But from 1.1.58 these Entomological Assistants attached to Superintendents of Health Services will work on all problems of insect importance.

Research**EYE-FLIES (SIPHUNCULINA FUNICOLA)**

Further studies were made in the field on the seasonal prevalence of these flies. Three stations, Batticaloa, Trincomalee and Jaffna, where eye-flies were reported to be a nuisance, were taken up for investigations. The percentage of houses positive for eye-flies was 37 in May, 55 in August, 42 in September and 39 in October. Catches made from five selected houses during these months gave a total collection of 190,086. *S. funicola* of which 4% were found in May, 27% in June, 4% in July (decrease due to heavy blowing), 39% in August, 16% in September and 7% in October. In 1948 the chief breeding medium was found to be the fish dressing places, but during the present investigations heavy breeding was detected in the ammoniacal soil found in cattle and goat sheds. Heavy concentration of larvae was found in dry cow dung and eggs were found in stacks of straw saturated with cattle urine. The seasonal prevalence of these flies starts in May, gradually increases and reaches its peak in August and decreases until they disappear with the onset of rain.

Laboratory bred eye-flies (*S. Funicola*) were reared in sterilized cages and a limited number introduced into cultures of common organisms found in cases of catarrhal conjunctivitis like *S. citreus*, *S. aureus*, *S. albus* and *S. viridans* and *B. coli*. These eye-flies were allowed to walk on these culture plates on a time basis and were transferred into sterile broths for culture. This experiment was done to determine whether *S. funicola* acted as a mechanical carrier of organisms. 165 such experiments were done and 41 of them were positive for transmission (i.e., 25 per cent of the experiments). Out of these 41, 20 were *S. citreus*, 12 *B. coli*, 2 *S. viridans* and 7 *S. aureus*.

In collaboration with the Epidemiology Unit a joint field expedition was carried out in September in Batticaloa area to obtain specimens from patients and to collect eye-flies in the homes of these cases for bacteriological studies. It was hoped to recover the organisms responsible for the disease in the eye-flies found in the vicinity. Eight such experiments have been done so far, out of which three were positive—two of which were *S. albus* and one was *S. viridans*. Further experiments are in progress.

Malathion. At the request of the Director of Health Services, experiments were carried out both in the field and in the laboratory, to assess the efficiency of Malathion on *Culex fatigans*.

Laboratory bred 4th stage larvae were used, and mortality counts were taken at the end of 24 hours and 48 hours. This showed that 0.5 p.p.m. gave 100% kill in 24 hours. Field trials were carried out in Wattala and Kolonnawa areas where 29 catch pits with heavy infestation of *C. fatigans* were selected and treated at rates of 0.25, 0.5 and 1.0 p.p.m. These pits were re-treated on the 8th day if they were found infested with *C. fatigans* larvae. Although 130 trials were carried out and it was found that 0.5 p.p.m. gave 88% control in moderately infested catch pits with no faecal pollution.

Resistance of *Culex fatigans*

Culex fatigans adults and larvae from Kurunegala have been tested for D. D. T. resistance. D. D. T. have been used in Kurunegala as a residual spray for malaria control for the past nine years. Kurunegala strains were compared with *Culex fatigans* caught in the remote villages off Kalutara where no insecticide has been used.

Kurunegala adults were 8 times as resistant as those from Kalutara, whereas larvae from Kurunegala were 13 times as resistant as those from Kalutara.

	<i>Adults</i>	
	<i>Kurunegala</i>	<i>Kalutara</i>
Median lethal dose	.. 3,000 mg. per sq. ft.	.. 375 per sq. ft.
	<i>Larvae</i>	
Median Lethal dose	.. 0.8 p.p.m.	.. 0.062 p.p.m.

Routine

In filaria control work this division assays the efficiency of control measures, by random collection of mosquitoes from dwellings and cattle baited traps. Percentage of dwellings positive and catching rate per man hour are used to determine mosquito prevalence; and the infection rate of the mosquitoes dissected, to determine the potential danger of infection spreading to human beings.

Entomological findings in connection with Filariasis Entomological Unit Stations

1. DEHIWALA-MOUNT LAVINIA

Table LXIV

Year		Percentage of dwellings Positive		Catching rate per man-hour		Infection rate (Percentage in mosquitoes dissected)
1950	..	44.1	..	6.7	..	10.0
1951	..	15.8	..	2.5	..	8.6
1952	..	9.9	..	1.7	..	4.7
1953	..	18.2	..	2.7	..	6.1
1954	..	16.8	..	2.8	..	8.0
1955	..	27.9	..	5.9	..	8.5
1956	..	26.5	..	6.8	..	7.1
1957	..	16.5	..	4.6	..	3.8

2. KOTTE

Table LXVII

Year		Percentage of dwellings positive		Catching rate Per man-hour		Infection rate (Percentage in mosquitoes dissected)
1950	..	41.8	..	5.1	..	5.3
1951	..	25.0	..	3.5	..	5.9
1952	..	14.6	..	1.4	..	3.4
1953	..	18.0	..	2.5	..	4.8
1954	..	26.0	..	4.4	..	6.0
1955	..	26.2	..	10.2	..	5.9
1956	..	22.0	..	2.4	..	7.4
1957	..	18.5	..	4.7	..	2.6

3. MATARA

Table XVIII

Year		Percentage of dwellings positive		Catching rate per man-hour		Infection rate (Percentage in Mosquitoes dissected)
1950	..	85.6	..	35.9	..	10.4
1951	..	61.1	..	19.2	..	10.7
1952	..	74.5	..	19.5	..	10.7
1953	..	57.0	..	9.0	..	11.7
1954	..	56.3	..	11.5	..	12.6
1955	..	63.4	..	23.5	..	12.0
1956	..	59.3	..	20.7	..	9.6
1957	..	64.2	..	32.6	..	7.0

DEHIWALA-MOUNT LAVINIA

The vector species *C. fatigans* was the predominant species caught in the houses. All the 26 mosquitoes that were positive for filaria infection were also *C. fatigans*. The catching rate and the infection rate are on the decline. In cattle traps, out of 969 mosquitoes collected 152 were dissected and 3 *C. fatigans* were infected with filarial larvae.

KOTTE

Quite a different picture prevails at Kotte cattle traps. The predominant species is *T. (M) uniformis* and all the infected mosquitoes were also *Taeniorhynchus* (Mansonioides) species. But in the dwellings the catches have been more of *C. fatigans* and out of the 29 positive for infection only one was *T. M. uniformis* and all the others were *C. fatigans*.

MATARA

Although the catching rate was more than last year the infection rate is less. 150 *C. fatigans* were found infected against 435 last year. 1,183 mosquitoes were collected in cattle traps, out of which 276 were dissected, and 3 *C. fatigans* found positive for filarial larvae.

Entomological Group Stations

1. *Wariyapola and the visiting stations—Awlegama, Kobeigana and Bandarakoswatte.*

Evidence of Bancroftian infection was found in one *C. fatigans* collected from dwellings at Bandarakoswatte, and in cattle traps, one at Awlegama, and in one *Aedes (A) pipersalatus* at Wariyapola.

2. *Ambalangoda and the visiting stations—Weragoda, Boosa, Katukoliya, Induruwa and Haburugala*

As no control was done at Induruwa, in consultation with Superintendent, Filariasis Campaign, Induruwa and Haburugala were closed in February and Balapitiya was worked from April. There was no evidence of infection at Katukoliya and Weragoda in dwellings. Infections in *C. fatigans* were 4 at Ambalangoda, 1 at Boosa and 2 at Balapitiya. In cattle traps there was one infection in *T. (M) uniformis* of the Malayan type at Haburugala.

3. *Moratuwa and the visiting stations—Panadura, Dehiwala and Angulana.*

In collections from dwellings evidence of transmission of Bancroftian filariasis by *C. fatigans* was found in 29 mosquitoes from Panadura, 20 from Dehiwala and 8 from Moratuwa. In the cattle traps there was one infection in *C. fatigans* at Angulana and one at Panadura.

4. *Weligama and the visiting stations—Kamburugamuwa, Mirissa, Denipitiya, Ahangama and Midigama.*

In the house collections in each of these areas, infection was found in *C. fatigans*—16 at Weligama, 3 at Midigama, 14 at Mirissa, 6 at Denipitiya, 16 at Kamburugamuwa and 4 at Ahangama.

There was infection in cattle traps only at Midigama—one *C. fatigans* was infected from the collection in the month of May.

5. *Negombo and visiting stations—Ja-ela.*

The number of *C. fatigans* found infected was 25 at Negombo, although work was commenced here only in March, and 12 at Ja-ela. There was no infection in mosquitoes caught in cattle traps.

6. *Kolonnawa and visiting stations—Kelaniya, Wattala, Peliyagodapattiya, Hendala, Mahara, Makola, Kandana, Hunupitiya and Dalugama.*

There was evidence of heavy infection at Kolonnawa—30 *C. fatigans* and 1 *T. (M) annuliferus* were infected. At Peliyagodapattiya 7 *C. fatigans* and 1 *T. (M) uniformis* were infected, at Wattala 3 infections in *C. fatigans*, at

Kelaniya 2 *C. fatigans* infected, at Dalugama 10 *C. fatigans* and 1 *T. (M) annuliferus* and at Hunupitiya 2 *C. fatigans* were infected. In cattle traps infection was found only at Wattala—3 *T. (M) uniformis* and 1 *T. (M) annuliferus*.

7. *Kalutara and visiting stations—Bentota, Beruwela, and Mahawaskaduwa (opened in November, 1957).*

There were 15 *C. fatigans* with Bancroftian filariasis infection at Beruwela, and 1 *C. fatigans* at Kalutara and 1 *T. (M) uniformis* infection at Bentota. In cattle traps there was infection at Beruwela in 2 *C. fatigans*.

8. *Galle—Unawatuna and Habaraduwa.*

Adult collections were done at Unawatuna and Habaraduwa by the Entomological Assistant, working at Galle Harbour. Eight *C. fatigans* were infected at Unawatuna only. There was no infection in cattle traps.

9. *Selected Houses.* At the request of the Superintendent, Filariasis Campaign, few houses were selected in some villages and regular monthly examination of these houses was made. This was done to ascertain the prevalence of the vectors and rate of infection in defined areas where optimum conditions prevailed. The investigations were gradually extended to other villages and the total villages under observation for the year was eight.

The following results were obtained :—

Station	Percentage of houses positive	Total adults caught	C. Rate	Infection Rate		Vector Distribution		
				<i>C. fati- gans</i>	<i>T. (M) Uni- formis</i>	<i>C. fati- gans</i>	<i>T. (M)</i>	<i>Others</i>
Ratmalana ..	*	6..	1.8..	— ..	— ..	*	— ..	—
Matara ..	81.5 ..	2,714..	64.9..	6.3..	— ..	90.7%..	0.3%..	9.0%
Ambalangoda ..	16.7 ..	7..	1.8..	— ..	— ..	14.3%..	57.1%..	28.6%
Moratuwa ..	69.8 ..	216..	22.3..	3.2..	— ..	86.6%..	1.4%..	12.0%
Panadura ..	61.3 ..	126..	19.4..	3.0..	— ..	93.6%..	3.2%..	3.2%
Dehiwala ..	35.2 ..	579..	10.6..	3.1..	— ..	86.9%..	1.6%..	11.5%
Kolonnawa ..	86.1 ..	518..	31.4..	2.9..	— ..	80.6%..	3.8%..	15.6%
Weligama ..	95.9 ..	817..	25.3..	4.2..	— ..	83.3%..	0.6%..	16.1%

* Only one examination made.

10. Air Ports and Sea Ports

AEDES (STEGOMYIA) AEGYPTI SURVEY

COLOMBO AIRPORT RATMALANA

This work is carried out in accordance with the International Sanitary requirements. This year the number of premises within the Air Port area is 29, as some premises have been amalgamated and some demolished to put up new buildings.

In October this year the quarter mile periphery was from the Airport buildings and not from the Airport boundary as done earlier. The buildings within the Airport were examined 39 times and *Aedes (S) aegypti* were

not found breeding at any time. In the peripheral area 18 *Aedes (S) aegypti* were found breeding in 4 premises in rubber tyres and in machinery parts. *Aedes (S) albopictus* were found breeding chiefly in discarded receptacles, bamboo stumps and tree-holes.

Larval Examination

Table LXIX

54 larvae were collected.

Genera and Species		Number	Percentage
<i>C. fatigans</i>	..	21	38.9
Others	..	33	61.1

The number of premises in peripheral area was 765 and after October 1947. These were examined 7 times in all. On four occasions *Aedes (S) Aegypti* were found breeding, i.e., in 0.2 per cent. of the premises and on twenty-six occasions *Aedes (S) albopictus* were found breeding, i.e., in 1.0 per cent. premises. Eighty-three *C. fatigans* were collected from dwellings within this area. Fifty-seven of these were dissected and in two the larvae of *W. bancrofti* were found.

Table LXX

758 larvae were collected.

Genera and Species		Number	Percentage
<i>C. fatigans</i>	..	306	40.4
<i>Aedes (S) albopictus</i>	..	104	13.7
<i>Aedes (S) aegypti</i>	..	18	2.4
Others	..	330	43.5

JAFFNA AIRPORT—KANKESANTURAI

Only Air Ceylon planes touch at this airport. There are twenty premises within the airport and they were examined seven times this year. *Aedes (S) aegypti* were not found breeding, but *Aedes (S) albopictus* were found on two occasions, i.e., in 1.4 per cent. of the premises. The breeding places were only built pits.

Table LXXI

Total larvae collected was 73.

Genera and Species		Number	Percentage
<i>C. fatigans</i>	..	55	75.3
<i>Aedes (S) albopictus</i>	..	9	12.3
Others	..	9	12.3

The outside area has 420 premises which were examined seven times. There was no breeding of *Aedes (S) aegypti*, but *Aedes (S) albopictus* was found breeding twenty-six times, i.e., in 0.9 per cent of the premises. The breeding places of *Aedes (S) albopictus* were chiefly built pits, tree-holes and discarded receptacles.

Table LXXII

925 larvae were collected.

Genera and Species		Number	Percentage
<i>Aedes (S) albopictus</i>	..	166	17.9
<i>Aedes (S) vittatus</i>	..	81	8.8
<i>C. fatigans</i>	..	424	45.8
Others	..	254	27.5

The adults collected at dusk as test-checks were altogether ninety. Eighty-five of these were *C. fatigans*, out of which fifty-eight were dissected and one infection with filarial larvae was found.

KATUNAYAKE AIRPORT

Work in this airport was commenced in April this year. Twelve premises within the airport area were examined eighteen times. *Aedes (S) aegypti* and *Aedes (S) albopictus* were found breeding on one occasion each, i.e., in 0.5 per cent of the premises in each case. They were found breeding in a built channel and a pool.

Table LXXIII

66 larvae were collected.

Genera and Species		Number		Percentage	
<i>Aedes (S) aegypti</i>	1	..	1.5
<i>Aedes (S) albopictus</i>	1	..	1.5
<i>C. fatigans</i>	3	..	4.5
Others	61	..	92.4

PERIPHERAL AREA

The number of premises in the peripheral area was 44 for the first seven rounds and later 45 premises. They were examined eighteen times this year. *Aedes (S) aegypti* was not found but *Aedes (S) albopictus* were found on twenty-four occasions, i.e., in 3.0 per cent of the premises. These larvae were found breeding in discarded receptacles and spent nuts.

Table LXXIV

615 larvae were collected.

Genera and Species		Number		Percentage	
<i>Aedes (S) albopictus</i>	285	..	46.3
<i>C. fatigans</i>	98	..	15.9
Others	232	..	37.7

COLOMBO SEA PORT

This year a separate officer was posted at the harbour and work was carried out right through the year. The buildings within it are 488 and they were examined four times making a total of 1,447. All the buildings were not examined in every round. 422 premises were positive for mosquitoes, i.e., 29.2 per cent of the premises.

Altogether 1,842 mosquitoes were collected of which 378 were *Aedes (S) aegypti* (i.e. 20.5 per cent), 37 *Aedes (S) albopictus* (i.e. 2.0 per cent), 1,355 *C. fatigans* (i.e., 73.6 per cent), and other 72 mosquitoes (i.e., 3.9 per cent).

The catching rate per man-hour was 10.9, a decrease in last year's number. Out of 631 *C. fatigans* dissected, nine were positive for *W. bancrofti* giving an infection rate of 1.4 per cent.

Table LXXV

Total larvae collection—1,088.

Genera and Species		Number		Percentage	
<i>Aedes (S) aegypti</i>	140	..	12.9
<i>Aedes (S) albopictus</i>	53	..	4.9
<i>C. fatigans</i>	830	..	76.3
Others	65	..	6.0

The chief breeding places of :—

1. *Aedes (S) aegypti* were discarded batteries, whet-stone troughs, discarded tyres, fire-buckets, machinery parts and barrels.
2. *Aedes (S) albopictus* were fire-buckets, machinery parts, discarded tyres, spent nuts and tins.
3. *C. fatigans* were cement tanks, cement drains, earth drains, dredging buckets, discarded tyres, gutters and cess-pits.

Machinery parts and discarded tyres play an important part in the breeding of *Aedes (S) aegypti*.

Table LXXVI

LOCAL FLOATING CRAFTS

Type	No. Exam.	No. Pos.	No. of Mosquitoes collected	Catching Rate per Man Hour	Infection Rate Per cent.
Steam launches	31	—	—	—	—
Floating cranes	6	5	88	25.1	4.9
Barges	647	66	168	2.9	0.9
Tugs	17	8	150	7.3	2.9
Dredgers	4	2	6	1.6	—
Fishing trawlers	6	5	41	8.0	—
	711	86	453	5.0	2.0

Out of 453 adults collected, 303 were *C. fatigans*, 112 *Aedes (S) aegypti* and others 38. 246 *C. fatigans* were dissected ; 5 of these were infected with larvae of *W. bancrofti*.

Total larvae collected were 91 of which 61 were *Aedes (S) aegypti*, 4 *Aedes (S) albopictus* and 26 *C. fatigans*. These were found breeding in barges, tugs and floating-cranes.

OCEAN-GOING VESSELS FROM PORTS IN YELLOW FEVER ZONE

Three cargo vessels and one cargo cum passenger ship were examined for adult mosquitoes. Only one *C. fatigans* was found in the ship "Indus", and this on dissection was negative for infection.

TRINCOMALEE SEA PORT

This sea port was opened in February this year after a preliminary survey in 1956. Adult work commenced only during the third round. The area under investigation was divided into 16 blocks and 7 rounds were done during the course of this year. 1,382 premises were examined out of which 229 premises were positive for mosquitoes, i.e., 16.6 per cent of the premises.

In all 300 mosquitoes were collected of which *Aedes (S) albopictus* were 6 (i.e., 2.0 per cent), *C. fatigans* 277 (i.e., 92.3 per cent) and others 17 (i.e., 5.7 per cent).

The catching rate per man hour was 3.8. Of 246 *C. fatigans* dissected, 2 were positive for filarial infection, giving an infection rate of 0.8 per cent.

Table LXXVII

Total collection of larvae—4,379

Genera and Species	Number	Percentage
<i>Aedes (S) Albopictus</i>	1,236	28.2
<i>C. fatigans</i>	2,039	46.6
Others	1,104	25.2

FLOATING CRAFTS

Eighteen floating crafts were examined and one was positive for mosquitoes. Total number of adults collected was eight *C. fatigans*. These on dissection did not show infection.

Eighty breeding places, chiefly tyres, pools and barrels, were found negative for larvae.

GALLE SEA PORT

The investigating area was divided into six blocks and six rounds were done during the course of this year. Altogether 1,203 premises were examined and 303 were positive for mosquitoes, i.e., 25.2 per cent of the premises. A total number of 539 mosquitoes were collected, *Aedes (S) aegypti* were 56 (i.e., 10.4 per cent) and *Aedes (S) albopictus* 3 (i.e., 0.6 per cent) and *C. fatigans* 463 (i.e., 85.9 per cent) and others 17 (i.e., 3.2 per cent).

The catching rate per man hour was 2.7. Out of 305 *C. fatigans* dissected, 12 were positive for filarial larvae.

Table LXXVIII

Total collection of larvae—1,776.

Genera and Species	Number	Percentage
<i>Aedes (S) aegypti</i>	505 ..	28.4
<i>Aedes (S) albopictus</i>	392 ..	22.1
<i>C. fatigans</i>	506 ..	28.5
Others	373 ..	21.0

CHIEF BREEDING PLACES

Aedes (S) aegypti—Discarded tyres, tins, barrels machinery parts, water buckets and earthenware pots.

Aedes (S) albopictus—Tins, barrels, machinery parts and earthenware pots.

C. fatigans—Cement drains, cement tanks and earthenware pots.

FLOATING CRAFTS

Eighty-six vessels were examined and three were positive for mosquitoes. Four *C. fatigans* and one *Aedes (S) aegypti* were caught and on dissection infection was not found.

Four larvae of *C. fatigans* were collected in these vessels.

Rat Flea Survey

These surveys are a guide to the potentiality of plague.

Table LXXIX

Station	Period	No. of Rats caught	No. of Fleas	Total Cheopis	Indices	
					General	X. cheopis
M. C. Galle ..	4th Quarter, 1956 ..	91 ..	93 ..	35 ..	1.0 ..	0.4
	1st Quarter, 1957 ..	97 ..	79 ..	28 ..	0.8 ..	0.3
	2nd Quarter, 1957 ..	113 ..	90 ..	26 ..	0.8 ..	0.2
	3rd Quarter, 1957 ..	110 ..	92 ..	29 ..	0.8 ..	0.3
Colombo Port ..	4.7.47 to 2.8.57 ..	60 ..	284 ..	252 ..	4.7 ..	4.2
Talaimannar ..	Sept., 1957 ..	91 ..	18 ..	— ..	0.2 ..	0.0

As in the previous two years the *cheopis* index of Colombo Port is more than 1.0, indicating immediate intensification of anti-rat measures.

Special Investigations

FLY NUISANCE, ANGODA MENTAL HOSPITAL

The main sources of fly-breeding at this institution and its vicinity were sludge from the sewage tanks, cattle dung heaps in the dairy farm, refuse pits in the plantations, faecal pollution and refuse and garbage heaps in the female section, premises of labour lines and in the vicinity of the hospital. The Entomological Assistant [Special Class] visits this institution once a month from the middle of this year and submits a report on the conditions prevailing and recommends control measures.

MOSQUITO NUISANCE, ANGODA AND WALPOLA AREAS

As a result of several petitions from residents of Angoda and the surrounding villages regarding the mosquito nuisance in these areas, a survey was undertaken by this section of the M. R. I. Angoda and the villages of Waploa, Himbutana, Mandawila and Aggona were selected for this survey. 146 breeding places were examined and 83 were found positive. The predominant species was *C. fatigans*, 185 houses were examined and 134 were positive for mosquitoes. Altogether 543 mosquitoes were caught out of which 232 were dissected and *C. fatigans* were found infected with filarial larvae.

MOSQUITO SURVEY—ROYAL AIR FORCE AREA—KATUNAYAKE

A total of 526 potential breeding places were examined of which 2.5 per cent were positive for larvae. Total collections were 105 and of these 49 were *C. fatigans* and 34 *Aedes (S) albopictus*.

In all 143 houses were examined, and 20.2 per cent of these houses were positive for mosquitoes; sixty-nine mosquitoes were collected and all were *C. fatigans*, the proved vector of Urban Filariasis. Dissection of these mosquitoes did not reveal any infection. There is an efficient mosquito control team working in the R. A. F. area. This survey was taken up as there was a large collection of Ceylonese personnel from all parts of the Island working in the Airport.

FLY NUISANCE—POLONNARUWA HOSPITAL

Breeding of flies was chiefly found in the back yards of eating-houses and boutiques in front of the hospital. The unsatisfactory manner in which night-soil and refuse were disposed of was also a contributory factor to the breeding of flies in the hospital premises.

KULIYAPITIYA HOSPITAL—FLY NUISANCE

Investigation revealed that there was no breeding taking place within the hospital premises. The hospital is in close proximity to the village fair and bazaar area. The breeding of flies was detected in the back yards of eating houses, boutiques, &c.

FLY NUISANCE AT BIBILE AND MEDAGAMA HOSPITAL

Breeding was found in refuse heaps, cattle-dung heaps and faecal pollution in the bazaar areas in close proximity to these hospitals. There were no breeding places within the hospital premises. At Moneragala hospital where the sanitary conditions were the same as at Bibile and Medagama hospitals, there was no fly nuisance as this hospital is built two miles from the bazaar.

FILARIASIS SURVEY—TRINCOMALIE U. C. AREA

A survey of *C. fatigans* breeding places in the Trincomalie U. C. area was undertaken at the request of the Medical Officer of Health. 1,728 breeding places were examined ; out of these 22 per cent were catch pits, 38 per cent were cesspools and 40.1 per cent other types of *C. fatigans* breeding places. On these findings a programme for the control of *C. fatigans* and *Aedes* (*Stegomyia*) breeding places was drawn up by this section and submitted to the Medical Officer of Health for action.

(ii)—DEPARTMENT OF PATHOLOGY, GENERAL HOSPITAL,
COLOMBO

General

The work in the Pathology Department during the year has been mainly the continuation of routine duties. The quantity of work has increased enormously.

Staff

The Medical Staff remained the same as before. There has been no change in the number of Medical Laboratory Technologists.

Work Done

CLINICAL PATHOLOGY

The usual routine methods have been employed.

BIOCHEMISTRY DEPARTMENT

The usual routine tests have been employed. The Biochemist is still away in U. K. on special training.

MORBID ANATOMY AND HISTORY

Less post mortems have been done because less bodies were available. Histological examination of operation specimens have been extended. Professor W. A. E. Karunaratne continues to give invaluable support in an honorary capacity.

BACTERIOLOGY

The standard agglutination tests are now provided regularly and it is therefore now possible for results to be sent to the wards the day after the blood specimens have been received. The long delay as a result of sending specimens to the M. R. I. as done previously has now been overcome.

BLOOD BANK

Work has progressed. More blood has been obtained and used this year than in the past. The mobile unit has been well established. A suitable Blood Transfusion Van for collecting blood has been asked for. The Blood Bank

Publicity Committee is carrying on a very difficult task of getting more donors and response from private voluntary organisations has been poor. There have been several technical improvements at the Blood Bank. A new high pressure sterilizer has been installed and sterilization of all Blood Bank equipment is now done in the Blood Bank premises.

Table LXXX—Work Done

(i) *Special Haematology :*

Marrow Biopsy	..	..	..	81
Absolute Count	..	..	..	361

(ii) *Histology Sections :*

Specimens of outstation hospitals	..	..	..	2,870
P. M. Sections	..	..	..	225
Toad Tests	..	..	..	175
Mounting of Museum specimens	..	..	..	25
No. of post-mortems done	..	..	..	85
Malignant cells	..	..	..	90

(iii) *S. A. T. Section :*

S. A. T.	..	..	..	2,576
Brucella	..	..	..	237
Coombs Tests	..	..	..	50

(iv) Routine tests have increased in numbers.

Equipment

The quantity and nature of laboratory equipment is satisfactory.

Accommodation

This is inadequate and unsatisfactory.

(iii)—LABORATORIES OF THE COLOMBO GROUP OF HOSPITALS

(a) **De Soysa Hospital for Women, Colombo****General**

The accommodation still remains the same (one room). Although it is desirable to have at least an Assistant Pathologist, the present accommodation does not justify the appointment.

Staff

The permanent staff of medical laboratory technologists is six. There has been some difficulty in coping with the daily routine work.

Work Done

Toad test for pregnancy	..	..	..	607
Urine for albumin and deposits	..	..	..	14,061
Albumin percentage	..	..	..	200
Other urine tests	..	..	..	1,273
Faecal examinations	..	..	..	15,204
Blood examinations	..	..	..	9,480

Sputum for T. B.	..	..	105
Vaginal Smears	..	..	2,263
Sperm Counts	..	..	114
Blood Urea Estimations	..	..	561
Rh. Factor	..	..	504
Coombs Test	..	..	300
Blood Sugar Estimations	..	..	118
Blood for Plasma Protein	..	..	312
Liver Function tests	..	..	17
Blood for Calcium	..	..	5
Blood for Phosphorus	..	..	—
Gastric Analysis	..	..	3
Serum Bilirubin	..	..	15
Histology	..	..	362

Equipment

Equipment is adequate for the work undertaken.

(b) Lady Ridgeway Hospital for Children, Colombo

General

The most significant event was the commencing of the new extension to the Pathology Department. This is expected to be completed by the end of 1958.

Staff

For the work undertaken the present staff is adequate. The additional staff will be required with the completion of the extension.

Work Done

Blood Examinations	..	..	26,316
<i>Liver Function :</i>			
Serum Bilirubin	..	..	172
Serum Alkaline Phosphatase	..	..	139
Thymol Turbidity	..	..	73
Blood Sugar	..	..	161
C. S. F. for Sugar	..	..	694
C. S. F. for Proteins	..	..	684
C. S. F. for Chlorides	..	..	684
C. S. F. for Cells	..	..	702
Smear for Organisms	..	..	742
Other fluids examined	..	..	22
Stools for Trypsin	..	..	2
Stools for Stercobilin	..	..	50
Stools for Occult Blood	..	..	22
Stools for Amoebia	}	..	9,964
Ova			
Cysts	}	..	1,200
Urine for Bile			
Urine for Urobilin	..	..	1,200
Urine for Specific Gravity	..	..	1,604
Urine for Sugar	..	..	408
Urine for Acetone	..	..	240
Urine for Deiasias	..	..	12
Urine for Chlorides (Fantus test)	..	..	26
Urine for Albumen percentage	..	..	136
Urine for Albumen deposits	..	..	8,940
Sputum and Gastric Contents for T. B.	..	..	424
Histology Sections	..	..	225
Total			54,842

(c) Castle Street Hospital for Women, Colombo

General

The new laboratory extension was almost completed during the year.

Staff

three laboratory technologists and one laboratory labourer are required immediately. Three more laboratory technologists and three more laboratory labourers will be required with the completion of laboratory extension.

Work Done

Urines	..	..	6,903
Faeces	..	..	1,515
R. B. C. and H. B. per cent	..	..	2,425
W. B. C. and D. C.	..	..	1,759
M. P.	..	..	32
M. F.	..	..	1,045
Blood Urea	..	..	87
R. H. Factor	..	..	164
E. S. R.	..	..	37
Pregnancy test	..	..	208
Vaginal Smears	..	..	148
Sputum	..	..	101
Bleeding and Clotting	..	..	46

Equipment

Adequate.

Accommodation

With the new extension accommodation is adequate.

(d) Victoria Memorial Eye Hospital

General

Nothing new was undertaken as conditions regarding accommodation and bench space could not be improved. The new Eye Hospital under construction will have better facilities for laboratory work.

Staff

Present staff consists of two medical laboratory technologists and one laboratory sub-Assistant.

Work Done

	<i>List of Tests</i>		<i>Numbers</i>
Urine	7,001
Faeces	195
Blood	841
Other examinations (smears, cultures, &c.)	7,649
			<hr/> 15,686 <hr/>

Specimens despatched to M. R. I. for examination :

Blood for Khan and Cl.	..	..	385
Blood for S. A. T.	..	..	5
Conjunctival cultures	..	..	25
Other tests	..	..	26
			<hr/> 441

*Specimens sent to D. M. H. and L. R. H. and Path. Lab.**G. H. C. :*

Blood for sugar estimation	..	..	67
Blood for Urea estimation	..	..	17
Other tests	..	..	18
Biopsy (Path. Lab., G. H. C.)	..	..	49
			<hr/> 151

Equipment

The present equipment is sufficient for the range of tests now carried out in this laboratory, but indents have already been placed by the Pathologist for the new laboratory in the new Eye Hospital building.

(iv)—LABORATORIES OF PROVINCIAL HOSPITALS**(a) Laboratory of the General Hospital, Kandy****General**

A wider range of work was undertaken in the Haematology, Biochemistry and Histo-pathology sections than in the previous year. Only a very limited amount of bacteriological work could be undertaken due to lack of staff.

Staff

The present staff in this department consists of :—1 Pathologist, 1 Assistant Pathologist, 1 Biochemist, 9 Medical Laboratory Technologists, 2 Laboratory Sub-Assistants, 3 Laboratory Orderlies and 1 labourer.

Work Done in 1957

Blood examinations	..	..	27,431
Glucose tolerance test	..	..	41
Insulin tolerance test	..	..	10
Urea clearance test	..	..	42
Serum bilirubin	..	..	141
Serum phosphorus	..	..	63
Serum calcium	..	..	85
Blood cholesterol	..	..	40
Cephalin cholesterol flocculation test	..	..	56
Acid Phosphatase	..	..	17
C. S. F. Analysis	..	..	377
Urine—full report	..	..	17,317
Stools for A. O. C.	..	..	7,055
Sputum for T. B.	..	..	1,305
Conjunctival smears	..	..	374
Throat swabs for C. Diphtheria	..	..	301
Smears for G. C.	..	..	171
Smears for Trichomonas	..	..	195
Faeces for stercobilin	..	..	14
Dark ground examination	..	..	2
Smears for B. leprae	..	..	25
Reticulocyte count	..	..	20
Bonemarrow Biopsies	..	..	6
Urea concentration test	..	..	8
Histo-pathology	..	..	398

Osmotic fragility test	3
Basal metabolic rate	92
Fasting contents	77
Gastric analysis	199
Uric acid	3
Fat analysis	8
Water concentration	8
Water elimination	4
Kepler's test	3
Urinary diastase	6
Bence Jone's proteins	10
Ozazone test	10

Equipment

Additional equipment has been indented for and is expected to arrive in the course of this year. With the development of the bacteriological unit additional furniture and fittings will also be required.

Accommodation

The accommodation has become inadequate for the needs of this laboratory especially because two rooms which were in use have been taken over as a lecture hall for the student nurses.

(b) Laboratory of the General Hospital, Jaffna

General

Additional accommodation was provided by handing over the old X-Ray block consisting of 6 rooms for Laboratory work. The Bacteriology, Haematology and B. M. R. sections were shifted to the block thereby enabling the expansion of the Bacteriological Biochemical departments.

Staff

1 Pathologist, 8 Medical Laboratory Technologists, 2 Sub-Assistants, 2 Laboratory Orderlies, and 4 Laboratory Labourers.

A large consignment of equipment was received during the year including a Flame Photometer.

Work Done

Clinical Pathology. Work has been mainly of a routine nature in addition to urea concentration and other special tests as demanded by Specialists.

Biochemistry. All estimates are done here. A flame photometer has been received and it is hoped to start photometry this year.

Haematology. Special tests including bone-marrow biopsy in absolute valves are done on selected cases.

Bacteriology. All cultural examination are done here including antibiotic sensitivity tests.

Specimens

The total specimens was as follows :—

Pathological specimens	21,455
Haematological examinations	21,913
Biochemistry specimens	2,247
Bacteriological specimens	2,910
Biopsy specimens	912
Museum specimens	36
B.M.R. Tests	68

(c) Provincial Laboratory, Kurunegala

General

During the year considerable progress and improvements were brought about in both laboratories.

A. Pathological Laboratory (Path. Lab.) Government General Hospital. The Pathological Laboratory was moved into the previous O. P. D. building of the Hospital. It has now one main hall and three rooms and an attached latrine. The other half of the building is to be used for the Blood Bank. It is well provided with equipment and reagents. Both reliability of tests and promptness in reporting the results have resulted in creating wider interest and keenness of the Hospital Staff in laboratory investigations; so much so that two additional technologists have to be posted to cope with the work.

B. Provincial Laboratory. With the arrival of the first instalment of the technical staff the Provincial Laboratory began functioning from the middle of 1957. Histo-pathology, Blood Sugar, Blood Urea and Gastric Analysis investigations have been taken up for the routine work to begin with, and are being carried out satisfactorily. In addition, a part of laboratory examination and field work of the Environmental Sanitation Project is also done in this institution.

Staff

Pathological Laboratory, Government General Hospital. One Assistant Pathologist posted at the Pathological Laboratory is doing the Blood Bank work in addition to Pathological Laboratory work. The other staff consists of:—

Technologists	3
Laboratory Labourers	2

Provincial Laboratory. The staff consists of one Pathologist who also supervises the work of the Pathological Laboratory of the Hospital, 3 technologists, one Laboratory Sub-Assistant and 3 labourers. One Technologist full-time and the one part-time, are engaged in the Environmental Sanitation Project work.

Work Done

The following work has been done in both laboratories:—

Histo-pathological specimens	..	..	283
Estimation of blood sugar	..	..	24
Estimation of urea	..	..	54
Other blood examinations	..	..	6,506
Examination of cerebro-spinal fluid	..	..	83
Slides for microfilaria	..	..	601
Sputum	..	..	981
Urine examination complete	..	..	5,011
Faeces examination complete	..	..	1,427

Environmental Sanitation Project Survey work—

Smear preparations examined (Direct and M.I.F.C. method)	3,873
Total	18,843

Equipment

A large portion of equipment has already been provided and the remaining has been indented for. Orders for the main bulk of reagents and media have been placed and is expected to be available by the middle of 1958.

Accommodation

Both laboratories have fairly good accommodation.

Blood Bank

With the conversion of the O. P. D. section of the Government General Hospital, the building accommodation has been well provided, but the necessary staff and equipment are awaited to start the work on proper lines.

(d) Laboratory of the General Hospital, Galle

General

The Pathology Department of the Galle Hospital was functioning without a permanent Pathologist from September, 1956, till July, 1957.

Staff

Dr. M. L. Sur, Foreign Medical Specialist in Pathology, took charge of the laboratory in July, 1957, and Dr. R. V. P. Dissanayake worked as Assistant Pathologist. The latter was transferred in December, 1957, and no successor has yet been appointed.

Three Laboratory Technologists, two laboratory Sub-Assistants, one Laboratory Orderly and two labourers were on the staff of this Laboratory till October, 1957, when two more Technologists and one more laboratory Sub-Assistant were posted.

Work Done

Following new sections have been added to the Laboratory :—

1. Biochemistry Section
2. Serology Section
3. Histo-pathology Section.

Preparation of blood grouping sera is done here now by :—

1. Absorption of cold Agglutininus
2. Inactivation
3. Titration to get sera of suitable agglutinating titres,
4. Phenotising to avoid bacterial contamination.

Blood Examinations	..	..	..	20,315
Faeces Examinations	..	..	..	2,615
Urine Examinations	..	..	..	45,670
Sputum Examinations	..	..	..	4,178
Smears for Bacteria	..	..	..	92

Aspirated Fluids

Alubmen	..	..	..	60
Organisms	..	..	..	54
Cerebro-spinal Fluid Specimens	..	..	..	792
Gastric Analysis	..	..	..	6
Liver function tests	..	..	..	32

(v) LABORATORIES OF SPECIAL CAMPAIGNS

(a) Anti-Malaria Campaign

General

As in past years the Laboratory attached to the Anti-Malaria Campaigns was engaged in the identification of mosquito adults and larvae and the examination of blood smears for malaria parasites. The methods of preparation of specimens of mosquito adults and larvae for examination remained the same as in previous years. The method adopted for straining of blood smears was for the thick smear to be stained with Giemsa's stain and for the thin smear to be stained with Lieshman's stain. These methods were found to be satisfactory for their respective purposes. J. S. B. stain was also prepared in the Laboratory and tried out as a method of staining blood smears. This method was found to be satisfactory for staining the odd smear whose results of examination might have been required in a short period of time. It was, however, found to be laborious for the purpose of mass staining.

Staff

Out of a total sanctioned cadre of 13 Laboratory Assistants there were only 7 posts filled. Six members of the field staff of the Anti-Malaria Campaigns were trained in the identification of mosquito adults and larvae and in the examination of blood smears for malaria parasites and these officers were found to be able to carry out the duties assigned to them satisfactorily. The full complement of three Laboratory Sub-Assistants and two Laboratory Orderlies functioned during the year.

Work Done*Examination of Anophelines :*

Total number of Anopheline adults identified	..	..	46,821
Total number of Anopheline larvae identified	..	..	123,138

Blood Smear Examinations :

Total number of blood smears examined	..	..	105,957
Total number of blood smears positive for Malaria parasites	..	..	6,811
Total number of blood smears positive for <i>P. vivax</i>	..	..	4,139
Total number of blood smears positive for <i>P. falciparum</i>	..	..	2,637
Total number of blood smears positive for <i>P. Malariae</i>	..	..	23
Number of mixed infections	..	..	12

Equipment

Sufficient equipment and material were available for the work of the Campaign undertaken during the year.

Arrangements were made for the obtaining of 45 microscopes and supplies of glass slides, stains, re-agents, &c., from U. S. O. M. in order that 60 microscopes could be at work at the same time for the purpose of implementing the Malaria Eradication Scheme.

Accommodation

The present laboratory space is totally inadequate for the expanded programme of work which would be necessary under the Malaria Eradication Scheme. Semi-permanent buildings situated at Narahenpitiya have been taken over to be re-conditioned and used to meet the additional requirements of accommodation for this Division.

(b) Filariasis Campaign**General**

The laboratories of the Superintendent, Filariasis Campaign, consist of the main laboratory at Dehiwela, 2 Sub-Unit laboratories, one at Ambalangoda and the other at Matara. Work in the Kalutara area is done by the Medical Laboratory Technologist attached to the laboratory at Kalutara.

Staff

The staff consists of 2 Medical (permanent) Laboratory Technologists, 1 permanent Grade, 1 permanent Grade—Lab. Sub-Assistant, 2 Temporary Laboratory Assistants, 2 Temporary Laboratory Technicians. 1 Temporary Laboratory Assistant resigned in February, 1957. The other Temporary Laboratory Assistant is working at Ambalangoda Sub-Unit Laboratory, 1 Temporary Laboratory Technician is working at Matara Sub-Unit Laboratory. Rest are working at Dehiwela main laboratory. Besides the above, 1 Field Attendant works in the Laboratory subject to calls for work at the general office, clinic, &c. 1 Casual Labourer is available for work till 9.30 a.m.

Work Done

Blood films examined for Microfilaria	..	..	127,757
Blood films found positive for Microfilaria	..	..	2,941
Other examinations : W. B. C.	..	..	284
D. D.	..	..	355
Urine	..	..	2

Equipment

The laboratory has been functioning with the minimum requirements.

Accommodation

The laboratory occupies a section (approximately $\frac{1}{4}$ of the floor space) of the semi-permanent building belonging to the S. F. C. The laboratory area is a portion of the office of some members of the paramedical staff of the Filariasis Campaign.

(c) Leprosy Campaign**General**

- (1) Smears from patients in the institution and field were examined to determine the bacillary index for purposes of classification, giving employment to patients, discharge of patients from institutions and evaluation of the results of treatment.
- (2) Special demonstration in the method of bacteriological examination for M. Leprae were given to M. O.O., P. H. II., and Nursing staff.
- (3) An additional Medical Laboratory Technologist has been posted to the Campaign on January 1, 1957.

New Tests

Concentration Method. Choloroform method for making smears with biopsied sections from skin and nerves in certain types of Leprosy—border-line and doubtful—have been carried out.

Staff

All the 3 Medical Laboratory Technologists are specially trained in India in Laboratory Work connected with Leprosy.

Medical Laboratory Technologists	3
Hospital Attendants	2

Work Done

	Type of Examination	No. of Examinations
R. B. C.	727
W. B. C.	485
D. G.	457
Hb. %	730
Urines	1,197
Stools	170
Sputum	215
Microfilariae	19
Malarial Parasites	7
E. S. R.	276
Smears—M. Leprae	4,983
Specimens sent to M. R. I. and Welisara	53

The above work was carried out in the Laboratories at Hendala, Mantivu, Uragaha and Maradana.

Equipment

Equipment is inadequate to do work of a high scientific standard. W. H. O. has given some equipment and the new laboratory which will be attached to the new Leprosy Clinic in Colombo will be fitted up with this equipment.

Accommodation

Hendala .. .. .	.. Laboratory space available—272 sq. ft. Extension to this laboratory necessary
Mantivu .. .. .	.. Accommodation sufficient
Colombo (Maradana) Clinic .. .. .	.. A laboratory is attached to the new Clinic and will be fitted up with sufficient equipment in due course

(d) Central V. D. Clinic

General

During the period under review the V. D. R. L. Screen Test has been established at the Central V. D. Clinic, Colombo, in addition to other routine tests. Since 29th November, 1957, an average case load of 75 specimens per day were examined at the Central V. D. Clinic.

Staff

A Medical Officer completed two years' work at the M. R. I. and awaits further training abroad.

Three full-time Medical Laboratory Technologists are attached to this laboratory.

Work Done

The annual figures of work done are as follows :—

Total number of smears for G. C.	..	..	4,340
Total number of smears for T. V.	..	..	1,331
Total number of smears for T. P.	..	..	3,425
Total number of C. S. F. for Cell counts	..	..	497
Total number of bloods for W. B. C. and D. D.	..	..	5
Total number of urines tested	..	..	872
Analysis : Albumin	..	..	213
Sugar	..	..	282
Deposits	..	..	785
Total Number of V. D. R. L. tests performed	..	..	17,747

Equipment

Most of the equipment indented for the establishment of a single serological test for syphilis have been received.

Accommodation

Extensions to the Central V. D. Clinic and laboratory are under construction. When these extensions are completed it will be possible to afford more accommodation to the laboratory section.

(e) Laboratory of the Judicial Medical Officer

General

The new Medico-Legal Morgue and Laboratory was opened in August, 1957. Post-mortem examinations of all cases of sudden deaths and deaths due to violence occurring in the area of Judicial Medical Officer, Colombo, are done here.

During the year under review, there has been an increase in the amount of laboratory work done. More and more outstation productions are referred to this laboratory now.

Histological work, examination of smears, stains, hairs, fibres, identification of human remains, preparation and mounting of museum specimens, and photographic work are done regularly.

Staff

One Medical Laboratory Technologist and one laboratory labourer.

Work Done

The following Medico-legal laboratory examinations were carried out:—

(1) Morbid Histology	212
(2) Smears for G. C., spermatozoa, &c. .. .	74
(3) Identification of hair, fibres, blood stains, &c. .. .	17
(4) Preparation and mounting of Museum specimens .. .	38
(5) Pregnancy tests	1

Photographic work was done in connection with five Medico-Legal cases. The Medical Laboratory Technologist is now undergoing a course of training in Photography at the School of Fine Arts.

Equipment

Adequate for present needs but a few more new ones and replacements are needed.

Accommodation

The accommodation available at present is quite sufficient.

(f) Laboratory for Fever Hospital, Angoda**General**

The laboratory services attached to the Mental Hospital, Angoda, continued to function on the same lines it has hitherto done. The routine examination of specimens of blood, urine, faeces and sputum took up the major portion of the time of the staff. Towards the middle of the year all patients suffering from Pulmonary Tuberculosis were segregated into 3 separate wards, following a mass X-ray examination of the patients and staff of this institution, which revealed that at least 10 per cent of the inmates were infected.

A special Medical Officer attached to the Tuberculosis Campaign visits the patients three times a week. A radiographic examination of all new admissions has been conducted and examination of specimens of sputum and blood examination of these patients have therefore occupied a great deal of the time. The present officers continue to attend to this greatly increased quota of work. The number of sputum examination have increased from 41 in January to 197 in December.

Staff

Consists of two Laboratory Technologists, one Sub-Assistant, one Labourer.

Work Done

A summary of the work done during the year under review is given in Table No. LXXXI.

Accommodation

This is satisfactory.

Table LXXXI—Pathological Laboratory, Mental Hospital, Angoda

	W.B.C.	D.C.	R.B.C.	H.B.	Spu- tum	M.F.	M.P.	G.C.	Bleeding and Clotting Time	Stools A.O.C. and Cells	Urine Deposits	Specific gravity	Bile	Albumin	Sugar	Speci- mens sent to M.R.I.	E.S.R.
January	84	87	83	83	41	7	2	4	2	156	152	18	14	172	217	272	86
February	48	47	48	55	33	9	3	3	—	136	141	26	9	156	176	258	39
March	92	92	61	65	56	6	5	5	—	131	294	39	11	308	325	335	51
April	113	106	84	91	54	7	2	1	3	109	140	14	7	150	172	317	44
May	99	111	100	121	63	13	1	2	—	241	196	16	5	212	230	343	69
June	111	113	102	96	81	20	2	3	—	173	281	8	8	305	320	374	39
July	113	114	101	108	111	4	1	3	1	221	232	1	6	248	256	349	52
August	155	158	121	144	53	3	3	2	2	187	196	21	5	262	279	453	61
September	171	171	139	123	114	8	1	1	—	217	220	26	22	252	282	375	49
October	140	140	143	135	111	6	2	2	1	300	233	31	15	238	256	394	32
November	214	220	136	122	285	11	1	4	2	185	260	5	14	292	318	389	75
December	195	198	121	138	197	13	2	3	1	156	220	4	1	245	262	300	52
Total	1,535	1,557	1,239	1,281	1,199	107	25	33	12	2,212	2,565	209	117	2,840	3,093	4,159	649

(vi) LABORATORIES OF BASE AND DISTRICT HOSPITALS

COLOMBO DIVISION

Base Hospital, Negombo

General

There has been an increase in the work in the year 1957 compared to the years 1955 and 1956. The total examinations done at this Laboratory for the year 1957 is 15,535 specimens and in the year 1956, 10,926 specimens.

Special tests such as Blood Sugar, Blood Urea and C. S. F. have to be undertaken.

Staff

Staff consists of one Medical Laboratory Technologist, one Laboratory Sub-Assistant and one Laboratory Labourer who was appointed with effect from 1.1.58.

Work Done

Blood examinations	5,550
Sputum T. B.	332
V. Smears G. C. and Trice	416
Stools A. O. C.	786
Urine Examination	8,214
C. S. F. Organisms	1
Referred to Colombo for report	236
	<hr/>
	15,535

Equipment

As far as the routine work is concerned the present equipment is sufficient. Towards the latter part of the year under review apparatus like Steriliser, Water bath, Hot-air Oven, Urea apparatus, Electric Still and Centrifuge were received from Colombo.

Most urgent items for this Laboratory appearing in the Standard List have been indented and a few of them have been received.

Accommodation

Towards the latter part of 1957 this laboratory was temporarily shifted to the 1st floor of the New Administration Block. There is a room set apart for the Laboratory in the New Administration Block, as the fittings of this room are not completed this temporary arrangement had been made.

KALUTARA DIVISION

Base Hospital, Kalutara

General

During the year under review 35,297 specimens have been examined in this Laboratory and when compared with the figures of the previous year (1956) there has been an increase of about 12,808 specimens during 1957. A total number of 993 specimens, chiefly for bacteriological tests has been sent to the M. R. I.

Staff

There are two Medical Laboratory Technologists, one Laboratory Sub Assistant and one Laboratory Labourer. The appointment of an additional Medical Technologist has eased the work considerably.

Work Done

Urine (Chemical Exam. and Deposits) ..	..	10,838
Blood (Blood counts, E. S. R. Grouping & D. T.) ..	..	10,632
Faeces (Amoebae, ova, cells) ..	..	8,182
Smears (G. C., T. B. and other organisms) ..	..	5,543
C. S. F. (Cells and cell counts) ..	..	102
		<hr/> 35,297 <hr/>

Equipment

Most of the laboratory equipment specified in standard lists already provided are available for use in this Laboratory.

Accommodation

The present accommodation is not sufficient for immediate needs.

District Hospital, Panadura

General

The year 1957 has been of special interest as the New Laboratory was occupied at the beginning of this year. The sinks and the connecting pipes have not yet been fitted although the work has been entrusted to the P. W. D. Due to the absence of a water supply to the laboratory and to the hospital in general, new examinations have not been undertaken.

Staff

The staff remains the same with one Laboratory Technologist and an orderly.

Work Done

The following examinations have been done in the year in review:—

Urine ..	..	..	..	9,852
Blood ..	..	..	..	3,435
Faeces ..	..	..	..	510
Smears ..	..	..	..	130
Sent to M. R. I. ..	..	..	..	719
				<hr/> 14,646 <hr/>

Equipment

The present position regarding equipment is quite satisfactory. A few more things will be required, e.g., distilling apparatus when the water supply is provided to hospital.

Accommodation

Accommodation in the New Laboratory in the Administration Block is satisfactory for the present as the bed strength of the hospital is still at 174.

District Hospital, Horana**General**

The laboratory is accommodated in the New Administration Block.

Work Done

The summary of the Laboratory Specimens dealt with during the year is given below :—

Urine for full report	1,764
Urine for sugar	1,417
Stools for A. O. C.	752
Blood examinations	635
Sputum for T. B.	47
Trichomonous	29
Smear for G. C.	576
Blood for Khan & Cl sent to Colombo	1,919

Staff

A Medical Laboratory Technologist was appointed in place of the former Laboratory Sub-Assistant with effect from 1.11.57.

Equipment

The equipment necessary for the Laboratory has been obtained during the year.

District Hospital, Pimbura**General**

The Laboratory is in charge of a Laboratory Sub-Assistant. The present bed strength is 133 and it is likely that it will be increased to 169 when the Children's Ward under construction is completed in the very near future.

Work Done

(a) Urine specimens	1,200
(b) Sputum for T. B.	40
(c) Blood specimens	192
(d) Smear for G. C.	32
(e) Stools for A. O. C.	82

Equipment

Present position is satisfactory.

Accommodation

Accommodation in the New Administration Block is satisfactory.

District Hospital, Ingiriya**General**

The Laboratory Sub-Assistant was appointed on 1.11.57. Laboratory equipment was also supplied during the month of November, 1957. Laboratory facilities to carry out simple Laboratory examinations of blood, urine and faeces are now available.

Staff

One Laboratory Sub-Assistant.

Work Done

Blood for W. B. C. and D. C.	..	..	..	10
Faeces for full report	..	..	..	5
Urine for full report ..	..	..	..	18

Equipment

The present equipment is satisfactory.

Accommodation

Only one room is available. This is insufficient.

District Hospital, Neboda**Staff**

Nil.

Work Done

	<i>Locally</i>		<i>Colombo</i>	
Urine	..	67	Blood for S. A. T.	.. 36
			Blood for Khan	.. 95
			Sputum ..	.. 32

Equipment

Available equipment is sufficient for routine work.

Health Unit, Kalutara**General**

Work in connection with the examination of blood films for microfilariae from the two S. F. C. divisions of Kalutara and Beruwela was continued during the year under review. Faeces examination in connection with the "field" trials in Entacyl was continued.

Staff

One Laboratory Technologist and a Laboratory Labourer.

Work Done

				<i>No. of Films</i>
<i>Blood for Microfilariae :</i>				
Kalutara	..	..	..	5,363
Beruwala	..	..	..	4,281
				<hr/> 9,644 <hr/>
Faeces for A. O. C.	..	..	..	271
Urine for full report	..	..	..	75
W. B. C., D. C.	..	..	..	43
<i>Despatched for Examination at Colombo :</i>				
Throat swabs for C. Diphtheriae	..	..	..	177
Blood for Khan & Cl.	..	..	..	1,016
Faeces for culture	..	..	..	3
Smears for G. C.	..	..	..	1
Urine for culture	..	..	..	1
<i>Examined at Anti-Malaria Campaign :</i>				
Blood for M. P.	..	..	..	2

Equipment

The Laboratory is fairly well equipped.

Accommodation

As mentioned in earlier reports the building is not suitable for an up-to-date Laboratory. Absence of a pipe-borne water supply and gas facilities are felt. This is a U. C. building.

JAFFNA DIVISION**General Hospital, Chavakachcheri****General**

Substantial progress could not have been made during the year for want of equipment and accommodation. However, a new Plant to prepare distilled water locally had been got down and is made use of. Bleeding time, clotting time, size of red cells, estimation of albumin per cent in urine are being done with the installation of the new equipment. Maternity survey is being undertaken.

Staff

Medical Laboratory Technologist 1, Laboratory Labourer 1.

Work Done

1. Urine for full report including albumin per cent, sugar per cent, acetone, bile, &c.
2. Faeces examination of ova and cysts, occult blood, amoeba, &c.

3. Sputum for T. B.
4. Vaginal and urethral smear for gonococci.
5. Vaginal smear for tricomonus.
6. Nasal smear for B. Leprae.
7. Blood for D. C., W. B. C., R. B. C., Hb per cent, M. P. Filaria Picture, Sedimentation rate, bleeding time, Clotting time, six of R. B. C., &c. Urine : 8,700 ; Faeces : 2,275 ; Blood : 245 ; Smear : 485.

Accommodation

The extisting accommodation is inadequate.

District Hospital, Kankesanturai

Staff

Medical Laboratory Technologist	..	..	..	1
Sub-Assistant	..	..	..	1
Laboratory labourer	..	..	..	1

Work Done

Blood	..	..	..	8,680
Urine	..	..	..	3,809
Faeces	..	..	..	1,793
Smears for G. C.	..	..	..	108
Fluids	..	..	..	316
Sputum for T. B.	..	..	..	2,460
O. P. D.	..	..	..	6,105
Specimens sent to Colombo	..	..	..	709
Total				23,980

Accommodation

Satisfactory.

District Hospital, Kayts

General

After the appointment of a Sub-Assistant, Blood for W. B. C., R. B. C., D. C., B. S. R., Sputum for T. B., Smears for G. C., drawing blood for Kahn & Cl. at the A. N. C. were done. Total number of specimens of all types handled was 3,903.

Staff

Lab. Sub-Assistant 1.

Accommodation

The laboratory is housed in a small room.

District Hospital, Point Pedro**General**

At present the staff consist of one Medical Lab. Sub-Assistant. The laboratory is housed in the old dispensary. The present block where the laboratory functions lacks space. Blood for Khan & Cl. are sent to the M. R. I.

Work Done

Urine	..	..	..	..	2,795
Blood	..	..	..	..	519
Stools	..	..	..	..	293
Sputum	..	..	..	..	117
Smear	..	..	..	..	75
Total..					<hr/> 3,799
Number sent to M. R. I.					<hr/> 196

MATALE DIVISION**Base Hospital, Matale****General**

The volume of work has increased considerably during the year 1957. No new tests could be carried out for want of additional space and required staff and equipment. Though it was proposed to start Blood Sugar and Blood Urea, this could not be undertaken until the laboratory is shifted to the New Administration Block under construction.

Staff

One Laboratory Technologist.

One Laboratory Orderly.

Work Done

Blood	..	..	..	..	2,077
Urine	..	..	..	..	1,987
Faeces	..	..	..	..	629
					<hr/> 4,693
<i>Specimens sent to Colombo :</i>					
S. A. T. and others..	..	..	..	..	257
Other examinations	..	..	..	..	86
					<hr/> 343

Equipment

The present position of equipment is satisfactory for undertaking routine examinations. Equipment for blood sugar and blood urea has been indented for ; a portion has already arrived and the balance is expected to arrive shortly.

Base Hospital, Polonnaruwa**General**

This institution was provided with a Laboratory from 1.9.57. Since the opening of the Laboratory, several Laboratory tests for which specimens had to be sent to M. R. I. are now conducted here.

Staff

One Laboratory Technologist.

Work Done

Since the opening of the Laboratory the following routine tests have been carried out.

(a) Blood examinations	..	..	..	257
(b) Urine specimens examined	..	..	..	295
(c) Stools—A. O. C. ..	..	..	..	191
(d) Sputum T. B.	..	..	..	11

Equipment

The present equipment provided is quite satisfactory to carry out the routine laboratory tests.

District Hospital, Dambulla**General**

This institution was provided with a Laboratory in September, 1957. Only simple routine tests were done.

Staff

One Laboratory Technologist.

Work Done

Blood	..	..	..	..	159
Urine	..	..	..	..	61
Sputum	..	..	..	..	26
Stool	..	..	..	..	16
Smears	..	..	..	..	2
					<hr/> 264 <hr/>

Accommodation

The space provided and accommodation is insufficient. The Laboratory will be shifted to the New Administration Block now under construction.

KANDY DIVISION**District Hospital, Watawala****General**

Routine tests—Urine, Faeces, Blood and smears—done.

Staff

One Laboratory Sub-Assistant Grade I.

Work Done

Urine	..	..	..	2,126
Faeces	..	..	..	1,957
Blood counts	..	..	..	386
Smears for G. C.	..	..	..	12
Sputum for T. B.	..	..	..	121
Blood for M. P.	..	..	..	215
Vaginal smears for Trichomonas	..	..	..	6
				<hr/> 4,823
Specimens sent to Colombo, M. R. I.	..	..	..	383

Equipment

Sufficient for present needs.

Accommodation

Satisfactory.

District Hospital, Maskeliya**General**

The progress in the Laboratory work is quite good. No changes have taken place during 1957.

Staff

One Laboratory Sub-Assistant is attached to this Institution.

Work Done

- (a) All examinations except the biochemical examinations are done.
- (b) Microscopical Examination of Blood: W. B. C., D. C. and for Malaria parasites, Microfilaria. Blood Grouping, E. S. R. and Hb per cent.
- (c) Microscopical Examination of faeces for Amoebae, Ova and Cyst.
- (d) Sputum for T. B.
- (e) Examination of Urine and Blood at the Antenatal clinic.
- (f) Vaginal and Urethral smears for Gonococcus and other organisms.
- (g) Despatching of specimens to M. R. I., A. M. C. and to Pathologist.

Urine	..	..	..	1,925
Faeces	..	..	..	1,097
Blood specimens	..	..	..	1,677
Sputum T. B.	..	..	..	149
Swab Diphtheriae	..	..	..	1
Smear G. C.	..	..	..	22
Blood E. S. R.	..	..	..	7
Leprosy	..	..	..	4
Specimens despatched to Colombo	..	..	..	454

Equipment

The equipment available is sufficient to perform the necessary examinations in a Government Hospital like this.

Accommodation

Present accommodation is unsuitable.

District Hospital, Nawalapitiya**General**

The Laboratory serves a bed strength of 175 to 185 and indoor patients ranging from an average of 180 to 200. The O. P. D. specimens have been examined per month ranging from 70 to 100.

As there is a T. B. clinic functioning permanently the examinations of sputum for T. B. have been increased to a great extent and the following tests—W. B. C. and D. C. ; E. S. R. ; and Sputum for T. B. ; are done on every suspected case of T. B. The V. D. clinic is functioning regularly and is assisted by the Technologist. The Maternity Clinic is functioning every Wednesday and every facility is provided for Laboratory examination.

Staff

Technologist ..	..	..	..	1
Laboratory labourer ..	..	..	..	1

Work Done

Blood specimens ..	..	..	..	1,370
Urine examinations ..	..	..	..	3,040
Faeces examinations ..	..	..	..	380
Serology examinations ..	..	..	..	1,689
Bacteriology specimens ..	..	..	..	714

Equipment

The standard of work has been improved. Equipment is sufficient for the present needs but steps are taken to obtain more requirements for further development.

Accommodation

The laboratory and the X-ray Office are housed in a single room. The present laboratory is not provided with water supply.

District Hospital, Gampola**General**

There have been no changes and no new tests were done other than the routine examinations. As there are three T. B. wards the T. B. work has been increased considerably and sputum for T. B. is done on every case that is admitted or transferred to this Hospital.

Staff

Laboratory Technologist ..	..	..	..	1
Laboratory Orderly ..	..	..	..	1

The work has been done satisfactorily and additional staff is not required at present.

Work Done

Urine for full report ..	..	..	..	3,429
Faeces ..	..	..	..	1,458
Blood examinations ..	..	..	..	2,388
Sputum for T. B. ..	..	..	..	872
Smear for G. C. ..	..	..	..	181
Specimens sent to M. R. I., Colombo ..	..	..	..	549

Equipment

The equipment that is available is sufficient for the needs of the Hospital but most of the equipment received has not been put to use due to lack of space and accommodation.

Accommodation

The present Laboratory is housed in a single small room which is only 6½ feet by 11 feet.

RATNAPURA DIVISION

General Hospital, Ratnapura

General

The Laboratory attached to the General Hospital, Ratnapura, is running on its 31st year. The work done in this Laboratory has been limited to clinical Pathology and elementary Bacteriology owing to lack of facilities such as space and equipment.

Staff

The staff consists of two Medical Laboratory Technologists and one Laboratory Orderly and two Laboratory Labourers.

Work Done

A summary of the tests performed during the year 1957 is given below :—

Urine	..	..	..	..	4,068
Faeces for Ova	..	..	..	..	572
Faeces for Amoebae and Cysts	..	..	..	..	572
Blood examinations	..	..	..	..	7,176
<i>Smears :</i>					
Sputum for T. B.	..	..	..	..	1,035
B. Leprae	..	..	..	..	3
G. C.	..	..	..	..	403
Trichomonas	..	..	..	..	272
Monilia	..	..	..	..	274
<i>Fluids :</i>					
C. S. fluids	..	..	..	..	49
Pleural fluids	..	..	..	..	4
Number of specimens sent to the M. R. I. during 1957				..	1,172

Equipment

The equipment in this Laboratory is below standard. However, the equipment ordered for the Laboratory in the new hospital not yet opened has been received and is stored in the new hospital. Some items which were considered essential are being used in this Laboratory.

Accommodation

The Laboratory will be shifted to the new hospital building in the very near future.

District Hospital, Eheliyagoda**General**

The work done in this laboratory during the year was confined to routine tests of Urine, Faeces, Blood, Sputum and Smears for diagnostic purposes.

Staff

The Laboratory staff consists of one Laboratory Technologist and a labourer and trained Laboratory Labourer. The staff is adequate for the volume of work done at present.

Work Done

A statement of work done during the period of 1.1.1957 to 31.12.57 is appended :

<i>Specimens Examined</i>				<i>No. of Specimens</i>
Urine	..	..	..	1,161
Faeces	..	..	..	988
Blood	..	..	..	1,494
Sputum for T. B.	..	..	..	2,445
Smear for G. C.	..	..	..	230
Number of specimens sent to M. R. I., Colombo	..	..	..	276
Number of specimens sent to Welisara for T. B. Culture	..	..	..	42

Accommodation

The present accommodation is inadequate.

District Hospital, Rakwana**General**

Much progress has been made in the laboratory work in this institution during the course of the year. The Medical Laboratory serves the patients of a bed strength of 97 as well as the patients of the O. P. D.

Staff

The staff consists of one Laboratory Sub-Assistant and one Laboratory Labourer.

Work Done

The list of tests performed and their numbers (total) for the year :—

Urine specimens	..	..	..	..	1,666
Faeces specimens	..	..	..	..	860
Blood specimens	..	..	..	..	494
Sputum for T. B.	..	..	..	..	42
Pus—Gonococci	..	..	..	..	13
<i>Pleural Fluid :</i>					
Tubercle Bacilli	..	..	..	..	1
Organisms	..	..	..	..	1
<i>Calcified Sebaceous Cysts :</i>					
Crystals and Organisms	..	..	..	..	1
Vomit for Exam	..	..	..	..	1

The number of specimens examined in the Medical Research Institute, Colombo : 302.

Accommodation

At present a room of the administration block has been set apart for the Medical Laboratory.

MATARA DIVISION**Base Hospital, Matara****General**

During the year the work of the laboratory has increased considerably. The number of examinations carried out during the year amounts to 37,493 as against 30,428 for the previous year.

Staff

There was only one Laboratory Technologist attached to the institution at the beginning of the year 1957. In March 1957 another Laboratory Technologist has been appointed. Besides the two Laboratory Technologists there is a Laboratory Orderly.

Work Done

S. A. T. and Biochemical Tests are being done in addition to the usual routine tests:—

Blood examinations	11,344
Urine Examinations	13,105
Stools for Amœbae	1,764
Stools for Ova	1,764
Stools for Cysts	1,764
Blood for S. A. T.	135
Number of specimens sent to M. R. I., Colombo	870

Equipment

Adequate.

Accommodation

The accommodation made available to the laboratory is inadequate. The total ground space covered by the laboratory is only 800 sq. ft.

District Hospital, Deniyaya**General**

The laboratory attached to the institution has been without a Laboratory Sub-Assistant for six months.

Staff

There is one Laboratory Sub-Assistant and this post has been vacant since October 1957.

Work Done

Urine for report	424
Stools for A. O. C.	11
Sputum for T. B.	65
Smears for G. C.	10
Blood for report	75
Examinations done at M. R. I., Colombo	183

Equipment

The equipment available is adequate.

Accommodation

Satisfactory for present needs.

District Hospital, Tangalla**General**

Satisfactory progress was made in laboratory work at the Institution.

Staff

One Laboratory Sub-Assistant.
One Laboratory Orderly.

Work Done

Urine for full report	...	..	..	1,386
Stools for A. O. C. ..	..	..	..	728
Sputum for T. B. ..	..	..	..	51
Smears for G. C., Tricho & Monilia..	..	..	..	45
Blood samples examined	..	..	..	1,229
Samples sent for examination in Colombo	..	..	..	594

Equipment

Adequate.

Accommodation

Adequate.

District Hospital, Hambantota**General**

Satisfactory progress has been made in laboratory work for the year 1957. Electrical wiring and a sufficient number of plug points were made available for the laboratory. Water service is satisfactory. But the supply of electricity is subject to frequent interruption lasting for hours.

Staff

One Laboratory Technologist.
One Laboratory Cleaner.

Work Done

Blood counts and other examinations of blood	..	760
Urine examinations	..	460
Stools examinations	..	143
Sputum examinations	..	67
Smears, &c.	..	43
Total	..	1,473

Equipment

Adequate.

Accommodation

Adequate.

PUTTALAM DIVISION

Base Hospital, Chilaw

General

In the laboratory, specimens from indoor as well as outdoor patients are examined. The Chest Clinic functions on Mondays and Thursdays. Blood counts and sputum are examined for the Chest Clinic. The V. D. Clinic functions on Tuesdays and Fridays with a Visiting V. D. Officer from Negombo Hospital. Smears are examined for the V. D. Clinic. The specimens from Rural Hospitals and Peripheral Units in the District are also examined. Four from the Police personnel of Chilaw for filariasis were done.

Staff

A trained Medical Laboratory Technologist, Grade II, and a Laboratory Unskilled Labourer.

Work Done

Stools for A. O. C.	..	..	860
Urine for full report	..	..	4,266
Blood specimens examined	..	..	2,576
Sputum for T. B.	..	..	113
Smears	..	..	79
Other examinations	..	..	12
Specimens sent to Colombo	..	..	159

Equipment

The laboratory is well equipped to do routine examinations of urine, blood, stools, etc.

Accommodation

The present room 14' × 14' is inadequate.

District Hospital, Marawila

General

All laboratory equipment and furniture necessary for the laboratory was obtained this year. The required clinical investigations of hospital patients were carried out in the laboratory.

Staff

Medical Laboratory Technologist	..	..	1
Laboratory Orderly (appointed on 1.1.58)	..	..	1

Work Done

(a) Urine (full chemical exam & deposits)	..	2,317
(b) Blood (counts, B. S. R., M. P. M. F., Grouping)	..	1,197
(c) Faeces (Ambae, Ova, Cysts, &c.)	..	1,567
(d) Smears (G. C., T. B. and other organisms)	..	179
(e) Specimens sent to Colombo for examinations	..	100
Total	..	<hr/> 5,360 <hr/>

Equipment

Nearly all the items of laboratory equipment specified in the standard lists are available for use in the laboratory.

Accommodation

Present accommodation is sufficient to carry out routine tests in Clinical Pathology.

District Hospital, Puttalam**General**

There was an increase in the work performed in the laboratory during the year. A few tests were also introduced during the latter half of the year.

Staff

A Laboratory Sub-Assistant, Grade II and a part-time labourer are attached to the laboratory.

Work Done

Blood specimens examined	..	..	448
Urine for full examination	..	..	1,076
Faeces for A. O. C.	..	..	142
Sputum for T. B.	..	..	53
C. S. F. for examination	..	..	4
Smear for G. C.	..	..	27
Total	..	..	<hr/>1,750 <hr/>

Specimens sent to the M. R. I. for examination and report : 194

Equipment

Equipment is sufficient at present.

Accommodation

The laboratory is housed in a room adjoining Ward No. 7.

KEGALLE DIVISION**Base Hospital, Kegalla****General**

The number of routine examinations carried out here is very favourable considering the fact that there is only one Technologist.

Staff

One Laboratory Technologist is assisted by a Laboratory Orderly.

Work Done

Figures relating to tests carried out in this hospital, in M. R. I. Colombo, in Pathological Laboratory, G. H. C., and in office of the Government Analyst, Colombo, are listed below:—

Locally—

Urine	..	..	3,016
Blood specimens examined	..	..	1,502
Smears for T. B.	..	..	397
Smears for G. C.	..	..	92
Smears for C. Diphtheriae	..	..	2
Fluid C. S.	..	..	6
Specimens sent to M. R. I. Colombo	476

Pathologist, G. H. C.

Sections for microscopical examination	2
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Government Analyst.

Smears for examination	4
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Equipment

Present position is satisfactory.

Accommodation

Accommodation provided for the Laboratory is satisfactory.

Base Hospital, Karawanella**Staff**

The Hospital has a Laboratory Technologist, who is assisted by a labourer.

Local examinations—

Urine specimens	..	..	2,077
Stools specimens	..	..	2,268
Blood specimens	..	..	433
Specimens sent to Colombo	..	..	305

There has been a considerable increase in the volume of work during the year under review.

Equipment

Very satisfactory, in comparison with the standard list already provided.

Accommodation

The present laboratory is housed in a portion of the D. M. A's Office. This is very unsatisfactory.

ANURADHAPURA DIVISION

Base Hospital, Trincomalee

General

New tests such as B. S. R. and Blood Grouping done. Stains and Reagents prepared in the laboratory. The general progress during the year was slight increase in the routine work.

Staff

One Medical Laboratory Technologist and a Laboratory Orderly.

Work Done

Blood specimens	..	..	2,142
Urine :			
Reac. Alb., Sug., Sp. Gr., Deposits	..	..	5,839
Faeces : A.O.C.	..	..	442
Sputum : T. B.	..	..	1,060
Smear : G. C., B. Lep., &c.	..	..	82
Specimens sent to M. R. I., Colombo	..	..	659

Accommodation

Present accommodation one room 18' × 15'—270 sq. ft. is satisfactory to carry out the routine work.

General Hospital, Anuradhapura

General

The work done during the year 1957 were the same routine tests carried out in the previous years. Routine and special sputum examinations from Anuradhapura Government Hospital patients only are done here. Smears for G. C. are also done here for the V. D. Clinic.

Staff

The staff consists of one Medical Laboratory Technologist and a Laboratory Orderly.

Work Done

Routine examinations done during the year were follows :—

Urine	..	..	2,187
Faeces	..	..	923
Blood	..	..	2,424
Sputum T. B.	..	..	1,126
Smears G. C.	..	..	264

Equipment

The position was the same as last year.

Accommodation

In view of the proposed shifting of the laboratory to the new hospital, no changes have been effected to the laboratory buildings.

VI—CIVIL MEDICAL STORES

The Civil Medical Stores is still working under adverse conditions. The reorganisation of the Stores on the lines recommended by Mr. J. E. Williams, W.H.O. Adviser, cannot be effected without a modern self-contained unit, capable of accommodating the whole organization of the C. M. Stores. The 3rd Stage of the Building Programme which should have been completed by August 1956 has fallen far behind schedule, and most of those buildings have not been completed as yet.

The plans to house the C. M. Stores at Narahenpita did not materialise. These lands have all been allocated to other Departments.

Staff

One Probationary Assistant Superintendent is expected to be back in October this year after training abroad. The two Foremen who were sent to U. K. for training in repairs to surgical instruments and equipment returned after a satisfactory period of training.

New Proposals

It is proposed to establish a well equipped workshop to attend to the repairs of all surgical equipment except X'ray and electrical appliances.

An officer is to be sent to M/s. Down Bros. for 3 years to study business administration in connection with surgical instruments. With the return of this officer, it is proposed to streamline the indenting and equipping of surgical instruments.

Other Activities

Two factors, hitherto not much in evidence have contributed to activities of the following nature. On account of the strikes, and threat of strikes the C. M. Stores instead of issuing drugs, had to prepare concentrated mixtures and despatch same to various institutions.

With the advent of the unprecedented floods, mobile dispensaries were equipped and directed to various flood-stricken areas.

Accounts

A special committee appointed to investigate the causes for the discrepancies revealed in the Annual Verifications of Stocks for the year 1945/46 to 1952/53 has not yet submitted its final report.

The accounts relating to 1953/54 have been checked and satisfactory explanations have been tendered to the Auditor-General in respect of all the Sections except Section 'C'. In the case of Section 'C' the Storekeeper who was in charge and since retired has been called upon to explain the discrepancies. His explanation is awaited.

As in the case of the year 1954/55, the accounts for the year 1955/56 have also been reconciled and all shortages and surpluses reported by the Annual Board of Survey have been satisfactorily explained to the Auditor-General. The Accounts Section of the C. M. Stores has been able to maintain the record established in the history of the Civil Medical Stores by having the 1955/56 accounts also balanced in the same manner.

The additional work involved in the billing for issues made from the C. M. Stores as a result of the decentralisation was very satisfactorily done in spite of the fact that this was the first year a venture of this nature was undertaken. Receipted invoices have been received from the institutions for

all issues made during the year and all bills rendered have been settled in full and the entire accounts for the year have been finalised.

The Stores Regulations prepared by the Accountant on 1.5.56 and submitted to the Treasury and the Auditor-General for approval in terms of F. R. 845 are awaited.

The value of stocks, cost of deficiencies and surpluses for the year 1954/55 and 1955/56 as reflected in the Annual Verification Report are as follows :—

<i>Year</i>	<i>Value of Stock</i>	<i>Value of Deficiencies</i>	<i>Value of Surpluses</i>
1954-55 ..	.. 5,031,045 91 ..	29,853 27 ..	46,435 19
1955-56 ..	.. 4,623,727 6 ..	32,481 73 ..	38,275 8

The total value of issues for the year 1955/56 is Rs. 11,160,273.13.

294 test checks were held during 1956/57 and a sum of Rs. 197.46 was written off at Government expense.

As far as possible, all institutions were issued their full quota of drugs during the year.

VII—WELFARE WORK

During the year under review an allocation of Rs. 35,000 was received from the Treasury for welfare work in this Department. This amount included a sum of Rs. 5,000 for Nurses' welfare work as well. Grants to cover this entire allocation were given to 208 institutions for provision of equipment for Canteens, Dining and Rest rooms, Tea clubs, Indoor and Outdoor recreational facilities. It will be observed that since the establishment of the Nurses' Training Schools in Kandy, Jaffna, Galle, &c., more Nurses are being employed in hospitals. A sum of Rs. 10,000 has been spent in providing recreational facilities for these nurses during the year.

The Welfare measures so far implemented have afforded new opportunities for all grades of the Service to meet and thereby promote greater understanding and co-operation among them.

On the instructions of the Permanent Secretary to the Ministry of Health steps were taken to find employment for those employees who had been retrenched owing to non-availability of work in the Chief Public Health Engineer's Division. Action is being pursued to see that all such employees are found employment either in other Divisions of this Department or in other Government Departments.

There is an urgent need to extend these amenities to as many institutions as possible ; but the degree to which it could be done is at present hindered by the lack of accommodation in existing buildings. All plans for new buildings in the future are being carefully scrutinized to see that essential amenities such as Canteens, Dining and Rest rooms, and Cloak room facilities are provided in them.

VIII—INTERNATIONAL ASSISTANCE AND CO-OPERATION

Scholarships and Fellowships

The World Health Organisation offered the following seven Fellowships in 1957 :—

<i>Serial No.</i>	<i>Speciality</i>	<i>No. of Fellowships</i>	<i>Period</i>
(1)	.. Public Health ..	2	.. 12 months each
(2)	.. Nursing ..	2	.. 6 month each
(3)	.. Nursing Education ..	1	.. 12 months
(4)	.. Psychiatric Nursing ..	2	.. 12 months each

The candidates selected are expected to proceed for their training during 1958.

The seven Officers selected for the following Fellowships in 1956 went abroad for their training in 1957:—

<i>Serial No.</i>	<i>Designation of Trainee</i>	<i>Country of Study</i>	<i>Speciality</i>	<i>No. of Fellowships</i>
(1)	.. 2 Public Health Nurses	.. U. K.	.. Public Health Nursing	2
(2)	.. 1 Medical Officer	.. U. S. A.	.. Entomology	1
(3)	.. 1 Medical Officer	.. Europe	.. Pharmacology	1
(4) (a)	.. 2 Medical Officers	.. India	.. Leprosy	2
(b)	.. 1 Medical Laboratory Technologist	.. India	.. Leprosy	1

The Colombo Plan awarded the following eighteen Fellowships in 1957:—

<i>Serial No.</i>	<i>Designation of Trainee and Number sent</i>	<i>Country of Study</i>	<i>Speciality</i>	<i>Period of Training</i>
(1)	.. 2 Asst. Physiotherapists	.. New Zealand	.. Physiotherapy	.. 36 months each
(2)	.. 1 Hospital Secretary	.. U. K.	.. Hospital Administration & Finance	6 months
(3)	.. 1 Medical Laboratory Technologist	.. Canada	.. Med. Pathology	.. 12 months
(4)	.. 1 Medical Laboratory Technologist	.. U. K.	.. Museum Techniques	12 months
(5)	.. 2 Male Nurses	.. U. K.	.. Urological Nursing	12 months each
(6)	.. 1 Medical Officer	.. U. K.	.. E. N. T. Surgery	18 months
(7)	.. 2 Medical Officers	.. Canada & U.K.	.. V.D.	.. 12 months each
(8)	.. 1 Nurse	.. U.K.	.. Nurse Tutor	.. 24 months
(9)	.. 1 Nurse	.. U.K.	.. Neuro-Surgical Operation	6 months
(10)	.. 2 Nursing Sisters	.. U.K.	.. Theatre Work	6 months
(11)	.. 1 Nursing Sister	.. U.K.	.. Neuro-Surgical Nursing in Ward	6 months
(12)	.. Orthopaedic Surgeon	.. U.K.	.. Neuro-Surgical Operation Theatre Work	6 months
(13)	.. Physicist	.. U.K.	.. Rehabilitation	.. 3 months
(14)	.. Radio Therapist	.. Canada	.. Radio Physics	.. 18 months
			.. Cobalt Therapy (Cancer)	3 months

Thirty-one candidates have been selected for their training in the following specialities under the Colombo Plan and are awaiting placement:—

<i>Serial No.</i>	<i>No. and Designation of Trainee</i>	<i>Speciality</i>
(1)	.. 3 Asst. Physiotherapists	.. Physiotherapy
(2)	.. 1 E.E.G. Recordist	.. E.E.G. Recording
(3)	.. 1 Hospital Secretary	.. Hospital Administration & Finance
(4)	.. 2 Medical Laboratory Technologists	.. Repair & Maintenance of Laboratory Apparatus
(5)	.. 3 Medical Officers	.. T.D.D.
(6)	.. 6 Medical Officers	.. Psychiatry
(7)	.. 1 Medical Officer	.. Pathology
(8)	.. 1 Medical Officer	.. ENT Surgery for D.L.O.
(9)	.. 1 Medical Officer	.. V.D. with emphasis in Serology
(10)	.. 2 Medical Officers	.. Diploma in Ophthalmology
(11)	.. 2 Medical Officers	.. Bacteriology
(12)	.. 2 Medical Officers	.. Radiology (D.M.R.D.)
(13)	.. 2 Medical Officers	.. Radiology (D.M.R.T.)
(14)	.. 1 Medical Officer	.. Public Health
(15)	.. 2 Public Health Inspectors	.. Leprosy Work
(16)	.. 1 Technical Assistant	.. Repair & Maintenance of Laboratory Apparatus

Other Assistance

World Health Organisation—Health Statistics Project. The W.H.O. Health Statistics Project began with the arrival of the W.H.O. Statistician, Dr. Richard Padley, in the Island on 1.4.57. After a study of local conditions, administrative arrangements of the Health Services, and the problems of the services, the Statistician has made considerable headway in revising statistical methods and procedures.

Environmental Sanitation Project—Kurunegala

The project continued under the direction of the Chief Public Health Engineer, an Assistant Public Health Engineer in direct charge, and a W.H.O. Public Health Engineer as Technical Adviser. Full details of this Scheme appear in the chapter on Sanitation. Financial aid for the materials and equipment needed for the project was given by the UNICEF.

Rural Health Development—Kalutara

A W.H.O. Paediatrician and a Public Health Nurse continued to work in this project. This work was intensified and more discussions were held and lectures given. The scope of the work in the field, clinics and in the wards of the Kalutara Hospital was widened and greater co-ordination between the field and institution established. The work of the team is being known and very much appreciated. The team is also organising paediatric work of similar pattern in other provincial and base hospitals.

Assistance in Epidemiology to the Health Directorate

The WHO Consultant in Epidemiology completed his 2 year assignment to the Health Directorate at the "Centre" in December 1957. During this period of assignment he set up an Epidemiological Unit and helped to define the communicable disease pattern in the country with special reference to diseases of Public Health importance.

The Epidemiological Unit undertook epidemiological surveys in infective diseases prevalent in the Island. Training programmes in epidemiology for Health Officers, Physicians, and Nurses were started and an opposite number to continue the epidemiological services was trained.

Leprosy Control Project

The WHO Leprologist completed his assignment with the Leprosy Control Project and left the Island on 22.6.57.

During this period of assignment he gave lectures and lecture demonstrations to Rural Officers, Officers in charge of Health Officers, Public Health Inspectors, Nurses and post-graduates from the Medical College. A leprosy survey was conducted and the result of the survey has been summarised and submitted to the Department. School children and suspects were examined in endemic areas.

Tuberculosis Control

Action was taken to implement Professor R. T. Neubauer, WHO T.B. Consultant's, ten-year plan for T.B. Control in Ceylon.

The Medical Record Unit created in 1956 continued to function. The WHO Statistician attached to the T.B. Project completed his assignment and left Ceylon in August 1957.

A National T.B. Register was opened.

The services of Prof. Neubauer was once again obtained towards the latter part of the year to assess work done in implementing the plan.

Nursing Adviser

The WHO provided with effect from 22.7.57 a Nurse Adviser to advise on the Nursing Services of the Department, including nursing organisations, education, administration and legislation.

Prior to making any proposals in regard to improvements, the Nursing Adviser carried out an investigation of the existing services.

United Nations Childrens' Fund

UNICEF assistance was obtained for the expansion and development of training facilities of para-medical personnel for the development of Rural Health Services. Further assistance was obtained for the establishment of the following projects :—

- (1) Dental Clinics
- (2) Health Education Projects
- (3) Environmental Sanitation Project, Kurunegala.
- (4) B. C. G. Campaign.

UNICEF Field Representative, Mr. Allan E. Mc. Bain, was in Ceylon towards the end of the year 1957 to discuss further aid to Ceylon. The discussions included among other items aid towards the upgrading of Paediatric facilities in 6 provincial hospitals.

M. C. W. and Rural Health Programme

The Health and Peripheral Units continued to receive drugs and diet supplements from UNICEF during the year. At the close of the year 15 sets of dental equipment were received for issue to School Dental Clinics.

Environmental Sanitation

UNICEF granted a further allocation of \$23,000 for this project. This was provided in the form of equipment. The equipment is sufficient to meet the requirements of the programme till end of 1958. Much progress has been made in this sphere but due to shortage of trained local personnel it was not possible to reach the target set for the year 1957.

Skimmed Milk Feeding Programme

The programme was sponsored by the UNICEF about 4 years ago. It commenced with the grant of 110 tons of skimmed milk powder, for issue in day rations to pre-school children, expectant and nursing mothers and T. B. patients. A further allocation of 400 tons was made in 1956. In addition to the beneficiaries mentioned above, leprosy patients and contacts too were issued skimmed milk powder.

The programme has now been taken over by the Co-operation for American Remittances to Everywhere—CARE. A draft agreement has been forwarded by this Organisation to the Ceylon Government. The agreement will be signed early to ensure uninterrupted supply. This Organisation will supply 500 tons of skimmed milk in the year 1958.

B. C. G. Campaign

UNICEF made free supplies of Vaccine and Tuberculin for the B. C. G. Campaign till June 1957. In accordance with the plan of operations the supplies were stopped when the target of 3.5 million tests was reached. Purchases are now being made from the King's Institute, Madras.

At the end of the year a short-term Consultant from the W. H. O. reviewed the T. B. Control Programme in Ceylon. A B. C. G. Assessment Team from this Organization is scheduled to arrive in early 1958. On their reports, a decision will be reached as regards the future development of the B. C. G. Campaign.

Health Education

UNICEF made an allocation of \$ 14,000 in 1955 for supplies in connection with the Health Education Programme. These supplies were received in full by the end of 1957.

United States Operation Mission

Health Education Project. The United States Operation Mission has agreed to supply equipment to the value of \$ 44,000 for the extensive expansion of the Health Education Project in the Island. Some of the equipment to be supplied includes—

1. Generators
2. Projectors
3. Epidiascopes
4. Photographic Equipment.

This equipment is for use in the areas of the 15 Superintendents of Health Services who will carry out the Health Education Programmes in their divisions.

A Health Educator to work out orientation courses to teacher trainees in the Teacher Training Colleges of the Department of Education was assigned.

The services of the Public Health Engineer to advise the Public Health Engineering Division on stepping up a rural sanitation programme was continued in 1957.

Assistance Under C-Plan—Australian Government

School of Nursing. The School of Nursing at Welisara constructed with the Australian Government Funds, for the training of Assistant Tuberculosis Nurses continued to function with Miss K. G. Thompson as Principal.

Chest Clinics. The Australian Government made a further donation of Rs. 1,142,259.38 towards the establishment of Chest Clinics. The total amount so far donated by Australia in this connection is Rs. 5,342,259.36. With these funds, five clinics have been opened—Ratnapura, Kandy, Kurunegala, Jaffna and Anuradhapura. Two additional clinics are being constructed—Batticaloa and Badulla.

Institute of Hygiene, Kalutara. A donation of Rs. 1,070,395.57 in cash was made by the Australian Government towards the construction of the Institute of Hygiene at Kalutara.

Canadian Government

The School of Nurses Aides continued to function with Miss E. J. Martin, Principal, and Miss F. J. Ferguson, Vice-Principal.

New Zealand Government

Dental Nurses' School. The School of Dental Nurses at Maharagama established with funds granted by the New Zealand Government continued to function with Mr. F. B. Rice as Principal. Misses. B. B. Webbes and E. H. Balwin, Sister Tutors, were succeeded in January 1957 by Misses E. S. Smith and M. A. Garland.

Assistance by Ceylon Government

Dr. Gerrit Hoekstra, Director of Health, Netherlands, New Guinea, came to Ceylon on a W. H. O. Fellowship in Public Health Administration. He arrived here on 15.11.57 and was here for a period of 6 weeks.

Dr. Wu Yao-Tsing of China came on 15th July, 1957, on a W. H. O. Fellowship in Malaria Control. He was afforded study facilities in Anti-Malaria measures for a period of 2 weeks.

Drs. V. Ekambaram and P. N. Khoshoo of India came here on a WHO Fellowship in Leprosy Control. They were afforded facilities to study leprosy control work from 24th April to 2nd May, 1957.

Dr. R. E. M. Suling, WHO Fellow from Indonesia, arrived in Ceylon on 16.1.57 on a 14-day visit to observe the Port Health practices at the Colombo Sea and Air Ports.

W. H. O. CONSULTANTS—1957

<i>Name of Consultant</i>	<i>Speciality</i>	<i>Date of</i>	
		<i>Arrival</i>	<i>Departure</i>
1. Dr. B. L. Malhotra ..	Leprologist, Leprosy Project ..	13. 7.54	22.6.57
2. Mr. J. B. Arbuthnot ..	Public Health Engineer, Environmental Sanitation Project, Kurumegala	17. 3.55	Continuing
3. Dr. H. M. C. Poortman ..	Paediatrician, Kalutara ..	14. 9.55	do.
4. Miss H. McLeod ..	Public Health Nurse, Kalutara ..	3.10.55	do.
5. Dr. T. A. Cockburn ..	Epidemiologist ..	3. 2.56	Dec. 1957
6. Mr. R. K. Som ..	Statistician, T.B. Project ..	23. 8.56	8.8.57
7. Dr. E. Mossige ..	Bacteriology ..	30.12.56	10.1.57
8. Miss V. Drenckhan ..	Health Educator ..	27. 1.57	11.2.57
9. Miss E. Graham ..	Nursing Adviser ..	11. 3.57	10 days
10. Dr. E. J. T. McWeeney ..	T.B. Project ..	9. 3.57	17.3.57
11. Dr. Enid Charles ..	Health Statistics Project ..	19. 4.57	28.4.57
12. Dr. R. Padley ..	Statistician ..	31. 5.57	Continuing
13. Dr. M. E. Farinand ..	Malaria ..	May, 1957	One month
14. Miss T. Tela ..	Nursing Adviser ..	22. 7.57	Continuing
15. Dr. P. H. Robinson ..	Visiting Consultant ..	23. 7.57	4.8.57
16. Dr. F. W. Clements ..	Nutritionist (WHO) ..	3. 9.57	Dec. 1957
17. Mrs. D. L. Bocobo ..	Nutritionist (FAO) ..	3. 9.57	—
18. Mr. V. W. Vickers ..	Sanitarian ..	17.11.57	Continuing
19. Dr. F. R. Farr ..	Hospital Physicist ..	7.12.57	12.12.57
20. Prof. R. T. Neubauer ..	T.B. Project Consultant ..	5.11.57	17.1.58

C. PLAN EXPERTS—1957

<i>Name of Consultant</i>	<i>Speciality</i>	<i>Date of</i>	
		<i>Arrival</i>	<i>Departure</i>
1. Mrs. A. Gurd ..	Health Visitor ..	16. 4.54	Continuing
2. Miss E. J. Martin ..	Principal, School of Nurse in Aides ..	19. 4.54	do.
3. Miss C. I. Graham ..	Sister Tutor ..	19. 4.54	do.
4. Miss M. H. Holloway ..	Sister Tutor T.B. Nursing ..	10. 5.54	29.3.57
5. Miss O. Tippetts ..	do. ..	10. 5.54	8.4.57
6. Mr. F. B. Rice ..	Principal, School of Dental Nursing ..	19.12.54	Continuing
7. Miss K. A. M. Salter ..	Sister Tutor, School of Dental Nursing ..	5. 9.53	17.1.57
8. Miss E. H. Baldwin ..	Sister Tutor, School of Nursing, Welisara ..	13. 5.55	29.3.57
9. Miss F. V. Webber ..	Sister Tutor, School of Dental Nursing ..	19.12.54	17.1.57
10. Dr. R. J. C. Campbell ..	Radiologist ..	30.10.55	1.5.57
11. Miss J. F. Ferguson ..	Vice Principal, School of Nurse Aides ..	22.11.55	Continuing
12. Miss K. G. Thomson ..	Principal, School of Nursing, Welisara ..	3. 2.56	2.1.58
13. Miss H. Keeling ..	Physiotherapist ..	14. 3.56	Continuing
14. Mr. H. H. Chester ..	do. ..	20.10.56	2.6.57
15. Mr. R. D. Bates ..	Public Health Engineer (USOM) ..	18.10.56	Continuing
16. Miss M. E. Robertson ..	Sister Tutor, School of Nursing, Welisara ..	20.12.56	19.12.57
17. Miss E. E. Inkpen ..	Sister Tutor, School of Nursing, Welisara ..	24. 1.57	22.12.57
18. Miss E. S. Smith ..	Sister Tutor, School of Dental Nursing ..	31. 1.57	Continuing
19. Miss M. A. Garland ..	do. ..	31. 1.57	Continuing
20. Mr. J. A. Hopps ..	Electronic Engineer ..	3. 2.57	do.
21. Mr. F. J. Thompson ..	Superintending Radiographer ..	12. 3.57	28.2.58
22. Miss H. M. Roberts ..	Neuro Surgical Theatre Sister ..	22. 3.57	Continuing
23. Miss M. M. Gillespi ..	Sister Tutor, School of Nursing, Welisara ..	22. 5.57	15.12.57
24. Dr. C. L. Sebalius ..	Dental Health ..	24. 5.57	1.6.57
25. Miss M. E. Storey ..	Orthopaedic Nursing Sister ..	18. 6.57	Continuing
26. Dr. J. B. Bibby ..	Visiting Consultant, Dental ..	30. 7.57	12.8.57
27. Dr. G. V. Stanton ..	Anaesthetist ..	10. 8.57	26.8.57

Distinguished Visitors

Dr. John B. Grant of the Rockefeller Foundation visited Ceylon during October 1957 in connection with the proposals for the establishment of a second Medical College.

Dr. Hugh R. Leavell, M. D., Public Health Consultant of the Ford Foundation, New Delhi, visited the Environmental Sanitation Project at Kurunegala on 12.1.57.

An Afghanistan Team visited the Kurunegala Health Unit on a discussion and observation tour. The members of the team were—

- (1) Mr. Ghulam Aizi, Director of Planning & Projects, Royal Afghan Ministry of Mines & Industries.
- (2) Mr. Nurul Haq., President, Rural Development, Ministry of National Economy.
- (3) Mr. Mohamed Yasin Mail, Director-General, Ministry of Agriculture.
- (4) Mr. Mohamed Omar, Director, Public Health Administration, Ministry of Public Health.
- (5) Mr. Faquir Nobi Alefi, Director, Liaison Department, Prime Minister's Liaison Office.
- (6) Mr. Abdul Wahid Mansury, Director, Directorate of Fundamental Education, Ministry of Education.

International Meetings and Conferences

Mr. P. B. G. Kalugalle, Parliamentary Secretary, Ministry of Health, accompanied by Dr. D. L. J. Kahawita, Director of Health Services, and his Excellency Mr. H. A. J. Hulugalle, M. V. O., Minister for Ceylon in Italy, attended the 10th World Health Assembly held at Geneva from 7th to 24th May, 1957.

Dr. D. L. J. Kahawita, Director of Health Services represented Ceylon at the 10th Session of the Regional Committee of the W. H. O. for South-East Asia held in Rangoon from September 16th to 21st, 1957.

A Technical Discussion on "Health Education of the Public" followed the Committee Meeting and a paper on this subject was presented by Ceylon at these Technical Discussions.

Dr. W. A. Karunaratne, Deputy Director (Public Health Services) represented Ceylon at the 19th International Red Cross Conference held at New Delhi from October 28 to November 7, 1957.

Dr. H. K. T. Fernando, Radiotherapist, represented the Department at the International Conference on Radioisotopes in Paris from September 9 to September 22, 1957.

Mr. J. Francis Silva, F. R. C. S., Surgeon in-Charge, Orthopaedic Department, represented the Department at the 4th International Poliomyelitis Conference, at Geneva from July 8 to 12, 1957, and at the 7th International Congress of the International Society for the Welfare of Cripples in London from July 22 to 26, 1957.

Dr. J. R. Wilson, Superintendent, T. B. Campaign, together with Drs. M. B. Warakaula, T. Somasunderam and M. Vanniathamby attended the 14th International T. B. Conference at Delhi from January 7, 1957, to January 11, 1957.

Dr. Wilson also attended the T. B. Conference at New Delhi from January 14 to 20, 1957.

A Ceylon Team consisting of Dr. R. B. Abeysinghe, Chief Medical Officer of Health, Kalutara, Dr. P. Nadarasa, Medical Officer of Health, Mr. D. R. Wijeratne, Public Health Engineer, and Mr. P. Ganewatte, Health Education Officer, attended the Rural Health Conference held in New Delhi from October 14 to 30, 1957.

Dr. R. P. Rajakoon and Messrs. Amarasinghe and Sri Karunanayake, Public Health Inspectors, who were in U. K. attended the Health Conference at Folkstone from April 30 to May 30, 1957.

Mrs. M. A. Jainu Deen, Principal Public Health Nurse, attended the 8th Triennial Conference of Associated Country Women of the World/UNESCO Seminar at Kandy from July 3 to 13, 1957.

Miss I. Wijeyaratne, Occupational Therapist, and Mr. D. C. Dillimini, Manager, Orthopaedic Workshop, represented this Department at the U. N. Seminar on Rehabilitation, Solo, Indonesia, from August 26 to September 7, 1957.

Expenditure on International Health Contribution Paid 1956-57

	Rs.	Rs.
Contribution to the W.H.O.		24,820
Contribution to UNICEF :—		
(i) Operational Budget	70,000	
(ii) Administrative Budget	14,213	
	<hr/>	84,213
Contribution to the Bureau of Tropical Diseases—London		3,556

IX—HEALTH COUNCIL

Twelve meetings of the Council were held in the course of the year under review.

Dr. F. N. Spittel, Obstetrician, Castle Street Maternity Hospital, retired from the Public Service and his place in the Council was filled by Dr. R. Caldera, Obstetrician, De Soysa Maternity Hospital.

The vacancy in the Council created by the retirement of Dr. A. S. Rajasingham was filled by Dr. L. N. Bartholomeusz, Surgeon, General Hospital, Colombo.

Dr. H. A. Dirkcze Senior Medical Officer of Health, (Epidemiology), who was renominated to serve in the Council for a further period of two years with effect from July 9, 1957, retired from the Public Service and left the Island on a W. H. O. Assignment. His place in the Council was filled with effect from November 16, 1957, by Dr. S. Amarasinghe, Senior Medical Officer of Health (Sanitation).

X—FINANCE

The Department expended a sum of Rs. 107.6 millions out of the Expenditure Votes for 1956/57 which is Rs. 7.1 millions or 7 per cent. more than the expenditure in the previous year. The increase on personal emoluments alone was Rs. 4.3 millions due partly to the revision of salaries and allowances of Medical Officers (Rs. 2.3 millions) in lieu of private practice and the conferment of permanent status to temporary minor staff and general increase in cadre.

Classified by Votes, the expenditure was as follows :—

<i>Actual Expenditure 1955/56 Rs.</i>	<i>Votes</i>	<i>Actual Expenditure 1956/57 Rs.</i>
6,762,855 ..	1. Administration & Common Services ..	8,133,673
76,197,912 ..	2. Medical Services ..	80,911,192
12,873,546 ..	3. Public Health Services ..	13,982,142
95,834,313		103,027,007
1,159,667 ..	4. Grants ..	1,272,401
3,543,162 ..	5. Capital Expenditure ..	3,300,658
100,537,142		107,600,066

Distributing the cost of common services under Vote 1 to the appropriate functional division, the administrative and operative costs of the department were as follows :—

<i>1955/56 Rs.</i>	<i>Operative Costs</i>	<i>1956/57 Rs.</i>
77,602,698 ..	Medical Services ..	82,405,074
12,993,728 ..	Public Health Services ..	14,124,813
1,687,036 ..	Laboratory Services ..	1,403,678
3,550,851	<i>Administrative Costs</i>	5,093,442
95,834,313		103,027,007

Revenue

The revenue collected by the Department under Head VII—Health Services—during the year 1956-57 amounted to Rs. 1,953,500, as follows, which is Rs. 328,889 more than the collection of the previous year.

1955/56 Rs.		1956/57 Rs.
1,037,177	.. Hospital & Dispensary Receipts ..	1,233,832
30,373	.. Sale of Drugs ..	11,624
30,682	.. Opium Sales ..	40,849
76	.. Sale of drugs under the Medical Wants Ordinance ..	2
131,010	.. Charges for immigrant labourers in hospitals and visits under the Medical Wants Ordinance ..	128,044
17,317	.. Fees collected from Laboratory examinations ..	22,073
349,873	.. Receipts, Quarantine Department ..	469,327
19,476	.. Fees—Apothecaries & Midwives ..	38,518
1,486	.. Fees for registration of Nursing Homes ..	2,231
7,141	.. Sundries ..	7,000
<hr/> 1,624,611		<hr/> 1,953,500

Internal Audit & Stock Verification

During the year under review 251 institutions were inspected by the Internal Audit Staff, while 26 surprise inspections of cash, provisions and drugs were also carried out.

With the functioning of a staff of 20 stock verifiers in July 1957 followed by the appointment of a further 10 in September 1957, a total of 76 institutions were surveyed under F. R. 858 including all the Provincial and District Hospitals and large decentralised units, i.e., General Hospital, Mental Hospital, Angoda.

The work of the Internal Audit and the Stock Verification Officers was amalgamated in October, 1957. With the amalgamation, yet a larger number of hospitals could be fully audited and surveyed.

Special investigations were done by the Internal Audit in 33 cases of alleged frauds and irregularities notably, 33, the shortages of linen and drugs at the General Hospital, Colombo, and Kalutara Hospital drugs fraud. The running audit of the accounts of the Colombo Group of Hospitals continues to function.

Consequent to the transfer of the Free Milk Distribution Scheme under this Department, the internal audit of officers and stores of District Supervisors have been undertaken. These inspections have revealed irregularities prevailing therein and action has been taken.

XI—DEATHS, RETIREMENTS, DISCIPLINARY ACTION, &c.

It is with deep regret the deaths of the following officers are recorded :—

1. *Medical Officers*—Dr. K. Kanagaratnam.
2. *Apothecaries*—Mr. E. D. Nihimiah, Mr. K. S. R. Silva.
3. *Nursing Sister (T. B.)*—Miss. B. Wellala.
4. *Staff Nurse*—Miss. N. D. P. Weerasinghe.
5. *Male Nurse*—Mr. A. Buksh.
6. *Public Health Inspectors*—Mr. S. P. Weeratunga, Mr. T. E. P. Wijesinghe.

7. *Clerks H. C. S.*—Mr. G. A. Wijenayake.
8. *Clerks D. C. S., etc.*—Mr. M. A. A. Perera—D.C.S., Mr. D. Wickramarachchi—Q. C. S.
9. *Medical Lab. Technologists*—Mr. S. D. H. de Silva, Mr. B. D. Priya.
10. *Ambulance Drivers*—Mr. I. M. Packiran, Mr. M. Suppiah, Mr. H. H. Semon Singho.
11. *Vaccinator*—Mr. N. Shanmugam.
12. *Van Driver*—Mr. K. P. Wijetunga.
13. *Driver Overseer*—Mr. R. M. Kantharatnam.
14. *Mechanics*—Mr. S. Upasaka Appu.
15. *Boilerman*—D. C. M. Perera.
16. *Male Attendants*—L. M. Wickramasinghe, U. G. Ariyaratne, R. Peter Peiris, W. Sumanadasa.
17. *Female Attendants*—K. Leelawathie, T. G. Lancy Nona, S. Mangayarkarasu, W. M. Premawathie.
18. *Hospital Orderlies*—W. J. Richard, A. M. Banda, K. H. Simon Silva.
19. *Barber*—C. P. de Silva.
20. *Conservancy Labourers*—T. Periyanaasi, Karuppan, N. Rengasamy, A. Gnanamuttu, A. G. Nandasena, S. Perumal, Edwin Jayasekera.

The following officers retired from service :—

1. *Medical Officers*—Dr. S. Ponniah, Dr. R. Jerumiah, Dr. A. H. D. S. de Silva, Dr. N. Sabaratnam, Dr. (Miss) R. Koshi, Dr. H. J. Abeysundara, Dr. C. Sivaratnam, Dr. O. G. Weerasinghe, Dr. P. D. Muhandiramge, Dr. H. P. Goonetilleke, Dr. (Miss) K. Soysa, Dr. A. S. Rajasingham, Dr. R. Kandiah, Dr. C. Kanagasabai, Dr. P. L. F. de Livera, Dr. H. A. Dirckze.
2. *Matron (H. G.)*—Miss F. M. de Silva.
3. *Senior Sister Tutor*—Miss A. N. Elias.
4. *Apothecaries*—Mr. M. D. S. Ranasinghe, Mr. A. Rasiah, Mr. C. S. Fernando, Mr. P. Dissanayake, Mr. W. H. Fernando, Mr. E. Madanayake, Mr. K. Kulandaivelu, Mr. C. Subramaniam, Mr. P. W. Tillekaratne, Mr. W. T. Veluppillai, Mr. D. S. Vitarana, Mr. D. N. Wickramaratne, Mr. M. Canagasabai, Mr. A. Pathanjalathan, Mr. K. Thambirajah, Mr. S. D. T. Senaratne.
5. *Public Health Inspectors*—Mr. H. M. Khalid, Mr. R. V. Perera, Mr. A. P. Peiris, Mr. V. J. Perera, Mr. T. T. de Zoysa, Mr. C. Marianu, Mr. H. R. Jinadasa, Mr. T. H. A. Silva, Mr. V. S. Rasiah, Mr. K. K. G. A. Wijetilleke, Mr. J. Alles, Mr. S. A. W. Fernando, Mr. Kanagaratnam.
6. *Clerks G. C. C., etc.*—Mr. L. H. Mendis, Mr. J. A. N. Fernandopulle.
7. *Clerks H. C. S.*—Mr. E. W. Blacker, Mr. R. M. Samarasinghe, Mr. R. Vallipuram.
8. *Lab. Technologists*—Mr. A. Subramaniam, Mr. L. Simon Alwis, Mr. V. Logan Smith, Mr. D. A. H. Liyanage.
9. *Vaccinators*—Mr. G. D. E. Abeyaratne, Mr. A. K. S. Daniel Silva, Mr. W. P. Gunawana, Mr. D. P. Suriyarachchi.
10. *Male Attendants*—W. Peiris Perera—G. Sandanam, D. J. Perera, M. M. Kiribanda, M. A. Perera, B. D. Don Jamis, S. A. Andiris,

- R. W. Piyango, Don David, D. H. S. Wanigasekera, A. D. Perisa, M. Carolis Silva, D. P. Satharasinghe, M. Andrew Perera, M. P. Nepo Perera, D. G. Karunaratne B. Sederis Perera, E. A. Carolis, H. Arnis, V. Methias Perera, T. D. Nanduwa, J. D. Jusey, W. D. Lazarus, G. K. D. U. Gunaratna.
11. *Female Attendants*—W. A. Nonahamy, A. G. Aggie Nona, K. A. D. Elizabeth, S. Periyapillai, K. P. Rosinahamy, E. G. Kaluhamy, C. N. Cissy Nona, B. M. Heen Menike, R. Thayammah, K. K. Wilisindahamy, G. Soida Dabare, K. S. A. Muthumenike, M. L. Johanahamy, K. Selestina Perera, P. Baby Nona, G. Ana Perera.
 12. *Field Attendant*—Mr. W. Peter.
 13. *Anky Dispensers*—Mr. K. Rasiah, Mr. D. V. Umagiliya.
 14. *Dispensary Orderlies*—V. Arunasalam, K. A. Charles Singho, S. G. Manikkam, K. Thambipullai, D. Juwanis, C. Suppiah, A. Thambiah, K. A. Antony.
 15. *Hospital Orderlies*—W. D. C. Singho, W. Sedris, K. S. Perera.
 16. *Watchers*—I. H. A. Albert Perera, L. C. Nagamany, S. J. P. Perera.
 17. *Nurses' Ayah*—W. P. Podi Nona, Lucyhamy.
 18. *Cooks*—K. K. Andiris Appu, L. Peter Silva, V. Vinasithamby.
 19. *Ordinary Labourers*—P. Ukkuwa, T. Thambimuttu, M. Thomas Fernando, L. Somadasa, T. K. E. Raphial, M. Suppan, W. D. Simon, K. Sengan, P. K. Jinadasa, P. Arulando.
 20. *Engine Driver*—C. George Anthony,
Linen Collector—A. David.
Gate Keeper—A. Karuppan Pillai.
Hospital Guard—S. Poopalapillai.
 21. *Conservancy Labourers*—M. Soosan, L. G. H. Carolis Appu, W. J. M. Fernando, K. Shaminugam, W. M. Podisingho, K. K. Vellai, V. Sinniah, Mrs. K. Sinnamma, Abdul Careem, M. Urukalan, P. D. Samarasekera, A. J. Mendis, Palany Suppan.

Disciplinary Action

- Officers/Employees interdicted and dismissed*—7 Apothecaries, 1 Pantry Boy, 3 A. M. C. Overseers, 5 Male Attendants, 1 Conservancy Labourer, 1 Hospital Overseer, 1 Watcher.
- Dismissed without Interdiction*—1 Public Health Nurse, 6 Conservancy Labourers, 1 Workman E. M. T. D., 3 Male Attendants, 5 Public Health Midwives.
- Interdicted and reinstated*—2 Public Health Inspectors, 2 Apothecaries, 3 Conservancy Labourers, 1 Workman E. M. T. D., 1 Female Attendant, 5 Male Attendants, 1 Watcher, 1 Staff Nurse, 1 Dispensary Orderly, 1 Clerk H. C. S.
- Officers and Employees under Interdiction*—4 Male Nurses, 1 Conservancy Labourer, 1 Hospital Orderly.