Administration report of the Public Health Department of the City of Port-of-Spain.

ADMINISTRATION REPORT

OF THE

PUBLIC HEALTH DEPARTMENT OF THE CITY OF PORT-OF-SPAIN

FOR THE YEAR

1962

BY

DR. RODERICK MARCANO, O.B.E. (Mil.), M.D. (Lond.), M.R.C.P. (Lond.), D.P.H. (Lond.)
MEDICAL OFFICER OF HEALTH

GOVERNMENT PRINTERY, TRINIDAD, TRINIDAD AND TOBAGO—1963

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Local Authority in the Urban Sanitary District of the City of Port-of-Spain

1961-1962

THE CITY COUNCIL

HIS WORSHIP THE MAYOR, COUNCILLOR EDWARD C. TAYLOR, J.P.

Deputy Mayor:

COUNCILLOR A. SABGA-ABOUD
(*From November* 1961 *to 24th January*, 1962)

COUNCILLOR C. B. TYWANG
(*From 25th January*, 1962)

Aldermen:

WILLIAM DOLLY
DUDLEY COBHAM
KENNETH FLETCHER
FITZGERALD BLACKMAN
MRS. KATHLEEN WARNER

Councillors:

J. ABRAHAM
MISS DOROTHY BENTHAM
I. MERRITT
A. HADEED
(*From November* 1961 *to 22nd February*, 1962)
G. GUY
J. HAMILTON HOLDER
C. A. ROACH
VICTOR C. RAMSARAN
D. J. MAHABIR
W. E. CLARKE
W. M. G. LUCAS
P. RAJNAUTH
MISS A. HARPER
MRS. Z. BANSFIELD

Administration Report of the Public Health Department of the City of Port-of-Spain, Year 1962

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PUBLIC HEALTH DEPARTMENT,
35, FREDERICK STREET,
PORT-OF-SPAIN,
TRINIDAD AND TOBAGO
19th August, 1963

URBAN SANITARY DISTRICT OF THE CITY OF PORT-OF-SPAIN

SECRETARY, LOCAL AUTHORITY,

SIR,

I have the honour to submit, for the information of the Local Sanitary Authority, the Annual Report on the health and sanitary condition of the Urban Sanitary District of the City of Port-of-Spain for the year ended 31st December, 1962.

The year 1962 can be described as satisfactory from the point of view of the health and sanitary condition of the Urban Sanitary District and though no spectacular improvement can be recorded yet everywhere in the City there were signs of steady, if slow, progress towards that state of the public health which it is necessary to achieve if we are not to continue sitting on the brink of a precipice.

In fact events, in so far as they concerned the Public Health Department, augured well for the future, and if the major works which were taking place in the City during 1962 could be duplicated in every subsequent year, it would not be long before we could attain a state of health and sanitation that would place the City of Port-of-Spain in the forefront of the cities of the Caribbean and make it equal to the best of the cities of similar size in the tropical zones of the civilized world.

We had, for instance, the sewerage works designed to sewer the remaining unsewered sections of the City progressing at a satisfactory pace even though the inconvenience and the discomfort caused to residents by these major works fairly well equalled the pace at which the works were being executed.

Other major works of road widening and road paving; the draining of primitive earthen channels; the repairing, constructing, and levelling off of footways; the formation and replacement of slipper drains, undertaken by the City Engineer's Department in accordance with the five year-Development Plan, proceeded apace in keeping with a well prepared and properly executed plan prepared by the City Engineer's Department, vetted by the City Council, and approved by the Central Government.

The housing situation was the least affected during the year under report but even here, though Shanty Town and John John were still with us, the plans for their elimination not having fructified, flats were being built in the Mango Rose Area—a nine-storey and a four-storey flat—to replace old dilapidated and overcrowded buildings which had served their purpose and which made Mango Rose such an eye sore to residents and visitors alike. Flats were being erected in the Malick and Morvant Area to accommodate the residents of John John and Shanty Town as well as those housed in that large insanitary barrack at Ajax Street, which is being used as a decanting centre for the former inhabitants of the slum area of Port-of-Spain between Park Street and South Quay and Frederick Street and the Dry River. We are looking forward to the elimination of these highly congested and overcrowded slum areas early in the New Year 1963 when these flats have been completed.

Certain other highly insanitary areas in the City of Port-of-Spain were visited by the newly constituted National Housing Authority and at least five new areas are likely to be declared slum clearance areas in addition to the St. Joseph Road, Piccadilly Street and South Quay triangle which has already been declared a Slum Clearance Area and on which it is proposed to erect nine storey flats, the large barracks at the western end having been compulsorily acquired by Government.

It is gratifying therefore to be able to record that major works have actually been taking place in the City during the past three years and it would appear that the period of standing still and of *laissez-faire* and of maintaining the *status quo*, has come to an end.

The water supply remained satisfactory though there have been periods and areas of shortage especially in the Belmont and East Dry River Districts, particularly when heavy downpours of rain cause the river sources to become flooded and the reservoirs to become inundated with muddy discoloured water which renders them unfit to contain water for drinking or other domestic purposes. I had hoped that it would have been possible for me to report in this annual report that at long last the Maraval River had been abandoned, but the alternative sources we had expected to obtain to replace this River did not quite materialise and the position at the moment is that, whereas we are permitting dwellings to be erected in the Haleland Park Estate of the Maraval Catchment Area at a distance of more than one hundred feet away from the Maraval River, this River continues to be one of the main sources of supply to the City, whilst the search for alternative sources of supply to replace it continues unabated.

No infectious disease reached epidemic proportions during the year under report with the single exception of Chicken Pox, 533 notifications of which were received at the Public Health Department,

all of them of a mild variety generally which did not give rise to any difficulty in diagnosis. This compares with 254 cases notified in the year 1961 which then was the largest number of cases notified in the Urban Sanitary District since its establishment by the Public Health Ordinance, Ch. 12 No. 4 in 1917.

Though 642 cases of infectious disease were notified in the year under report, only 88 deaths were certified. Only 4 cases of Typhoid Fever were notified to the Department and no deaths were certified to this disease during 1962. There were 70 cases of Pulmonary Tuberculosis notified with 4 deaths as against 53 cases with 2 deaths in 1961. Deaths from Diarrhoea and Enteritis declined from 57 in 1960 and 41 in 1961 to 27, with the East Dry River sub-district and the Belmont sub-district claiming 8 and 9 victims respectively, as can be confidently expected in these unsewered, congested, overcrowded and poorly sanitated areas.

The vital statistics for 1962 can be considered satisfactory. The estimated population figure increased to 101,600, the birth rate declined to 2,496 per 100,000 from 2,647 per 100,000 in 1961 ; the death rate was 941 per 100,000 as compared with 966 per 100,000, and the maternal mortality rate 1.18 per 1,000 Live Births compared with 1.91 per 1,000 live births in 1961. The infant mortality, however, rose from 116 in the year 1961 to 121 which, with total live births declining to 2,536, gave an infant mortality rate of 47.71 in 1962 as compared with 44.44 in 1961.

Diseases of the heart and blood vessels with 217 deaths, diseases of the nervous system including cerebral haemorrhage with 138 deaths, and cancer and other malignant diseases with 128 deaths were the main " killing " diseases in 1962 and this follows the pattern that we have been led to expect from the figures for the preceding years, and indeed the common pattern that is recorded in all civilized countries of the modern civilized world.

These are the main facts that must be recorded in the year under report. There is a lot more yet to be done. The Mucurapo Lots have not yet been laid out, the Transport Train still occupies the same old quarters in Damian Street, Woodbrook, and the building lots that are due to be leased out here when the Transport Train is removed to Wrightson Road in close proximity to the Mucurapo Pumping Station still remain a well-conceived plan on paper, and the reclamation of the Cocorite Swamp to provide much need building space for the badly housed and sorely tried residents of the City is a dream that has not yet come true. Flats are being actively erected on the Old Leper Asylum Site in Cocorite, to the rear of the Port-of-Spain Community Hospital (Seventh Day Adventist) to accommodate residents who are likely to be displaced when their dwellings have been demolished to make way for the widening of the Western Main Road, a project which is actively under way at the time I write.

I must once more record my grateful thanks to His Worship the Mayor, who is Chairman of the Local Sanitary Authority, and the Alderman and Councillors of the Local Sanitary Authority for the active interest they take in the public health of the City, and who continue to facilitate the work of the Public Health Department by the questions that they ask and the enquiries they make, and whose ready acquiescence in all measures and projects directed to the improvement of the health and sanitary condition of the Urban Sanitary District has contributed greatly to the efficient and harmonious working of the Department.

Thanks are due to my colleagues in the other Departments of the Corporation, in the Town Clerk's Department, in the City Engineer's Department, in the Waterworks and Sewerage Department, in the City Treasurer's Department and in the City Assessor's Department, who through their respective Chief Officers have given ready support and active co-operation to the work of the Public Health Department, without which much that has been achieved could not have been accomplished.

Finally I have to commend the work of the staff of the Public Health Department as a whole, pensionable as well as non-pensionable, for the success that has attended their efforts and for a year's work well done.

I have the honour to be,

Sir,

Your obedient servant,

RODERICK MARCANO
Acting Medical Officer of Health

NATURAL AND SOCIAL CONDITIONS OF THE DISTRICT

There is really nothing new to report under this heading. The size of the City remains the same as it has been since 1949 when the 168 acres south of Wrightson Road, between King's Wharf on the east and Mucurapo Pumping Station on the west were added to the City and the southern boundary of the City was defined by statute to be " the sea wherever it is now and wherever it is likely to be in the future". Since then the acreage of the City stood at 2,550 acres, such as it is today.

The mid-year population, i.e. the population at midnight on the 30th June, 1962, was estimated to be 101,600, an increase of 3,000 on the figure for 1961 and the density now works out at 40 persons per acre.

Whilst the slum areas in the south-eastern part of the City between Park Street and South Quay and between Frederick Street and the Dry River have now practically disappeared and new three-storey and five-storey flats have taken the place of the old overcrowded and dilapidated hovels that formerly " adorned " these areas, to the everlasting satisfaction and heartfelt gratitude of the residents who once occupied these areas, no words of mine can accurately depict the suffering and distress of the inhabitants of John John and Shanty Town which still remain eyesores in the City of Port-of-Spain, with old dilapidated shacks, hastily improvised, primitive earthen drainage channels, cesspits cheek by jowl with kitchens and living rooms, and earthen uneven tracks doing duty as means of access to the hovels that overcrowd these areas. It seems a pity that nothing has yet happened to put these areas in good sanitary condition but nothing indeed can happen until alternative accommodation can be found for the inhabitants of these areas and that is being actively prosecuted in the Malick and Morvant area where two storey and four storey flats are being erected specially to house the displaced Shanty Town and John John residents. Until these are ready for occupation these areas must remain in *statu quo*, but I am satisfied that this matter is being tackled as expeditiously as it can be tackled.

At the moment I write, one four-storey flat and one nine-storey flat have been erected and have been occupied in the Mango Rose Area and it is proposed to erect another nine storey flat here to accommodate the displaced residents of this slum area.

The drainage problem at the eastern limits of the City remains the same as I have recorded in previous annual reports and when heavy downpours of rain occur, the La Pena Ravine gets flooded and the whole eastern end of the City beneath the Fly-Over Bridge and extending westwards to the Eastern Foundry and the Council's dwellings in South Quay is one large sheet of storm and flood waters and this situation has been made worse by works which are now proceeding on the Central Market site, south of the Abattoir, and which give rise to periodic blocking of the drainage channels that course westwards and southwards to the Dry River and the Sea.

I had hoped that the plans which have been drawn up for solving the drainage problems of this area would have been executed by now ; in fact a start was made by the laying down of a large east to west concrete drainage pipe designed to collect this water and drain it into the Dry River but so far only a portion of the work has been done and the western end of this drain pipe does not yet connect up with the Dry River.

These are defects in the natural and social conditions of the City that still remain unremedied and to which it is my duty to call attention in these annual reports, but bits of extraordinary work in the various sub-districts of the City : the levelling, widening, paving and draining of narrow lanes and primitive passages, the draining of land-locked pools and in some cases their actual elimination, the grading and extending of lots, continue to take place in keeping with the Five-Year Development Plan and it is heartening to know that the ugly spots of the City are being slowly but surely eliminated and that the face of the City is undergoing a gradual but positive change for the better.

SANITARY CIRCUMSTANCES

Water

The condition of the water supply of the City of Port-of-Spain during the year 1962 was practically the same as it was in the year 1961, only minor temporary changes occurring here and there at different periods of the year when one or other source has become flooded through heavy downpours of rain and the corresponding reservoirs inundated with muddy contaminated water. In such circumstances the particular source has to be excluded from the distribution system and an alternative source found to

replace it. Fortunately these changes are only temporary in nature and the inconvenience and embarrassment caused are of short duration. Within 24 to 48 hours the situation has usually righted itself and the source or sources have returned to normal again.

The minimum daily requirements for normal usage is round about twelve million gallons and the minimum daily supply is round about twelve and a half millions a day of which ten millions are derived from Corporation sources and two and three quarter million gallons from Central Government sources.

The Corporation sources of water supply comprise river sources and well sources of which the river sources are not up to the initial standard of purity necessary to avoid expensive subsequent treatment by extensive sand filtration, and a high degree of chlorination has to be resorted to at each river source which makes the treatment of these sources of water supply expensive and unsatisfactory.

We are hoping to be able to abandon the river sources soon and permit their catchment areas to be built upon with a view to relieving the acute housing shortage, but up to the time of writing this has not been possible because of lack of alternative sources to replace them. In fact it is a long time now since we have been consistently referring to the highly unsatisfactory nature of the Maraval Water Supply and since we have been calling for its abandonment and I had confidently expected that I would have been able to state in this year's report that this source has been abandoned but due to set-backs in finding suitable alternative sources—boreholes in the Maraval Catchment Area having proved to be unsatisfactory—we shall have to wait at least another year before this desire could be consummated.

The well sources are far more satisfactory and even the few shallow wells which still remain and do duty at the Farrell Pumping Station have not been known to give any kind of trouble from the point of view of the quality of the water supply due most likely to the fact that about one-half to three-quarter parts of chlorine per million gallons are added at that station. The King George V Park two deep wells functioned satisfactorily during the year under report though there were times when these wells, and particularly King George V Park Well No. 2, could not supply because of mechanical trouble. The three Savannah Wells were on the whole satisfactory during 1962 but we have had periodic difficulty with Savannah Well No. 2, known as Governor General's Well, the raw water from this well having been on occasions unsatisfactory and even in two or three instances unsafe, but seeing that the water from this well meets chlorinated water in which there is actually a residual chlorine, before it is distributed to the consumer taps, it has not been found necessary to eliminate altogether this source from circulation and washing out the mains from the well almost invariably causes these unsatisfactory results to disappear.

During the late dry season the customary shortages continued to occur due to the diminution in the volume of the river sources and the various sections of the City had to be deprived of water for a certain number of hours in the day to build up the water head in the Reservoirs for use in other areas, a practice which certain sections of the City have grown accustomed to particularly the down-town areas, and we must here pay a tribute to the workers at the various turncock stations for the facility they display and the ingenuity they exercise in depriving one area of the City of water to supply another area with water, for which the residents have been insistently clamouring.

As I write this Report a Committee of Experts which was appointed to consider the unification of the various water authorities of the Territory has handed in its report to the Minister of Public Utilities; we are intensely interested in this Report and the action that will be taken as a result of this Report; for we are a water authority. It is to be hoped that what we have decided on long ago will materialise i.e. that our sources of supply will come under one winning authority, but that we shall be permitted to distribute water to the citizens of Port-of-Spain. In that case the Distribution System will need overhauling and revamping to meet the needs of the increasing population seeing that the existing system is an old one laid down many years ago when the size and population of the City was just about one half of what it is today, but this is an undertaking of major proportions and we shall have to wait on the outcome of the Water Unification Report before the matter could be successfully tackled.

Bacteriological Examination of Water Supply, 1962

Where Derived	Results of Examination				
	No. of Samples taken	Safe	Unsatisfactory (Presumptive B. Coli present)	Not safe without further treatment (Non-faecal B. Coli present)	Not safe without further treatment (Faecal type B. Coli present)
* Cocorite Wells	82	74	6	—	2
Docksite Well No. 1 (Untreated)	48	45	3	—	—
Docksite Well No. 2 (Untreated)	40	39	1	—	—
Wharf Well No. 3 (Untreated)	43	42	1	—	—
† St. Clair Pumping Station	84	80	4	—	—
‡ St. Clair Wells (Treated)	47	42	4	—	1
† Maraval Reservoir	46	45	1	—	—
§ Cascade Reservoir	87	85	2	—	—
§ St. Ann's Reservoir	115	85	19	—	11
Knagg's Hill Reservoir	35	33	1	—	1
Queen's Park Savannah Well No. 1 (Untreated)	42	39	3	—	—
Queen's Park Savannah Well No. 2 (Untreated)	44	25	9	—	10
Queen's Park Savannah Well No. 3 (Untreated)	34	17	15	—	2
King George V Park Well No. 1 (Untreated)	41	32	6	—	3
King George V Park Well No. 2 (Untreated)	35	27	8	—	—
Laventille Reservoir	42	41	1	—	—
| Picton Reservoir	43	43	—	—	—
| 133 Henry Street	42	41	1	—	—
| Charlotte Street (tap)	28	28	—	—	—
| General Hospital (tap)	43	40	3	—	—
† Saddle Road, La Seiva (tap)	46	43	1	—	2
Masson Hospital (tap)	45	43	2	—	—
Microbiological Institute (tap)	47	46	1	—	—
Sanitary Laundry (tap)	43	39	4	—	—
¶ Furness Withy & Co. (taps)	63	41	19	—	2
St. James (taps)	39	32	6	—	1
¶ Woodbrook (taps)	42	41	—	—	—
City Proper (taps)	44	43	—	—	1
East Dry River (taps)	41	34	5	—	2
Belmont (taps)	44	43	1	—	—
St. Clair (taps)	40	35	2	—	3
Wells on Private Property					
Electric Ice Co., Ariapita Avenue	47	46	1	—	—
Queen's Park Hotel	26	15	8	—	3
Perseverance Wells	23	4	15	—	4
	1,611	1,408	153	—	48

Standard of purity : B. Coli absent in 100 c.c.

*Chlorinated, not filtered.
†Filtered after chlorination.
‡Chlorinated before distribution.
§Filtered before chlorination.
|Filtered before chloramination.
¶Broken Samples were discovered at Laboratory.

Chemical Examination of Water—Samples Examined by Government Chemist, 1962

Where Derived	No. of Samples Examined	No. of Samples found safe
Picton Reservoir	35	35
Maraval Reservoir	26	26
Cascade Reservoir	21	21
St. Ann's Reservoir	20	20
Cocorite Pumping Station	16	16
Cocorite Pumping Station (for salinity)	165	165
Docksite Wells	24	24
King George V. Park Wells	16	16
Queen's Park Savannah Wells	25	25
St. Clair Well	25	25
Wharf Well	2	2
Queen's Park Hotel Well	6	6
Docksite Wells (for salinity)	—	—
Perseverance Well	—	—
Total	381	381

Drainage and Sewerage

When the Des Forges Imrie Commission reported in December, 1949 it was recommended that main watercourses that arise outside the City and course through the City on their way to the Sea should be widened where necessary and paved by the Central Government and handed over to the City which would then undertake the responsibility of maintaining them in efficient working condition. This recommendation was accepted by the Central Government and every year since then a sum of money is put down in the Estimates for this specific purpose, the City indicating to the Central Government the order of priority in so far as the various watercourses that traverse the City are concerned.

Thus we have been able to widen and pave the Santa Barbara Ravine in the Belle Eau Road area of Belmont and deepen its course downwards on its way to the point of discharge into the Dry River. This project is now almost completed and when a few minor details are attended to and the paved and widened and deepened ravine is functioning properly, the watercourse will no longer be the source of stagnant water and mosquito breeding that was a cause of such great concern and anxiety to the Public Health Department.

In keeping with that same undertaking the Cocorite Harding Place main watercourse was widened and paved throughout the course of its length, on its way to the Sea. There are other primitive watercourses that need immediate attention, however, and of these the most important is the La Pena Ravine at the eastern limits of the City. I have already referred to this Ravine in an earlier section of this Report and it remains for me to repeat that this project is urgently needed to eliminate the regular flooding of this area with storm and flood waters as soon as a downpour occurs in that section of the City. The plan for abating this nuisance has already been worked out and all that is needed now is the immediate implementation of it.

In so far as sewerage is concerned the position is that work on this project is actively proceeding and at the time I write the whole of Belmont, and the greater part of the East Dry River Sub-districts have been sewered, causing great hardship and inconvenience to the residents of these areas, but not without evoking a sense of satisfaction and a feeling of thanksgiving that what had been requested so long ago and has been waited for so patiently, has at long last materialised.

Now that the trenches in the streets, the heaps of dirt, the burst pipes and shortage of water, and the accumulations of refuse in the streets have become a thing of the past, the one question on the lips of the residents of these newly sewered areas is how long will it be before the dwelling houses and the business places can be connected up with the sewerage system; how will it be done and from where will the wherewithal for connecting up be forthcoming and this question has become more urgent still by the announcement of the Lock Joint (American) Company that they will very soon be undertaking cross connections across the streets from the main sewers to the boundaries of individual properties. It has also been announced that there will be more digging up of the streets, more accumulations of heaps of dirt, and more inconvenience and embarrassment to pedestrians and motorists than occurred when the main sewers were first being laid, but I feel sure that this will all be borne with the equanimity and understanding and fortitude that our people are noted for, when a project that is destined to bestow great benefits and eliminate undue hardships to the citizens of Port-of-Spain as a whole, is being executed.

Scavenging and Refuse Disposal

The position in regard to this service is that there is really nothing new to record and scavenging and refuse disposal was carried out during the year 1962 under the same conditions and with the same advantages and disadvantages that I referred to in my last annual report. The scheme to which I referred in my report for 1961 which was submitted to the Council and which was destined to secure the elimination of early morning sweeping and scavenging throughout the length and breadth of the City by substituting evening sweeping and evening scavenging throughout, such as now obtains in the down-town areas of the City, has not yet engaged the full attention of the Council and in consequence has not been adopted, and the same old system continues to be operated. The same old difficulty of filled dustbins, poorly covered and easily dislodged, being put on the footways at night before retiring and of being overturned by dogs and cats persists and the same old habit of throwing refuse on the streets and on the footways continues to be indulged in particularly by smaller merchants in the down-town areas of the City with all the attendant difficulties that such a system creates.

The only solution appears to be a health education campaign and health education working committees in each sanitary district where the citizens themselves will be their own arbiters of what is or is not right conduct in this important matter and will be able to bring pressure to bear on the culprits. Prosecution of defaulters is undertaken occasionally but usually the case fails on the rock of inability to state definitely that the defaulter before the Court is the actual individual who deposited the refuse in the drain, on the street, or on the footways.

In the meantime the work of the Public Health Department in its efforts to secure an efficient scavenging and refuse disposal service continues. The Sanitary Inspector of the District is slowly but surely getting all householders and business people to provide themselves with a good and efficient

dustbin, within the meaning of the Regulations, takes time off to explain the nature of the bye-laws and to detail the reasons why certain provisions of the Bye-laws have been enacted, and persuades and exhorts householders and businessmen alike to comply with the Bye-laws.

The Keep the City Clean Week is organised each year in collaboration with the Junior Chamber of Commerce and during this week our efforts in this particular direction are intensified by a full programme of activities which include motorcades throughout the City and its suburbs, open air shows and talks at selected points in each suburb ; by cinema slides and spot announcements, and a round-table broadcast on Radio Trinidad.

Last year I referred to the fact that we were able to procure two up-to-date modern scavenging trucks of greater capacity than those to which we have grown accustomed and loaded from the rear and provided with mechanical equipment for compressing the refuse. During the year under report a few more of these trucks have been purchased and already it is becoming clear that these trucks have made a great difference to the amount of refuse which is carried to the Dump at one loading and to the time that is taken in doing the round of scavenging, and it is obvious that when we have been able to secure a fleet of these trucks the service of scavenging and refuse disposal will be rendered comparatively less onerous and generally more efficient.

The Eastern Dump

The Eastern Dump, occupying an area of land, south of the Beetham Highway and now just beyond the eastern limits of the City, continued to function during the year under report as the main dumping ground for refuse coming from the City and also from the adjacent areas to the immediate east and west of the City.

Refuse collected from the districts of Laventille, Success Village and Morvant, and refuse from St. Ann's, Cascade, Maraval, Ross Lands, St. James is conveyed by trucks which in the latter case traverse the City to the Eastern Dump where it is disposed of. By an arrangement arrived at with the consent and approval of Central Government, East St. George in common with ourselves, is permitted to dump refuse at this Eastern Dump and the refuse is disposed of by the method of " controlled tipping ". This method of controlled tipping, if carried out meticulously paying particular attention to every detail of the process, is a very successful way of disposing of refuse ; no nuisance is created and land is successfully reclaimed which, as was the case with the area south of Wrightson Road, can be made use of, when sufficient subsidence has taken place, as sites for the erection of commercial buildings. This disposal of refuse at the Eastern Dump by the method of controlled tipping is done by City Council workmen under the control of a dump master. There is a bulldozer that levels and compresses the refuse when it has been deposited at the advancing edge of the dump and then a layer of earth 9 inches deep is placed on it which has the effect of sealing it off and of creating so high a temperature that it is impossible for vermin to survive. Hence it comes about that there is very little, if any, in the way of fly breeding, and there are no rats or mosquitoes on the Dump.

I need hardly state that this detailed process of " controlled tipping " breaks down at times and then it is possible to detect the presence of vermin, but matters are soon brought under control once more and no more nuisance arises. The troubles that arise frequently at the Dump are those associated with fires which in the large majority of cases are spontaneous, and with the resultant smoke which has been known to invade the cars and embarrass the drivers as they travel along the Beetham Highway, and the difficulties associated with the control of visitors from adjoining Shanty Town who invade the Dump in search of salvageable materials. They scrutinize and search every truck load of refuse, looking for something of value that they can make use of, and in so doing very often undo the work of controlled tipping that has been effected during the day, their depredations taking place quite often in the evenings when the day's work has been completed.

From observations that I have been able to make, the work of land reclamation is proceeding fast apace and it will not be long now before we shall have either to get an alternative site on which to dump or to resort to an alternative means of disposal of the City's refuse.

SANITARY INSPECTION OF THE DISTRICT

Premises and Occupations controlled by Bye-laws and Regulations

Food

This work of food inspection and food control, of the registration of food places and itinerant vendors in the City of Port-of-Spain is among the most important of the services that are preformed by the Public Health Department and now that the Food Inspection Unit is properly organised and geared for the purpose, the results that we had been hoping for quite a few years now are beginning to materialise. Not that the actual figures prove anything but seeing the work that is being done from day to day and realising the enthusiasm and energy of the Unit I am hopeful that in the end the statistical data will improve.

As I have stated in previous reports we have now set a standard to which we are strictly adhering and the resolution of the Council of April 22, 1937 " that it be a direction to the Medical Officer of Health to use his discretion and not enforce the provisions of the bye-laws unduly against vendors of fruit, vegetables and greens " no longer stands. All food places and all itinerant vendors must now comply with the provisions of the Bye-laws and those that cannot comply or will not comply must either be made to comply by resort to the process of law or be made to fall out.

I am pleased to state that every year we are getting greater and greater co-operation on the part of vendors of foodstuffs, in so far as compliance with the provisions of the Bye-laws is concerned. Food in restaurants, cafés and snack bars and food purveyed by itinerant vendors is prepared and sold under more hygenic conditions and these operatives are beginning to appreciate and understand and therefore obey the doctrine that food hygiene pays and that it is not merely a fad that is indulged in by public health officials.

We still have to contend with premises that have been converted into food places and with improvised booths and stands that do duty as food places and with itinerant vendors who are so poor and so ignorant that they do not and cannot understand the elementary principles of food hygiene, but our efforts to eliminate them have not been entirely unsuccessful and more and more we are getting properly constructed and better equipped food places and more intelligent and co-operative itinerant food vendors. It is remarkable, however, what pressure has to be brought to bear and how often the food inspectors have to concentrate on certain places to prevent them lapsing back to the previous state of insanitation and uncleanliness that we have been successful in getting them to eliminate.

In so far as incoming foodstuffs are concerned we are happy to state that the amount of unsound and unsafe food discovered at the Wharves continues to bear very little relation to the amount that gained entrance previous to the stationing of an Inspector at the Wharves and we are now satisfied that the tendency to dump unsatisfactory and unsafe foods in the Territory no longer exists.

Whenever unsound food is discovered at the Wharves it is in such amounts and under such circumstances as occur in all ports even in the largest of them such as the Port of London or the Port of Liverpool.

Food continues to be exposed in an unsatisfactory way at the Eastern Market and quite often the Food Inspector and the Inspector of the District discover unsound meat or fish on a meat or fish stall, which he seizes and which is eventually condemned by the Medical Officer of Health, but no attempt to remedy the condition was made in the year under report seeing that it will not be long now before the New Central Market is put into commission when we hope and expect that all modern equipment for protection and refrigeration will have been installed.

Sale of Foodstuffs Bye-laws

Registration of Shops (1962)

Provision, Meat, and Spirit Shops, Restaurants, Hotels, Refreshment Parlours, Dairies	251
Ground Provision and Fruit Shops	8
Bakehouses	2
Confectionery Shops	—
Aerated Water Factories	—
Other Factories	6
Total 1962	267
Total 1961	200

Registration of Vendors (1962)

Bread and Cakes	9
Confectionery	22
Cooked Food including Fries, Souse, &c.	23
Ice Cream and Palets	12
Sweet Drinks	15
Vegetables, Greens, Fruits	36
Miscellaneous	33
Total 1962	150
Total 1961	224

Number of Badges issued to Itinerant Vendors ... 1962—146 (1961—224)
Number of Oyster Vendors Licensed under Sale of Oysters Bye-laws 1962—3 (1961—0)

Sale of Milk Bye-laws

Dairies and Milk Shops (1962)

	Cowshed Licences Issued
City Proper	—
East Dry River (Unsewered)	—
Belmont (Unsewered)	—
Woodbrook (Sewered, but premises not all connected with the Sewerage System)	—
St. James (Unsewered)	—
Total 1962	—
Total 1961	—

Dairymen's Licences (1962)

Dairymen's Licences issued to Cowkeepers and other purveyors of milk	—
Dairymen's Licences to Shops, Milk Bars and Refreshment Parlours	11
Total 1962	11
Total 1961	26

Milk Vendor's Licences and Badges (1962)

	Milk Vendor's Licences	*Cow Tuberculin Tested*	*Badges*
Port-of-Spain	11	—	—
Out-Districts	—	—	—
Total 1962	11		
Total 1961	26	—	—

Foodstuffs Seized or Surrendered and Destroyed, 1962

Biscuits	...pounds	...	48	Milk (powdered)	...pounds	...	1,333
Butter	...pounds	...	54	Milk (canned) ...	...pounds	...	5,078
Cake Mix	...pounds	...	85	Macaroni ...	...pounds	...	150
Cheese	...pounds	...	258	Nuts	...pounds	...	135
Cereals	...pounds	...	181	Onions ...	...pounds	...	137
Confectionery	pounds	...	152	peas (dried) ...	...pounds	...	5,632
Cornmeal	...pounds	...	480	Pork (pickled) ...	...pounds	...	13,002
Fish (canned) ...	...pounds	...	24	Poultry (frozen)	...pounds	...	1,851
Fish (wet) ...	...pounds	...	1,477	Preserves ...	...pounds	...	89
Fish (dried) ...	...pounds	...	326	Potatoes ...	...pounds	...	42,744
Flour ...	...pounds	...	135,290	Salt	...pounds	...	34,515
Fruit (dried) ...	...pounds	...	2,972	Sausage (canned)	...pounds	...	2,574
Ham (smoked) ...	...pounds	...	667	Sausage (smoked)	...pounds	...	493
Ham (canned) ...	...pounds	...	696	Tomatoes ...	...pounds	...	1,200
Jams	...pounds	...	60	Tomato Paste ...	...pounds	...	1,400
Meat Products	...pounds	...	576	Vegetables (canned)	...pounds	...	118
Melon ...	...pounds	...	60	Vegetable Juice	...pounds	...	53

Anti-Rat Measures

We have reason to believe that the rat population of the City is being kept down to reasonable numbers because of the fact that the complaints of rat nuisance that are made nowadays to the Public Health Department are not by any means as numerous as they used to be five or ten years ago. In addition the number of rats caught by the various gangs is showing a tendency to diminish though the mice population, judging by the number of mice caught, remains practically the same. But the war against the rat continues, as indeed it must, if we are to keep the rat population down to such numbers as are not likely to cause an epidemic, if by any means rat plague happens to establish a foothold within the limits of the City.

The rats caught by the various gangs are all collected first thing in the morning and are taken to the Government Bacteriological Laboratory where a certain proportion of them are examined bacteriologically for the presence of plague. So far not a single specimen of rat plague has yet been discovered by the Government Bacteriologist during the course of these examinations.

There are nine anti-rat gangs operating in the City of Port-of-Spain and each gang comprises a foreman and usually three but sometimes four operatives. These operatives have, as can quite well be imagined, all had to undergo a period of preliminary training before they are sent out in the field. They are lectured to by the foreman, checkers, sub-overseers and overseer of the Anti-Rat Unit and particularly by the Health Eeucation Unit, one of the duties of the Assistant Health Education Officer being to train the non-pensionable operatives in the theory and practice of the work they will be called upon to perform when they go out on the field.

They are trained in the characteristics and habits of the rat, the identification of species, the signs of rat infestation, the evidence of the damage and the destruction they cause, the measures adopted for the destruction of rats, the different kinds of bait, rat poisons, rat traps, signs of disease in rats that are caught and how to dispose safely of rats. These workers must therefore possess a sound elementary education and at the end of their training period they can justly be classified as skilled workers and as such deserve the goodwill, co-operation and often the commendation rather than the mistrust, scorn and derision of the householders on whose premises they have to work.

We have not yet been able to get hold of any new rodenticide that is worth its salt. We have been trying out new variants of the old standby—warfarin—that we have been using for years now, such as bromoline, rentokil and racumin, but so far we are not convinced that they are definitely better in practice than warfarin nor are they any cheaper. We still resort to the use, on occasions that demand them, of the time honoured poisons of arsenious oxide, and zinc phosphide, and we have red squills, antu, barium and cyanogas as a standby in cases of emergency.

We have had again during the year under report to send our men in the adjoining districts of Cascade, St. Ann's, Maraval, Ellerslie and St. James (Outside the City) to do anti-rat work because of the insistent complaints of householders in these districts and because in the large majority of cases we have been requested to do so by the Medical Officer of Health, St. George West.

These are areas that are rat infested and we are anxious to help the householders who have complained and the Medical Officer of Health who has requested our help. In addition we save our City from the depredations of these rodents as most assuredly they will invade the City sooner or later if left to grow and multiply in the areas adjoining the City ; but we must request the Authorities concerned to organise an efficient anti-rat service for the sake of the areas infested themselves and for the sake of the safety of the City.

DESTRUCTION OF RATS AND MICE, 1962

Rats caught by trappers	28,472
Rats bought	—
Total	28,472
Mice caught and destroyed	27,256

EXAMINATION OF RATS BY GOVERNMENT BACTERIOLOGIST, 1962

Rats examined for plague	837
Rats found infected with plague	—
Immature rats not examined	—

	SPECIES		
	Decumanus	*Rattus*	*Total*
Males	249	48	297
Females	419	121	540
Total	668	169	837

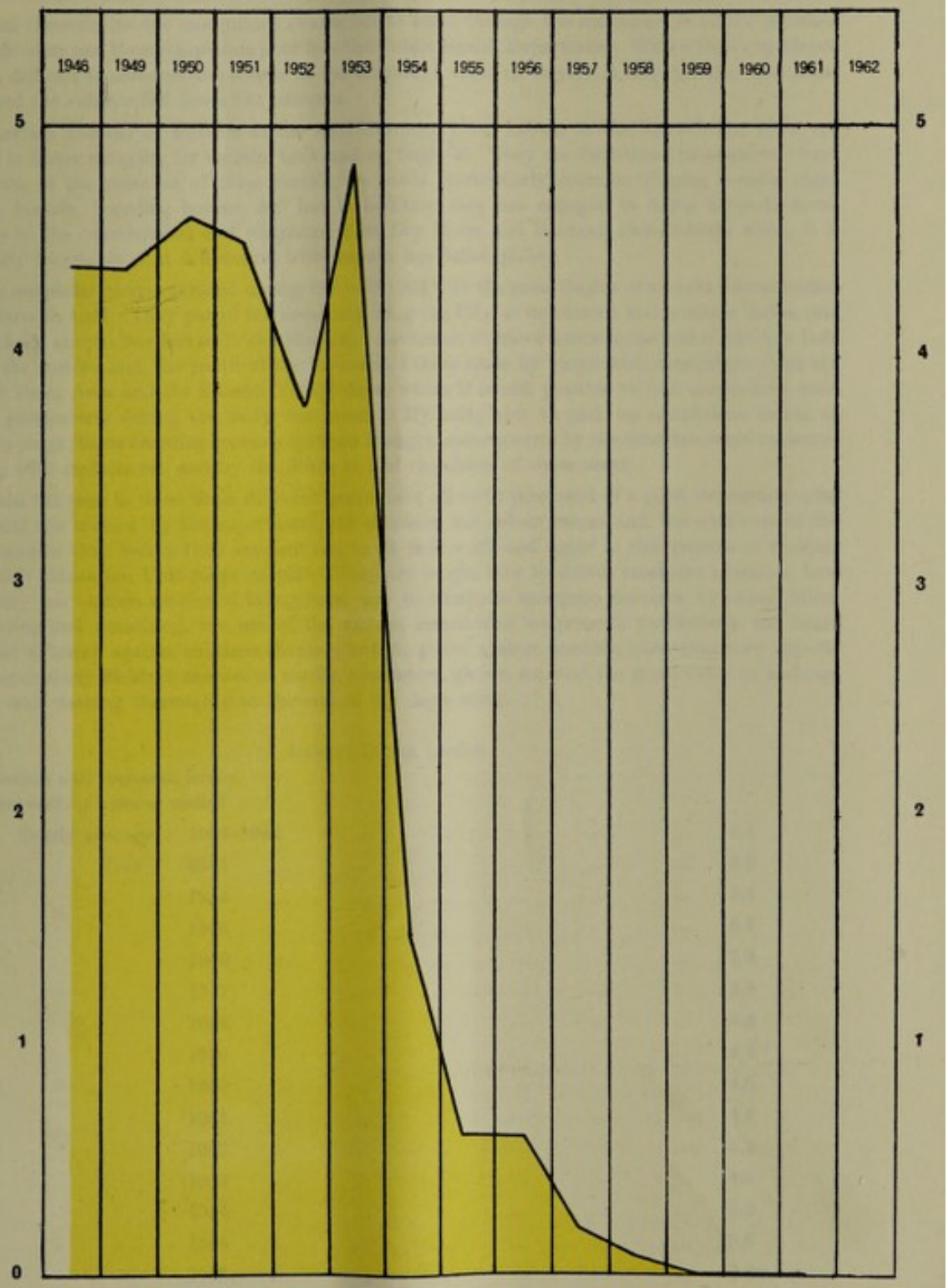
Anti-Mosquito Measures

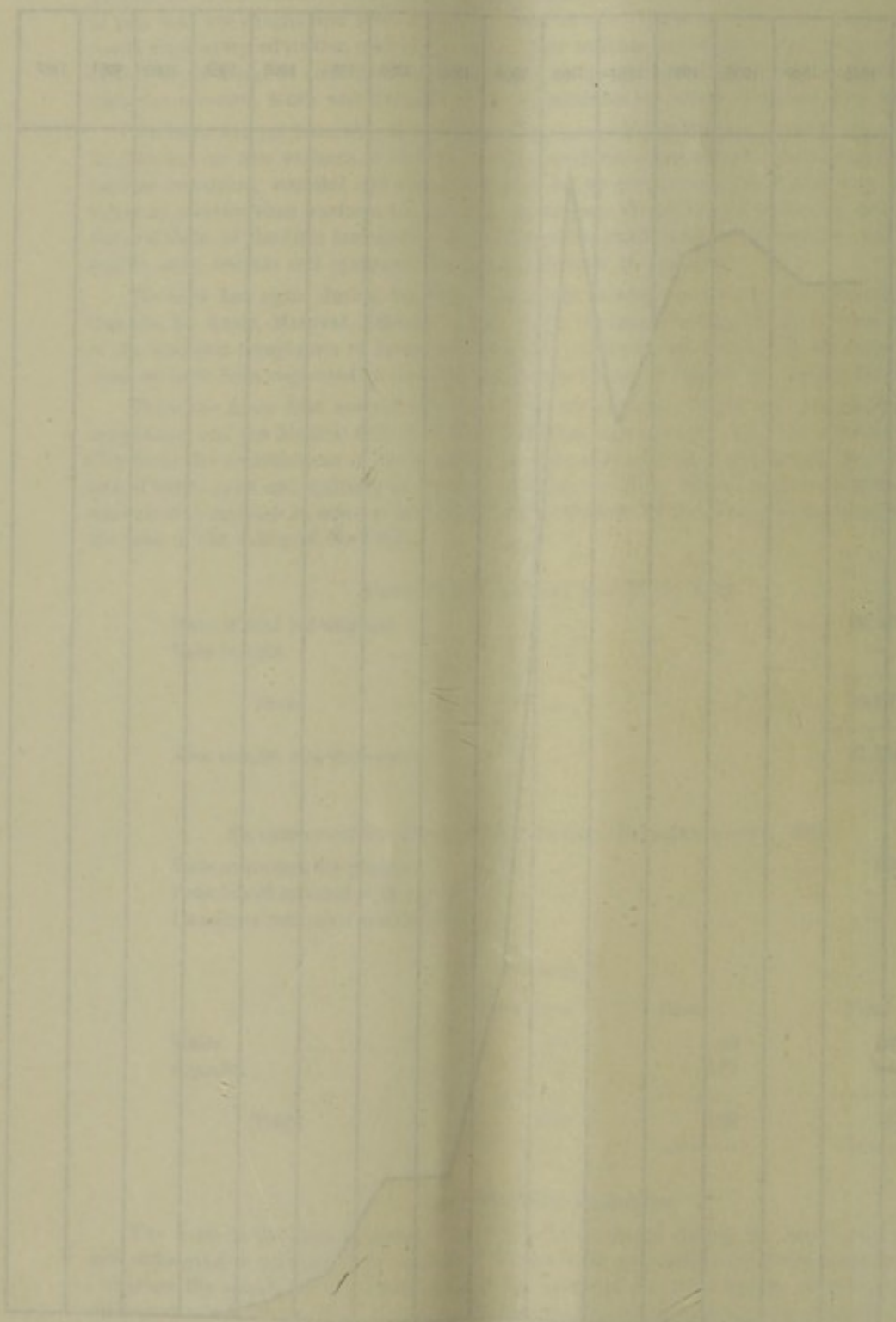
The work of the Anti-Mosquito Unit continued unabated during the year under report. The anti-*aedes* gangs continued their operations but the work was mainly on a maintenance basis, which comprises the search for and destruction of the larvae of the *aedes* species of mosquitoes in those areas particularly where there is reason to believe that the introduction of the mosquito from infested areas abroad is possible and that is mainly along the whole of the waterfront area of the City. Here a continuous patrolling of the area is kept up and all potential breeding grounds like tin cans, old-bottles, coconut shells and sundry containers of various kinds are eliminated from the dwelling houses and commercial and business places of these particular areas of the Urban Sanitary District. This maintenance work extended further inland on occasions and even to the extreme northern and north-western limits of the City where there is reason to believe that an *aedes* focus might have gained a foothold in the City.

CHART A

Port-of-Spain

Aedes Larval Index 1948- 1962





The anti-*culex* gangs are at the moment the busiest and their activities extend throughout the length and breadth of the City, wherever there is the possibility of stagnant water constituting the breeding ground of *culex* mosquitoes.

In addition to oiling sheets of stagnant water they also endeavour to eliminate breeding grounds by the levelling of depressed areas, the canalising of streams and rivulets and by filling in cavities and depressions and even by the flushing of stagnant underground drains. It is in these stagnant underground drains that we meet our greatest problems, especially during the rainy season when water for flushing is on the whole scarce and when the refuse that finds its way into them, either through the utter carelessness of householders or the deliberate action of the scavengers, causes the drains to become blocked and *culex* mosquitoes to breed freely in them.

From these drains the mosquitoes swarm out at night through the manholes on to the premises of householders and then complaints pour into the Public Health Department. With a little experience it is not difficult to discover the source of the trouble, a cloud of Baytex is then sprayed into these drains and the culprits fall down like ninepins.

A certain number of workers in the Anti-Mosquito Unit, known as the Disinfection Unit, are engaged in house spraying for vermin, cockroaches, bugs, &c. They are dispatched to premises where complaints of the presence of these vermin are made, particularly common lodging houses, night shelters, hostels, boarding houses, &c. but in addition they are engaged in doing house-to-house spraying in the overcrowded and congested East Dry River and Belmont Sub-districts where it is practically inevitable that infestation with vermin has taken place.

The *anopheles* gangs operated during the year 1962 with the same degree of success that attended their efforts in 1961. They patrol the areas adjoining the City at its eastern and western limits, and they pick up anophelene larvae in the Mucurapo Savannah at the western limits and in the Sea Lots area at the eastern end, the result of the invasion of these areas by anophelene mosquitoes from the Cocorite Farm Area and the Success Village Area, where it is still possible to find anophelene mosquitoes particularly during the early wet season. By being able to pick up anophelene larvae at this early stage, these breeding grounds are soon brought under control by the time-honoured measures of oiling with malaria oil, and by the filling in and canalising of these areas.

Again the men in these three different gangs have all to be possessed of a good elementary education and are trained by the supervisors, the checkers, the sub-overseers and the overseers of the Anti-Mosquito Unit before they are sent out to do field work and again in this process of training the Health Education Unit plays its part. They are taught how to detect mosquito nuisance, how to identify the various species of mosquitoes, how to eliminate mosquito nuisance by oiling, filling in, levelling and canalising, the use of the various insecticides we possess, particularly the latest and most effective against culicines, baytex, how to guard against possible intoxication by insecticides, particularly dieldrin, the use of masks, respirators, gloves, &c. and the great value of bathing, soaping and washing thoroughly at the end of the day's work.

LARVAL INDEX (*Aedes*)

Premises with mosquito larvae per cent. of number visited		
Yearly average	1938–1942	2.1
Year	1943	3.3
	1944	5.4
	1945	6.9
	1946	7.3
	1947	5.8
	1948	4.4
	1949	4.4
	1950	4.6
	1951	4.5
	1952	3.8
	1953	4.8
	1954	1.5
	1955	0.6
	1956	0.6
	1957	0.2
	1958	0.08
	1959	—
	1960	—
	1961	—
	1962	—

INSPECTION OF EAVES GUTTERS, ETC., 1962

Number of inspections of premises	93,418
Number of inspections of eaves gutters	1,191
Number of occasions found in good order	199
Number of occasions found defective	992
Number of occasions found containing water only	502
Number of occasions found containing water and larvae (Culex) ...	110
Number of occasions mosquito larvae (Culex) were found in tubs, anti-formicas, tin cans, &c.	336
Yards cleared of receptacles	—

Premises used for human habitation, Houses let in lodgings, Common Lodging Houses

Whilst it must be agreed that some attempt to deal with the extremely difficult housing situation in the City has been made in the year under report and is being made currently, yet the situation has been allowed to remain static for such a long time and the dwellings in the eastern and down-town areas of the City particularly allowed to remain unrepaired or unreconstructed for such a long time that what is being done at the moment serves only to scratch the surface of a problem that can only be solved now by a wholesale comprehensive and universal housing scheme of major proportions.

In fact when the Statistical Department of Government after a census of the housing situation in the Municipality undertaken in the period July, 1957 to June, 1958 declared in its published report that overcrowding of premises of the City was in the vicinity of 52 per cent. and that the number of dilapidated and ruinous " accommodation units " as they were called, amounted to 40 per cent. they were merely putting down on paper a state of affairs of which we of the Public Health Department were fully cognisant.

For our District Health Inspectors who have as part of their duty to do house-to-house inspection had long ago noted this unsatisfactory state of affairs and had been brought face-to-face with the situation where landlords, stymied by the Rent Restriction Ordinance, were unco-operative and definitely unwilling to effect the simplest repairs to a dwelling or its outhouses, and they were forced to resort to the process of the law for the most minor requirements like the stopping of a leak in the roof of a house, the repairing of a drain, the paving of the floor of a kitchen or the making of a privy cesspit flyproof with all the delay, the disappointment, and the cumbrous machinery that such a process usually entailed.

It is true that the quadrangle of Park Street, Frederick Street, South Quay, the Dry River was long ago declared a Slum Clearance Area, and that reconstruction of this quadrangle was taking place, but the process was so slow and the funds earmarked for the purpose so limited that it was easy to imagine that by the time the last and northermost block of flats was constructed and ready for occupation, the dwelling houses that were being used as alternative accommodation would have been ready for extensive repairs and even reconstruction in parts, and this is exactly what happened when the block of flats in the George Street, Nelson Street, Prince Street and Duke Street area was completed, the Planning and Housing Commission—now the National Housing Authority—had to spend a large sum of money on repairs to dwellings in the St. James Area at the back of the House of Refuge, which had been constructed as alternative accommodation, but which unfortunately were occupied by tenants in need of housing accommodation on a permanent basis.

John John and Shanty Town continued to thrive during the year under report and nothing has yet materialised to give us the sanguine hope and the fond expectation that these slum areas will be eliminated permanently once and for all though we continue to hear that flats for the alternative accommodation of the residents of those areas are being erected in the Malick and Morvant areas of Laventille.

The premises around 69, Woodford Street, the small area embracing 33 and 35, Dundonald Street, the La Cour Harpe area, the Jackson Place, Piccadilly and Laventille Road area, the St. Paul Street-Rodney Street-Besson Street area, the St. Joseph Road-South Quay area, which were specially inspected during the latter part of 1961 by the Slum Clearance Committee of the Planning and Housing Commission, now called the National Housing Authority, and which were intended to be declared Slum Clearance Areas with a view to the elimination of the old dilapidated buildings that occupied these sites and their reconstruction into flats, have not yet been so declared with the exception of the La Cour Harpe area and the St. Joseph Road-South Quay area, and I am pleased to be able to report that nine-storey flats are rearing their head skywards in this latter area.

On the western side of the City instead of reconstruction, demolition of existing premises has taken place due to the fact that the widening of the Western Main Road in preparation for a new highway to Chaguaramas is, at the moment I write, actively taking place and the residents here have been hard-put to find alternative accommodation, though I am pleased to be able to report that a new block of flats to the rear of the Port-of-Spain Community Hospital (Seventh Day Adventist) is now ready for occupation and accommodation in these flats has been offered the displaced residents.

John John and Shanty Town

As I have stated before no new development affecting these areas has taken place in the year under report.

It is true that some contraction of Shanty Town has taken place because of building on the Central Market site on the one hand and the expansion of the Industrial Estate on the other hand but all that has happened is that Shanty Town has shifted eastwards with the Dump and the residents still continue their daily depredations of the Dump in search of pigs' food, bits and pieces, old bottles and salvageable material like pieces of metal and old wood, during which they have to dig into the Dump and as this work is usually done after working hours they succeed quite effectively in undoing the work of " controlled tipping " which has been accomplished on the Dump. One is often asked why not detail a policeman or two to keep these invaders in check ; the answer is that an unarmed policeman is of no use against these people ; there are quite a number of desperadoes among them and they are usually armed with cutlasses, knives, nut and bolts which they use indiscriminately when requested or directed to leave the Dump.

John John is in the same state that it has been for years now, the only difference being that the dwellings here are deteriorating rapidly and many are on the point of collapse ; in fact some have actually collapsed rendering their occupants homeless.

The difficulty in getting an area like this kept in good sanitary condition is enormous when neither landlord nor tenant will do anything to keep the place clean or to abate nuisances and dangerous nuisances like a full or overflowing cesspit and accumulations of fly and rat breeding refuse have to be abated by the Council on the grounds of danger to public health.

We can only hope and pray that the flats which are being erected in Malick and the Hirondelle Street area of Morvant as alternative accommodation for these people of Shanty Town and John John will soon be completed and that a start will soon be made to clearing these areas and laying them out in proper building lots for dwelling houses or business places.

THE HEALTH EDUCATION OF THE DISTRICT

We consider that the health education of the citizen of Port-of-Spain to be one of the most important, if not the most important function, that the Public Health Department has to perform. As I have already stated in previous annual reports more and more emphasis is going to be laid on the whys and wherefores for the health measures that we are adopting and are requesting people to adopt, in order that co-operation and understanding should be immediately forthcoming than on the police methods of enforcement that we have inevitably to resort to in certain cases. We are convinced that the large majority of citizens are anxious and willing to comply with directions to abate nuisances and/or to execute works of a sanitary nature if only they could be persuaded that it is in their own interest and in that of the public at large for them to do so. This we can do and have done by the methods of persuasion and explanation, by practical demonstration and by appeal to the senses, methods that form the basis and foundation of health education. A hard core of chronic offenders will always remain, people who are deaf to and unmindful of any appeals for co-operation with the Department in getting work done and so improve the sanitary condition of their own property as well as the health of their own tenants, but we have been pleased to find that health education does bear fruit and does succeed very often in enlisting co-operation where even the law fails us because of the long delay in getting matters finalised and of the insignificant penalty which encourages the offender to wait until he gets a summons to Court before he thinks of complying with a Notice.

Whilst it is the duty of all personnel attached to the Department to educate the public in all matters appertaining to public health and it is impressed upon the District Sanitary Inspectors particularly that in their daily routine house-to-house work inspection they must demonstrate to householders any nuisances they may have discovered, explain their nature and the dangers that they can give rise to and so persuade them readily to carry out the measures for their abatement that have been detailed, the organised health education of the Urban Sanitary District is the special preserve of the Health Education Unit of the Department whose head is the Health Education Officer and who plans its activities generally and prepares the programme for any project that has been decided upon. This Unit starting from scratch, as it did in 1956, has been building up gradually in personnel and equipment and gets more and more geared with each succeeding year for the big job of work in hand.

During the year under report we were able to make recommendations for the appointment of a public health nurse (health visitor) and we have been able to supply the Unit with a public address system and photographic equipment for the dark room, slowly but surely building up a photographic section of the Unit which will serve us in good stead in so far as the photographs of staff that are to be supplied with special passes and have to be provided with identification cards for entry into premises are concerned, and also when photographs are needed for insertion in the Annual Report. We were able further to build up our film library and we are now in possession of a good stock of films but we still have to avail ourselves of the services in this particular direction of the United States Information Service, the United Kingdom Information Centre, the British Council and the Information Department of Government to whom we are greatly indebted and for which we are deeply grateful.

Films which we had on order have arrived and have been put to good use in the programmes that we have been able to formulate for the current year. The Unit concerned itself with a number of health education activities during the year under report.

A Small Keep the City Clean campaign was undertaken in the week before Independence and motorcades in the different sub-districts of the City were organised to alert the residents of the importance of cleanliness of houses, yards, streets, squares, public places during the celebration of Independence as we were going to be hosts to a number of visitors and they would surely judge us by the cleanliness of our City and the tidiness of our homes.

Keep Port-of-Spain Clean Week was again organised jointly by the Public Health Department of the Council and the Junior Chamber of Commerce with whom we have been collaborating in this project since 1959. The Week was officially launched by His Worship the Mayor with a motorcade in the morning of Monday the 22nd day of October and it came to an end officially on Saturday the 27th day of October. During the week a concentrated effort was made to bring home to every citizen of Port-of-Spain, the benefits that accrue from keeping his home, his yard, the streets, parks and open spaces clean and every known health education medium was made to play its part during the week : the press, radio, filmstrips, leaflets, posters, handbills, &c. The motorcades were organised during the week on the Monday, Wednesday, and the Friday, each motorcade traversing a different section of the City and public meetings with film shows were held in the St. James Sub-district, the Belmont Sub-district and the City Proper.

The Unit participated in Tuberculosis Prevention Week, an annual fixture of the Trinidad and Tobago Association for the Prevention of Tuberculosis in which the Public Health Department takes its full share. Meetings were organised in the various sub-districts of the City and talks were delivered and appropriate film shows to the public who attended. The Health Education Unit in addition participated in the week's radio and press programmes and supplied posters and leaflets for distribution throughout the Territory. The Unit took part in the programme organised by the Trinidad and Tobago Association for Mental Health, a programme of health education directed to the prevention of alcoholism in the City.

Perhaps, however, the main activity of the Health Education Unit during the year under report was the organisation of the District Health Education Working Committees. It is proposed to have one of these Committees established in every sanitary district of the City. They are comprised of citizens of the District who are interested in the health and welfare of the District together with the District Sanitary Inspector and the Health Education and Assistant Health Education Officers. At the moment I write fifteen such Committees have been organised and there remain another five such to be organised. In these Committees the citizens together with the District Sanitary Inspector and the Health Education Officer deliberate on the health of the District and the number of nuisances that can be found in them and formulate plans and devise measures to secure their abatement and the keenness and the enthusiasm and sometimes annoyance at insanitary features in the District that have been demonstrated at these meetings augur well for the future of the Committees and for their playing a most important role in the environmental hygiene and the health generally of the Sanitary District. The District Sanitary Inspector is kept on his toes at these meetings and the prevailing atmosphere at these meetings is one of positive and determined action to eliminate nuisances that exist in the District and to improve its health and sanitary condition.

VITAL STATISTICS OF THE DISTRICT

Comparative Summary of Vital Statistics

(*Unless otherwise stated, rates are per* 100,000 *population*)

	1921	1960	1961	1962
Area of City—acres (pastures and open spaces included)	1,793	2,550	2,550	2,550
Estimated population (mean)	61,386	94,100	98,600	101,600
Density of population (persons per acre)	34.2	37	39	40
Total Live births	1,687	2,498	2,610	2,536
Birth rate	2,728	2,655	2,647	2,496
Still births registered	154	73	80	64
*Still birth rate	91.3	29.22	30.65	25.24
Total deaths	1,659	1,040	952	956
Death rate	2,683	1,105	966	941
Natural increase of population ...	28	1,458	1,658	1,580
Death under one year	287	141	116	121
*Infant mortality rate	170.12	56.44	44.44	47.71
*Maternal mortality rate	—	2.80	1.91	1.18

*Per 1,000 live births.

Vital Statistics of the District—*Continued*

Comparative Summary of Vital Statistics—*Continued*

Death rates :	1921	1960	1961	1962
Notifiable infectious diseases	621	104	98	87
Pulmonary tuberculosis	249	2	2	4
Tuberculosis (other forms)	26	—	3	1
Enteric Fever	125	1	2	—
Pneumonia (all forms)	197	99	90	80
Bronchitis	136	9	9	15
Diphtheria	2	1	—	—
Malaria	89	—	—	—
Syphilis	21	13	9	9
Diarrhoea and enteritis	191	61	42	27
Influenza	26	—	2	3
Ankylostomiasis	15	1	—	—
Bright's disease and nephritis ...	209	22	10	8
Diseases of the heart and blood vessels ...	265	276	215	214
Diseases of the nervous system including cerebral haemorrhage	170	151	167	135
Cancer and other malignant diseases ...	63	131	109	126

Census Population of City—April, 1946—93,108: April, 1960—Preliminary Count—91,340.
Colony's Mean Population—898,050.

Acreage and Population

The size of the City of Port-of-Spain remained during the year under report at 2,550 acres, such as it has been since 1949, when the 168 acres of lands which the City reclaimed by " controlled tipping " and which are located between Wrightson Road on the one hand and the King's Wharf—Dock Site Area on the other hand were included within the limits of the City. These lands like all reclaimed lands are the property of the Central Government, but being now within the limits of the City are subject to the jurisdiction, sanitary and otherwise of the City Council..

In 1917 when the City Council was duly constituted the Local Sanitary Authority for the City of Port-of-Spain the area of the City inclusive of parks and open spaces was 1,793 acres. The 279 acres of the Queen's Park Savannah are included within the limits of the City and forms an important part of the original 1,793 acres mentioned above. To this acreage of 1,793 in 1917 there have been added 114 acres of the Mucurapo Lands in 1932, 83 acres in Gonzales Place in 1933, 49 acres of the St. Clair Experimental Station Lands in 1937 ; 268 acres in St. James and 75 acres in Cocorite in 1938. It will be seen therefore that the size of the City has increased by 757 acres in 45 years.

It is a matter of great importance that an estimate of population, as accurate as possible, be made during inter-census periods by the use of methods that can be relied upon and that during a census year an accurate count of the resident population be made, because without accurate figures the various rates which are based on the population figures would be completely false and misleading and as such could not be properly compared with similar rates for previous years and particularly with similar rates for cities in other tropical or semi-tropical or temperate climates of similar size. The estimated mean population for the year 1962, i.e. the population at midnight 30th June, 1962 was 101,600 which represents an increase of 3,000 on the corresponding figures for 1961.

The estimated mean population for the Territory in 1962 was 898,058 as compared with the estimated mean population for 1961 of 871,050.

Births and Birth Rates

The returns received at the Public Health Department in the year 1962 and which are sent to the Department by the District Registrars in the various sub-districts of the City as well as by the Medical Superintendent of the General Hospital, Port-of-Spain showed that 2,536 live births occurred in the City, in other words 2,536 infants were born in 1962 of mothers who resided for at least six months previous to the date of birth in the City. This gives a birth rate of 2,496 per 100,000 population as compared with 2,647 per 100,000 population in 1961, a decline that can be considered significant seeing that we are now getting hold of quite accurate figures for births within the City from the District Registrars and the Medical Superintendent, General Hospital, Port-of-Spain. Coupled with this decline in the birth-rate an equally significant decline in the still births registered took place during the year under report, the number being 64 as compared with 80 in the year 1961.

Deaths and Death Rates

Death returns showed that 956 deaths of residents who lived during the six months previous to their death within the limits of the City occurred during the year 1962 as compared with 952 in the year 1961, an increase which cannot by any means be considered significant ; the death rate per 100,000 worked out at 941 as compared with 966 in the previous year. On the whole it can be stated that the rates that are compiled from death returns can be regarded as being more accurate than those compiled from returns that relate to births or notifications seeing that no burial can take place or rather does take place unless the death has been registered and that many deaths have to be investigated by the Sanitary Inspectors attached to the Department, and the fumigation of the premises where death has occurred has to be supervised by them. Besides dating back to the very beginning of registration it has been customary for District Registrars to insert in their returns to the Department the correct address whether within the limits of the City or outside the limits of the City of the deceased.

Birth and Death Rate, 1962

Births, 1962				Deaths, 1962			
Males	Females	Both Sexes	Birth Rate per 100,000 population	Males	Females	Both Sexes	Death Rate per 100,000 population
1,249	1,287	2,536	2,496	481	475	956	941

Deaths in Sub-Districts of the City, 1962

Sub-District	Mean Population	Deaths — Place of Occurence				Total Deaths	Rate per 100,000 population
		Home &c.	General Hospital	Royal Gaol	House of Refuge	Sub-Districts	
City Proper	22,548	155	105	7	—	267	263
St. Clair	1,347	36	—	—	—	36	35
East Dry River	22,892	71	109	—	—	180	177
Belmont	25,514	81	73	—	—	154	152
Woodbrook	11,523	38	32	—	—	70	69
St. James	17,776	72	54	—	123	249	245
Total	101,600	453	373	7	123	956	941

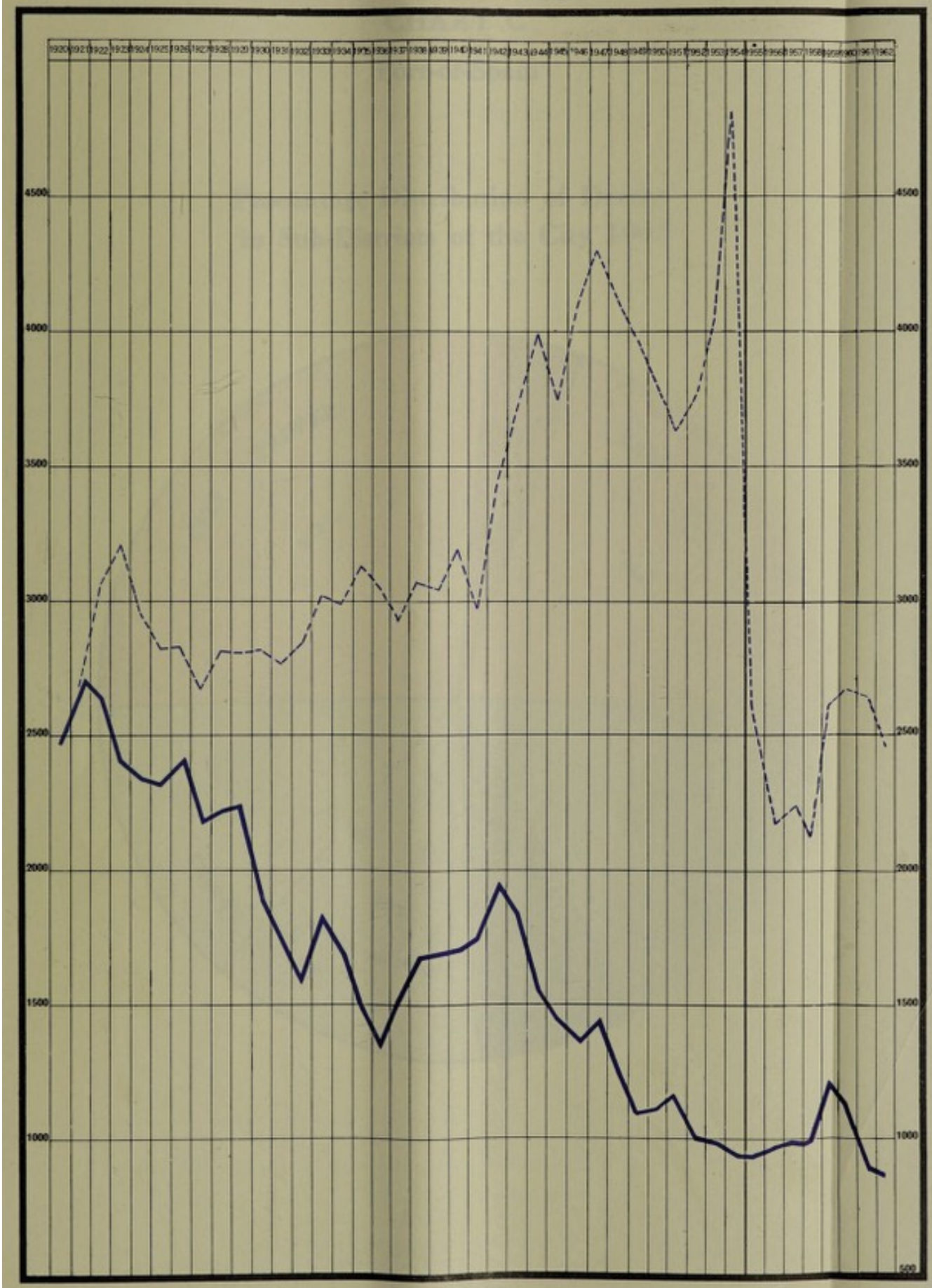
Age Distribution of Deaths, 1962

Period	Males	Females	Both Sexes	Percentage of Total Mortality at All Ages
Under 1 year	70	51	121	12.66
1– 5 years	10	13	23	2.41
6–10 do.	3	4	7	0.73
11–20 do.	7	11	18	1.88
21–30 do.	18	9	27	2.82
31–40 do.	18	19	37	3.87
41–50 do.	35	28	63	6.59
51–60 do.	82	61	143	14.96
Over 60 years	238	279	517	54.08
Total	481	475	956	

CHART B

Port-of-Spain

Birth Rates & Death Rates per 100,000 Population 1920-1962



* Adjusted Rate (1955): Births and Deaths of City Residents only

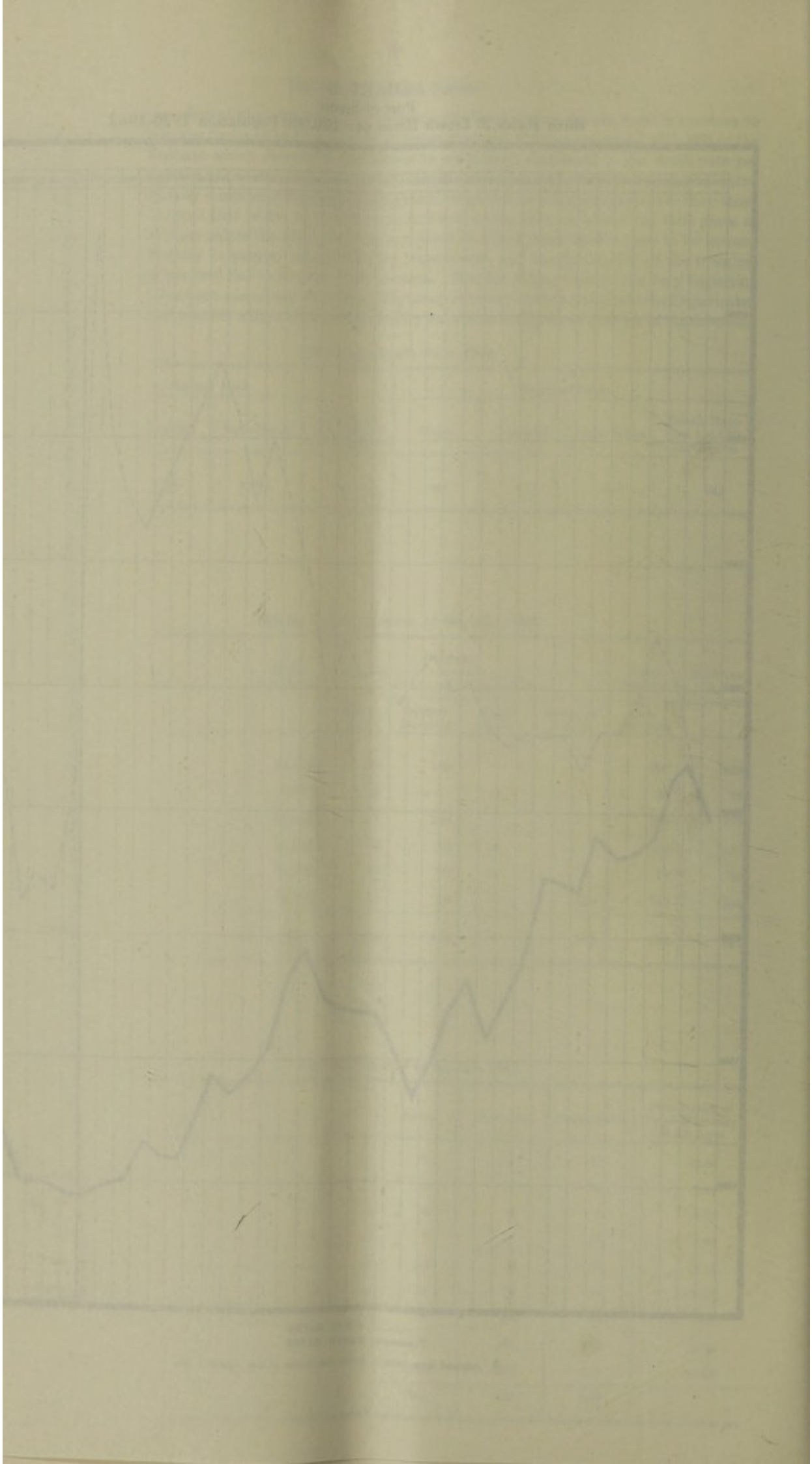


CHART C

Port-of-Spain

Percentage Distribution of Deaths in Sub-Districts of the City 1962

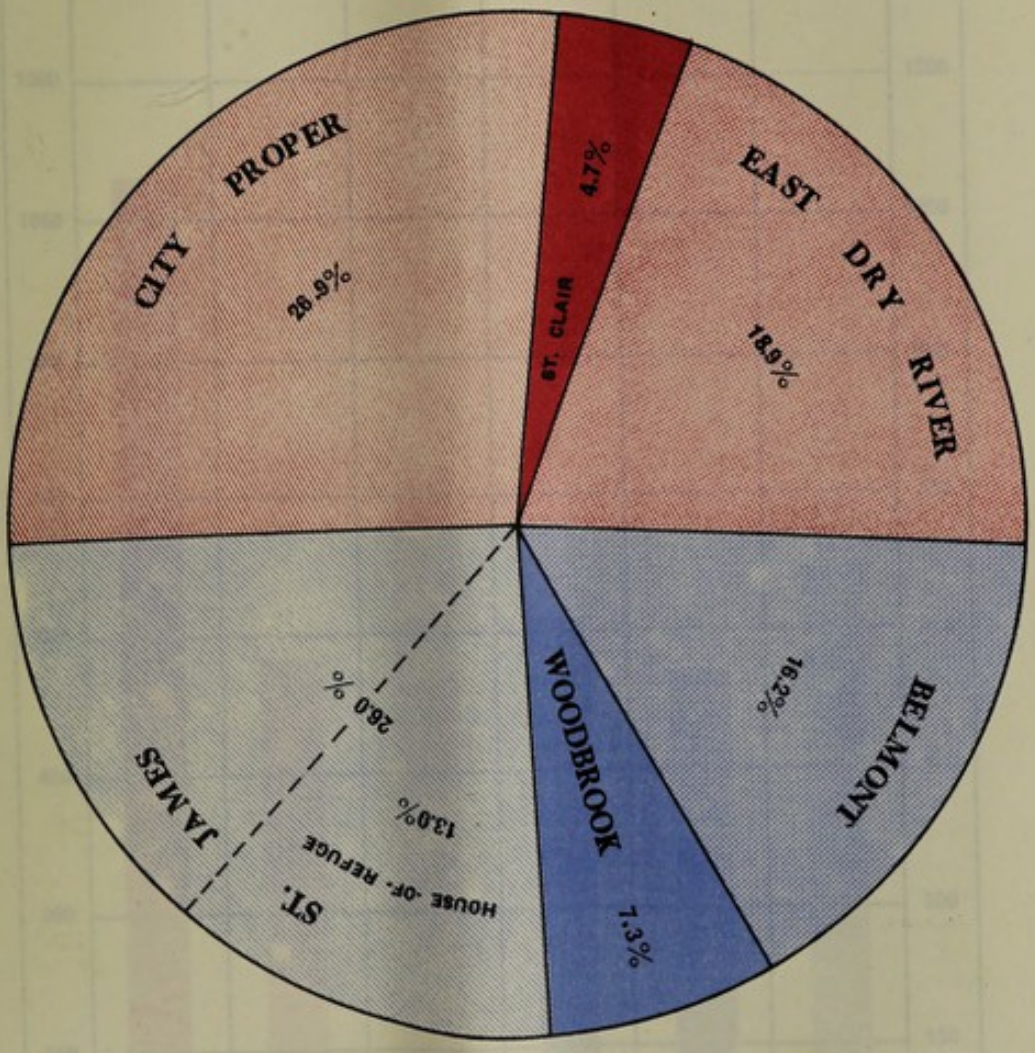


CHART C

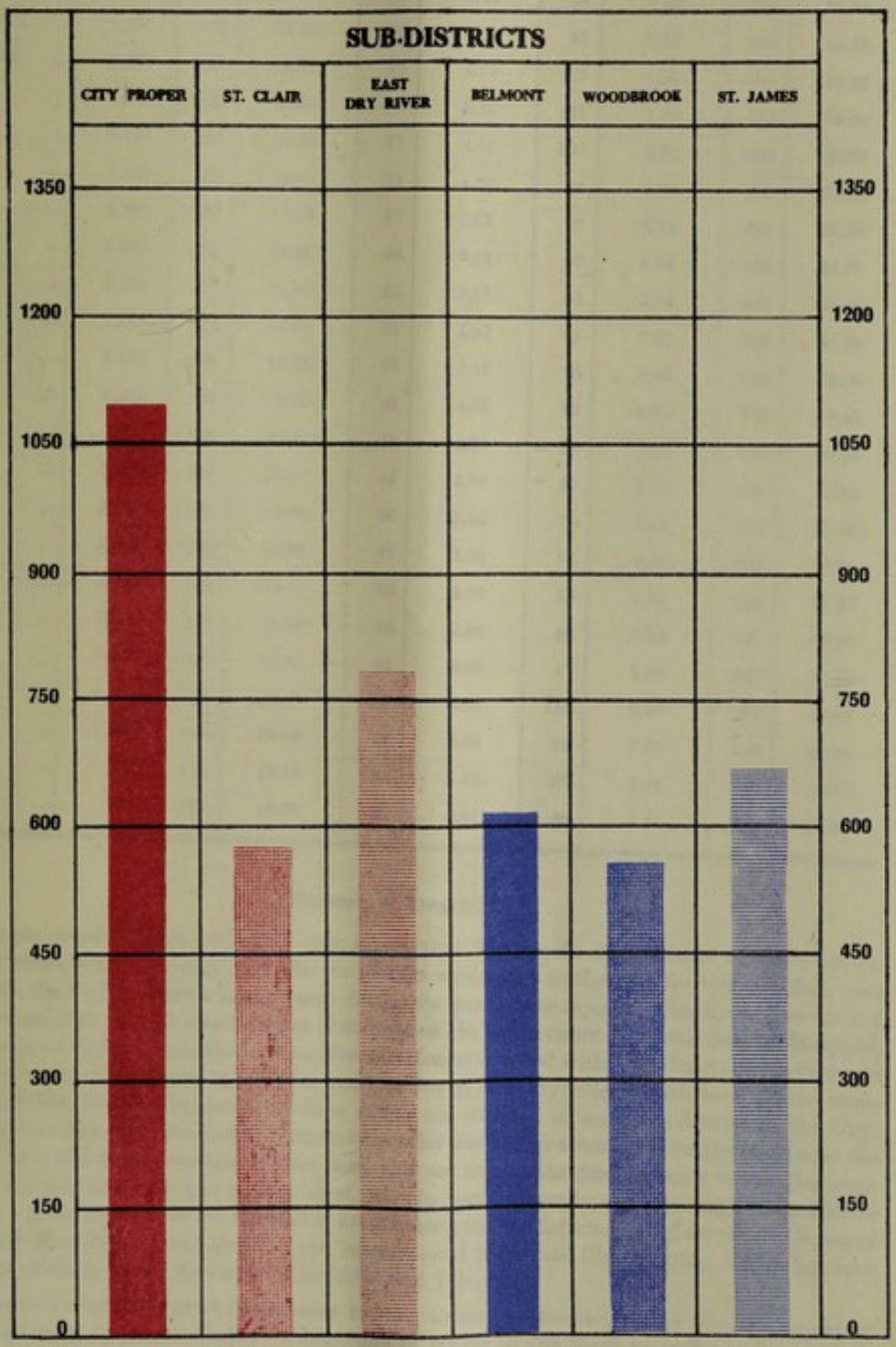
Port-of-Spain

Percentage Distribution of Deaths
in Sub-Districts of the City 1952

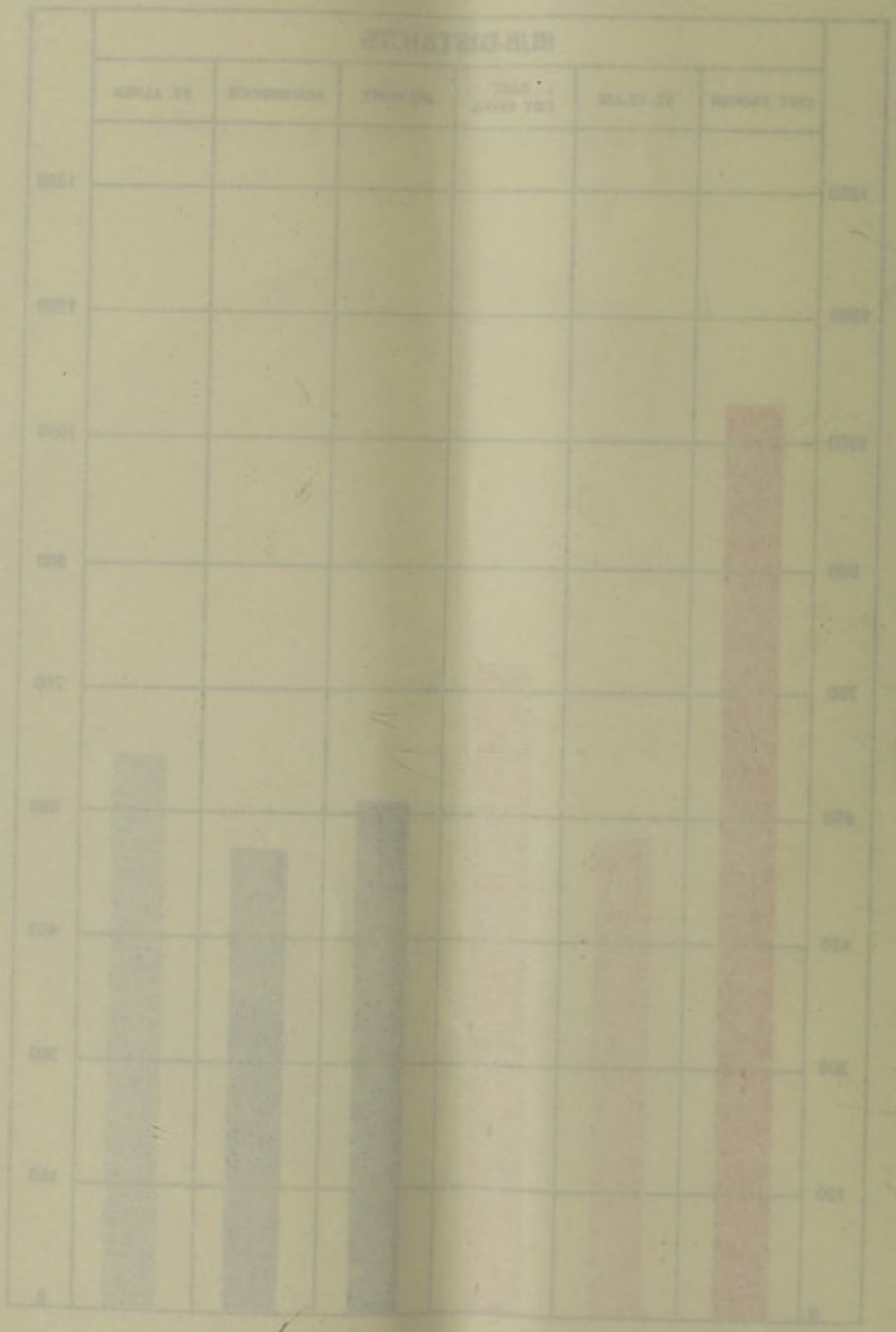
CHART D

Port-of-Spain

Sub-Districts Death Rate Per 100,000 Population of Sub-District 1962



NOTE: Deaths at Seventh Day Adventist Clinic; at St.Elizabeth Clinic; at Nurse Johnson's Nursing Home; at Park Nursing Home; at Nurse Lawless' Nursing Home; at Pichery Lane Nursing Home; at Nurse Soyer's Nursing Home; at Superville's Nursing Home; at the P.O.S. Community Hospital and at the House of Refuge are excluded from Sub-Districts of City Proper, St.Clair, East Dry River, Woodbrook, and St.James respectively.



Comparison of Deaths at Different Age Periods, 1928-62

Period	Total Deaths at All Ages	Deaths under 1 Year		Deaths 1–5 Years		Deaths 56–60 Years		Deaths over 60 Years	
		No.	Percentage of Total Deaths	No.	Percentage of Total Deaths	No.	Percentage of Total Deaths	No.	Percentage of Total Deaths
Yearly Averages									
1928-32 ...	1,327	230	17.42	81	6.06	94	7.09	336	25.10
1933-37 ...	1,167	215	18.24	62	5.29	87	7.57	289	24.74
1938-42 ...	1,622	275	16.85	68	4.21	117	7.20	566	34.92
1943 ...	1,862	283	15.20	102	5.18	131	7.04	674	36.20
1944 ...	1,620	248	15.31	77	4.75	106	6.54	598	36.92
1945 ...	1,526	239	15.66	71	4.65	86	5.64	561	36.76
1946 ...	1,396	241	17.26	77	5.52	95	6.81	493	35.32
1947 ...	1,385	231	16.68	49	3.54	92	6.64	536	38.70
1948 ...	1,191	177	14.86	45	3.78	66	5.54	491	41.23
1949 ...	1,147	171	14.91	57	4.97	85	7.41	524	45.68
1950 ...	1,170	168	14.36	75	6.41	76	6.50	526	44.96
1951 ...	1,243	167	13.43	43	3.46	79	6.35	602	48.43
1952 ...	1,094	137	12.52	48	4.39	77	7.04	540	49.36
1953 ...	1,108	157	14.17	41	3.70	67	6.05	524	47.29
1954 ...	1,028	150	14.59	36	3.50	79	7.69	484	47.08
1955 ...	1,067	138	12.93	27	2.53	78	7.31	542	50.80
1956 ...	1,120	158	14.11	32	2.86	85	7.59	581	51.88
1957 ...	1,134	127	11.20	35	3.09	86	7.58	627	55.29
1958 ...	1,147	171	14.91	42	3.66	87	7.58	595	51.88
1959 ...	1,179	158	13.40	39	3.31	114	9.67	595	50.47
1960 ...	1,040	141	13.56	32	3.08	82	7.88	549	52.79
1961 ...	952	116	12.18	23	2.42	67	7.04	540	56.72
1962 ...	956	121	12.66	23	2.41	90	9.41	517	54.08

Causes of Deaths

I have previously stated earlier in this report that 956 deaths of residents of the City, i.e. inhabitants whose place of residence in the six months antecedent to their deaths was the City, were recorded with the Public Health Department during the year under report. This figure was arrived at by careful analysis of each death return that reached the Department from the General Hospital, from the House of Refuge, from the various Nursing Homes situated within the limits of the City and from private homes throughout the length and breadth of the City where death took place—these latter through the District Registrars, whose offices are situated in each sub-district of the City. These returns are signed by the medical practitioner who was last in attendance on the case or by the practitioner who did a post-mortem on the case, and are sent in the first instance to the Registrar of the Sub-District in which the patient died, who in turn transmits them to the Public Health Department. Here the deaths are codified in accordance with the Intermediate List of 150 Causes of Morbidity and Mortality as contained in the International Statistical Classification, which has now been adopted officially in the Territory of Trinidad and Tobago.

It is always a matter of great importance to statisticians, particularly those who are concerned with vital statistics, to public health workers, and of course to the State as well as to lay people generally to have a clear picture in their minds' eyes of the causes of deaths and particularly of those diseases which are responsible for the greatest mortality, and analysis of the table hereunder detailed demonstrates the fact that four groups of causes are responsible for the majority of deaths : diseases of the circulatory system with 217 deaths, diseases of the nervous system and sensory organs with 151 deaths, cancer and other malignant diseases with 128 deaths, and diseases of the respiratory system with 112 deaths. These four groups of causes have again run true to form and have been responsible for the greatest toll of mortality for the past twenty years. Next in order comes diseases of the digestive system with 75 deaths of which diarrhoea and enteritis claimed 28 deaths, certain diseases of early infancy with 67 deaths and senility with 32 deaths. Notifiable infectious diseases claimed 89 victims, pneumonia being responsible for 81 of them.

Causes of Deaths, 1962—(International Classification)

Intermediate List No.	Cause Groups	Detailed List No.	Total
	I—Infective and Parasitic Diseases		
A 1	Tuberculosis of respiratory system	001–008	4
A 2	Tuberculosis of meninges and central nervous system	010	—
A 3	Tuberculosis of intestines, peritoneum and mesenteric glands	011	—
A 4	Tuberculosis of bones and joints	012	—
A 5	Tuberculosis, other forms :		
	02 All other forms	014, 016–019	1
A 6	Congenital Syphillis	020	—
A 8	Tabes Dorasalis	024	1
A 9	General paralysis of insane	025	—
A 10	All other syphillis	026–029	9
A 11	02 Other gonococcal infections	031–035	—
A 12	Typhoid fever	040	—
A 13	02 Other Salmonella infections	042	—
A 16	Dysentry, all forms :		
	01 Bacillary dysentry	045	1
	02 Amoebiasis	046	1
	03 Other unspecified forms of dysentry	047,048	—
A 20	Septicaemia and pyaemia	053	7
A 21	Diptheria	055	—
A 22	Whooping cough	056	—
A 23	Meningococcal infections	057	—
A 25	Leprosy	060	—
A 26	Tetanus	061	10
A 29	Acute infectious Encephalitis	082	2
A 30	Late effects of Acute poliomyelitis and acute infectious encephalitis		—
A 32	Measles	085	—
A 34	Infectious hepatitis	092	1
A 37	03 Falciparum malaria (malignant tertian)	112	—
A 41	Ankylostomiasis	129	
A 42	02 Ascariasis	130.0	—
A 43	All other diseases classified as infective and parasitic :		
	01 Lymphogranuloma venereum	037	—
	02 Granuloma inguinale, venereal	038	1
	08 Chicken pox	087	—
	19 Gas Gangrene		
	Herpes zoster	088	—
	23 Mumps	089	—
	25 All other diseases classified as infective and parasitic	132–134	1
	II—Neoplasms		
A 44	Malignant neoplasm of buccal cavity and pharynx	140, 148	3
A 45	Malignant neoplasm of oesophagus	150	4
A 46	Malignant neoplasm of stomach	151	20
A 47	Malignant neoplasm of intestine, except rectum	152, 153	3
A 48	Malignant neoplasm of rectum	154	6
A 49	Malignant neoplasm of larynx	161	3
A 50	Malignant neoplasm of trachea and of bronchus and lung not specified as secondary	162, 163	12
A 51	Malignant neoplasm of breast	170	11
A 52	Malignant neoplasm of cervix uteri	171	7
A 53	Malignant neoplasm of other unspecified parts of uterus	172-174	2
A 54	Malignant neoplasm of prostate	177	3
A 55	Malignant neoplasm of skin	190–191	1
A 56	Malignant neoplasm of bone and connective tissue	196, 197	—
A 57	Malignant neoplasm of all other and unspecified sites	155–160 175 176 198, 199	46
A 58	Leukaemia and Aleukaemia	204	3
A 59	Lymphosarcoma and other neoplasms of lymphatic system	200–203 205	4
A 60	Benign neoplasms and neoplasms of unspecified nature	210–239	—
	III—Allergic, Endocrine System, Metabolic, and Nutritional Diseases		
A 62	Thyrotoxicosis with or without goitre	252	1
A 63	Diabetes mellitus	260	26
A 64	Avitaminosis and other deficiency states :		
	01 Beri Beri	280	—
	02 Pellagra	281	—
	04 Vitamin B deficiency, except beri beri and pellagra	286.2	—
	05 Other deficiency states	283–286	5
	IV—Diseases of the Blood and Blood-Forming Organs		
A 65	Anaemics:		
	01 Pernicious and other hyperchromic anaemias	290	—
	03 Other specified and unspecified anaemias	292, 293	3
A 66	Allergic disorders, all other endocrine, metabolic and blood diseases:		
	01 Asthma	241	5
	02 All other allergic disorders, endocrine, metabolic and blood diseases	253	1

Causes of Deaths, 1962—(International Classification)—*Continued*

Intermediate List No.	Cause Groups	Detailed List No.	Total
	V—Mental, Psychoneurotic and Personality Disorders		
A 67	Psychoses	300–309	1
A 68	Psychoneuroses and disorders of personality	310–324	—
		326	
	VI—Diseases of the Nervous System and Sensory Organs		
A 70	Vascular lesions affecting central nervous system	330–334	132
A 71	Nonmeningococcal meningitis	340	5
A 72	Multiple scelrosis	345	—
A 73	Epilepsy	353	1
A 77	02 Otitis media and mastoiditis	391–393	—
A 78	02 All other diseases of the nervous system and sense organs	341–344	13
		350–352	
		354–357	
		360–369	
		395–398	
	VII—Diseases of the Circulatory System		
A 79	Rheumatic fever	404–402	—
A 80	Chronic rheumatic heart disease	410–416	1
A 81	Arteriosclerotic and degenerative heart disease	420–422	129
A 82	Other diseases of the heart	430–434	38
A 83	Hypertension with heart disease	440–443	28
A 84	Hypertension without mention of heart	444–447	13
A 85	Diseases of arteries	450–456	6
A 86	Other diseases of the circulatory system	460–468	2
	VIII—Diseases of the Respiratory System		
A 87	Acute upper respiratory infections	470–475	—
A 88	Influenza	480–483	3
A 89	Lobar pneumonia	490	34
A 90	Broncho pneumonia	491	30
A 91	Primary atypical, other, and unspecified pneumonia	492, 493	17
A 92	Acute bronchitis	500	4
A 93	Bronchitis, chronic and unqualified	501, 502	11
A 95	Empyema and abscess of lung	518, 521	1
A 96	Pleurisy	519	3
		523	—
A 97	All other respiratory diseases :		
	01 Pneumoconiosis	511–517	
	02 All other respiratory diseases	520–522	
		524–527	9
	IX—Diseases of the Digestive System		
A 99	Ulcer of stomach	540	3
A100	Ulcer of duodenum	541	3
A101	Gastritis and duodenitis	543	2
A102	Appendicitis	550–553	2
A103	Intestinal obstruction and hernia	570	5
A104	Gastro-enteritis and colitis, except diarrhoea of the newborn:		
	01 Gastro-enetritis and colitis between 4 weeks and 2 years	571.0	24
	02 Gastro-enteritis and colitis, ages 2 years and over	571.1	3
	03 Chronic enteritis and ulcerative colitis	572	1
A105	Cirrhosis of liver	581	11
A106	01 Cholelithiasis	584	3
	02 Cholecystitis without mention of calculi	585	2
A107	Other diseases of digestive system	536–539	16
		542–544	
		545	
		573–580	
		582–583	
		586–587	
	X—Diseases of the Genito-Urinary System		
A108	Acute Nephritis	590	1
A109	Chronic and other unspecified nephritis	591–594	7
A110	Infections of kidneys	600	6
A111	Calculli of urinary system	602–604	—
A112	Hyperplasia of prostate	610	10
A114	02 Disorders of menstruation	634	—
A114	03 All other diseases of the genito-urinary system	601–603	4
		605–609	
		611, 612	
		614–617	
		622–623	
		635–637	
	XI—Deliveries and Complications of Pregnancy, Childbirth, and the Puerperium		
A116	01 Puerperal eclampsia	685	
	02 All other toxaemias of pregnancy and the puerperium	642, 652, 686	
A117	Haemorrhage of pregnancy and childbirth:		
	01 Placenta praevia	643	—
	02 Haemorrhage of pregancy	644, 670	—
A118	Abortion without mention of sepsis	650	1
A119	Abortion with sepsis	651	2
A120	All other complications of pregnancy and childbirth:		
	01 Ectopic pregnancy	645	—
			874

Causes of Deaths, 1962—(International Classification)—*Continued*

Intermediate List No.	Cause Groups	Detailed List No.	Total
	XI—Deliveries and Complications, of Pregnancy, Childbirth, and the Puerperium—Contd.		
	A120—All other complications of pregnancy and childbirth—*Contd.*		
	03 Delivery complications	673–675	—
	04 Other complications of pregnancy	646, 648 649, 676 680, 683	—
	05 Delivery without complications	660	—
	XII—Diseases of the Skin and Cellular Tissues		
A121	Infections of skin and subcutaneous tissue	690–698	—
	XIII—Diseases of the Bones and Organs of Movement		
A122	Arthritis and spondylitis	720–725	4
A123	Rheumatism unspecified	726–727	—
A124	Osteomyelitis and Periostitis	730	—
A126	All other diseases of the skin and musculoskeletal system:		
	01 Chronic ulcer of skin	715	3
	02 All other diseases of skin	716	—
	03 All other diseases of musculoskeletal system	731–736 738, 744	—
	XIV—Congential Malformations		
A127	Spina bifida and meningocele	751	1
A128	Congenital malformation of Circulatory System	754	2
A129	All other congenital malformations	750–752 753, 755 759	2
	XV—Certain Diseases of Early Infancy		
A130	Birth Injuries	760–761	4
A131	Post-natal asphyxia and atelectasis	762	27
A132	Infections of the newborn:		
	01 Diarrhoea of newborn (under 4 weeks)	764	—
	02 Sepsis of newborn	767, 768	—
	04 Other infections of newborn	763–766	2
A133	Haemolytic diseases of newborn	770	—
A134	All other defined diseases of early infancy:		
	02 Haemorrhagic diseases of newborn	771	5
	03 Nutritional maladjustment	772	—
A135	Ill-defined diseases peculiar to early infancy and immaturity unqualified	73, 776	29
	XVI—Symptoms, Senility and Ill-defined Conditions		
A136	Senility without mention of psychosis	794	32
A137	01 Pyrexia of unknown origin	788.8	—
	03 Certain symptoms referable to nervous system and special senses	780	—
	04 Other symptoms referable to nervous system	781	—
	05 Symptoms referable to cardio-vascular and lmyphatic system ...	782	—
	07 Symptoms referable to upper gastro-intestinal tract	784	—
	08 Symptoms referable to abdomen and lower gastro-intestinal system	785	—
	09 System referable to genito-urinary system	786	1
	12 Nervousness and Debility	790	1
	14 Uraemia unqualified	792	1
	15 Ill-defined and unknown causes of mortality	795	5
	16 Other general symptoms	788–1–788.9	—
	"E" XVII—Code Alternative Classification of Accidents, Poisonings, and Violence (External Cause)		
AE138	Motor Vehicles Accident	E810–E825	9
AE139	Other Transport Accidents		—
AE140	Accidental poisoning	E870–E985	—
AE141	Accidental falls	E900–E904	1
AE142	Accident caused by machinery	E912	—
AE146	Accidental drowning	E929	2
AE147	02 Foreign body entering other orifice	E928	3
	05 All other accidental causes	E910–E911	—
	01 Foreign body entering eye and adnexia		
AE148	Suicide and self-inflicted injury	E970–E979	1
AE148	Homicide and Judicial Execution	E980–E985	7
	"N" XVIII—Code Alternative Classification of Accidents, Poisonings, and/Violence (Nature of Injury)		
AN138	Fracture of skull	N800–N804	1
AN139	Fracture of spine and trunk	N805–N809	3
AN140	Fracture of limbs	N810–N829	4
AN143	Head injury (excluding fracture)	N850–N856	1
AN144	Internal injury of chest, abdomen and pelvis	N860–N869	
AN145	Laceration and open wounds	N870–N908	
AN147	Effects of foreign body entering through orifice	N930–N939	1
AN148	Burns	N940–N949	3
AN149	Effects of poisons	N960–N979	4
AN150	All other unspecified effects of external causes	N950–N959 N980–N999	2
	Grand Total		956

Infant Mortality

Public health workers and sociologists, welfare workers and statisticians attach great importance to the infant mortality rate as a very sensitive index of the state of progress and civilization of a community, of the general level of education, particularly health education, and of the state of environmental hygiene, apart altogether from the yardstick, that it undoubtedly is, as to the efficiency and success of the specific measures that are directed to the prevention and treatment of the accidents and diseases of pregnancy, confinement and post-natal life.

It is enough for me to state in this regard that more and more with each succeeding year it is being realized that the death of infants under one year constitutes a wastage of human life that is in large measure preventable and that it is well worth the time, energy, and expense involved to reduce this wastage and eventually to eliminate it altogether, both from the humanitarian point of view that any life is worth saving as well as from the point of view that the life of a potential bread winner, a potential benefactor, even a potential genius may thereby be saved. Even international organisations like the World Health Organisation (W.H.O.) and the United Nations International Emergency Fund (UNICEF) are beginning to take an active interest in the deaths of infants and children as obtain in this Territory, and help in the shape of milk supplies and equipment are beginning to reach us. What is however urgently needed is an intensive campaign designed to reach every expectant mother, infant, toddler and child in the cities, towns and villages and to bring to them skilled care and treatment in their homes, and adequate nutrition during the critical periods of pregnancy, confinement, post natal and pre-school life. Child welfare work is committed in the main to the care of two recognized bodies : Central Government and the Child Welfare League which work in close co-operation the one with the other. It may be stated in general terms that the purely technical part of the work, ante-natal, intra-natal, and post-natal is done by Government and the welfare part, the care of the expectant mother, the weighing, feeding and clothing of infants, the teaching of mothercraft, the welfare of the expectant mother, the visiting of the homes of mothers and infants, is done by the Child Welfare League, again with the help and assistance of Government. I need hardly state that it is generally admitted that good and satisfactory work has been done and continues to be done ; much more, however, is needed to reduce the high infant mortality rate and no effort should be spared to put a stop to this wastage of valuable human life. There are far too many expectant mothers who do not go either to an ante-natal clinic or to a private doctor and far too many infants are left either without the care and attention of the health visitor either at home or at the child welfare clinic. The first and foremost pre-requisite for the further prosecution of this work is an increase in the number of health visitors who are the pivots around which the whole scheme revolves and of whom there should at all times be a sufficient number to enable every home where an expectant mother and newly born infant resided to be visited at regular intervals. If the mother and the infant will not go to the clinic, the clinic must then be brought to the home, and it would appear that the amount of care and welfare administered and attention and advice given in the home itself, taking into account the circumstances of the home, are of more lasting practical benefit than that administered and given in the ideal conditions of the clinic, which can hardly ever be duplicated in the home.

Besides home visiting has been known to have a highly beneficial effect on the environmental hygiene of the home and surroundings which, we have already stated, has a direct bearing on infant mortality, and may be the means whereby the general sanitation of the neighbourhood is improved and more adequate housing accommodation for mother and child provided.

The number of infants under one year who died in the year under report totalled 121 which with the 2,536 live births recorded for the year gives an infant mortality rate of 47.71 per 1,000 live live births. This represents a higher rate than that for 1961, 116 deaths and 2,610 live births giving an infant mortality rate of 44.44 per 1,000 live births.

This is a rate which is high compared with that of countries of similar size in other parts of the civilized world where infant mortality rates of 30 or so per 1,000 live births are being recorded regularly.

When one considers that out of a total of 2,526 live births 121 have died before they have attained the age of one year, it is clear that this is a very high price to pay in a City that should be and can be provided with all the modern facilities and requirements for prompt and safe confinement and that much more effort is needed by those agencies and organisations that are concerned with maternal and child welfare.

Eighty-four of the one hundred and twenty-one deaths of infants under one year that occurred in the year under report were of infants under one month, in other words the neo-natal mortality was 69.4 per cent. of the total mortality. It is believed that the neo-natal mortality is due to causes operating mainly during the ante-natal and intra-natal period and the high rate seems to emphasise the fact that whilst the mortality in the case of the infants that survive the first month of extra-uterine life is being substantially reduced, hardly any progress whatsoever has been made in so far as the neo-natal mortality is concerned.

If the infant mortality is to be further reduced, the ante-natal causes of that mortality like prematurity, congenital abnormality, marasmus, malnutrition, anaemia, and other ante-natal and

intra-natal causes like haemorrhage, cerebral damage, asphyxia and atelectasis must be enquired into critically and steady research undertaken with a view to discovering the means whereby they can be prevented.

Births and Deaths of Infants under 1 year, 1917-1962

Period	Number of Births	Number of Deaths under 1 year	Infant Mortality Rate
Year 1917	1,770	412	232.77
Yearly Averages :			
1918–22	1,700	310	182.94
1923–27	1,862	274	146.96
1928–32	1,925	230	119.13
1933–37	2,248	215	96.05
1938–42	2,913	275	93.84
1943–47	4,026	248	61.94
Average 1918–47	2,446	259	116.94
1948	4,053	177	43.67
1949	4,037	171	42.36
1950	3,905	168	43.02
1951	3,982	167	41.94
1952	4,115	137	33.29
1953	4,499	157	34.90
1954	5,403	150	27.76
1955	3,078	138	44.83
1956	2,621	158	60.28
1957	2,735	127	46.44
1958	2,592	171	65.97
1959	2,627	158	60.15
1960	2,498	141	56.44
1961	2,610	116	44.44
1962	2,536	121	47.71

Causes of Deaths, under 1 year, 1962

Causes of Death	Neo-Natal Deaths under 1 month	Deaths 1 month and under 1 year	Total	Percentage of Total Infant Mortality
Ante-Natal Causes :				
Ventricular Septal Defect	—	—	—	—
Prematurity	28	1	29	
Marasmus	—	—	—	
Malnutrition	—	—	—	
Congenital Abnormalities	1	—	1	
Congenital Heart Disease	—	1	1	
Hydrocephalus	—	—	—	
Neonatal Sepsis	—	—	—	
Cerebral	—	—	—	
Total Ante-Natal	29	2	31	25.62
Intra-Natal Causes :				
Birth Injury	4	—	4	
Total Intra-Natal	4	—	4	3.31
Post-Natal Causes				
Asphyxia and Atelectasis	26	1	27	
Pneumonia	3	13	16	
Diarrhoea and Enteritis	11	9	20	
Bronchitis	—	5	5	
Icterus Neonatorum	—	—	—	
Pleurisy	—	—	—	
Tuberculosis	—	—	—	
Pulmonary Congestion	4	—	4	
Other Post-Natal Causes	7	7	14	
Total Post-Natal	51	35	86	71.07
Grand Total	84	37	121	

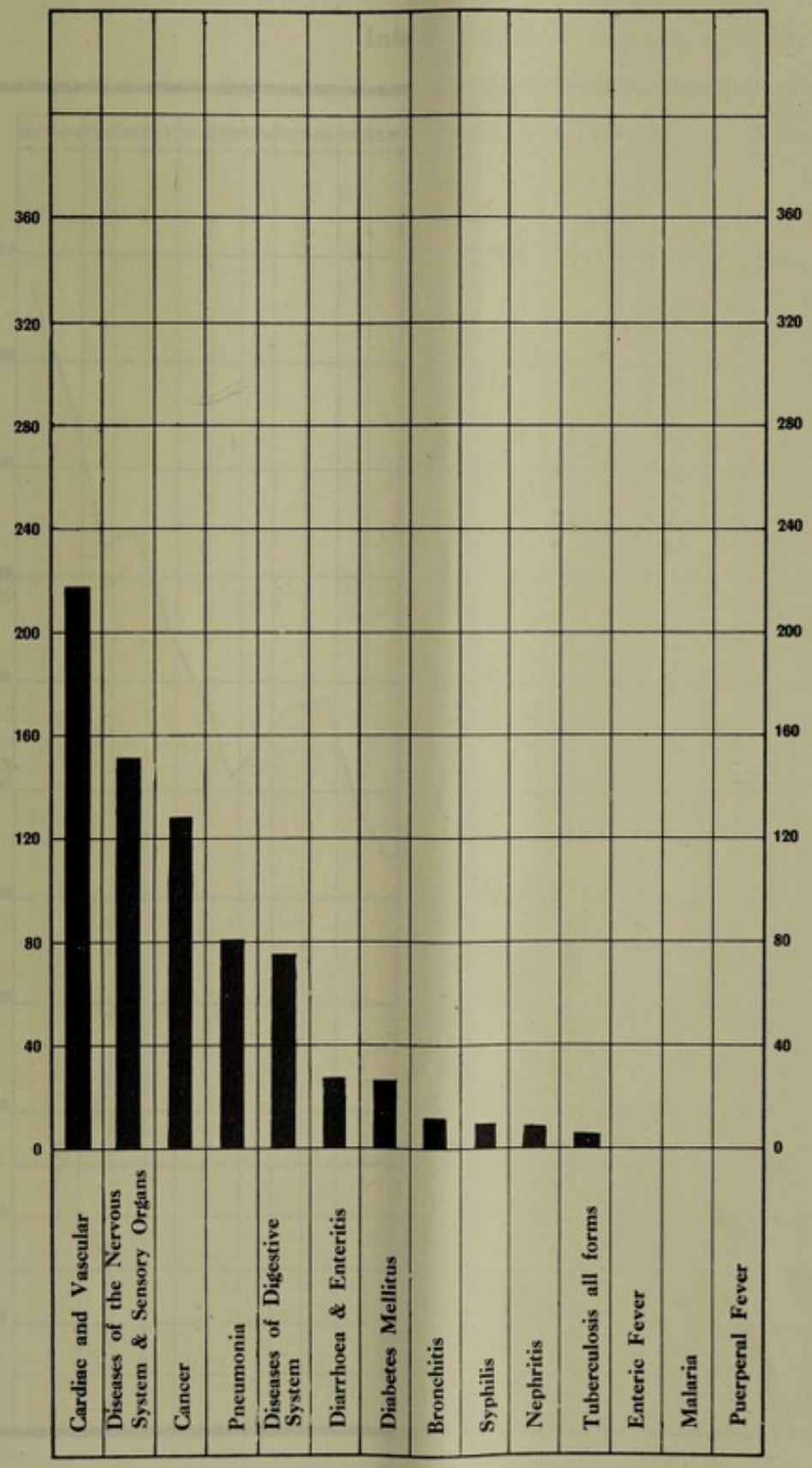
Duration of Life of Infants under 1 year, 1962

Duration of Life	Number of Infants	Percentage of Total Deaths under 1 year	Corresponding Percentage, 1961
Under 1 day	26	21.49	15.52
1 day and under 2 weeks	44	36.36	41.38
2 weeks and under 1 month	14	11.57	6.90
Total under 1 month	84	69.42	63.80
1 month to 3 months	12	9.92	21.55
Over 3 to 5 months	8	6.61	5.17
Over 5 to 7 months	4	3.31	2.59
Over 7 to 9 months	6	4.96	6.03
Over 9 to 11 months	7	5.78	0.86
Over 11 months and under 1 year	—	—	—
Total	121	—	—

CHART E

Port-of-Spain

Principal Individual
CAUSES OF DEATHS 1962



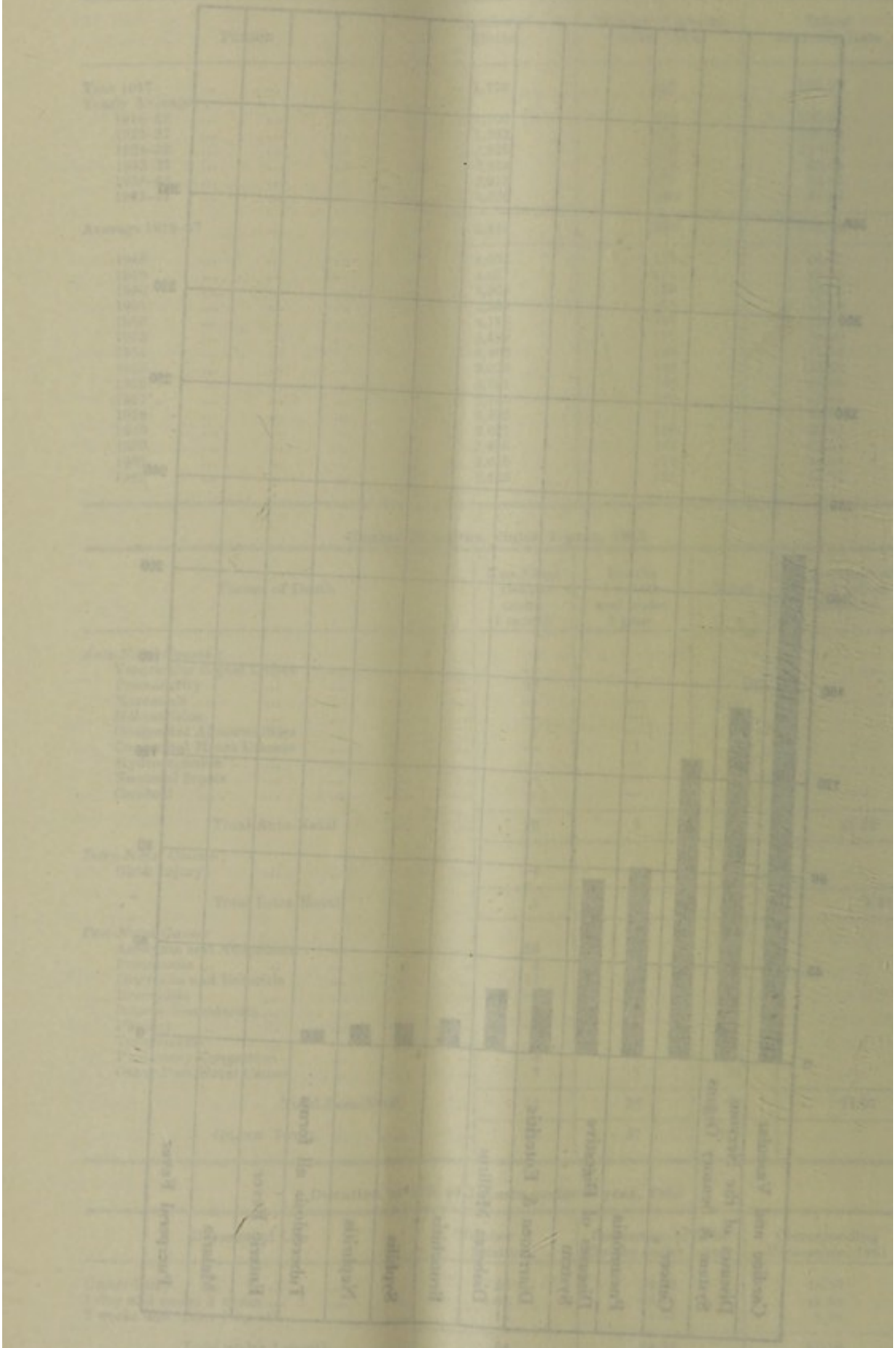
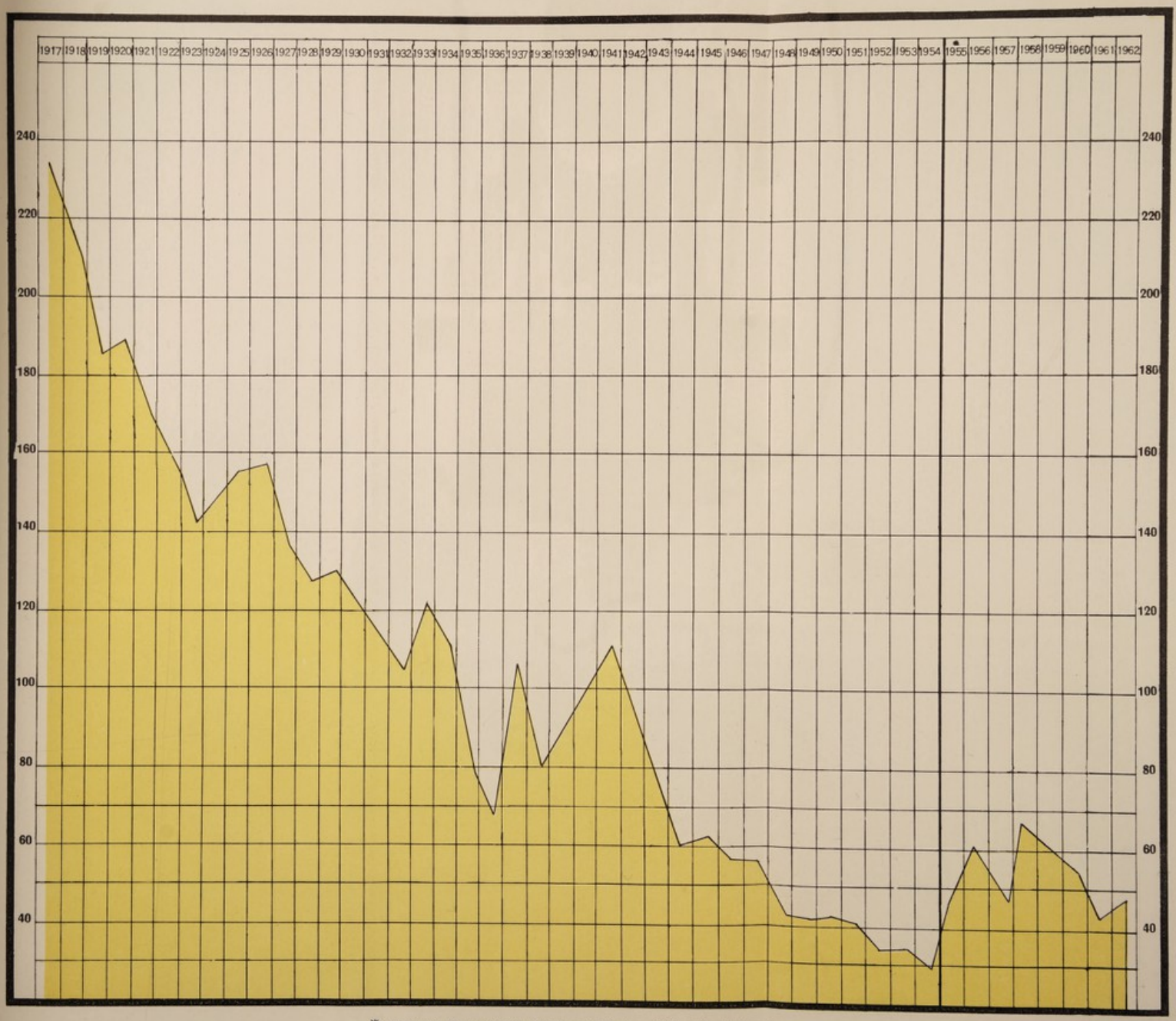


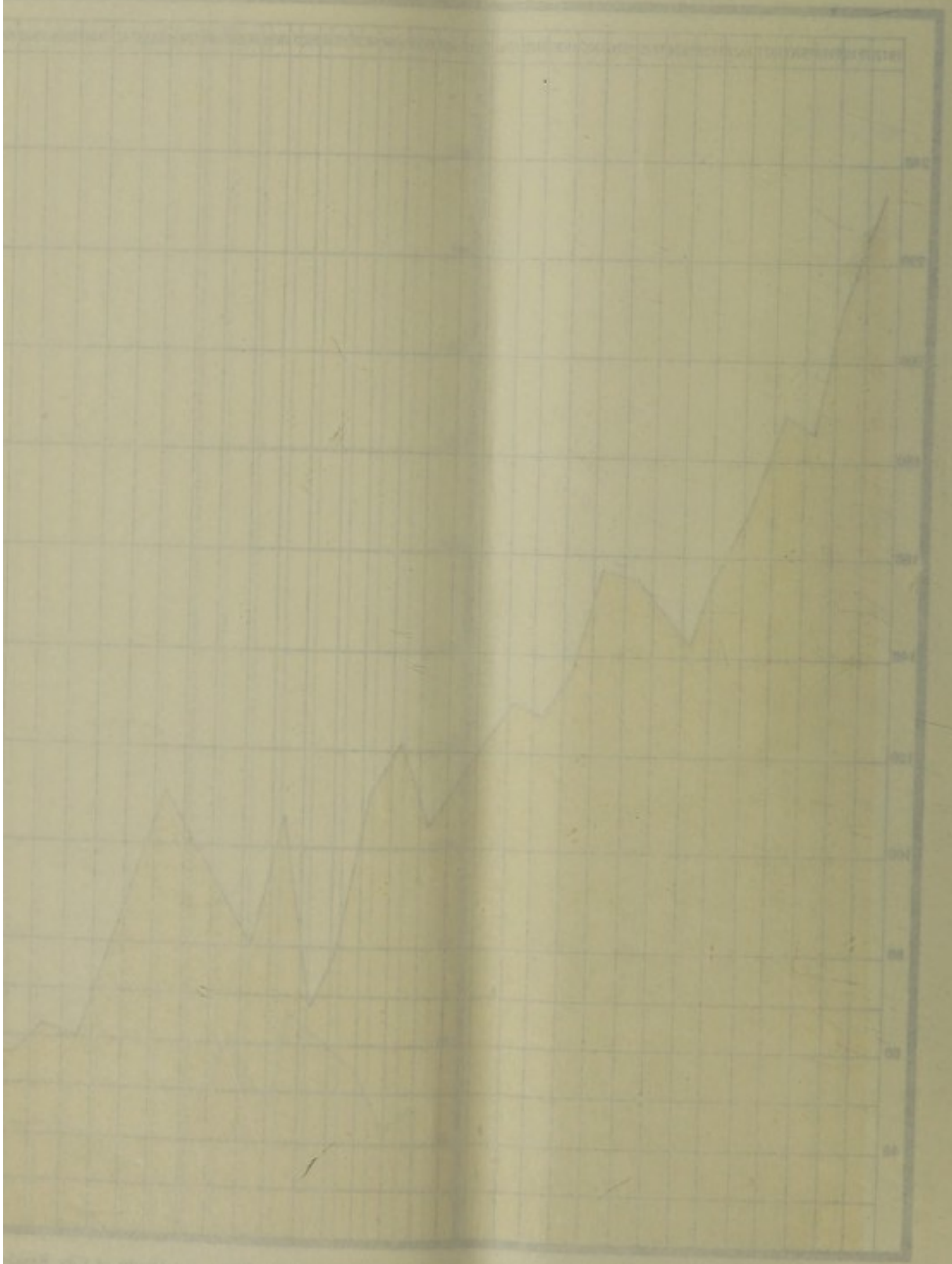
CHART F

Port-of-Spain

Infant Mortality Rates per 1,000 Live Births 1917-1962



* Adjusted Rate (1955): Births and Deaths of City Residents only



Neo-Natal Mortality (Deaths under 1 month) 1930-1962

Period	Number of Deaths under 1 month	Percentage of Total Deaths under 1 year	Neo-Natal Mortality Rate per 1,000 Births
Yearly Average 1930–34	90.6	38.60	44.03
Year 1935	91	50.28	39.24
1936	61	40.94	26.58
1937	110	46.41	48.39
1938	117	57.35	45.16
1939	122	50.41	44.33
Average 1935–39	100.2	49.08	40.74
Year 1940	132	45.36	44.94
1941	137	43.63	47.44
1942	134	41.62	39.42
1943	134	47.35	35.72
1944	117	47.18	28.12
1945	126	52.72	31.72
1946	136	56.43	32.91
1947	133	57.58	32.20
1948	76	42.94	18.75
1949	82	47.96	20.31
1950	82	48.82	21.00
1951	77	46.11	19.34
1952	60	43.79	14.58
1953	84	53.51	18.67
1954	84	56.00	15.55
1955	82	59.42	26.64
1956	67	42.41	25.56
1957	70	55.12	25.59
1958	88	51.46	33.95
1959	93	58.87	35.40
1960	80	56.74	32.02
1961	74	63.80	28.35
1962	84	69.42	33.52

Still Births

The number of still births that occur in any community is a matter of some importance because deaths that occur in the mother's womb is intimately bound up with deaths that occur during the first year of extra-uterine life and particularly with those that take place during the first month of the first year. It is a fact that the selfsame causes that operate to the detriment of the infant in its mother's womb and cause its intra-uterine death are responsible very often for the weakened or injured infant that cannot survive more than a month after birth.

It is a question of the intensity of the lethal agent and the degree of resistance of the infant. Any disease or injury of great intensity acting on an infant of low resistance would have an immediate lethal effect, whereas a disease or injury of less intensity acting on an infant with a greater degree of resistance would permit the infant to be born alive but so weakened as to be incapable of surviving beyond the first year of extra uterine life or even beyond the first month of the first year.

Certain still births are, of course, caused by artificial means and come under the heading of artificial abortion but we are not at the moment concerned with these.

The conditions that cause the death of the infant in the mother's womb may operate during the ante-natal period as well as during the intra-natal period ; of these the chronic systemic diseases like tuberculosis, chronic nephritis, diabetes, chronic heart disease and alcoholism are the more important and operate predominantly during the ante-natal period on the one hand and the diseases, accidents and abnormalities of pregnancy play the important role in the intra-natal period on the other hand. It follows therefore that further efforts to diminish the still birth rate must be concentrated on the elimination and cure of these chronic systemic diseases during the ante-natal period and on prompt, skilled, and readily available intra-natal care during the intra-natal period. In addition to the cure of disease and the avoidance of injury or accident, health education can play a most important part and parents must be made to understand and realise that diseases like alcoholism, insanity, tuberculosis, and diabetes can have a profound effect on the health and resistance of the infant.

During the year under report 64 still births were registered at the Public Health Department which with 2,526 live births gave a still birth rate of 25.24 per 1,000 live births. Since the year 1955 there has been a drop in the number of still births to under 100 per year but this has been due largely to a more careful analysis of the birth and death rates to make quite sure that only City deaths and City births are taken into account when the still birth rate is being calculated.

Still Births, 1938-1962

Year	Total Still Births	Rate per 1,000 Live Births
1962	64	25.24
1961	80	30.65
1960	73	29.22
1959	57	21.70
1958	66	25.46
1957	78	28.52
1956	67	25.56
1955	89	28.92
1954	268	49.60
1953	225	50.01
1952	207	50.30
1951	193	48.47
1950	165	42.25
1949	244	60.44
1948	223	55.02
1947	220	53.49
1946	225	54.44
1945	224	56.39
1944	265	63.69
1943	230	61.32
1942	257	75.61
1941	211	73.06
1940	214	72.86
1939	190	69.04
1938	171	66.00

Maternal Mortality

Maternal mortality is an index of the quality and extent of medical care and attention that is provided during the ante-natal and post-natal period and of the quality and promptness of midwifery services during the period of labour and confinement. When expectant mothers are brought early in the ante-natal period under competent medical care and attention, the diseases and accidents of pregnancy can usually be avoided and where skilled and prompt midwifery services are available, the complications and accidents of labour and confinement are either eliminated altogether or dealt with promptly.

The death of an expectant mother during pregnancy, labour or confinement is a tragedy that should be an often could be avoided and child bearing should be completely free from hazards of any kind and should remain the physiological process that it is meant to be.

It is the business of medical science to prevent disease and save the life of every single member of the community and a child and mother saved might very well be the means whereby greater benefit, greater welfare, and greater happiness are made to accrue to the community.

During the year under report 3 mothers died in pregnancy and during childbirth and this figure, with 2,536 live births, gives a maternal mortality rate of 1.18 per 1,000 live births as compared with the death of 5 expectant mothers and a maternal mortality rate of 1.92 per 1,000 live births in 1961.

Causes of Maternal Deaths, 1962

Causes of Maternal Deaths	Under 16	16 to 25	26 to 35	36 and Upwards	Total All Ages	Rate per 1,000 Births	
						1962	Average 1957–1962
Puerperal Sepsis	—	—	—	—	—	—	—
Eclampsia	—	—	—	—	—	—	0.1
Haemorrhage	—	—	—	—	—	—	0.4
Pernicious Vomiting	—	—	—	—	—	—	—
*Other Causes	—	1	1	1	3	1.18	2.1
TOTAL	—	1	1	1	3	1.18	2.6

*Other Causes includeAbortion with Sepsis 2. Abortion without Sepsis 1.

The Pre-School Child

The child between the ages of 1 and 5 is by comparison with the infant under 1 year completely neglected and lacks by far the care and attention that is devoted to the latter. It seems to be taken for granted that a ssoon as the first year of life is passed the child has taken on a new lease of life and can be permitted to fend for itself without guidance or supervision.

That this is a gross error is being more and more recognised seeing that when next the child comes under medical supervision i.e. when it enters school at the age of 5 it is the rule rather than the exception to discover a number of defects and diseases that could easily with medical care and attention have been prevented and which in some cases have done so much damage that the child is handicapped for life.

It is true that the mortality of children between 1 and 5 is very much less than the mortality of infants under 1 year and that the under 1 year period in a child's life is much more vulnerable than any other period of the child's life but there can be no room for the complacency and the *laissez faire* attitude that prevails.

Child welfare organisation must be such that the child between 1 and 5 years is brought under skilled medical care and attention at regular intervals during this period to enable the necessary preventive and curative measures to be applied at the earliest possible opportunity to the diseases and accidents that occur at this period of life. There is here an urgent need for more health visitors and voluntary workers whose duty it would be to reach the homes of these children and prevent them from falling a prey to diseases and injuries that can have such a crippling effect on their future lives.

In the difficult and complex conditions that obtain in modern life it seems inevitable that mothers be compelled to go out to work to help run the home, a circumstance that must lead to more adequate accommodation for infants and children in crêches and day nurseries and it is therefore incumbent on the Nursing Association and the Child Welfare League, whose functions include the provision of nurseries and nursery schools to take care of a need that is likely to grow greater with each passing year and to get the necessary financial support to extend this work in this particular and important direction.

During the year under report the deaths of 23 children between 1 and 5 were registered at the Public Health Department. The largest number of deaths 6 were attributable to diseases of the Digestive System.

Causes of Death at Ages 1-5, 1962

Groups	Group Total	Percentage of Total Mortality at ages 1–5
Diseases, &c., attributable to Ante-Natal Causes : Congential Heart Disease 1, Congenital Spina Bifida 2	3	13.04
Communicable Disease : Pneumonia 2, Infectious Encephalitis 1	3	13.04
Diseases of the Nervous System : Bilateral Venous Thrombosis (Cerebral, Siginoid) 1; Encephalitis 1...	2	8.70
Diseases of the Circulatory System :	—	—
Diseases of the Digestive System : Gastro Enteritis 3; Enterocolitis 1; Gastric Troubles 1; Cirrhosis of Liver	6	26.09
Diseases of the Respiratory System : Pulmonary Oedema 1	1	4.35
Other Causes : Road Accidents 2; Burns 1; Neuroblastoma 1; Hodgkins Sarcoma 1; Anaemia 2; Respiratory Failure due to Obstruction by Orange Seed 1	8	34.78
	*23	—

*M—10; F—13;

PREVALENCE OF AND CONTROL OVER INFECTIOUS DISEASES

Notifiable Infectious Diseases

The list of infectious diseases which have been declared notifiable and to which sec. 103 of Part XIV of the Public Health Ordinance Ch. 12 No. 4 applies remained the same in the year under report i.e. 21, the last addition to the list, malaria, having been made in March, 1956. Of these 21 diseases 7 have been designated dangerous infectious diseases because of the severity of the disease process itself, because of the large scale epidemics that they can give rise to and have been known to give rise to in the past and especially because their occurrence in any particular locality brings immediately into force quarantine measures that have been decided upon by international agreement. They are plague, cholera, yellow fever, small pox (including alastrim), typhus fever, typhoid fever and anthrax. Typhoid fever and anthrax were proclaimed dangerous infectious diseases in 1937

and 1938 respectively (*Royal Gazette* 30th July, 1937 and *Royal Gazette* 2nd June, 1938). An outbreak of dangerous infectious disease is a cause of great alarm and concern to countries immediately adjoining as well as to countries further away and any such case has to be notified forthwith to the Pan American Sanitary Bureau which is now the regional representative for the Americas of the World Health Organisation and which was established before the World Health Organisation came into being for the specific purpose of safeguarding the health of the Americas. The imposition of quarantine restrictions on any country is a matter of serious import in as much as trade and commerce are materially affected apart altogether from the stigma attaching to the label "dangerous infectious disease". Port-of-Spain and its environs were placed in this unfortunate position in 1954 when a few cases of jungle yellow fever occurred in the forest areas of the Arima and the Nariva-Mayaro District. These were followed in the August of the same year 1954 by what had to be considered a case of urban yellow fever in the periphery of the City. Even though this label was removed in a period of three months and quarantine restrictions lifted, the loss to the Territory was estimated to be in the vicinity of a million and a half dollars.

Section 104 of the Public Health Ordinance prescribes that it is a statutory duty to notify cases of infectious diseases that are declared notifiable to the Medical Officer of Health and this is a duty that is imposed in the main on the medical practitioner who is attending the case or who first saw the case in the course of his practice and it states that the case must notified as soon as there is reasonable suspicion of the disease; in other words there must be no delay whatsoever in notifying the case even though confirmation of the disease is being sought by laboratory investigation or by further observation in Hospital. It is also the duty of the doctor in Hospital to whose care the case is committed to notify the disease to the Medical Officer of Health.

A good deal of unnecessary delay often occurs when these notifications are sent by post to the Public Health Department and practitioners are requested to get in touch with the Department by telephone or send the notification by hand to the Department. It is only by notification at the earliest possible opportunity to the public health authorities that such a case can be promptly and efficiently isolated and the whole chain of measures designed to limit the spread of the disease—isolation, disinfection, and disinfestation, the detection of contacts, inoculation, passive and active immunisation—set in motion.

Practitioners are also requested not to hesitate to refer cases to hospital where proper isolation can be effected whenever it is obvious that the home conditions militate against effective isolation and this is particularly important in the overcrowded, congested, and poorly sanitated homes in the East Dry River and Belmont Sub-districts and in certain other parts of the City where suitable conditions for the rapid spread of infectious diseases are readily available.

Six hundred and forty-two cases of notifiable infectious diseases were reported to the Department in the year under report as against 342 in the previous year 1961. This was due in the main to the outbreak of chicken pox to which I made reference in my report for 1961 and which reached its peak in 1962, 533 cases having been reported. The disease, however, was mild in type and no deaths were recorded. There has never been a death from chicken pox during the whole period that I have been Medical Officer of Health of the City.

For the rest, the figures were not very different from those for 1961 ; 4 cases of typhoid fever and 7 cases of diphtheria were reported as against 8 and 13 in the year 1961; 2 cases of typhoid fever died. On the other hand 70 cases of pulmonary tuberculosis and 19 cases of pneumonia, as against 53 and 9 cases in 1961 were notified and 4 deaths from pulmonary tuberculosis and 81 deaths from pneumonia were certified in the year under report. Again pneumonia showed that it a "poorly notified" disease, 81 deaths being certified to the disease as against 19 cases notified.

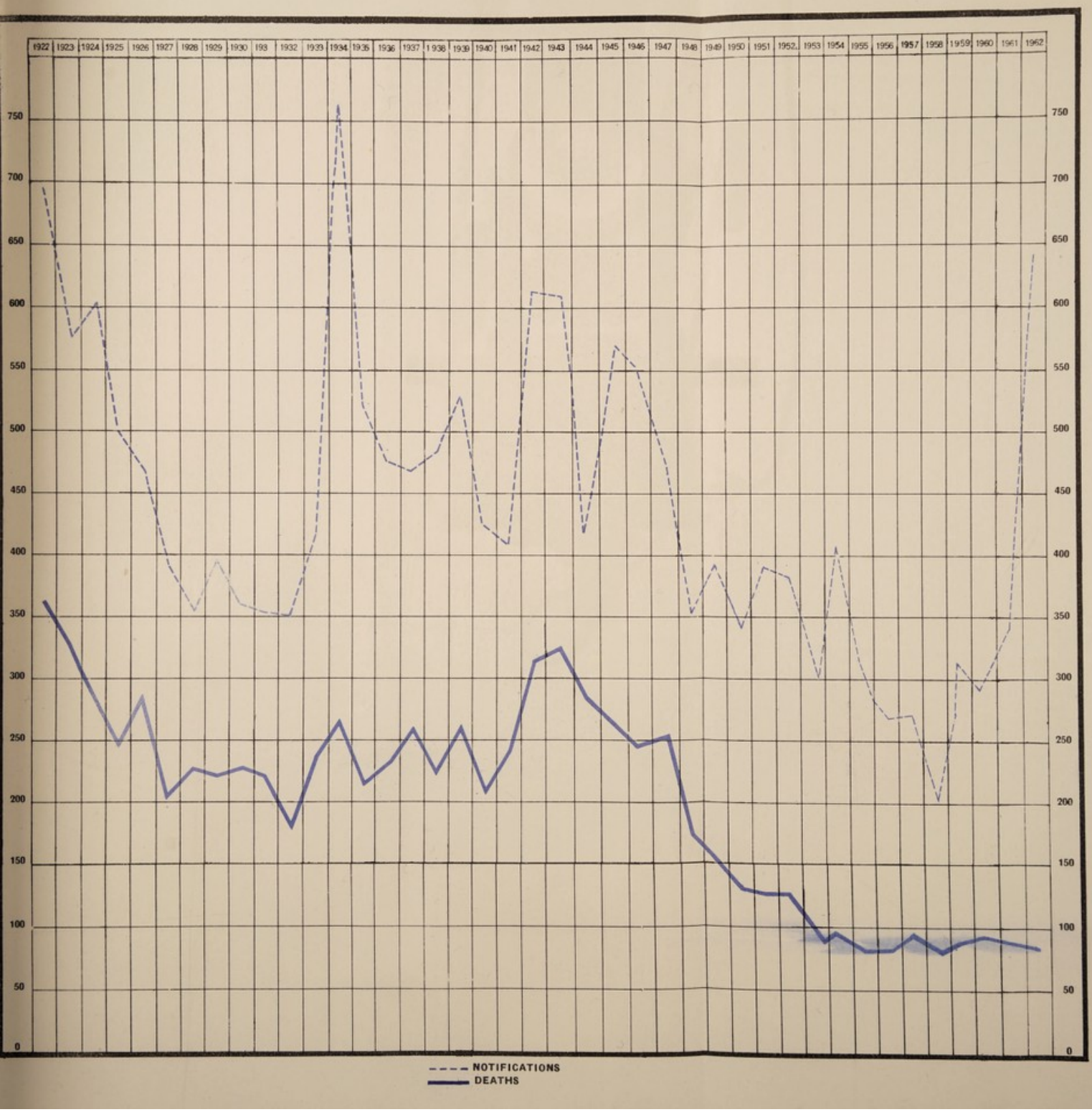
Infectious Diseases—Notifications and Deaths, 1952-1962

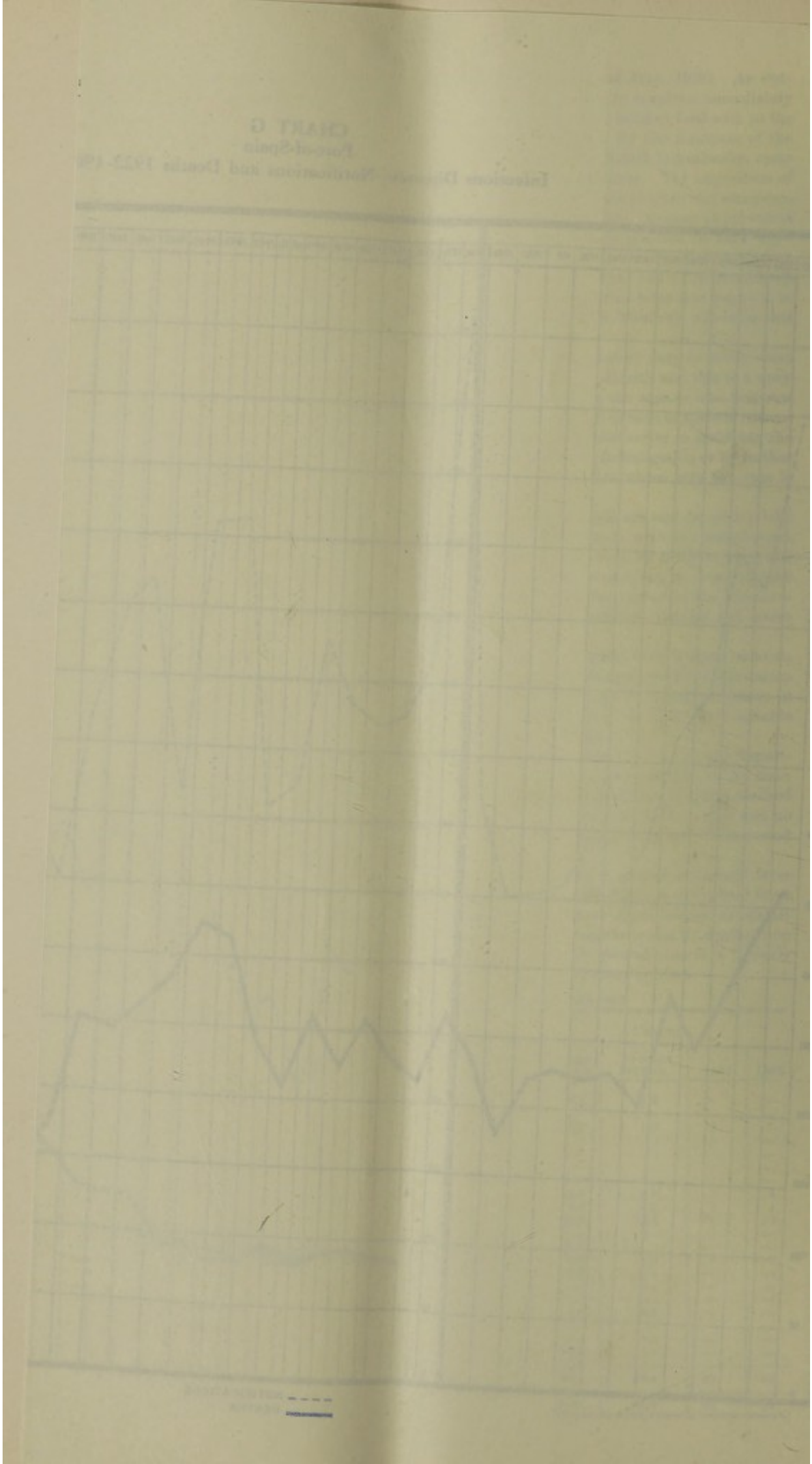
Infectious Diseases	Cases Notified				Deaths			
	Average 1952–56	Average 1957–61	1961	1962	Average 1952–56	Average 1957–61	1961	1962
Diptheria	23.2	18.2	13	7	0.8	1.2	—	—
Membranous Croup ...	0.2	—	—	—	—	—	—	—
Typhoid or Enteric ...	21.0	15.8	8	4	3.0	1.0	2	—
Plague	—	—	—	—	—	—	—	—
Cholera	—	—	—	—	—	—	—	—
Yellow Fever	—	—	—	—	—	—	—	—
Small Pox (Alastrim) ...	—	—	—	—	—	—	—	—
Pulmonary Tuberculosis	122.2	68.8	53	70	19.4	6.4	2	4
Tuberculosis (other forms) ...	3.8	1.2	—	—	5.6	1.2	3	1
Pneumonia	47.8	22.2	9	19	62.8	78.8	89	81
Opthalmia Neonatorum ...	7.8	12.8	5	8	—	—	—	—
Chicken Pox	98.4	140.8	254	533	0.2	—	—	—
Encephalitis Lethargica ...	0.4	0.2	—	—	0.2	1.0	1	2
Acute Poliomyelitis ...	8.0	4.0	—	1	0.2	—	—	—
Cerebo-Spinal Fever ...	0.2	0.2	—	—	—	—	—	—
Typhus Fever	—	—	—	—	—	—	—	—
Puerperal Fever	0.2	—	—	—	—	0.8	—	—
Acute Ascending Myelitis ...	—	—	—	—	—	—	—	—
Anthrax	—	—	—	—	—	—	—	—
Malaria	0.4	—	—	—	0.2	—	—	—
Grand Total ...	333.6	284.2	342	642	92.4	90.4	97	88
Rate per 100,000 Population	291.8	266.2	347	632	80.81	84.7	98	87

CHART G

Port-of-Spain

Infectious Diseases—Notifications and Deaths 1922-1962





Distribution of Cases and Deaths from Notifiable Infectious Diseases, 1962

Diseases	City Proper		St. Clair		East Dry River		Belmont		Woodbrook		St. James	
	Cases notified	Deaths	Cases notified	Deaths	Cases notified	Deaths	Cases notified	Deaths	Cases notified	Deaths	Cases notified	Deaths
Diphtheria	3	—	—	—	2	—	1	—	1	—	—	—
Membraneous Croup ...	—	—	—	—	—	—	—	—	—	—	—	—
Typhoid or Enteric Fever ...	1	—	—	—	1	—	—	—	—	—	2	—
Plague	—	—	—	—	—	—	—	—	—	—	—	—
Cholera	—	—	—	—	—	—	—	—	—	—	—	—
Yellow Fever	—	—	—	—	—	—	—	—	—	—	—	—
Small Pox (Alastrim) ...	—	—	—	—	—	—	—	—	—	—	—	—
Pulmonary Tuberculosis ...	29	2	—	—	17	—	12	1	7	—	5	1
Tuberculosis (other forms) ...	—	—	—	—	—	—	—	1	—	—	—	—
Pneumonia (all forms) ...	2	27	—	3	3	7	5	9	1	8	8	27
Opthalmia Neonatorum ...	2	—	—	—	4	—	—	—	—	—	2	—
Chicken Pox	112	—	1	—	165	—	132	—	98	—	25	—
Encephalitis Lethargica ...	—	1	—	—	—	1	—	—	—	—	—	—
Acute Poliomyelitis ...	—	—	—	—	—	—	—	—	—	—	1	—
Cerebo-Spinal Fever ...	—	—	—	—	—	—	—	—	—	—	—	—
Typhus Fever	—	—	—	—	—	—	—	—	—	—	—	—
Acute Ascending Myelitis ...	—	—	—	—	—	—	—	—	—	—	—	—
Puerperal Fever	—	—	—	—	—	—	—	—	—	—	—	—
Anthrase	—	—	—	—	—	—	—	—	—	—	—	—
Malaria	—	—	—	—	—	—	—	—	—	—	—	—
Grand Total ...	149	30	1	3	192	8	150	11	107	8	43	28
Rate per 100,000 Population in each Sub-District ...	661	133	74	223	839	35	588	43	929	69	242	158

Notifiable Infectious Diseases—Home and Hospital Deaths, 1962

Diseases	Deaths			Hospital Deaths Percentage of Total Deaths	Corresponding Percentage for the year 1957
	At Home	At Hospital	Total		
Diphtheria	—	—	—	—	—
Enteric Fever	—	—	—	—	100.00
Pulmonary Tuberculosis	4	—	4	—	50.00
Tuberculosis (other forms)	1	—	1	—	100.00
Pneumonia (all forms)	44	37	81	45.68	25.84
Puerperal Fever	—	—	—	—	—
Chicken Pox	—	—	—	—	—
Cerebro-Spinal Fever	—	—	—	—	—
Acute Poliomyelitis	—	—	—	—	—
Encephalitis Lethargica	1	1	2	50.00	100.00
Malaria	—	—	—	—	—
Total	50	38	88	43.18	30.93

Premises, &c., Disinfected for Infectious Diseases and Vermin, 1962

Diseases	Premises Sprayed
Pneumonia	7
Tuberculosis	46
Enteric Fever	3
Diphtheria	7
Puerperal Fever	—
Opthalmia Neonatorum	5
Chicken Pox	367
Poliomyelitis	1
Cerebo-Spinal Fever	—
Leprosy	—
Encephalitis Lethargica	—
Total	436
Vermin	633

6,058 Cesspits were sprayed with a mixture of crude and distillate oils (free of charge) as a routine measure of prevention against spread of the bowel-filth diseases.

TUBERCULOSIS

Pulmonary Tuberculosis

Special attention has always been devoted to this infectious disease and special mention made of it in every annual report that I have written because pulmonary tuberculosis was at one time a major public health problem in the City of Port-of-Spain; when I took office in the year 1937 it was the infectious disease that had the greatest incidence and was responsible for the highest mortality besides being at that time third on the list of all diseases responsible for the total mortality in the Urban Sanitary District. The victims of the disease were at that time doomed to despair and suffering and the number of cases that survived the two-year period subsequent to the diagnosis of the disease could be enumerated on the fingers of both hands. The victims of the disease were scorned and spurned, they were often deserted by their relatives and friends and admission to hospital was looked upon as the final act in a drama of sorrow, distress, and suffering. There was as yet no sanatorium to which cases could be sent for rest and treatment, no proper isolation hospital to which advanced cases, whose chances of cure were remote, could be admitted to prevent the indiscriminate spread of the disease ; the surgical treatment of tuberculosis was just being developed and the drugs that were in use at the time were those that relieved symptoms only and not those, such as are now available, that have a direct lethal effect on the causative organism. In circumstances such as these it was inevitable that the uppermost though in the mind of the patient, his relatives and his friends was that he should conceal himself and cases of tuberculosis were driven underground with all the harm to the patient and the danger to contacts that such a procedure entailed. The public conscience, however, was becoming aroused and the work of the Tuberculosis Association, on whose shoulders the main bulk of the measures directed to the prevention and treatment of tuberculosis fell at the time had prepared the ground so well that with the help of a publicity campaign organised by one daily newspaper, the *Trinidad Guardian*, at the time, a sum of money was collected by means of public subscriptions which was to form the nucleus for the building of the modern sanatorium at Caura and which eventually opened its doors to patients in 1949. Compare this state of affairs with the position today when in the year under report only 70 cases of pulmonary tuberculosis were notified and 4 deaths certified to the disease. Four deaths in the Urban Saniatary District certified to pulmonary tuberculosis is the second lowest ever recorded in the annals of the history of the disease, 2 deaths having been recorded in the year 1961.

The Tuberculosis Division of the Health Department of Government established in 1946 and the Masson Isolation Hospital opened in 1948 were slowly and surely taking over the bulk of the work that the Tuberculosis Association had been doing since 1905 and with the division of responsibility for the prevention and treatment of Tuberculosis between the Association for the prevention of Tuberculosis and the Tuberculosis Division of the Health Department of Government, a new orientation was given to the problem of tuberculosis with results that are obvious to anyone who is interested.

It is true to state that today pulmonary tuberculosis no longer presents a major public health problem and whilst the number of cases of pulmonary tuberculosis notified to the Public Health Department remains about the same during the last seven years, the number of deaths certified to the disease gets fewer and fewer with each succeeding year.

The new orientation towards tuberculosis, the certain hope and confident expectation of the sufferer that he can be and will be cured of his disease, and the effect of modern drugs which have a direct lethal action on the causative organism of tuberculosis and of modern surgical procedures, the increased resistance shown by reason of increased contact with the disease, have combined to bring about such a change that the fear of a dangerous complacency creeping in is now claiming the attention of all workers in this field of public health.

There is reason to believe that the incidence of the disease has not kept pace with the diminution in mortality and that there are quite a number of cases that are not notified. Certain it is that more and more cases are undergoing treatment at the hands of private practitioners who sometimes fail to notify the case with the result that when eventually discovered a good deal of damage from the point of view of spread of the disease could have been done and often has already been done. The fault is also to be laid at the door of the individual victim himself who prefers that it be not known that he has fallen a prey to the disease and who stays at home whilst receiving modern treatment from his private doctor. This is the situation that we are faced with and this is the situation that we have to take cognisance of and rectify before it is too late.

The rehabilitation of cured patients which is now the main preoccupation of the Association for the prevention of Tuberculosis is presenting its customary difficulties and efforts are being made to deal with them, but a new problem has crept into the picture, i.e. the rehabilitation of the male ex-patient. What are we to do with these ex-patients in order that they may be able to earn a living and lead a respectable life? The efforts of the Association at male rehabilitation have not proved a success. It is not an easy matter to persuade a number of male ex-patients that they have to spend a sufficiently long time at learning a new job as will enable them to produce an article that can stand up to competition with similar articles in the open market, and even when they have attained the necessary amount of skill it is a problem of the first magnitude to place them in a job. Scorn and prejudice have still to be overcome.

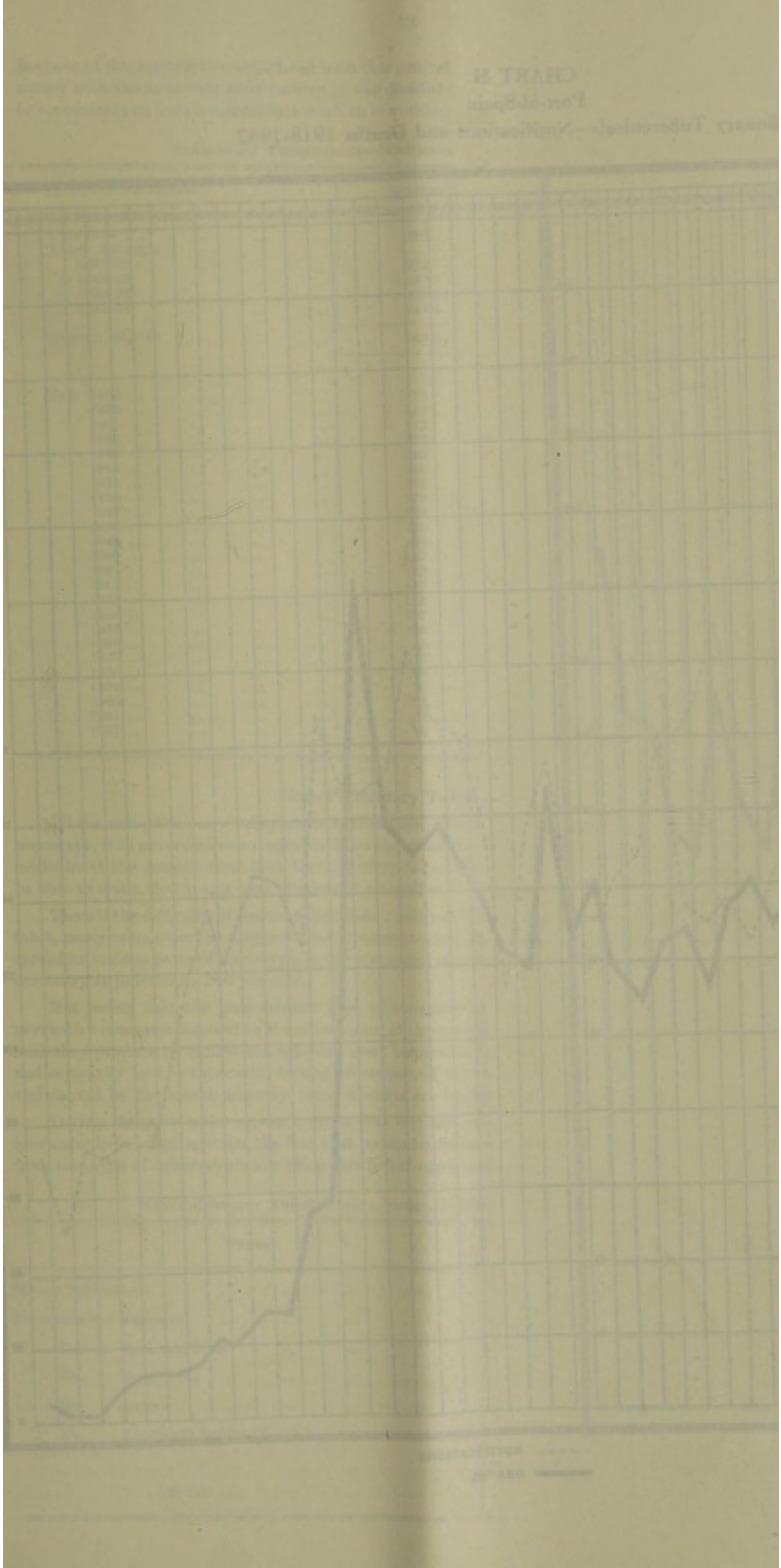
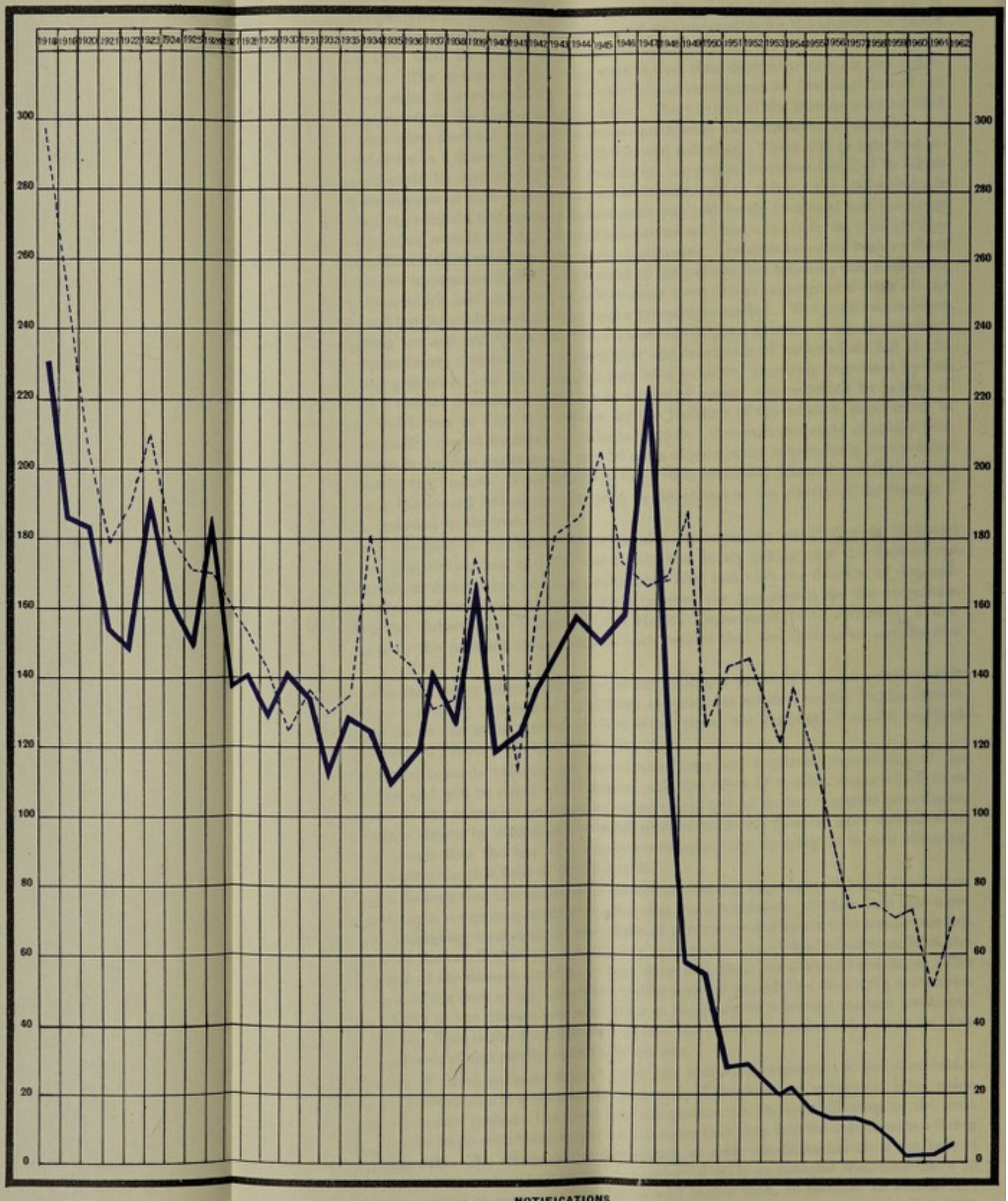


CHART H

Port-of-Spain

Pulmonary Tuberculosis—Notifications and Deaths 1918-1962



Because of the expenditure associated with this project, with the Association spending large sums of money with comparatively small returns, it was decided to close down the male rehabilitation unit and to concentrate on female rehabilitation which is working satisfactorily and at a small profit.

Pulmonary Tuberculosis—Notifications and Deaths, 1918-1962

Period	Notifications	Deaths	Death Rate per 100,000 Population
Year 1918	299	233	343
Yearly Averages :			
1919–23	207	173.2	265
1924–28	167.6	154.6	238
1929–33	133.6	12.9	185
1934–38	147.4	124.6	162
Average 1919–38	163.9	145.4	213
Year 1939	175	167	185
1940	155	118	128
1941	113	124	127
1942	157	136	137
1943	182	148	145
1944	186	158	152
1945	206	140	141
1946	173	158	157
1947	222	167	174
1948	170	108	109
1949	189	58	57
1950	127	55	53
1951	143	27	25
1952	147	28	26
1953	122	20	18
1954	137	22	19
1955	120	14	12
1956	85	13	11
1957	73	13	11
1958	75	9	7
1959	70	6	6
1960	73	2	2
1961	53	2	2
1962	70	4	4

Non-Pulmonary Tuberculosis

Whilst non-pulmonary tuberculosis is that form of tuberculosis which has the highest mortality nowadays, it is nevertheless so susceptible to the measures that are commonly applied in preventive medicine at the present time that there is every hope that the day is not far distant when we shall be able to claim that it has been eliminated altogether.

There is the difficulty of course of diagnosis ; many of these cases are diagnosed on the post mortem table, many more resort to diagnosis and treatment when the disease is already far advanced and has spread to various parts of the body like the meningeal covering of the brain and spinal cord where the mortality is practically 100 per cent.

But seeing that the predominant type of causative organism is the bovine tubercle bacillus, preventive measures directed to the elimination of these bacilli from the flesh of bovines and from the milk they produce by skilled and effective meat inspection, by the boiling and pasteurisation of milk and especially by the tuberculin testing of cattle and the building up of tubercle free herds can be and should be the means whereby these diseases are brought under control.

During the year under report 1 death was certified to non-pulmonary tuberculosis. The table hereunder listed demonstrates the fact that public health measures are bearing fruit and that deaths from this type of tuberculosis are being slowly but surely reduced.

Non-Pulmonary Tuberculosis—Forms, Notifications and Deaths, 1962

Forms	Notifications	Deaths
Miliary Tuberculosis	—	—
Tuberculosis of Meninges	—	—
Do. Spine and Bones	—	—
Do. Peritoneum	—	—
Do. Larynx	—	—
Do. Lymphatic System (Neck)	—	1
Total	—	1

Deaths from Non-Pulmonary Tuberculosis, 1924-1962

Period	Deaths	Rate per 100,000 Population
Yearly Averages :		
1924–28	15	23
1929–33	15.2	22
1934–38	10	13
Average 1924–38	13.4	19
Year 1939	15	17
1940	14	15
1941	6	6
1942	4	4
1943	9	9
1944	10	10
1945	13	12
1946	14	14
1947	11	11
1948	6	6
1949	10	10
1950	14	13
1951	7	7
1952	12	11
1953	6	5
1954	4	3
1955	3	3
1956	3	2
1957	—	—
1958	3	2
1959	—	—
1960	—	—
1961	3	3
1962	1	1

ENTERIC FEVER

If the incidence of pulmonary tuberculosis is held to be a very sensitive index of the state of congestion and overcrowding of a sanitary district, all the more so does typhoid or enteric fever indicate in a very special way the efficiency of the disposal of sewage and the general resistance to infectious disease of the residents of the area.

For it is an undoubted fact that if the infected faecal matter of a person suffering from this disease is promptly and efficiently disinfected and disposed of and if no ready means exist whereby it can gain entry to the body of a healthy individual and reproduce the disease, enteric or typhoid fever must inevitably come to an end.

The aim of all modern methods of sanitation and of the water-borne method of sewage disposal particularly is to lower the incidence of the bowel filth diseases of which typhoid fever is perhaps the most important, and eventually to eliminate them altogether. The water-borne sewerage system insures the speedy removal of faecal matter and particularly infected faecal matter from inhabited premises and its ultimate disposal in a place where it can exert no harmful effect. It is obvious, therefore, that any system of conservancy which permits faecal matter to be retained in and about premises carries with it a grave potential risk that the faecal matter, if perchance it happens to be infected, may cause the spread of typhoid fever, dysentery and other bowel filth diseases.

In the City of Port-of-Spain where less than one half of the Urban Sanitary District is sewered there still remains the privy cesspit system of disposal with a certain number of premises being served by local sewage disposal systems such as septic tanks, or, what is much more usual, cesspools. It is clear therefore that in these unsewered areas the risk of the spread of typhoid fever is a real one, a risk that is ever present but very considerably diminished by the constant oiling and disinfecting of those areas which is an important part of the regular routine work of the Department but which is intensified whenever a case of typhoid fever occurs in the district.

In these circumstances oiling of the privy cesspits within a circle a mile wide is undertaken in addition to measures of disinfection applied to the premises themselves where the case occurred and to the particular cesspit where it is almost certain that infected faecal matter has been deposited.

It is true that by these and other measures including the active immunisation of contacts, the incidence of typhoid fever has been kept down and fewer and fewer cases are occurring each year but if typhoid fever is to be completely eliminated from the Urban Sanitary District, the whole of the City will have to be sewered and a sufficiency of water supplied for the immediate flushing of lavatories and the prompt removal of contaminated matter from the affected premises and this is exactly what is being done at the moment I write. A firm of American contractors, Lock Joint American, (Lojam) is actively engaged in the sewering of the remaining unsewered areas of the City and I am pleased to be able to state that the greater part of the St. James, the Belmont, and the East Dry River sub-districts has now been sewered and soon it will be possible for the individual dwellings and business

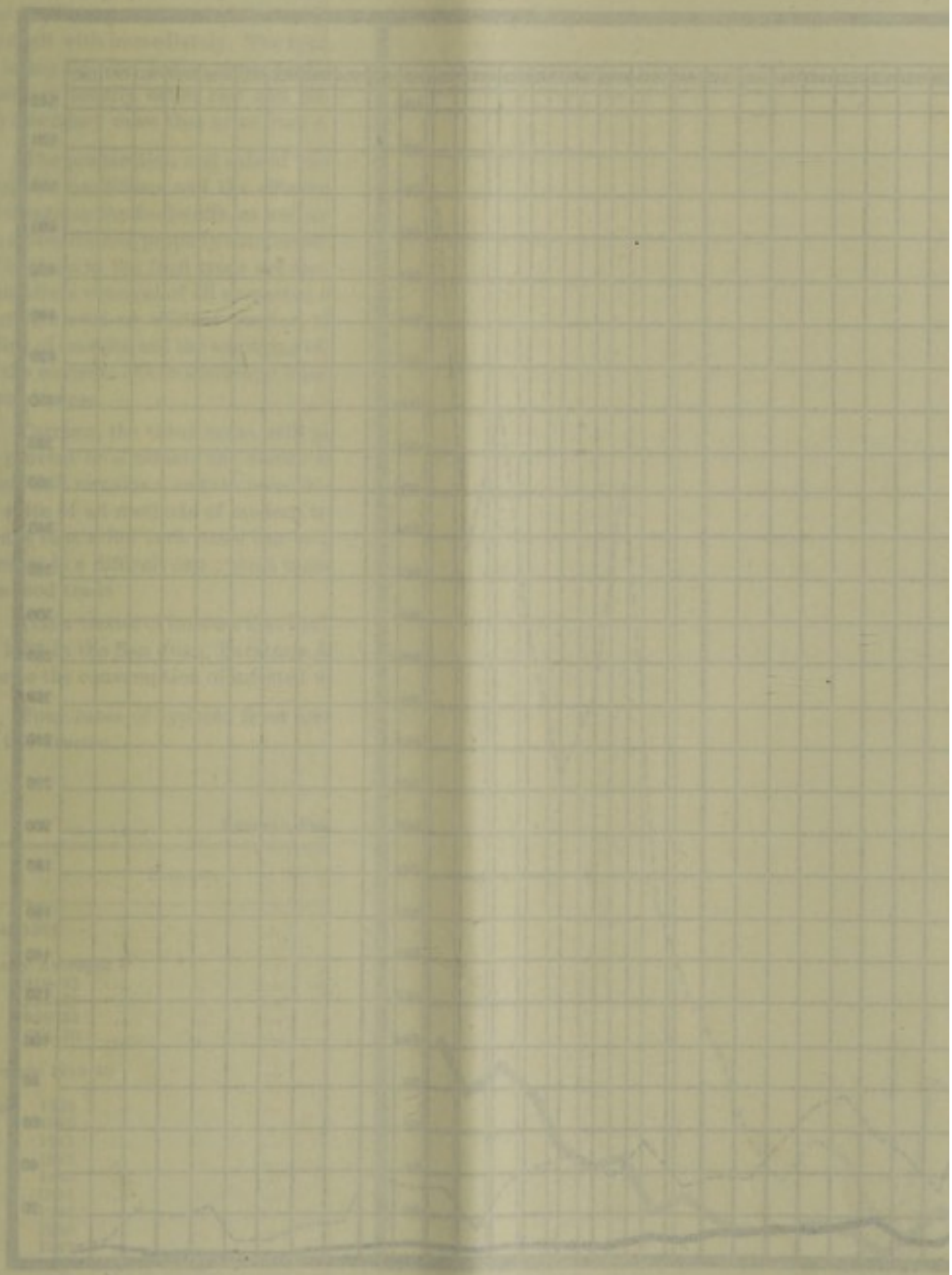
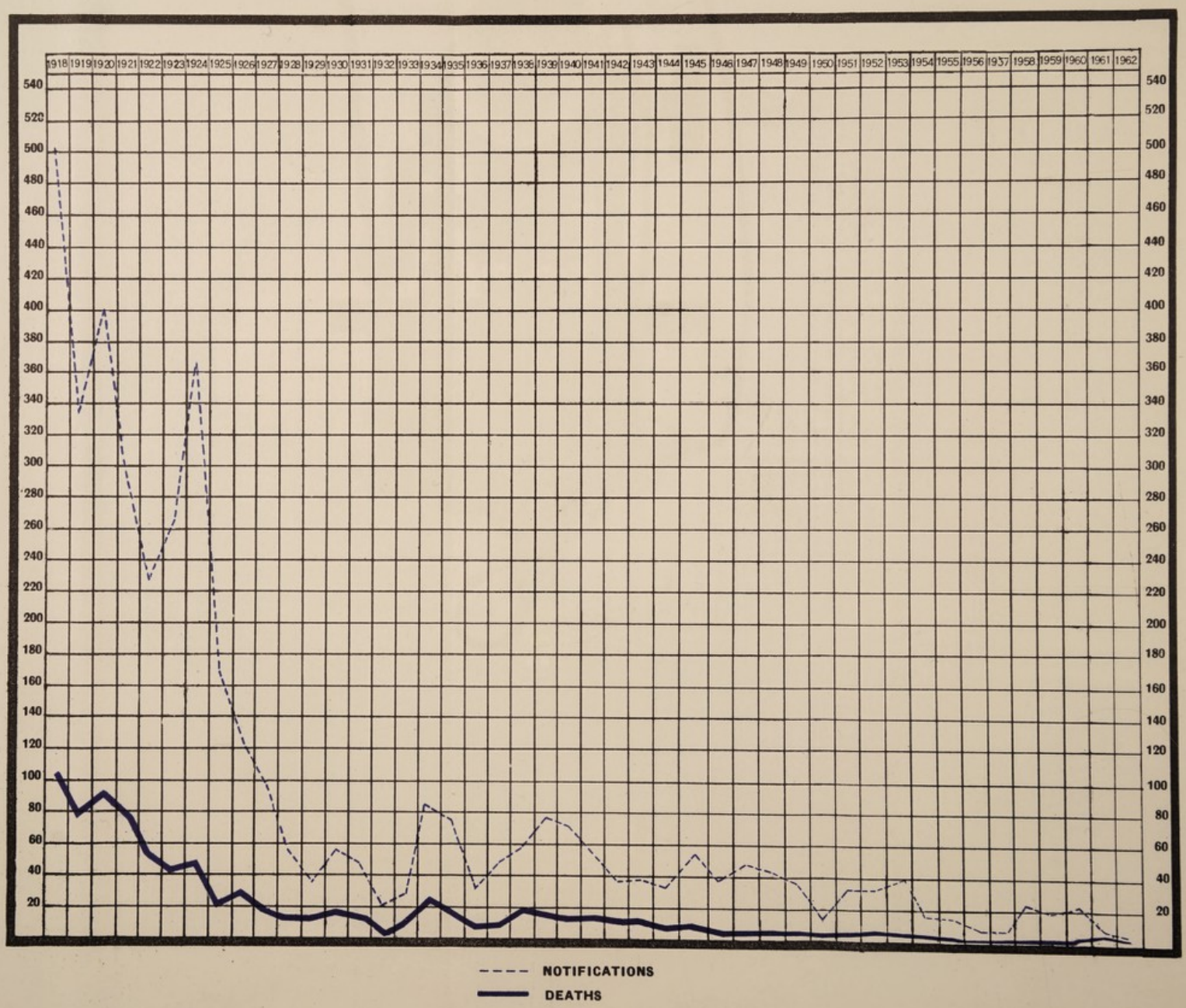


CHART I
Port-of-Spain

Enteric Fever—Notifications and Deaths 1918–1962



places to be connected up with the sewers in the streets and all faecal matter disposed of by waterborne carriage to a treatment plan situated in the Caroni Swamp area to the south of Shanty Town.

Undoubtedly the sewering of the areas has caused a good deal of inconvenience and hardship to the residents, but no amount of inconvenience or hardship can compare even remotely with the immense boon and benefit that will accrue when faecal matter is immediately removed from the vicinity of premises and disposed of safely and securely.

Typhoid fever within the limits of the City is certainly not waterborne, the water supply being made and kept potable by the chlorination of all sources and by the maintenance of a residual in the distribution system to make sure that any possible contamination occurring in the latter system can be dealt with immediately. The typhoid fever that is occurring nowadays in the City of Port-of-Spain is in my opinion due to three causes : (1) contaminated foodstuffs and particularly those foodstuffs that are usually eaten raw and uncooked like watercress, lettuce, cabbage, tomatoes, fruits, &c., (2) secondary cases that arise from a missed or wrongly diagnosed primary case, (3) carriers.

The preparation and sale of foodstuffs by clean, healthy, and intelligent people under improved hygienic conditions and the efficient protection of such foodstuffs from contamination by covering or wrapping the foodstuffs, as well as—and this would appear to be the most important requirement—an extensive and properly conducted health education campaign directed to the raising of the standard of hygiene in the food trade are the means that must be adopted to deal with the first cause ; the immediate removal of all suspected cases of typhoid fever to hospital and the active immunisation of contacts with an efficient vaccine, the disinfection of premises and particularly fomites, the prompt oiling of cesspits and the emptying of septic tanks and cesspits by the vacuum emptier with the disposal of the contents at the Mucurapo Pumping Station, are the measures that are necessary to deal with the second cause.

Carriers, the third cause, still pose a problem ; in spite of every effort by the hospital services to prevent or eliminate the carrier state in the case of typhoid fever before discharge from hospital, there still remains a certain number of cases that continue to discharge bacilli in their urine or faeces in spite of all methods of modern treatment and so remain a potential source of danger. I have no doubt that a few such cases can be found in the Urban Sanitary District and the problem that they present is a difficult one ; such cases must be kept far away from places and persons connected with the food trade

It is a matter of interest that the last big epidemic of typhoid fever in the Territory which originated in 1933 in the San Juan, Barataria District and which spread eventually to the City was found to be due to the consumption of infected water drawn from the San Juan River.

Four cases of typhoid fever were notified in the year under report and no death was certified to the disease.

Enteric Fever—Notifications and Deaths, 1918-1962

Period	Notifications	Deaths	Death Rate per 100,000 Population
Year 1918	495	104	152
Yearly Averages :			
1919–23	301.8	67.8	103
1924–28	162.28	25.2	39
1929–33	37	10.8	16
1934–38	59.8	14.6	19
Average 1919–38	140.3	29.6	44
Year 1939	75	15	17
1940	70	11	12
1941	56	14	14
1942	37	12	12
1943	38	12	12
1944	32	9	9
1945	55	10	9
1946	37	8	8
1947	68	7	7
1948	42	5	5
1949	36	5	5
1950	14	3	3
1951	32	5	5
1952	32	8	7
1953	36	3	3
1954	15	3	3
1955	13	1	1
1956	9	—	—
1957	9	—	—
1958	23	2	2
1959	18	—	—
1960	21	1	1
1961	8	2	2
1962	4	—	—

Inoculation of Enteric Fever Contacts, 1962

T.A.B. Injections

Year	Number Receiving one Injection	Number Receiving two Injections	Total
1947	250	222	472
1948	85	61	146
1949	101	44	145
1950	64	32	96
1951	329	249	578
1952	66	26	92
1953	213	146	*359
1954	101	46	147
1955	50	21	71
1956	43	10	53
1957	40	27	67
1958	412	249	661
1959	153	67	220
1960	84	25	109
1961	205	226	431
1962	19	7	26

*Mass inoculations were carried out during the 1953 outbreak of Enteric Fever at Arima and 8,250 City inhabitants, in addition, were inoculated.

PNEUMONIA

Pneumonia tops the mortality list attributable to diseases of the Respiratory System and has displaced pulmonary tuberculosis, which once occupied pride of place on the mortality list, almost to the bottom of the table. It is a notifiable infectious disease which has always been responsible for a high mortality and which could, when it did not lead to the death of the victim, cause such a degree of invalidism and often give rise to such serious complications like pulmonary tuberculosis, lung abscess, brain abscess, empyema, heart disease and anaemia that the complacency that has now taken the place of the fear and alarm that once characterised the occurrence of the disease in a household is highly dangerous and thoroughly unjustified. At one time it was a disease that practitioners notified with meticulous care and in regard to which the number of notifications received always exceeded the number of deaths certified to the disease but such a change has taken place since 1946 that the deaths certified to the disease now exceed by more than twice the number of notifications that reach the Public Health Department.

In other words practitioners are not nowadays paying the same careful attention to the notification of the disease as they did in the past and are inclined to proceed straight away to the treatment of the case with the newer drugs like the sulpha drugs and the antibiotics like penicillin, &c., that are now available completely oblivious of the fact that the infection can and does spread readily to other members of the family and that it is possible for the disease to assume epidemic proportions such as it did in 1942 and 1943 when 372 and 251 cases of the disease were notified and 112 and 149 deaths certified respectively.

In spite of the efficiency of the newer drugs pneumonia still exerts a high toll of mortality and in the overcrowded and congested sub-districts of the City where the poor, the undernourished, and often the alcoholic reside, where sanitation and environmental hygiene are sub-standard, pneumonia is a serious disease which can and does spread from person to person and which leaves behind a long train of complications that may lead to a fatal termination when the disease itself fails to do so.

It is in circumstances such as these that the preventive measures of isolation, detection of contacts, and disinfection must be resorted to and patients should be given the opportunity of removal to hospital where isolation and current disinfection can be more effectively applied.

Practitioners are hereby reminded of their statutory duty to notify cases of pneumonia as early as possible and so give the Public Health Department the opportunity to institute immediately preventive measures directed to the limiting of the spread of the disease. It does not at all follow that the Department is going to insist on removal to hospital ; if we are satisfied that the conditions of the home are such that effective isolation can take place the need will not arise, but at the very least other preventive measures will be applied and the Department will be in the position to sort out contacts and to keep an eye on the premises and its surroundings in its effort to supplement and enhance the efforts of the practitioner.

In the year under report 19 cases of pneumonia were notified and over four times that number of deaths were certified to the disease ; many of these were, of course, cases of terminal pneumonia, the ultimate complication of a long and debilitating disease, but 19 deaths due to primary, atypical and other and unspecified pneumonias which nowadays are usually termed virus pneumonia, were recorded in regard to which no notifications were received.

Pneumonia—(All Forms)—Notifications and Deaths, 1922-62

Period	Notifications	Deaths	Death Rate per 100,000 Population
Yearly Averages :			
1922–26	111.8	78	123
1927–31	69.8	53.4	79
1932–36	155.4	80.6	110
Average 1922–36	112.3	70.7	104
Year 1937	125	85	110
1938	101	70	83
1939	107	59	65
1940	69	63	68
1941	138	88	90
Average 1937–41	108	73	83
Year 1942	332	152	153
1943	251	149	146
1944	109	97	93
1945	118	79	74
1946	87	61	61
1947	75	64	67
1948	62	51	52
1949	73	74	73
1950	64	54	52
1951	81	80	75
1952	68	72	66
1953	46	52	47
1954	48	58	51
1955	39	65	56
1956	38	67	56
1957	27	83	69
1958	22	59	49
1959	30	70	70
1960	23	93	99
1961	9	89	90
1962	19	81	80

DIPHTHERIA

Diphtheria is an infectious disease that is becoming a source of anxiety to public health workers all over the country and Medical Officers of Health are having to answer more and more questions from parents who are getting more and more conscious of the seriousness of the disease.

More and more cases are making their appearance in the Urban Sanitary District and though the disease remains predominantly of the mild type, yet cases are apt to be missed because the diagnosis is not always borne in mind in any and every case of throat trouble, and deaths are apt to occur from the involvement of the larynx. With each succeeding year it is becoming increasingly clear that a campaiign of active immunisation of pre-school children and school children of the City cannot now be too long delayed and it is here advocated that immunisation with the triple vaccine which promotes immunisation against whooping cough, tetanus, and diphtheria by the use of one single combined vaccine should be given an extensive trial with a view to assessing the results obtained as against the use of diphtheria toxoid alone. And even the quadruple vaccine that immunises against poliomyelitis–whooping cough, diphtheria and tetanus which has recently appeared on the market should be given a trial. It is a matter of importance that this disease be always borne in mind in every case of sore throat and at the least suspicion of the disease swabs should be taken and sent to the Government Bacteriological Laboratory for confirmation of the diagnosis and for test of virulence ; but that treatment with anti-toxic serum be instituted forthwith and not withheld until results of the analysis have been obtained. Extension of the disease to the larynx is such a serious complication that nothing should be left undone that would prevent that possibility.

There is no difficulty nowadays in getting contacts to come willingly and promptly to the Department for protection against the disease and it is customary to administer active immunizing toxoids to all such contacts, two doses of APT being given to children and three doses of TAF to adults. This is considered preferable to giving anti-toxic serum which confers a passive immunity only of short duration, tends to the development of anti-toxic and anaphylactic reactions later on if serum has to be administered to the developed case, and may serve to mask the development of the clinical cases making them more dangerous as carriers of the disease.

During the year under report, 7 cases of diphtheria were notified and no deaths were certified to the disease. The largest number of cases of this disease which were notified to the Department was in the year 1939 when 61 cases were notified with 2 deaths. These cases were really all of a mild type,

diphtheria mitis, and occurred for the most part in the Belmont Orphanage, where one undetected convalescent carrier succeeded in transmitting the disease to 14 other children between the ages of 1–5 and 6–10 years.

Diphtheria—Notifications and Deaths, 1917-62

Period	Notifications	Deaths	Death Rate per 100,000 Population
Yearly Averages:			
1917–21	11.8	1.4	2
1922–26	14.8	2	3
1927–31	23.8.	1.6	2
1932–36	29.8	2.2	3
Average 1917–36	20	1.8	3
Year 1937	30	4	5
1938	16	3	4
1939	61	2	2
1940	37	2	2
1941	30	2	2
Averages 1937–41	34.8	2.6	3
1942	18	3	3
1943	40	4	4
1944	19	3	3
1945	20	5	5
1946	22	2	2
1947	23	2	2
1948	9	1	1
1949	11	2	2
1950	37	3	3
1951	28	1	1
1952	20	1	1
1953	33	1	1
1954	26	1	1
1955	20	1	1
1956	17	—	—
1957	19	1	1
1958	14	2	2
1959	26	2	2
1960	19	1	1
1961	13	—	—
1962	7	—	—

CHICKEN POX

During the year under report the Public Health Department has had to contend with an epidemic of Chicken Pox which started the year before, 1961, and reached its peak in 1962 ; 533 cases were notified as against 254 in 1961 and this number represents the largest number of cases of the disease notified in any one year in the Urban Sanitary District.

No deaths were certified to the disease and on the whole the disease was of the mild type though there were a few severe cases which necessitated a visit by the Medical Officer of Health to make sure that a case of small pox is not being wrongly diagnosed as a severe case of chicken pox. Though chicken pox is a highly infectious disease and one can be quite certain that when once a case has occurred in a family it is going to be very difficult to prevent other members of the family from acquiring the infection and suffering from the disease, it is not aninfect ious disease that causes much concern or alarm except in the overcrowded and congested sub-districts of the City and whenever a case occurs in any of the many dilapidated and insanitary dwellings of the East Dry River and the Belmont sub-districts it is customary for large numbers of contact cases to arise and for the disease to spread far and wide affecting all susceptibles in an ever widening circle.

In such circumstances a certain number of severe cases do occur which immediately bring the possibility of small pox to mind and make it imperative for the Medical Officer of Health to pay a visit to the premises with a view to establishing the diagnosis and sometimes even to direct the removal of the case to hospital, when home conditions are such that effective isolation is not possible, or where it is important that further investigation be undertaken or that the progress of the case be observed in hospital. A missed case of small pox or small pox mistaken for chicken pox could of course lead to a dangerous epidemic of small pox with all the international complications that that entails.

It is important to bear in mind the fact that whilst chicken pox hardly ever leads to a fatal termination yet complications of a serious nature can and do occur which may eventually cause death if not properly taken in hand. It is not unusual for a very debilitated malnourished person

convalescing from a serious attack of chicken pox to fall a victim to pneumonia or even pulmonary tuberculosis and cases of encephalitis following chicken pox do occasionally occur, often with disastrous and even fatal results.

Chicken Pox—Notifications, 1924-62

Period	Notifications	Period	Notifications
Yearly Averages:		Year 1949	57
1924–28	19.8	1950	96
1929–33	41	1951	95
1934–38	110.4	1952	94
1939–43	42.6	1953	51
1944–48	91.8	1954	133
		1955	113
		1956	101
		1957	110
		1958	45
		1959	159
		1960	136
		1961	254
		1962	533

MALARIA

The position in regard to malaria which is now a notifiable infectious disease and which was declared notifiable in March, 1958 for the specific purpose of ascertaining as far as possible the exact incidence of malaria in the Territory remained substantially the same in 1962 as it was in the year 1961 and which was detailed in my report for the year 1961.

To repeat there is very little malaria within the limits of the City and what there is, is due to importation from outside i.e. cases who have acquired malaria outside the City and who have come into the City for treatment, and old febricitants who once lived in a malarious area but who have now taken up residence within the City's limits and who get periodic recrudescences due to the lowering of resistance to an infection that was never really eradicated.

That is not saying that no anophelene mosquitoes are to be found within the City's limits ; in the wet season, particularly, it is possible to pick up mosquito larvae of the anophelene species in the swampy areas at the extreme eastern and western limits of the City but these have never created a problem as they have always been easily brought under control by the time honoured measures of oiling, draining, canalising, cutlassing, &c. It is clear, however, that the culex and anophelene section of the Anti-Mosquito Unit has always to be on the *qui vive* and gangs have at all times to be deployed at the various points of the City where anophelenes from the adjoining areas to the east, northeast, and west are likely to establish breeding grounds.

In so far as the malaria problem of the Territory is concerned the facts are that malaria is with each succeeding year becoming less and less of a public health problem and the accent now is on malaria eradication to attain which there is a well-planned and properly directed campaign in actual execution at the time I write, and the results being achieved bid fair to get rid of any malaria carrying anophelenes and to reduce the malaria problem to one of complete insignificance.

As to the areas that adjoin the City I have in previous reports recorded the fact that the Laventille Swamp together with the contiguous Success Village which were at one time prolific breeding grounds for malaria carrying mosquitoes and in which latter village there occurred many cases of malignant malaria can now be considered free of malaria and a source of great potential danger to the City has been eliminated. The same cannot be stated, however, in so far as the Cocorite Swamp is concerned. It is true that this Swamp and the adjoining areas are kept under the close supervision of and subjected to the effective control of the Malaria Division of the Health Department of Government but the works that are executed here, in which the Public Health Department of the City assumes its share of responsibility, are of a temporary nature only and the permanent major works of swamp reclamation which I have been advocating year in year out have not yet been undertaken, though there are signs that with the widening of the Western Main Road, and the construction of the highway to Chaguaramas the work of swamp reclamation will become inevitable and will have to be undertaken as soon as these projects have been completed.

I would be failing in my duty were I not to record the gratitude of the Local Sanitary Authority to the Malaria Division of the Health Department of Government for the active co-operation and ready assistance given to all the many and varied mosquito problems that affect the City.

The work of the anophelene and culex sections of the Anti-Mosquito Unit of the Public Health Department continued unabated in the year under report and it is obvious that the workers must always be on the alert and must persevere with their day-to-day routine, if the position won after so many years of consistent effort devoted to the elimination of potential anophelene breeding grounds is to be maintained.

No return in which the cause of death was certified to be malaria was received at the Public Health Department during the year under report.

Malaria—Local Distribution of Deaths, 1953-62

Sub-Districts	Deaths									
	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962
City Proper ...	—	—	—	—	—	—	—	—	—	—
St. Clair ...	—	—	—	—	—	—	—	—	—	—
East Dry River ...	—	—	—	—	—	—	—	—	—	—
Belmont	—	—	—	—	—	—	—	—	—	—
Woodbrook ...	—	—	—	1	—	—	—	—	—	—
St. James ...	—	1	—	—	—	—	—	—	—	—
Total ...	—	1	—	1	—	—	—	—	—	—

ACUTE ANTERIOR POLIOMYELITIS

This is an infectious disease that is usually associated with a good deal of scare and alarm whenever and wherrver an outbreak occurs and considering the high mortality that certain types of the disease give rise to and the crippling results that the disease can produce it is fortunate that we in this Territory generally and in the City especially have been so luckily spared, seeing that so few cases of the disease are notified and in fact do occur normally.

Numbers of cases of this disease do, of course, occur in the United States of America, in the United Kingdom and in the large cities of Europe and just recently in 1962 an outbreak of the disease occurred in British Guiana in which quite a large number of cases occurred.

Occasional outbreaks do occur in Trinidad and Tobago, such as we had in 1942 when 26 cases and in 1954 when 35 cases were reported in the City but it cannot be stated with truth that we have had to endure the havoc, misery, and suffering that the disease has inflicted on other people and in other countries of the world. The disease so far has maintained the mildness which has on the whole been a feature of the outbreaks of 1942 with 3 deaths and of 1954 with no deaths, but how long this not unfavourable state of affairs is likely to continue no one can tell ; a change in type of the disease with all the dire consequences attendant upon this is a possibility that cannot be discounted, now that sea and air traffic has brought us in such close touch with countries which are severely afflicted.

Fortunately vaccines that are potent and effective are now available and particularly are we grateful for the Sabin type of oral vaccine, vaccination of children up to the age of 10 years with which will almost inevitably have to be undertaken in the not too distant future. Certain it is that more and more requests for vaccination are being received at the Department with each succeeding year.

Acute Anterior Poliomyelitis—Notifications and Deaths, 1927-62

Year	Number of Cases Reported	Deaths	Year	Number of Cases Reported	Deaths
1927–29	—	—	1947	—	1
1930	5	1	1948	3	2
1931	—	2	1949	4	—
1932	3	—	1950	—	—
1933–35	—	—	1951	—	—
1936	3	—	1952	3	—
1937	10	1	1953	—	—
1938	2	—	1954	35	—
1939	1	—	1955	2	—
1940	—	—	1956	—	—
1941	15	4	1957	13	—
1942	26	3	1958	5	—
1943–44	—	—	1959	1	—
1945	—	1	1960	1	—
1946	1	—	1961	—	—
			1962	—	—

OTHER NOTIFIABLE INFECTIOUS DISEASES

No notifications of or deaths from Cerebro-Spinal Fever or Paralytic Rabies, i.e. Acute Ascending Myelitis, were received at the Public Health Department during 1962. Two (2) deaths from Encephalitis Lethargica, however, were recorded.

No cases of Plague, Cholera, Typhus, Yellow Fever, or Small Pox—variola major or variola minor—were reported to the Department during the year 1962.

NON-NOTIFIABLE INFECTIOUS DISEASES

Under this heading are listed diseases which can be and very often are highly infectious or have been known to spread very rapidly in the area where they are occurring; in fact some of these diseases have been known to spread all over the civilized world in the nature of waves of infection and to be responsible for a very high mortality. I refer particularly to the disease influenza which has been responsible for several pandemic waves of infection and which in the great pandemic after World War I was the cause of more deaths than occurred during the whole four years of hostilities.

It is customary to include under this heading eight diseases, three of which are usually spread by means of droplet infection viz. measles, whooping cough, and influenza; two by direct contact with persons suffering from the disease viz. syphilis and leprosy; two by infection of the body with contaminated faecal matter viz. dysentery and ankylostomiasis; and one by means of an intermediate host, though malaria has now been declared a notifiable infectious disease and is so listed.

Measles and whooping cough are common diseases and occur during childhood particularly; they are among the major causes of the chest troubles that children suffer by reason of the lung complications that occur so frequently during their course, e.g. broncho-pneumonia. In fact measles can spread so rapidly and whooping cough can be responsible for so much disablilty that in times of great prevalence they can be and have been known to be declared notifiable in order that the public health officer be given the opportunity to sort them out and isolate them under conditions which will limit their spread and to apply the well known preventive measures of current and terminal disinfection of cases and fomites, and the inoculation of prophylactic vaccines.

Syphilis and leprosy are diseases that are spread by intimate contact and in the case of leprosy close and direct contact over a period of years seem to be the only method by which the disease may be transmitted as has been demonstrated in leprosaria all over the world and even at our own leprosarium at Chacachacare. The toll of mortality that they exact is appreciable enough but they are in addition the cause of much suffering, misery, social stigma and economic wastage due to the loss of labour and manpower, chronic invalidism, and disease of the various systems of the body. It is for this reason that the Venereal Disease and Leprosy Divisions of the Health Department of Government are actively engaged in campaigns whose objective is the detection of cases, the curing of the disease, and the prevention of the spread of infection by a well directed health education programme.

Ankylostomiasis is a rare disease within the limits of the City but cases can occur and do occur occasionally in the upper hilly areas of the East Dry River and Belmont Sub-districts where faecal matter is apt to escape from defective privy cesspits and to contaminate the toes and feet of residents who go about barefooted and so start the chain of infection.

Dysentery and Diarrhoea and Enteritis are conveyed through the agency of food, especially foodstuffs of the green variety that are usually eaten raw like cabbage, watercress, lettuce, spinach, tomatoes, fruit that is eaten unwashed and unpeeled and milk, food, and fruit that are contaminated with faecal matter infected with the causative organisms. They are capable of causing a high mortality and diarrhoea and enteritis especially is responsible for a large number of deaths of infants under one year of age and in children of the pre-school period.

It is not possible to state with any degree of certainty how prevalent these diseases are in the Urban Sanitary District since only the death returns are available to gauge their incidence and with the increasing success that is attending treatment with the newer drugs it is clear that the mortality attributable to these diseases is getting lower and lower. Even the death returns do not give a completely correct picture of the state of affairs due to the fact that many death returns give as the immediate cause of mortality many of the complications of the disease and it is only by a close analysis of the returns does it become clear that the underlying cause which was responsible for the death of the patient was indeed and in fact one of these non-notifiable infectious diseases. Such for instance is a death which is stated to be due to aortic aneurysm, cerebral thrombosis, hemiplegia, coronary thrombosis, and even aortic regurgitation all of which are often caused by syphilis which is the underlying basic disease that gave rise to the complication that was the immediate cause of death. Liver abscess may be the only clinical manifestation of amoebic dysentery and may be responsible for the death recorded; likewise anaemia may be due to ankylostomiasis and myocardial degeneration to

influenza. It is therefore very likely that quite a number of these diseases are occurring in the City and are causing a good deal of illness and disability and only by a proper system of notification would it be possible to gauge their incidence.

Non-Notifiable Infectious Diseases—Home and Hospital Deaths, 1962

Diseases	Deaths			Hospital Deaths percentage of Total Deaths	Corresponding percentage for the year 1961
	At Home	At Hospital	Total		
Whooping Cough	—	—	—	—	—
Influenza	3	—	3	—	—
Dysentery	—	2	2	100.00	—
Ankylostomiasis	—	—	—	—	—
Syphilis	5	4	9	44.44	55.55
Leprosy	—	—	—	—	—
Total	8	6	14	42.86	38.46

SYPHILIS

Syphilis makes such widespread and dangerous incursions on all tissues of the human body that its importance as a public health problem of the first order cannot be over-estimated. The problems that syphilis present are in part clinical, in part preventive, in part sociological. The clinical problems of syphilis are being adequately and efficiently tackled by the Veneral Diseases Division of the Health Department of Government which had its beginning in the year 1943 by the establishment of a centre for veneral diseases in the old U.S.O. Building in Wrightson Road, supported then by funds provided by the Development and Welfare Organisation of the Imperial Government and by the Central Government and at that time under the care, control, and direction of Colonel O. C. Wenger, that "aggressive syphilis fighter" as Kabi calls him, of the American Army. This Division is now an integral part of the Health Department of Government and is run by local personnel with funds allocated by Government in each year's budget. The results which have been achieved by the Division in the detection and treatment of venereal disease, the awakening of the public conscience to the dangers and ravages of these diseases; the re-education and sometimes the rehabilitation of the known members of the prostitute class who are in the main responsible for the ready spread of the disease are indeed gratifying. In so far as the City of Port-of-Spain is concerned the work of this Division of the Health Department of Government has been of inestimable value to the Public Health Department and once more the Local Authority desires to record its gratitude for the solid achievement of the Division and for the great benefit to the public health of the City that has accrued from its activities.

The more overt manifestations of syphilis are nowadays quite rare and it is an uncommon experience to encounter in the course of the daily routine a case of primary chancre and when one does occasionally, whilst examining labourers or food handlers, there is no difficulty whatsoever in persuading such patients to go to the Caribbean Medical Centre for treatment and advice and they are known to persevere with their treatment until they have been pronounced cured; this is in marked contrast to what obtained 10 years ago when it was extremely difficult to get such cases to continue with their treatment especially after the primary chancre had healed; as a direct result the secondary and tertiary manifestations of the disease are being prevented from making their appearance. The tissues of the central nervous system, of the heart and blood vessels, of the liver and kidneys, are nowadays the chief seat of the clinical manifestations of syphilis and this is undoubtedly due to the fact that the inadequate and inconclusive treatment of former days is making its influence felt in the form of this attack on these very delicate and vulnerable tissues. The tertiary manifestations of syphilis are in the first place less amenable to treatment than the primary disease and in the second place they play an important part in the large number of diseases of the heart and bloodvessels that are occurring nowadays and which are responsible for an ever increasing toll of mortality.

It is clear therefore that the only hope lies in a concerted drive to prevent the disease by educating prospective victims as to the dangers of the disease and how it can be acquired; what means can be applied to prevent it, what facilities exist for the prompt and effective treatment of the disease if by chance it has been acquired and how its spread to others can be limited, and it is gratifying to be able to record that it is exactly such a campaign that is being actively prosecuted by the Veneral Disease Division of the Health Department of Government.

The sociological problem that venereal disease presents is that more and more it is being recognised that the main source of the disease under modern conditions is members of the prostitute class who, sometimes through ignorance and sometimes through actual perversity, continue to spread the disease This type of person is slow to go to the Clinic and persuasion seems to have very little effect; it would appear that the compulsory notification of this class will have to be seriously considered, though

the collateral problems of the possibility of driving the disease underground, the question of financial aid from the Government &c. are of sufficient importance to cause an acute difference of opinion as to the value of notification.

It is, of course, a well recognized fact that the returns that list syphilis as the cause of death represent only a proportion, perhaps only a minor proportion, of the deaths attributable to the disease, due to a large extent to failure on the part of the practitioners to fill in adequately and correctly the death certificate. A death ascribed to cerebral thrombosis, to hemiplegia, meningitis, aneurysm, aortic regurgitation, coronary thrombosis or even to arteriosclerosis is often a death that should have been certified to syphilis, which was the basic underlying systemic disease that gave rise to the complication that led to the terminal event.

Deaths from Syphilis, 1918-62

Period	Deaths	Rate per 100,000 Population
Yearly Averages:		
1918–22	16.2	24
1923–27	56.8	88
1928–32	28.2	41
1933–37	21.8	29
Average 1918–37	24.6	37
Yearly Average 1938–42	24.6	27
1943	29	27
1944	36	35
1945	22	21
1946	20	20
1947	21	22
1948	8	8
1949	7	7
1950	8	8
1951	11	10
1952	6	5
1953	7	6
1954	8	7
1955	13	10
1956	18	15
1957	13	11
1958	17	14
1959	13	13
1960	12	13
1961	9	9
1962	9	9

DYSENTERY, DIARRHOEA AND ENTERITIS

These infectious diseases are usually considered together and the only reason perhaps why this is done is due to the fact that their method of spread follows a common pattern i.e. the infection of the intestines of man by swallowing bits of excreta contaminated with the causative organisms. Though the organisms vary, being bacilli of the food poisoning type, i.e. salmonella sometimes, true dysentery bacilli at other times, and protozoa occasionally, in order to initiate the disease these organisms must find their way via the mouth to the intestinal tract of man and this is generally done through the medium of contaminated foodstuffs, particularly those of green variety that are usually eaten raw or partially cooked and those of the made-up variety that are subjected to much handling like ice-cream, mayonnaise, pies, sausages, pastry, &c. It also does happen on occasions that tinned foodstuff is the vehicle whereby these infections are introduced into the body, particularly tinned foodstuffs that are in the early stages of blowing due to inadequate and improper processing. Transmission from case to case by fingers and formites is, of course, a possibility if those who are attending or nursing a case of these diseases are not careful about disinfecting or washing their fingers thoroughly before partaking of food, or are victims of that disgusting habit of licking or sucking the fingers, but this method of spread is rare and exceptional.

Inaccurate and incomplete certification of the causes of death may cause returns to be labelled dysentery or diarrhoea when the basic underlying cause is cancer of the bowel or intestinal tuberculosis, but these errors are rarely met with nowadays with the greater care that is being exercised in the certification of the causes of death since the adoption of the International Classification of 150 causes of morbidity and mortality particularly.

The diarrhoea and enteritis of infants appears to be a disease *sui generis* and is very likely caused by organisms of either the food poisoning or dysentery variety. It appears certain that the vehicle of transmission is contaminated milk or liquid food in which fresh milk or dried milk or condensed milk forms the essential part. Exposure of this type of food to the dirt, dust and germs of the atmosphere in an open kitchen or pantry where the temperature is suitable for the rapid multiplication of organisms almost invariably leads to contamination. It is important to bear in mind that milk foods are very susceptible to contamination and should be consumed almost as soon as they are prepared and the greatest care given to feeding bottles, spoons, saucers, cups and last but not least

to the hands of those in attendance upon infants and young children. That flies play some part is almost certain seeing that these cases are more prevalent whenever there is an outbreak of fly nuisance such as occurs during the early dry season in poorly sanitated areas where there is an accumulation of vegetable or animal organic matter with the necessary moisture to provide the medium suitable for the hatching out of fly larvae. Infants and children in these areas fall easy prey to the disease and seeing that it is in these areas that the poorer sections of the community live, in whom undernourishment and malnutrition are common findings, it is not surprising that the disease exerts such a high toll of mortality. There appears also to be some connection between the disease and the privy cesspit system of sewage disposal, for analysis of the death returns, in which diarrhoea and enteritis was certified to be the cause of death, proves conclusively that by far more infants and children succumb to this disease in the unsewered areas. It is in these areas that the link between non-fly-proof privy cesspit and exposed foodstuffs is so easily supplied by the domestic housefly whose breeding place is invariably to be found in the heaps of vegetable and organic matter that can usually be found on these premises. Preventive measures designed to secure clean wholesome food, milk and ice cream that is effectively pasteurised and generally to prevent the contamination of foodstuffs with dirt, dust, vermin, flies and other insects and at the same time to improve the general level of environmental hygiene, with the elimination of congestion and overcrowding, and last but not least the elimination of the privy cesspit system by the substitution of a water-borne sewerage system are an urgent necessity if the number of cases in this group of diseases is to be substantially reduced.

The outbreak of this disease affecting infants and children which started in 1958 with 104 deaths, settled down to 69 deaths in 1959, to 57 in 1960, to 41 in 1961 and to 27 in 1962, but the latter figure is still too high a price to pay for a disease which is capable of yielding to strict measures of control and treatment. Analysis of the returns, sub-district by sub-district, again demonstrates the constant finding that the unsewered areas of the City furnished the largest number of cases. Out of a total of 27 deaths 7 were in the Belmont Sub-district, 8 in the East Dry River Sub-district, and 6 were in the City Proper where overcrowding and congestion are at their worst and where the barrack system still persists to a certain extent and where a great number of undernourished people reside.

Deaths from the Dysentries, 1918-62

Period	Deaths	Death Rates per 100,000 Population
Year 1918	43	63
Yearly Averages :		
1919–23	38.2	58
1924–28	32	49
1929–33	14.8	21
1934–38	5.4	7
1939–43	7.4	8
1944–48	3	3
Average 1919–48	16.8	23
Year 1949	1	1
1950	2	2
1951	1	1
1952	3	3
1953	3	3
1954	2	2
1955	—	—
1956	3	2
1957	1	1
1958	2	2
1959	3	3
1960	1	1
1961	1	1
1962	2	2

Deaths from Diarrhoea and Enteritis—1918-62

Period	Deaths	Death Rate per 100,000 Population
Year 1918	193	284
Yearly Averages :		
1919–23	143.6	218
1924–28	72.8	112
1929–33	52.8	76
1934–38	40	52
1939–43	78.4	81
1944–48	46	44
Average 1918–48	76.16	103
Year 1949	30	30
1950	37	35
1951	42	39
1952	39	36
1953	58	51
1954	37	32
1955	45	38
1956	57	47
1957	35	29
1958	104	86
1959	69	69
1960	57	60
1961	41	42
1962	27	27

Diarrhoea and Enteritis—Deaths in Sub-Districts, 1962

Sub-districts	Deaths
City Proper	6
St. Clair	—
East Dry River	8
Belmont	9
Woodbrook	3
St. James	1
Total	27

OTHER PRINCIPAL CAUSES OF DEATH

CARDIAC AND VASCULAR DISEASES

I have again this year, as I have had to do in every annual report that I have written, to record the melancholy fact that cardiac and vascular diseases continue to do the damage that they are accustomed to do, and that there is no sign of any diminution of the heavy toll of mortality that they are exacting. Whilst it is true that in so far as the year is concerned there has not been a significant increase in the mortality attributable to these diseases, 217 as against 212 in 1961, yet the slow steady unrelenting increase each year persists with no sign of abatement and the position is the same in all civilized countries of the world; compilers of vital statistics in every part of the civilized world continue to record the fact that with each succeeding year more and more victims are being claimed by cardiac and vascular diseases and that they continue to occupy pride of place in the list of causes of death and that this is particularly the case in the big and busy cities where stresses and strains and the pace of modern life are at their greatest.

It would appear that the price that has to be paid for better personal and environmental hygiene, for comparative freedom from dangerous and other infectious diseases, for an improved standard of living and for increasing longevity is the increasing vulnerability of the delicate tissues of the heart and blood vessels to the stresses and strains of modern life, to the complexity and pace of every day life and to the worry and anxiety associated with the many difficult and trying situations that arise nowadays in our private and public lives. Limited and uncertain as our knowledge of the actual causes of these diseases happens to be, there are, however, a few facts that are definite and on which preventive measures can be based. The toll of mortality is highest at the older age periods 41 to 60, when the delicate tissues of the heart and blood vessels are beginning to show signs of wear and tear and to feel the stresses and strains incidental to the complexity of modern life. Again a certain percentage

of these cases is due to organic disease that is susceptible to the influence of preventive measures such as those diseases of the heart and blood vessels that are due to chronic infections like syphilis and to the toxaemia associated with chronic disorder of the liver and kidneys. The strict avoidance of those conditions and circumstances that lead to the possibility of acquiring the infection and, if unfortunately acquired, the adequate and efficient treatment of syphilis in the early stages would spare the delicate tissues of the heart and bloodvessels and of the brain, nervous system, and sensory organs that are so vulnerable to these diseases and for which so little in the way of effective treatment can be done when once they have been attacked. The elimination of the well known poisons of alcohol and other such drugs that cause and aggravate kidney and liver disease would certainly put off the day when the heart must feel the inevitable strain and suffer a breakdown.

It is clear therefore that in the present state of our knowledge not much in the way of specific measures can be applied to stem the tide of mortality attributable to these diseases. Much, however, can be achieved by a campaign of health education directed to the detection in their early stages of those systemic diseases that give rise eventually to heart disease when much more can be done to diminish the harm done and limit their evil effect; to teaching the afflicted how to live within the limits of their damaged heart and blood vessels; how to avoid the stresses and strains, the worry and anxiety of modern life and yet be able to undertake useful and productive work and this is of particular importance seeing that the greatest incidence of these diseases is, as I have indicated, to be found at the later age periods of life when by reason of his knowledge, wisdom, and experience, the victim is likely to be of the greatest value to the community.

During the year under report cardiac and vascular diseases claimed 217 victims, the largest number attributable to a single group of diseases. Examination of the table listed hereunder shows that the older age periods of 41–60 and over 60 bore the brunt of the attack with 44 and 159 deaths respectively and the fact clearly emerges that the older the tissue the more susceptible it becomes to these diseases. Of the forms of cardiac and vascular diseases that are responsible for the highest mortality it is again the same old picture that presents itself viz. *arteriosclerotic* and degenerative heart disease is par excellence the greatest killer.

Deaths from Cardiac and Vascular Diseases in Age Groups, 1962

Forms	0–20 years	21–40 years	41–60 years	Over 60 years	Total
Rheumatic Fever	—	—	—	—	—
Chronic Rheumatic Heart Disease ...	1	—	—	—	1
Arteriosclerotic and degenerative heart disease	—	5	27	97	129
Other diseases of the heart	1	2	7	28	38
Hypertension with heart disease	—	1	4	23	28
Hypertension without mention of heart ...	—	4	6	3	13
Diseases of arteries	—	—	—	6	6
Other diseases of circulatory system ...	—	—	—	2	2
Total	2	12	44	159	217

CANCER AND OTHER MALIGNANT DISEASES

It cannot be stated with certainty that the incidence of cancer and other malignant diseases is showing any great increase and whatever increase is recorded may very well be due to a greater appreciation of the severity of the disease with consequent more frequent and earlier resort to diagnosis and treatment, to greater accuracy in diagnosis and to the fact that the proportion of citizens over 60 years of age whose tissues are more susceptible to cancer is getting greater and greater with each passing year. But there can be no doubt that cancer and other malignant diseases are not of uncommon occurrence in the City and nothing that we know or can do at the moment gives rise to the hope that the toll of mortality exacted by these diseases will be diminished. The cause of these diseases still remains obscure in spite of the large amount of research that has taken place and is taking place at the moment in all parts of the world and as long as the cause of a disease is unknown it is difficult to determine fully what are the factors that operate in the production of the disease, just as it is almost impossible to prevent that disease from claiming the life of its victim.

Cancer and other malignant diseases are almost invariably fatal and the appearance of the disease in the human body amounts to a death sentence. Sooner or later death invariably closes the final scene and although the surgeon's knife or the application of X-rays or radium or more recently treatment with hormones or the heavy metals may be successful in retarding the progress of the disease, complete cure is hardly ever effected. The early detection of the disease and the early application of treatment may, however, be responsible for lengthening the life of the patient by an appreciable

number of years and it is the course of supreme wisdom not to permit any ulcer to remain unhealed or any suspicious lump to grow for any length of time without bearing in mind the possibility of cancer and without consulting a doctor with a view to establishing the diagnosis and undergoing treatment. Seeing that the specific cause of cancer still remains obscure in spite of much research and experimentation, it is not possible to apply any preventive measures that can be considered effective, but a health education campaign directed to the education of the public as to the high mortality associated with this group of diseases and to the consequent necessity to treat every small lump or indolent ulcer with the respect that it deserves and to seek early treatment by surgery, X-rays or radium would pay dividends and help to a greater understanding and appreciation of the toll of mortality that cancer and other malignant diseases are exacting from the community.

During the year under report 128 persons who resided within the limits of the City died of cancer and other malignant diseases, the largest number of victims since 1917 when it was first rendered possible with the establishment of the Local Sanitary Authority in 1917 to compile accurate statistics that relate to the City alone.

The sites in the male that appear to be most vulnerable and which bear the brunt of the attack are the trachea, bronchus and lung, and the stomach, and in the female the stomach, breast and cervix uteri in that order of frequency.

Cancer and Other Malignant Diseases, 1962

	Deaths	
	Males	Females
Malignant neoplasm of buccal cavity and pharynx	2	1
Malignant neoplasm of oesophagus	3	1
Malignant neoplasm of stomach	7	13
Malignant neoplasm of intestine, except rectum	2	1
Malignant neoplasm of rectum	4	2
Malignant neoplasm of larynx	1	2
Malignant neoplasm of trachea and of bronchus and lung not specified as secondary	8	4
Malignant neoplasm of breast	—	11
Malignant neoplasm of cervix uteri	—	7
Malignant neoplasm of other and unspecified parts of uterus	—	2
Malignant neoplasm of prostate	3	—
Malignant neoplasm of skin	1	—
Malignant neoplasm of bone and connective tissues	—	—
Malignant neoplasm of all other and unspecified sites	15	31
Leukaemia and aleukaemia	2	1
Lymphosarcoma and other neoplasms of lymphatic and haematopoietic system	1	3
Benign neoplasms and neoplasms of unspecified nature	1	—
Total	49	79

Deaths from Cancer and other Malignant Diseases, 1918-1962

Period	Deaths	Rate per 100,000 Population
Yearly Average :		
1918–22	44.4	67
1923–27	45.6	71
1928–32	44.6	65
1933–37	56.8	76
Average 1918–37	47.9	70
Yearly Average 1938–42	75.4	82
1943	88	86
1944	84	81
1945	80	75
1946	79	78
1947	75	78
1948	87	88
1949	91	90
1950	91	89
1951	103	94
1952	89	90
1953	113	102
1954	96	81
1955	104	89
1956	104	87
1957	102	84
1958	119	98
1959	113	114
1960	123	131
1961	107	109
1962	128	126

SANITARY ADMINISTRATION

Staff

There has been no increase of staff in the Public Health Department during the year under report and the fixed establishment remained the same as it was in 1961 i.e. 225 employees of whom, 65 belonged to the permanent pensionable staff and 160 to the permanent non-pensionable staff. At the end of the year 1962, however, of the permanent pensionable staff of 65, 46 were actually permanent employees; 8 posts of sanitary inspector were vacant, 3 of these vacant posts being filled by retired men who have been recalled to duty in a temporary capacity on a month-to-month basis, and 5 posts by recently qualified sanitary inspectors who have been appointed to act, pending their permanent appointment to the vacant posts by the Council. The three vacant posts of public health nurse (health visitor) again were not filled, though recommendations for filling them were made to the Local Service Commission from persons who had applied in response to an advertisement in the daily newspaper.

Six student sanitary inspectors and two departmental clerks are still to be appointed and at the moment I write 5 student sanitary inspectors and 2 departmental clerks have actually been appointed and the vacant post of student sanitary inspector is filled by a young man in an acting capacity pending the making of this appointment by the Council.

Of our full complement of 35 sanitary inspectors 8 vacancies could not be filled permanently because of the lack of suitable and qualified staff, but 3 of these posts have been filled in a temporary capacity by retired inspectors who have been recalled to duty and appointed on a month-to-month basis and at the end of the year under report we were able to fill 4 of the vacant posts of Grade B Sanitary Inspector by recently qualified sanitary inspectors in an acting capacity, and at the moment I write we have taken on another young sanitary inspector to act in the fifth post, though unfortunately we shall have another Grade B post vacant because of the imminent retirement of the Chief Sanitary Inspector, Mr. Alban Romain. It is to be hoped that these acting Sanitary Inspectors will be put permanently on the staff in the near future and not kept too long in an acting capacity.

For the purpose of the "inspection of the district with a view to ascertain what nuisances exist calling for abatement," the City was again divided into 18 sanitary districts with a sanitary inspector in charge of each district. The number of premises in these sanitary districts varies depending on the locality, average size of premises, type of buildings &c. but they range from 1,211 in District No. 3 to 296 in District No. 7 for each inspector, who is required to do 25 house to house inspections each day and to inspect each and every premises in his district at the rate of at least once in every six weeks. It is realised that this is a duty imposed on the district sanitary inspector which is not easy to carry out and it is proposed to increase the sanitary districts to 20 as soon as it is possible to recruit newly qualified inspectors, thus making it possible for the district sanitary inspector to inspect his district thoroughly and efficiently and of course each and every premises at least once in every six weeks. This we consider to be longest time that it is possible to leave any individual premises uninspected in the Urban Sanitary District. Though the number of premises in the City of Port-of-Spain amount to 12,000 the number of accommodation (housing) units total 20,000. In his district the Sanitary Inspector is in full and complete charge of the public health services that are performed in the district i.e. anti-rat, anti-mosquito, anti-rabies, disinfection &c. in addition to the basic essential work of inspecting the district and he has, as his duty, to cast a supervisory eye on the various gangs that operate these services and to consult with and report to the special inspector who is in charge of the whole unit as to the efficiency of the measures being undertaken and as to the ability, conduct, discipline and efficiency of the men who are working in his district. He is in fact responsible to the Chief Sanitary Inspector and eventually to the Medical Officer of Health for the health and sanitary state of his district.

Eleven sanitary inspectors who, under normal circumstances when the full complement of staff is available, have been or at the moment are Senior Grade A Inspectors of some maturity and in good standing with the knowledge, experience, and necessary personality and administrative ability to guide, direct, control, and supervise a Special Unit were employed in the year under report in the execution of duties of a special nature. One such Inspector is the Health Education Officer of the Department and he plans, directs, supervises, and controls the work of the Health Education Unit and the personnel allocated thereto as well as the other employees of the Department who may be taking part in a health education meeting in the evening. In this work he is assisted by the Assistant Health Education Officer. The Senior Sanitary Inspector (Outdoor) is in charge of the water sampling service and the Anti-Rabies Unit and he is also the Factories Inspector. He is in charge of water sampling and is also engaged in the inspection and control of the various catchment areas of the river and well sources of water supply; he plans, supervises, directs, and controls the work of the Anti-Rabies Unit and he has also to do with the registration and control of Factories in addition to the routine duties of planning, directing, and supervising the work of a certain number of District Sanitary Inspectors. The Buildings Inspector is concerned with building plans of all kinds and in addition he inspects, examines, and report on layouts, leases, assignments and other kindred matters. It is his duty to see that a building is erected in accordance with the approved plans, especially the part of the building that is of special concern to the Department like doors,

windows, ventilation openings, distances from boundaries, and last but not least the sanitary conveniences. Another inspector, the Anti-Rat Inspector, is in charge of and plans, directs, supervises, and controls the working of the Anti-Rat Unit. The Food Inspection and the Food Control Unit are under the immediate charge of the Deputy Chief Sanitary Inspector (Food) who together with the Senior Sanitary Inspector (Food) plans, directs, supervises, and controls the work of this Unit. Three Grade A Inspectors are assigned to this Unit, one of whom is stationed at the King's Wharf and Customs and whose duty it is to inspect and examine food of all kinds, but particularly tinned and perishable food, on its arrival at the Port; another Inspector is in charge of food places in the down town area mainly, he sees to the inspection, examination, and registration of all food places and food handlers in this area; and the third Food Inspector is concerned with all food places outside the down-town areas and with the registration of all itinerant food vendors throughout the length and breadth of the City. In the district the Sanitary Inspector in charge is required to take and normally does take an active part in the work and actively assists the Food Inspector in the demonstration and abatement of nuisances in so far as food places are concerned prepatory to inspection for actual registration by the latter two Food Inspectors.

The two overseers and three sub-overseers of the Department are allocated to and assist in the planning and execution of the work of the non-pensionable staff in addition to supervising and controlling them. Theirs is also the duty to instruct and train newcomers to the Department in the particular work they are called upon to perform before they are actually posted to do field work. In this work the Assistant Health Education Officer plays an important role in educating the recruits as to what is expected of them in their particular line specifically and in health education work generally. One Overseer and one Sub-overseer are allocated to the Anti-Rat Unit comprising one timekeeper (for the whole of the non-pensionable staff), one checker, 7 foremen, 12 Grade A trappers and 27 Grade B trappers, and the Anti-Rabies Unit of one checker, 2 Grade A trappers and one Grade B trapper. One Overseer and one Sub-overseer are allocated to the Anti-Mosquito Unit comprising 3 checkers, 1 foreman, 12 supervisors, together with 14 Grade A mosquito inspectors and 28 Grade B mosquito inspectors. One Sub-overseer is in charge of the Disinfection Unit and plans, directs, supervises, and controls the operation of this Unit which comprises 2 spraymen and 4 other men engaged in disinfection work; he also plans, directs, controls, and supervises the work of the Public Conveniences Unit which now comprises 15 caretakers and which was transferred from the City Engineer's Department in the year 1943.

The Unit employed by the Council for the emptying of cesspits, cesspools, and septic tanks which was transferred to the Public Health Department in 1947 comprises 1 cooper, 1 caretaker and 2 men on the deadman at the Mucurapo Pumping Station, 14 cleaners, 3 chauffeurs for driving the night soil trucks, 1 checker, 1 carpenter and mason, and 1 carpenter's mate on a part-time basis all under the care, control, and the direction of the Supervisor of the cleaning of Cesspits.

All told in the year under report the outdoor staff of the Department comprised 33 inspectors, 2 overseers, 3 sub-overseers, 1 supervisor of the cleaning of cesspits and 157 miscellaneous workers of the non-pensionable staff all under the care, direction, supervision and control of the Senior Sanitary Inspector (Outdoor) the Deputy Chief Sanitary Inspector (Outdoor), and the Chief Sanitary Inspector.

The work of the indoor staff which, let it be stated is equally important and just as onerous as the work of the outdoor staff, is concerned with correspondence of all kinds, messages, complaints, verbal and written reports, the preparation and issuing of licences, certificates of registration, the distribution of food badges, the preparation of contacts of cases of infectious diseases and other applicants for inoculation and vaccination, the keeping and replenishing of equipment, supplies, and records relative to vaccination and inoculation, the keeping of the various registers, books, minutes, &c. of the Department, the preparation of files and the care and the preservation of the filing system, the checking and verifying of the pay sheets of the non-pensionable staff, the preparation of the salary sheets of the pensionable staff, the keeping and bringing up-to-date of the various vote books of the Department, in fact all that appertains to the financial transactions and the financial records of the Department. The sorting, codifying, and classifying of the various returns that reach the Department, the collection and compilation of vital statistics, the calculation of the various rates that are the concern of the Urban Sanitary District, the preparation of monthly, quarterly, and annual reports have now been taken away from the indoor staff, and given to the Deputy Chief Sanitary Inspector (Food) and the Senior Sanitary Inspector (Food) to prepare.

The indoor staff comprises 5 second class clerks, 2 first class clerks, 1 senior clerk, 1 scientific assistant, 1 messenger, all under the care, direction, supervision, and control of the Principal Officer.

Inspection of Premises, &c., by Sanitary Inspectors, 1962

Average Monthly Number of Visits to Dwellings, Shops and other Premises 5,358

Inspection of Stores, Shops, &c.

	Average Monthly Number of Visits		*Average Monthly Number of Visits*
Provision and Meat Shops	144	Cinemas	9
Provision Stores	28	Sweet Drink Carts	5
Restaurants and Cookshops	45	Dairies and Cowsheds	14
Bakehouses	18	Stables	19
Bread Depots	6	Goat Pens	11
Cake and Ice Cream Shops	121	Aerated Water Factories	3
Fry Shops	4	Soap Factories	1
Hotels	7	Other Factories	36
Markets	75	Schools	32
Spirit Shops	40	Common Lodging Houses	6
Ice Cream Carts and Pails	23	Barber Shops	17
Cake Trays and Baskets	42	Dye Works	1
Provision Trays and Baskets	17	Laundries	20
Bread Carts and Baskets	6	Garages	25
Fresh Fish Trays	11	Tanneries	3
Oyster Vendors' Baskets	4	Public Urinals	5
Plantain Carts	3	Boats	12

Results of Notices and Verbal Directions—1962

	Constructed, installed or provided	Repaired	Cleansed	Painted	Eliminated	Limewashed	Oiled
Yard Pavements	103	102	—	—	—	—	—
Depressions in yards	—	—	—	—	141	—	—
Yards	—	—	4,089	—	—	—	—
Drains, sinks, gullies, washing troughs, &c.	269	481	3,304	—	—	—	—
Lavatories, sewer basins, flush tanks, urinals, bathrooms, &c.	310	268	1,118	—	—	—	—
Privies	154	505	—	—	—	279	—
Cesspits	83	140	1,795	—	—	—	43
Manure Heaps	—	—	—	—	405	—	—
Rat Holes	—	—	—	—	96	—	—
Tree Shade, Overgrowths of bush ...	—	—	—	—	1,039	—	—
Dustbins	592	44	357	—	—	—	—
Dustbin covers	222	—	—	—	—	—	—
Shops, Parlours, Restaurants, Bakehouses, Hotels, &c.	—	115	1,793	346	—	191	—
Aerated Water Factories	—	—	12	—	—	2	—
Bread Carts	—	—	—	—	—	—	—
Barracks, Common Lodging Houses ...	—	29	36	4	—	31	—
Garages, Kitchens	—	19	—	—	—	31	—
Cowsheds, Stables	—	4	170	—	—	27	—
Tanneries, Soap Factories, &c.	—	—	—	—	—	—	—
Close-boarding, Ventilation of Houses ...	—	—	—	—	—	—	—
Barber Shops and other Workshops ...	—	—	33	14	—	—	—
Glass Cases and Covered Trays ...	33	36	—	44	—	—	—

Reports to Water and Sewerage Department—1962

Reports	*Total*
Leaks, defective taps, chokes, &c., ...	893

Anti-Rabies Measures—1962

Trappings, Etc. of Bats

Number of locations for roosts of Bats	13,190

Bats Caught

Artibeus lituratus palmarum (Trinidad Fruit Bat)	154
Artibeus jamaicensis trinitatis (Jamaica Fruit Bat)	237
Molossus m. major (Small Free-tailed Bat)	5
Carollia p. perspicillata (Short-tailed Fruit Bat)	8
Glossophaga s. soricina (Long-tongued Bat)	41
Centurio senex (Wrinkled-face Bat)	2
Micronycterus Megalotis (Little Big-eared Bat)	1
A. Atey Mummy	1
	449

Bats Caught Outside City Limits

Fort Picton Cave—*Desmodus R Rotundus* (South American Vampire Bat)	7
Cocorite Farm—*Desmodus R Rotundus* (South American Vampire Bat)	1
Total	8

Building Plans, &c.—1962

Reports made by the Public Health Department were as follows :—

On Plans, &c., for reconstruction or reconditioning of buildings ...	611
On applications for leases of land in Woodbrook and Gonzales Place ...	69
On premises in which building operations were in progress	21
On application for certificates of completion of buildings	123

Cleaning of Privies, &c.—1962

Under the Public Health Ordinance, Ch. 12. No. 4, Section 64 (1) (*c*), Cesspits, Cesspools and Septic Tanks were cleansed as follows :—

East Dry River	584
Belmont	751
St. James	422
Woodbrook	38
	1,795

Outstanding cesspits up to 31st December, 1962, numbered 34

Average cost per cesspit emptied : $45.13

Prosecutions—1962

Cases Determined by the Magistrate

Offences	*Number of Cases*	*Results Total Fines*
Failing to comply with nuisance notices	1	Dismissed
	4	Fresh Summonses
	5	
Breaches of Sale of Foodstuffs Bye-laws	5	Fined $12.50
	2	Dismissed
	1	Withdrawn
	6	Reprimanded
	9	Fresh Summonses
	23	
Grand Total	28	

Summary

Cases	
5	Fined $12.50
3	Dismissed
1	Withdrawn
6	Reprimanded
13	Fresh Summonses
28	

Leave of Absence—1962

Name of Officer	*Vacation Leave Number of days*	*Sick Leave Number of days*	*Local Leave Number of days*
Assing, C. C.—Sanitary Inspector	—	24	—
Aberdeen, K.—2nd Class Clerk	21	7	9
Adams, R.—2nd Class Clerk	21	2	14
Antoine, A.—Supervisor of E/C.	28	1	8
Bennett, Dr. S.—Inspector of A & M	28	—	—
Boucaud, R.—Sanitary Inspector	28	4	5
Boxill, E.—Deputy Chief Sanitary Inspector (Food)	28	—	14
Brathwaite, E.—Sanitary Inspector	28	—	14
Batson, B.—Overseer	28	14	11
Carpette, O.—Overseer	28	14	11
Castello, G.—Overseer	21	7	14
Cameron, I.—Sanitary Inspector	—	—	1
De Four, H.—Health Education Officer ...	28	7	7
Davidson, C.—Sanitary Inspector	28	—	8
Dubois, C.—Sanitary Inspector	28	—	8
Forde, G.—Senior Sanitary Inspector (Food) ...	28	—	11
Forde, O. E.—Acting Sanitary Inspector ...	28	—	6
George, J.—1st Class Clerk	—	14	1
Goodridge, C.—Messenger	21	1	9
Greenidge, St. A.—Sanitary Inspector	21	8	14
Griffith, G.—2nd Class Clerk	—	4	—
Holdip, M.—Assistant Health Education Officer ...	149	2	14
Hinkson, G.—Sanitary Inspector	28	9	2
Joseph, A.—Scientific Assistant	21	—	7
Joseph, V.—Senior Clerk	28	14	—
Khan, V. S.—Sanitary Inspector	28	3	18
Langton, E.—2nd Class Clerk	21	9	7
Marcial, R. S.—Sanitary Inspector	28	18	1
Mitchell, K. I.—Sanitary Inspector	21	14	3
Nurse, G.—Sanitary Inspector	28	—	14
Neranter, A.—Sanitary Inspector	21	17	12
Noel, C.—Sanitary Inspector	21	9	14
Parris, J.—Overseer (retired)	—	—	7
Phillip, O.—Sanitary Inspector	21	14	11
Rivers, F. B.—Deputy Chief Sanitary Inspector ...	94	4	2
Romain, A.—Chief Sanitary Inspector	118	—	11
Rowe, D.—2nd Class Clerk	21	4	10
Rameshwar, C.—Acting Sanitary Inspector ...	21	8	4
St. Cyr. H.—Acting Sanitary Inspector ...	28	—	7
Sampson, A.—Sanitary Inspector	28	49	—
Samm, A.—Sub-Overseer	21	1	12
Sansavoir, F.—Sub-Overseer	21	—	14
Turney, H.—Sanitary Inspector	28	2	2
Turner, K.—Sanitary Inspector	28	2	6
Trotman, F.—Sanitary Inspector	21	—	9
Wilson, A.—Principal Officer	28	1	9

Financial

Revenue and Expenditure, 1960-1962

	1960	1961	1962
REVENUE	$ c.	$ c.	$ c.
Revenue collected by the Health Department ...	2,305 49	1,557 37	1,848 76
EXPENDITURE			
Salaries and Allowances (Personal Emoluments)	170,179 73	172,843 05	181,554 12
Superannuation Allowances	—	12,647 64	—
Contributions	91 00	91 00	91 00
Replacing Jitney G.P. Extraordinary ...	—	—	4,018 79
Purchase of Photographic Equipment ...	—	—	2,003 83
Purchase of Public Address System	—	—	2,269 54
Port-of-Spain X-Ray Campaign	2,493 75	—	—
Pest Eradication Campaign—Extraordinary (1961)	—	25,528 01	—
Increased Wages—20 cents per day, 1959—A. Pajotte	98 65	—	—
Increased Wages—40 cents per day, 1959—D. Ragoobar	124 10	—	—
Increased Wages—40 cents per day, 1959 ...	18,885 01	—	—
Arrears of Pension to O. E. Forde and C. C. Assing for 1959–1960	2,000 00	—	—
Arrears of Salaries (Anomalies)—A. Romain and 4 others—1959–1960	4,132 00	—	—
Increased Wages—40 cents per day	15,147 21	—	—
Increased Wages—40 cents per day—P. Seecharan	5 60	—	—
Increased Wages—20 cents per day—A. Pajotte —1st January, 1960 to 19th October, 1960	92 60	—	—
Arrears of Cost of Living Allowances—1960 ...	830 52	—	—
Wages and Allowances	219,013 93	253,106 42	267,155 12
Maintenance, Materials, &c., ...	33,980 75	24,618 38	25,729 39
	$467,074 85	$490,391 87	$484,670 55
Disposal of Night Soil	10,253 48	12,252 90	13,798 92
Emptying Cesspits	48,456 71	49,458 52	81,014 56
	$525,785 04	$ 552,103 29	$579,484 03

Emptying of Cesspits—amount recoverable from house owners $14,053.00 in 1960.

Emptying of Cesspits—amount recoverable from house owners $17,092.30 in 1961.

Emptying of Cesspits—amount recoverable from house owners $22,887.00 in 1962.

ACKNOWLEDGMENT

The work of the Public Health Department continues to increase every year with the increasing population of the City and with the need for more efficient, more extensive, and more varied public health services covering a wider field.

Due to a large extent to the greater health consciousness aroused by our health education programme, the residents of the City are demanding and expecting better general and personal health, a higher standard of sanitation and environmental hygiene and more readily available and prompt services, efficiently executed. Add to this the fact that we have for years now been desperately short of properly qualified and dependable technical staff it is clear that were it not for the devotion to duty and the loyalty, generally, of the staff, pensionable and non-pensionable, and the conscientious day-to-day routine performed under the able guidance, direction and leadership of the Chief Sanitary Inspector Mr. Alban Romain, Cert. R. San. I., and the Principal Officer, Mr. Anthony Wilson, we certainly would not have been able to maintain our services at a satisfactory level and there would have been a deterioration of the public health. I am convinced that the employees of the Public Health Department, taken as a whole, are sensible of the great responsibility that is theirs, that they have the welfare, and prestige of the Department at heart, and that they have all spared no effort in the year under report to render a public service which can be truly considered the greatest of all services i.e. that of maintaining and improving the health and sanitary state of the Urban Sanitary District without which all the other services of the Corporation would certainly be a nullity.

For this I am deeply grateful and I seize this opportunity once more to commend their services to the favourable notice of the Local Sanitary Authority.

Whilst deeply appreciative of their work I am not unmindful of the disabilities they suffer as compared with the Sanitary Inspectors in the employ of the Central Government, and I am to request the Local Sanitary Authority once again to make haste to make available to the Sanitary Inspectors of the Corporation those amenities and facilities enjoyed by their confreres so that we may be able to have in our service a capable and contented staff, to be able to attract Sanitary Inspectors of the highest calibre to the Department, and to be able to retain staff whom we have recruited and trained to be efficient practical inspectors, often at great expense.

During the year under report we lost by resignation Mr. J. Parris, Overseer, Public Health Department, stationed at 187A Tragarete Road, and Mr. I. Cameron, Sanitary Inspector, both of whom had reached the age limit. Mr. J. Parris was a capable, efficient and loyal overseer who had given 29 years of service to the Corporation; he had risen from the ranks to the post of Chief Overseer and the loss we feel by his retirement is compensated for only by the pleasure we experience in his being now able to enjoy a well earned and fully merited rest.

Mr. I. Cameron joined the Department as a mature Sanitary Inspector having worked elsewhere before. In fact his years of service were not sufficient to enable him to earn a pension but he was given a gratuity. We wish him long life and a happy period of retirement.