

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

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# ADMINISTRATION REPORT

OF THE

Public Health Department of the City of Port-of-Spain



FOR THE YEAR

## 1947

BY

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



TRINIDAD

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**Local Authority in the Urban Sanitary District of the City of Port-of-Spain  
1946-47**

**The City Council**

HIS WORSHIP THE MAYOR, COUNCILLOR REGINALD VIDALE, J.P

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COUNCILLOR THE HON. ALBERT GOMES

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N. TANG

Q. O'CONNOR

DR. E. DE VERTEUIL

C. WARD



# **Administration Report of the Public Health Department of the City of Port-of-Spain. Year 1947**

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PUBLIC HEALTH DEPARTMENT,  
35, FREDERICK STREET,  
PORT-OF-SPAIN,  
TRINIDAD, B.W.I.

18th October, 1948.

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 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, 1947.

This is the tenth report I am submitting to the Local Health Authority and I take pleasure in recording for the tenth time a year of satisfactory maintenance of the *status quo* without being in a position to experience the added delight of definite progress in any section of the public health field. True, there has been no deterioration in the state of health or in the sanitary condition of the Urban Sanitary District, and there has been slight progress in certain aspects, but the definite improvement in the overall standard of public health that is capable of being achieved has not been achieved because of the inability of the Local Authority to provide the funds necessary for the purpose.

Proposals for increase of staff, better and more up-to-date equipment, for more detailed district health work, for more intensive campaigns against pests of all sorts, for a concentrated drive to secure good, clean, and pure food have all had to be left in abeyance because of that perennial handicap, **lack of funds**.

This state of affairs has a general depressing effect on all sections of the Public Health Department because the workers here, I am glad to say, are anxious to see plans go forward and feel a sense of frustration when they are, perforce, condemned to maintaining only the existing state of things.

In spite of all this, though there is nothing spectacular to record, at the same time there has been no drastic deterioration of any kind such as an epidemic of one or more of the infectious diseases could easily have produced, and the year has, on the whole, been satisfactory, as can be gathered from a consideration of the following facts and figures.

The mean population has been estimated by the Registrar General to be 96,067 and the end of the year population 97,571. This compares unfavourably with the mean population for 1946 which was estimated at 100,798 but the explanation is furnished by the census taken in April, 1946, which gave an actual population figure of 93,198 and an estimated end of the year (1946) figure of 94,097.

Total live births numbered 4,113; total deaths 1,385, and deaths under one year 231, giving a birth rate of 42.81, a death rate of 14.42 per 1,000 population, and an infant mortality rate of 56.16 per 1,000 live births.

In so far as death rates from individual diseases or group of diseases are concerned the death rate from notifiable infectious diseases per 1,000 population was 2.64 of which figure, 1.74 was due to the death rate from pulmonary tuberculosis which seems to be exacting a greater and greater toll each year that passes, .07 to enteric fever, .67 to pneumonia and .02 to diphtheria.

Syphilis and malaria were responsible for a death rate of .22 and .05 per 1,000 population, respectively, and the chronic system diseases, e.g., diseases of the heart and blood vessels, diseases of the nervous system including cerebral haemorrhage, and Bright's disease and nephritis claimed figures of 2.21, 1.38 and .62 per 1,000 population, respectively. Cancer and the other malignant diseases claimed 75 deaths giving a death rate of .78 per 1,000 population.

I have in previous reports adverted to the various public health problems which confront the City and I need hardly state that they continue each year to become more urgent in the same proportion as the chances of their ultimate solution, for the reasons I have already given, grow more and more remote each year.

The City is still without an adequate supply of water and the existing sources, with the increasing urbanisation of their catchment areas, are becoming more and more liable to pollution; existing housing accommodation is taxed to the utmost and the housing problem is becoming increasingly acute. Belmont and the East Dry River District still remain unsewered and continue to harbour the unsatisfactory and often insanitary cesspit system; the whole eastern section of the City is in pressing need of major works of drainage, of road making and road widening, of the relaying out of lands for building purposes and for necessary open spaces, &c., a need that still remains unanswered; scavenging and sanitation need improvement, and last but not least, the high cost of living has so affected the easy availability of essential foodstuffs that nutrition and with it the resistance of the populace leaves much to be desired.

These problems, in spite of the difficult and trying times through which we are passing, can be tackled successfully if we get together, put our shoulders to the wheel, and go forward in a spirit of co-operative effort, and the **Local Authority is once more exhorted to make a determined bid to put its financial status on a sound footing with a view to securing the necessary funds without which not a single one of these problems can even be considered, far less solved.**

My sincere and heartfelt thanks are due to His Worship the Mayor, Aldermen and Councillors for the keen interest they displayed in the working of the Department and for the active help and ready encouragement they gave in all matters appertaining to the public health that engaged their attention during the year under review, and I take this opportunity of expressing my gratitude for the co-operation and loyal support of the City Engineer's and the Town Clerk's Departments without which the work of the Public Health Department would not only have been rendered far less successful, but exceptionally burdensome as well.

I have the honour to be,

Sir,

Your obedient Servant,

RODERICK MARCANO

Medical Officer of Health



## SANITARY CIRCUMSTANCES

## Water

The provision of an adequate supply of pure wholesome water to the Waterworks District continues to present the same tremendous difficulties that it has done during the past ten years and though spasmodic attempts to ameliorate the supply in one or other districts, whenever there has been an abnormal shortage, have been made and made successfully, yet that long term, comprehensive over-all scheme that will solve the water question once and for all, and take care of the water requirements of this growing City is not yet forthcoming.

The various sources of supply, some of them quite small, continue to give of their best, but there can be no doubt that they are being strained to the utmost and, in addition, their catchment areas are becoming more and more polluted in proportion as the need for housing and kitchen garden accommodation becomes more and more insistent. The result is a raw product of less initial purity than heretofore which necessitates constant vigilance and care, and an increasing dose of sterilising chemical to secure a final potable product safe and palatable to the consumer.

What has been stated so often in previous reports, viz. : that the well sources yield a product of much greater initial purity and much less subject to sudden adverse change than the river sources, continues to hold good though here again because of increasing urbanisation, greater doses of sterilising chemical are becoming necessary.

The Local Authority are fully seized of all these facts and have, as a result, decided to abandon the Maraval source and to embrace the Caura Scheme in principle.

How necessary it is to expedite the Caura Scheme can be judged from a consideration of the foregoing facts, and I desire to impress upon the Local Authority the urgent need for representing to Government the compelling necessity to replace certain unsatisfactory and inadequate river sources by a liberal and potable supply either from the Caura Scheme or the Valsayn Wells.

Any reference to water would be incomplete without again offering grateful thanks to Dr. J. L. Pawan, Senior Pathologist, Government Bacteriological Laboratory, who retired during the year under report, but who, as Fate would have it, is still working at the laboratory though on a part-time basis only. The Local Authority owes a great debt of gratitude to Dr. Pawan's untiring efforts in this field of public health. It is true to say that he saw the birth of a potable water supply to the City when in 1924 chlorination was introduced, and with unremitting care and devotion he nursed this difficult child, whose intricacies and vicissitudes he knew so well, through many a serious pitfall that under other circumstances and with less skill and promptitude might have degenerated into a catastrophe.

With the help of his continued valuable advice and ready assistance no outbreak of water-borne disease has taken place within the limits of the City during the past twenty-four years and I seize this opportunity of placing on record my sincere personal thanks.

## Bacteriological Examination of Water Supply (Weekly Samples)

WHERE DERIVED	No. of Samples taken	RESULTS OF EXAMINATION	
		Safe	Unsafe (B. Coli present)
*Cocorite (Wells) ...	50	49	1
*Diego Martin (Wells) ...	40	38	2
†St. Clair (Pumping Station) ...	51	49	2
‡St. Clair (Wells) Raw Water ...	52	30	22
§Maraval (River) ...	99	96	3
Cascade (River) ...	53	52	1
St. Ann's (River) ...	55	52	3
Knaggs' Hill Reservoir ...	97	86	11
Pictou Reservoir ...	52	36	16
McShine Reservoir ...	16	16	—
Colonial Hospital (Tap) ...	103	88	15
143, Charlotte Street (Tap) } Quare River	30	25	5
131, Henry Street (Tap) } Supply	4	2	2
133, Henry Street (Tap) }	31	26	5
143, Henry Street (Tap) }	4	4	—
TOTAL ...	737	649	88

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.

## Bacteriological Examination of Water Supply (Daily)

No. of daily samples examined	No. of Samples with B. Coli present (B. Coli in 100 C.C.)	Percentage of Samples with B. Coli present	No. of samples with B. Coli absent (B. Coli in 100 C.C.)	Percentage of samples with B. Coli absent
364	4	1.1	360	98.9



### Scavenging and Refuse Disposal

It is usually stated by visitors that Port-of-Spain is a clean City and to a large extent this is true, but there are some unsatisfactory gaps in the scavenging and refuse-disposal service that need urgent filling.

For example it is time that scavenging on Sundays on a more extended scale were instituted. It is still possible to see on Sundays insanitary accumulations of refuse in odd places about the City, deposited there by residents whose bins are already full on Saturday night. I need hardly state what a nice "nest egg" they are for stray dogs whose business it is to forage in these untidy heaps of rubbish looking for "toothsome morsels".

Then again it is not unusual to find underground drains full of refuse, a practice indulged in by certain householders and shop owners who ought to know better, but who cannot resist the temptation to choke a freely flowing drain, and so create a nuisance by thus promoting the breeding of mosquitoes.

Refuse disposal is presenting a bit of a problem at the moment because of the complete abandonment of the reclamation work which had been proceeding in the vicinity of the Dump and Abattoir behind an enclosing rubble wall. This whole area is now fast becoming a vast swamp where mosquito breeding is taking place.

Anophelene mosquitoes have been discovered here on several occasions, as is to be expected when consideration is given to the fact that the famous Caroni Swamp and Success Village, Laventille, are hardly a stone's throw away.

Lack of the necessary earth with which to cover the deposited refuse prevents the practice of "controlled tipping" which is the only scientific method of dumping on the foreshore, with the result that the Dump presents an untidy appearance and fly breeding is more the rule than the exception.

As the foreshore gets more and more reclaimed and the filling of the swamp area proceeds the problem of finding another dump or an alternative method of refuse disposal becomes a pressing need, and it will not be long now before the Local Authority will be forced to tackle this problem once and for all and make up their minds either to incinerate refuse or to go further away from the City to find suitable dumping sites.

### SANITARY INSPECTION OF THE DISTRICT

#### Anti-Rat Measures

Measures directed to the reduction of the rat population of the Urban Sanitary District continued unabated during the year under report with a large degree of success. These measures are comparatively new and are based on the methods employed in the United Kingdom, the result of experimental work done on the habits and life history of the rat by the scientific staff of the Infestation Division of the Ministry of Food. Briefly they consist of a system of pre-baiting, poison baiting, and post-baiting with suitable baits and poisons with the important proviso that post-baiting—and poisoning if necessary—must be done with a different bait and a different poison from those employed in pre-baiting.

We are gathering experience as to the best type of bait, the most suitable poison, and the most favourable set of circumstances conducive to success in this method of attack, and we hope and expect that in course of time it will be possible to replace the older methods of trapping, gassing, and clubbing by the method of poisoning almost entirely.

I need hardly point out that the use of poison bait involves a risk of death by poisoning to dogs, cats, and other household pets and particularly to poultry, and great care has to be exercised by the various groups of the anti-rat unit in the course of regular routine work, and the knowledge, consent, and collaboration of the householder is a necessary indispensable preliminary. This is not always obtained and in view of this appreciable element of risk, these newer methods cannot be applied to every premises and in every circumstance.

Trapping and gassing continue to yield satisfactory results especially when the more sensitive types of rat and mice traps can be obtained and are properly and suitably baited.

I must here refer to the urgent need for specific legislation to deal with rat nuisance. It is becoming increasingly patent that the owner and occupier are more and more disclaiming any responsibility in this matter. They continue to feel that it is the duty of the Local Authority to prevent the occurrence of rat nuisance and to abate it when it arises.

Apart altogether from much needed co-operation which is often conspicuously lacking, some householders literally feed and harbour rats, and do not appreciate the elementary fact that, if these rodents can get alternative food and shelter, they will pay absolutely no attention to baits or traps set by the Department to poison and ensnare them.

Of what permanent value one may ask are intensive campaigns directed to the abatement of rat nuisance when no efforts are made to get rid of extensive harbourages, and no legislative enactment exists to compel the elimination of rat runs or the rat-proofing of buildings?

#### DESTRUCTION OF RATS AND MICE

Rats caught by trappers	...	...	...	...	9,710
Rats bought	...	...	...	...	11
Total	...	...	...	...	9,721
Mice caught and destroyed	...	...	...	...	7,252



## EXAMINATION OF RATS BY GOVERNMENT BACTERIOLOGIST

Rats examined for plague	...	...	...	...	9,721
Rats found infected with plague	...	...	...	...	—
Immature rats not examined	...	...	...	...	—

## SPECIES

				<i>Decumanus</i>	<i>Rattus</i>	Total
Males	...	...	...	2,238	518	2,756
Females	...	...	...	5,654	1,311	6,965
Total	...	...	...	7,892	1,829	9,721

## Anti-Mosquito Measures

There was no undue prevalence of mosquito nuisance during 1947 and complaints from householders were fewer than in previous years. This not unsatisfactory state of affairs has been achieved as a result of constant vigilance and regular routine inspection.

There can be no let-up in the work of the Anti-Mosquito Unit. Even in the best and cleanest premises it is possible to find potential breeding places which have only to be left a week or ten days before the inevitable larva makes its appearance. Again the large underground drains are a constant source of anxiety particularly in the dry season when not uncommonly they get blocked with refuse brought down from areas higher up, or deposited on the spot by some careless householder or malevolent scavenger.

It is true to say that anophelene mosquitoes are conspicuous by their absence, and that infected anophelenes are an extreme rarity but the same cannot be said of "aedes" mosquitoes. Whatever nuisance is prevalent within the limits of the City is due almost entirely to this variety of mosquito and the aedes index of 3 to 4 per cent. which is about the normal finding is far too high to engender any feeling of safety, if, perchance, and aedes mosquito infected with the virus of yellow fever were to gain a foothold in the City.

Increased staff, increased funds, and better equipment are urgently needed to reduce the index to zero and to put ourselves in a state of efficient preparation against the possibility of invasion by yellow fever infected mosquitoes.

## INSPECTION OF EAVES GUTTERS, &amp;c.

Number of inspections of premises (Anti-Mosquito Unit)	...	109,268
Number of inspections of eaves gutters	...	36,190
Number of occasions found in good order	...	33,501
Number of occasions found defective	...	2,689
Number of occasions found containing water only	...	450
Number of occasions found containing water and larvae	...	215
*Number of occasions mosquito larvae were found in tubs, anti-formicas, tin cans, &c.	...	10,772
Yards cleared of receptacles	...	5,750

N.B.—\*Occasions on which mosquito larvae were found by sanitary inspectors, during the course of 79,417 inspections of premises, are included in above figure.

## LARVAL INDEX

					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

## (A) Premises and Occupations controlled by Bye-Laws and Regulations

## FOOD

The food problem continues to be one of the first magnitude both from the point of view of quantity and quality. Apart altogether from the high cost of all essential foodstuffs which is working intense hardship on all classes of the community but on the poorer classes particularly, it has not been always possible during the past year to obtain a sufficiency of supplies to meet all needs.

There have been periods when it was not possible to obtain essential foodstuffs like butter, cheese, eggs, bacon, ham, and I need hardly say that such shortages have an adverse effect on the health and resistance of the residents of the Urban Sanitary District.

Again, the quality of the available foodstuffs has often been poor, and deterioration in the case of frozen meat and iced fish, leading on occasions to condemnation as unfit for human consumption, has not been the uncommon and rare feature that a public health officer would like it to be. It is not sufficiently realised by importers and vendors alike that frozen meat and poultry and iced fish do not stand up to tropical temperatures as well as to the temperatures prevailing in temperate climes, and when this fact is coupled with the prevailing lack of adequate storage space, and the careless handling which seems to be on the increase, it is not difficult to understand why deterioration sets in so quickly.



The work of the Department designed to secure cleanliness and freedom from contamination of food exposed for sale and to insure the registration of all foodshops and itinerant vendors and the medical examination of all foodhandlers continued unabated, but the difficulties in the way of obtaining these essential requirements multiply in proportion as it becomes difficult to get proper screening material for trays, cupboards, &c., an ample supply of running water, and frequent changes of clean clothing.

It is possible, however, to record that a better and more sympathetic understanding of the aim and purpose of the campaign, and a greater appreciation of the value of good clean food with a fuller consciousness of all that that term implies, are becoming apparent and to that extent the progress made is heartening.

#### Sale of Milk Bye-Laws

##### DAIRIES AND MILK SHOPS

<i>Sub-District</i>					<i>Cowshed Licences Issued</i>
City proper	...	...	...	...	—
East Dry River (unsewered)	...	...	...	...	—
Belmont (unsewered)	...	...	...	...	2
Woodbrook (partly unsewered)	...	...	...	...	—
St. James (unsewered)	...	...	...	...	2
Total 1947	...	...	...	...	4
Total 1946	...	...	...	...	25

##### DAIRYMEN'S LICENCES

Dairymen's licences issued to cowkeepers and other purveyors of milk	...	...	...	...	4
Dairymen's licences issued to shops, milk bars and refreshment parlours	...	...	...	...	38
Total 1947	...	...	...	...	42
Total 1946	...	...	...	...	88

##### MILK VENDORS' LICENCES AND BADGES

<i>City and Out-Districts</i>			<i>Milk Vendors' Licences</i>	<i>Cows Tuberculin Tested</i>	<i>Badges</i>
Port-of-Spain	...	...	41	75	6
Out-districts	...	...	48	182	56
Total 1947	...	...	89	257	62
Total 1946	...	...	172	345	133

#### Sale of Foodstuffs Bye-Laws

##### REGISTRATION OF SHOPS, &c.

Provision, meat, and spirit shops, restaurants, hotels, refreshment parlours	...	...	...	...	510
Ground provision and fruit shops	...	...	...	...	35
Bakehouses	...	...	...	...	32
Confectionery shops	...	...	...	...	8
Aerated water factories	...	...	...	...	2
Other factories	...	...	...	...	5
Total 1947	...	...	...	...	592
Total 1946	...	...	...	...	710

##### REGISTRATION OF VENDORS

Bread and cakes	...	...	...	...	45
Confectionery	...	...	...	...	52
Cooked food including fries, soups, &c.	...	...	...	...	72
Meat, fish and cheese	...	...	...	...	32
Ice-cream and palets	...	...	...	...	83
Sweet drinks	...	...	...	...	68
Vegetables, greens, fruits	...	...	...	...	32
Miscellaneous	...	...	...	...	10
Total 1947	...	...	...	...	394
Total 1946	...	...	...	...	640
Number of badges issued to itinerant vendors	...	...	...	...	382 (522—1946)
Number of oyster vendors licensed under Sale of Oyster Bye-Laws	...	...	...	...	7 (5—1946)



## FOODSTUFFS SEIZED OR SURRENDERED AND DESTROYED

Under Part X of the Public Health Ordinance, Ch. 12. No. 4.

Cakes ... ..	...rolls	78	Milk (preserved—sweetened and unsweetened) ...	{ cases ...	21
Cheese ... ..	...pounds	342	Oats (rolled) ... ..	{ tins ...	170
Cornmeal ... ..	...pounds	6,300	Onions ... ..	{ bags ...	9
Fish (fresh and preserved) including shell fish	{ cases ...	193	Potatoes ... ..	{ pounds ...	55,012
	{ tins ...	638		{ bags ...	67
	{ pounds ...	977		{ barrels ...	852
	{ bags ...	98		{ pounds ...	14,800
Meats (fresh and preserved) including beef, pork, ham, sausage, &c.	{ cases ...	90	Vegetables (fresh and preserved) including turnips, fruits, &c. ...	{ cartons ...	25
	{ casks ...	6½		{ cases ...	21
	{ tins ...	900		{ pounds ...	1,039
	{ pounds ...	103,868			

## (B) Premises used for Human Habitation, Houses Let in Lodgings, Common Lodging Houses

Housing accommodation for the increasing population of the City continues to be extremely inadequate and the problem of finding houses for the large number of people who besiege the Public Health Department is one that must, in the present set of circumstances, remain unsolved.

The fact is that private owners complain that they have no inducement to build houses for rent because of the limitations imposed by the Rent Restriction Ordinance and the little private building that goes on at the moment is largely in the nature of building for commercial purposes. True, a certain amount of building is taking place on the Woodbrook Estate and in the St. James area, but these are houses either for the builders themselves or their families.

Hardly anything is being done to satisfy the needs of the middle classes and the situation for them is as acute and as hopeless as it has ever been.

For the poorer classes, often referred to as the "working classes", the Planning and Housing Commission are continuing their activities in the Slum Clearance Areas and the grand and wonderful work of ridding the down-town areas of the City of barracks and slums continues unabated. The face of the eastern and southern sections of the City is being slowly but surely changed and two- or three-storey flats are taking the place of the old tumbledown and ramshackle barracks that formerly "adorned" this part of the City. They present a clean and sanitary appearance and, providing as they do adequate accommodation with modern up-to-date amenities, they cannot fail to exert a favourable effect on the health of the district and a good influence on the residents.

It is of course greatly to be regretted that only a certain proportion of those who formerly lived in these areas can be re-housed on the site, but in view of the great overcrowding and congestion that formerly existed this was to be expected—and, indeed, this has happened wherever slums have been cleared—and the need for alternative accommodation is an obvious and pressing one.

It is being freely rumoured that the work of the Planning and Housing Commission may soon come to an end; the mere thought of this is depressing in the extreme. The work has in a sense only just begun and only a fraction of the problem has been tackled. There remain many slum areas which, though somewhat localised, constitute veritable eyesores in the various districts of the City.

The building of the projected workers flats in the Wrightson-Dock Road Area is a long awaited necessity.

Surely it is inconceivable that the necessary funds for continuing this humanitarian work of major public health importance will not be forthcoming.

## VITAL STATISTICS OF THE DISTRICT

## Comparative Summary of Vital Statistics

(Unless otherwise stated, rates are per 1,000 population)

	1921	1945	1946	1947
Area of City—acres (pastures and open spaces included) ... ..	1,793	2,550	2,550	2,550
Estimated population (mean) ... ..	61,386	106,347	100,798	96,067
Density of population (persons per acre) ... ..	34.2	42	40	38
Total live births ... ..	1,687	3,972	4,133	4,113
Birth rate ... ..	27.28	37.34	41.00	42.81
Still births registered ... ..	154	224	225	220
*Still birth rate ... ..	91.3	56.39	54.44	53.49
Marriages registered ... ..	534	1,133	1,170	1,024
Marriage rate ... ..	8.64	10.65	11.61	10.66
Total deaths ... ..	1,659	1,526	1,396	1,385
Death rate ... ..	26.83	14.34	13.85	14.42
Natural increase of population ... ..	28	2,446	2,737	2,728
Deaths under one year ... ..	287	239	241	231
*Infant mortality rate ... ..	176.12	60.17	58.31	56.16
*Maternal mortality rate ... ..	—	3.02	1.45	3.40

\*Per 1,000 births.

Census population of City April, 1946: 93,198.

Estimated Population of City to 31st December, 1947: 97,571.

Colony's Mean Population: 577,660.

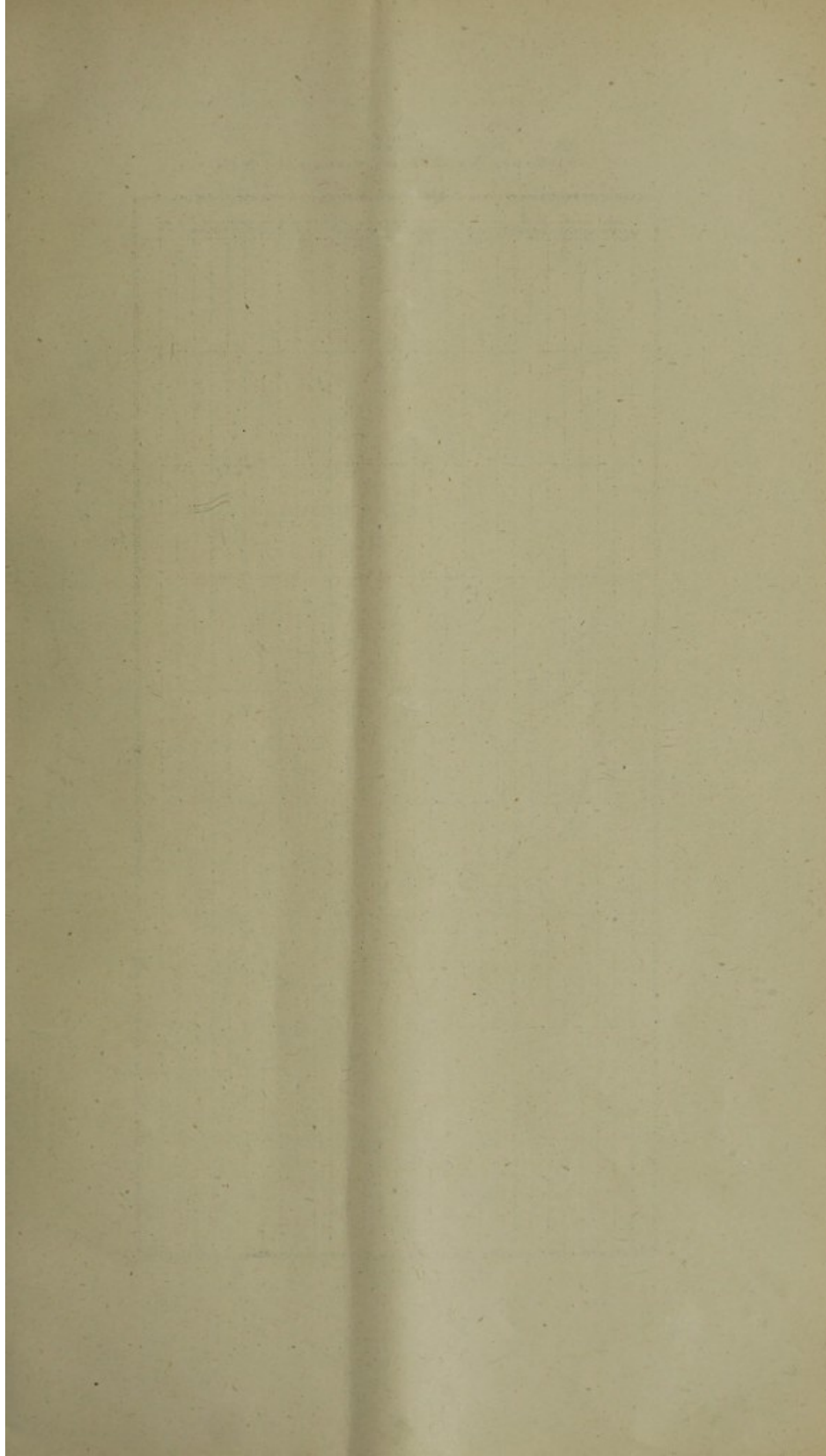




Chart A  
Port of Spain  
Birth-Rates and Death-Rates per 1,000 Population, 1920-1947





## Comparative Summary of Vital Statistics—Contd.

(Unless otherwise stated, rates are per 1,000 population)

	1921	1945	1946	1947
<b>Death Rates :</b>				
Notifiable infectious diseases ...	6.21	2.47	2.45	2.64
Pulmonary tuberculosis ...	2.49	1.41	1.57	1.74
Tuberculosis (other forms) ...	.26	.12	.14	.11
Enteric fever ...	1.25	.09	.08	.07
Pneumonia (all forms) ...	1.97	.74	.61	.67
Bronchitis ...	1.36	.41	.33	.47
Diphtheria ...	.02	.05	.02	.02
Malaria ...	.89	.14	.12	.05
Syphilis ...	.21	.21	.20	.22
Diarrhoea and enteritis ...	1.91	.39	.51	.41
Influenza ...	.26	.02	.03	.01
Ankylostomiasis ...	.15	.02	—	.01
Bright's disease and nephritis ...	2.09	.76	.43	.62
Diseases of the heart and blood vessels ...	2.65	2.21	2.02	2.21
Diseases of the nervous system including cerebral haemorrhage ...	1.70	1.66	1.47	1.38
Cancer and other malignant diseases ...	.63	.75	.78	.78

Census population of City April, 1946: 93,198.

Estimated population of City to 31st December, 1947: 97,571.

Colony's mean population: 577,660.

## Births and Birth Rates—Deaths and Death Rates

The birth rate of 42.81 per 1,000 population during the year under report was the highest birth rate recorded in the annals of the Local Sanitary Authority and the death rate of 14.42 the third lowest—the only other years in which there was a lower rate being 1945 and 1946 in which the rate was 14.34 and 13.85, respectively. Actually the number of deaths recorded, 1,385, was lower than those recorded in 1945, 1,526, and in 1946, 1,396, respectively, but because of the lower estimated mean population of 96,067 as compared with 106,347 and 100,798, respectively—based of course on the actual population figures obtained as a result of the census held in April, 1946—the rate works out somewhat higher.

The East Dry River District and the Belmont District again furnished the highest death rate figures—a fact that can always be confidently predicted in view of the well known insanitary conditions of those districts with their privy cesspit system, small and undersized lots, their narrow streets, and the imperfect and inadequate drainage system, features that are particularly prominent in the East Dry River District.

Surely it is high time that the various schemes and plans, long-term and short-term, that have been prepared for ameliorating the lot of those who are unfortunate enough as to live in this area, were put into effect, but when I make this statement I am at once reminded that with the Council's financial resources, such as they are, it is impossible to expect anything but patchwork here and there in the immediate future, unless the whole big question of increased revenue is settled once and for all.

Births				Deaths			
Males	Females	Both Sexes	Birth Rate per 1,000 population	Males	Females	Both Sexes	Death Rate per 1,000 population
2,054	2,059	4,113	42.81	711	674	1,385	14.42

## Deaths in Sub-Districts of the City

SUB-DISTRICT	Mean Population	DEATHS				Total Deaths in Sub- Districts	Rate per 1,000 population
		PLACE OF OCCURRENCE					
		Home, &c.	Colonial Hospital	Royal Gaol	House of Refuge		
City Proper ... ..	33,053	208	204	16	...	428	12.95
St. Clair ... ..	1,611	14	...	...	...	14	8.69
East Dry River ... ..	21,322	170	121	...	...	291	13.64
Belmont ... ..	16,611	152	72	...	...	224	13.49
Woodbrook ... ..	12,190	86	33	...	...	119	9.76
St. James ... ..	11,280	94	44	...	171	309	* 27.39
TOTAL ... ..	96,067	724	474	16	171	1,385	14.42

\* See Table: "Comparison of Death Rates".



## Comparison of Death Rates

	No. of Deaths	Death Rate per 1,000 population
(1) City (St. James excluded) ... ..	1,076	12.69
(2) City, including St. James ... ..	1,385	14.42
(3) City, as in (2), but omitting House of Refuge ... ..	1,214	12.72
(4) St. James (House of Refuge excluded) ... ..	138	12.97

## Age Distribution of Deaths

Period	Males	Females	Both Sexes	Percentage of Total Mortality at All Ages
Under 1 year ... ..	135	96	231	16.68
1-5 years ... ..	21	28	49	3.54
6-10 do. ... ..	6	2	8	0.58
11-20 do. ... ..	11	19	30	2.17
21-30 do. ... ..	54	62	116	8.37
31-40 do. ... ..	66	53	119	8.59
41-50 do. ... ..	72	61	133	9.60
51-60 do. ... ..	92	71	163	11.77
Over 60 years ... ..	254	282	536	38.70
TOTAL ... ..	711	674	1,385	...

## Comparison of Deaths at different Age periods, 1928-47

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	5.48	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

## Causes of Deaths

Examination of the table listed hereunder demonstrates once again the well known fact that the main causes of deaths in the Urban Sanitary District are diseases of the circulatory system first, and pulmonary tuberculosis second, with the various diseases of early infancy occupying third place and old age or senility fourth.

I have in previous reports referred to the toll being taken by the cardiac and vascular diseases and there is nothing to add of particular importance in the year under review. But it would appear that pulmonary tuberculosis is claiming more and more victims—in fact both notifications and death returns in respect of pulmonary tuberculosis have been on the increase during the past five years—but it must be remembered that efforts are being made by all public health departments to obtain a more accurate estimate of the morbidity and mortality attributable to tuberculosis, and as more and more facilities are provided for the detection and treatment of this scourge, more and more cases are being uncovered.

Undoubtedly this fact is responsible to a certain extent for the increase in the notifications and death returns, but the writer is also of the opinion that the incidence of pulmonary tuberculosis is increasing, coincident with the worsening of the economic position that has been going on during the past few years.

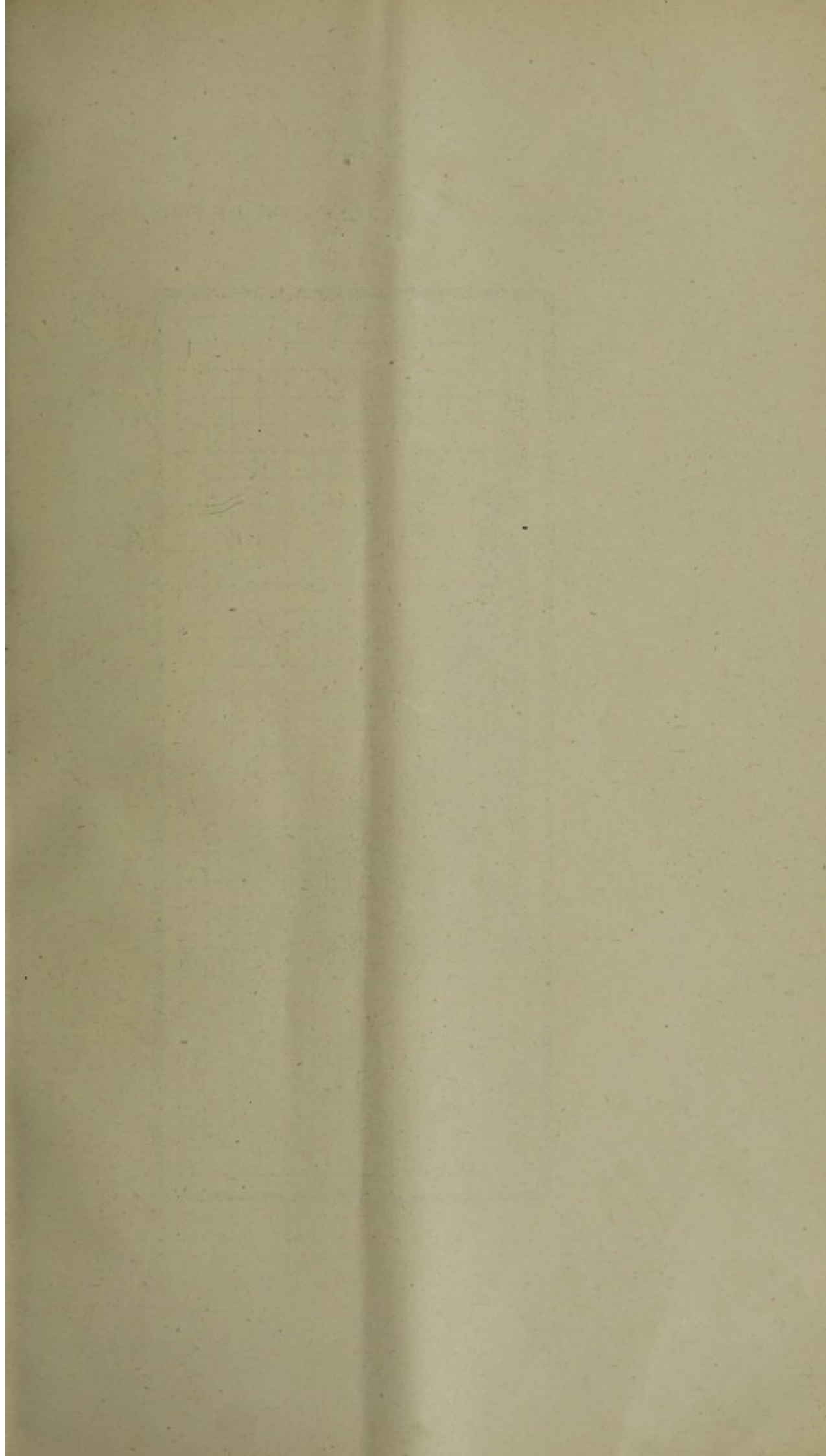
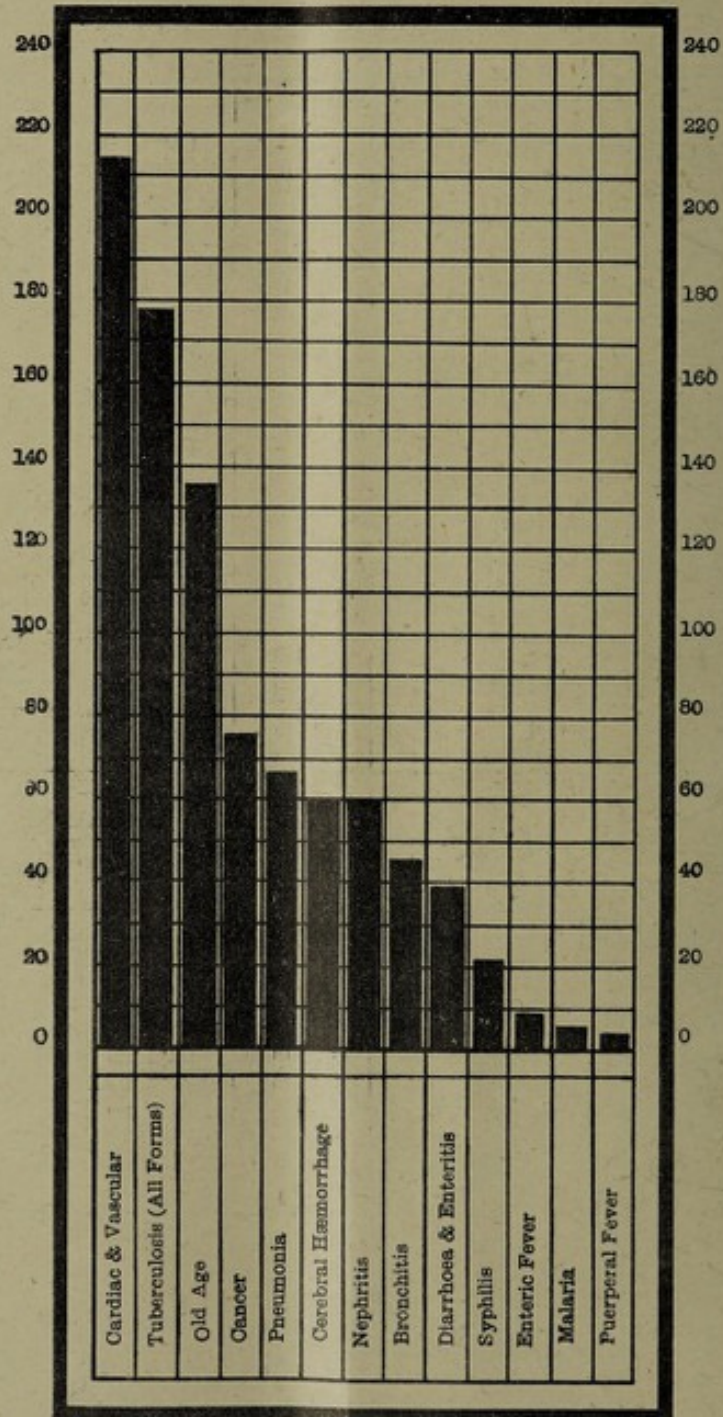




Chart B.  
Port-of-Spain

Principal Individual CAUSES OF DEATHS—1947





## Causes of Deaths

I.—GENERAL DISEASES			
(a) Notifiable Infectious Diseases			
Enteric Fever ...	7	(c) Diseases of the Circulatory System	
Diphtheria ...	2	Cardiac and Vascular Diseases ...	212
Membranous Croup ...	—	Other Circulatory Diseases ...	5
Pulmonary Tuberculosis ...	167		217
Tuberculosis (other forms) ...	11	(d) Diseases of the Respiratory System	
Pneumonia (all forms) ...	64	Bronchitis ...	45
Ophthalmia Neonatorum ...	—	Other diseases of the Respiratory System ...	20
Plague ...	—		65
Cholera ...	—	(e) Diseases of the Digestive System	
Small Pox ...	—	Diarrhoea and Enteritis ...	39
Typhus Fever ...	—	Cirrhosis of Liver ...	6
Yellow Fever ...	—	Other diseases of the Digestive System ...	52
Encephalitis Lethargica ...	—		97
Acute Poliomyelitis ...	—	(f) Non-Venereal Diseases of the Genito-Urinary System	
Acute Ascending Myelitis ...	—	Bright's Diseases ...	—
Cerebro-Spinal Fever ...	—	Nephritis ...	60
Puerperal Fever ...	3	Other Non-Venereal Diseases ...	46
Anthrax ...	—		106
	254	(g) Diseases of the Puerperal State. (Other than Puerperal Fevers)	
(b) Non-Notifiable Infectious Diseases.		Puerperal Eclampsia ...	4
Malaria ...	5	Puerperal Haemorrhage ...	2
Whooping Cough ...	—	Other Puerperal Diseases ...	5
Influenza ...	1		11
Measles ...	—	(h) Diseases of Early Infancy ...	155
Dysentery ...	1	(i) Old Age ...	135
Ankylostomiasis ...	1	(j) Affections produced by External Causes.	
Syphilis ...	21	Burns and Scalds ...	6
Other Venereal Diseases ...	5	Accidents and Injuries... ..	30
Blackwater Fever ...	—		36
	34	(k) Other Causes of Death ...	29
II.—OTHER DISEASES		Grand Total ...	1,385
(a) General Diseases not included above			
Cancer and other Malignant Diseases ...	75		
Pellagra ...	1		
Scurvy Rickets ...	—		
Leprosy ...	1		
Other General Diseases ...	36		
	113		
(b) Diseases of the Nervous System and Organs of Special Sense			
Simple Meningitis ...	11		
Cerebral Haemorrhage ...	56		
Apoplexy ...	4		
Convulsions of Children under 5 years ...	1		
Other diseases of the Nervous System ...	61		
	133		

## Infant Mortality

It is generally admitted that the infant mortality rate is something more than a mere rate indicating how many infants under one year of age have died per 1,000 live births in any particular year.

It is said to be a very valuable index of the general state of the public health and furnishes important information as to the general level of social welfare obtaining in any community and this, because there are a variety of factors which all play a part in producing a low infant mortality rate. For instance, a poor state of general sanitation, overcrowding, bad housing conditions, malnutrition, general poverty as well as inefficient and insufficient ante-natal, intra-natal, and post-natal care will all affect adversely the life of the infant in that critical period, the first year of life, and incidentally that of the mother as well.

It is customary, therefore, to analyse critically the various aspects of the infant mortality rate with a view to discovering in what direction there must be a concentration of effort by those concerned if a further reduction of this rate is to be obtained. It may be stated in general here, that specifically the important factors conducive to a lowering of the death rate among infants are an increase in the standard of "positive" health among parents both before marriage and after, the improved feeding both of mother and infant, a higher standard of maternal physique, better maternal care during pregnancy, confinement, and in the puerperium and better infant management. But there are other indirect factors which will always affect adversely the infant mortality rate if efforts directed towards their elimination are neglected. Some of these are domestic insanitation in the widest sense, unsatisfactory and inefficient disposal of excreta and refuse, overcrowding, ineffective scavenging, poverty and filth.

It is customary to find that ignorance of infant care and management is usually associated with defective sanitation, overcrowding and unsatisfactory housing conditions.

It is, therefore, with some degree of satisfaction that the infant mortality rate of 56.16 per 1,000 live births is recorded, the lowest in the annals of the Local Sanitary Authority which, be it remembered, was established in 1917.

As a matter of fact there has been a constant reduction of this rate ever since the Local Authority was instituted by the Public Health Ordinance of 1915 and a proper Public Health Department established to take special care of the health and sanitary condition of the Urban Sanitary District. In this commendable effort the Child Welfare League has played a major part by the splendid work at their various clinics within the City, by the skill, care, and attention of their nurses, and by the measures directed to the securing of proper nutrition and correct feeding of mother and child which they have so successfully undertaken.



Ante-natal care at the out-patient's clinic and the skilled intra-natal and post-natal care now available at the Colonial Hospital have all played their part, and the Local Authority gratefully acknowledge the debt they owe to both Child Welfare League and Government for their work in this field and express the hope that it will be extended and intensified.

The neo-natal mortality is correspondingly low, 37.20 per 1,000 live births but seeing that it represents 57.58 per cent. of the total mortality under one year, it is clear that much more effort directed to the elimination of disease and accidents, malnutrition, and insanitary conditions of home and environment, in the pre-natal and intra-natal periods is still needed.

#### Births and Deaths of Infants under 1 year, 1917-47

Period	No. of Births	No. 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
Average 1918-37	1,901	288	155.57
Year 1938	2,591	204	78.73
1939	2,752	242	87.94
1940	2,937	291	99.08
1941	2,888	314	108.73
1942	3,399	322	94.73
Average 1938-42	2,913	275	93.84
Year 1943	3,751	283	75.45
1944	4,161	248	59.60
1945	3,972	239	60.17
1946	4,133	241	58.31
1947	4,113	231	56.16

#### Causes of Deaths under 1 year

Causes of Deaths	Neo-Natal Deaths under 1 month	Deaths 1 month and under 1 year	Total	Percentage of Total Infant Mortality
<i>Ante-Natal Causes:</i>				
Prematurity	67	5	72	
Congenital Debility	12	5	17	
Marasmus	1	6	7	
Malnutrition	—	6	6	
Congenital Abnormalities	5	1	6	
Other Ante-Natal Causes	9	4	13	
Total Ante-Natal	94	27	121	52.38
<i>Intra-Natal Causes:</i>				
Asphyxia Neonatorum	16	—	16	
Cerebral Haemorrhage	5	—	5	
Atelectasis	1	—	1	
Internal Haemorrhage	4	—	4	
Total Intra-Natal	26	—	26	11.26
<i>Post Natal Causes</i>				
Pneumonia	—	14	14	
Diarrhoea and Enteritis	—	22	22	
Bronchitis	2	10	12	
Icterus Neonatorum	5	—	5	
Pulmonary Congestion	1	2	3	
Diphtheria	—	1	1	
Tuberculosis	—	10	10	
Meningitis	—	1	1	
Other Post-Natal Causes	5	11	16	
Total Post-Natal	13	71	84	36.36
GRAND TOTAL	133	98	*231	—

\* M. 135. F. 96

#### Duration of Life of Infants dying under one year of Age

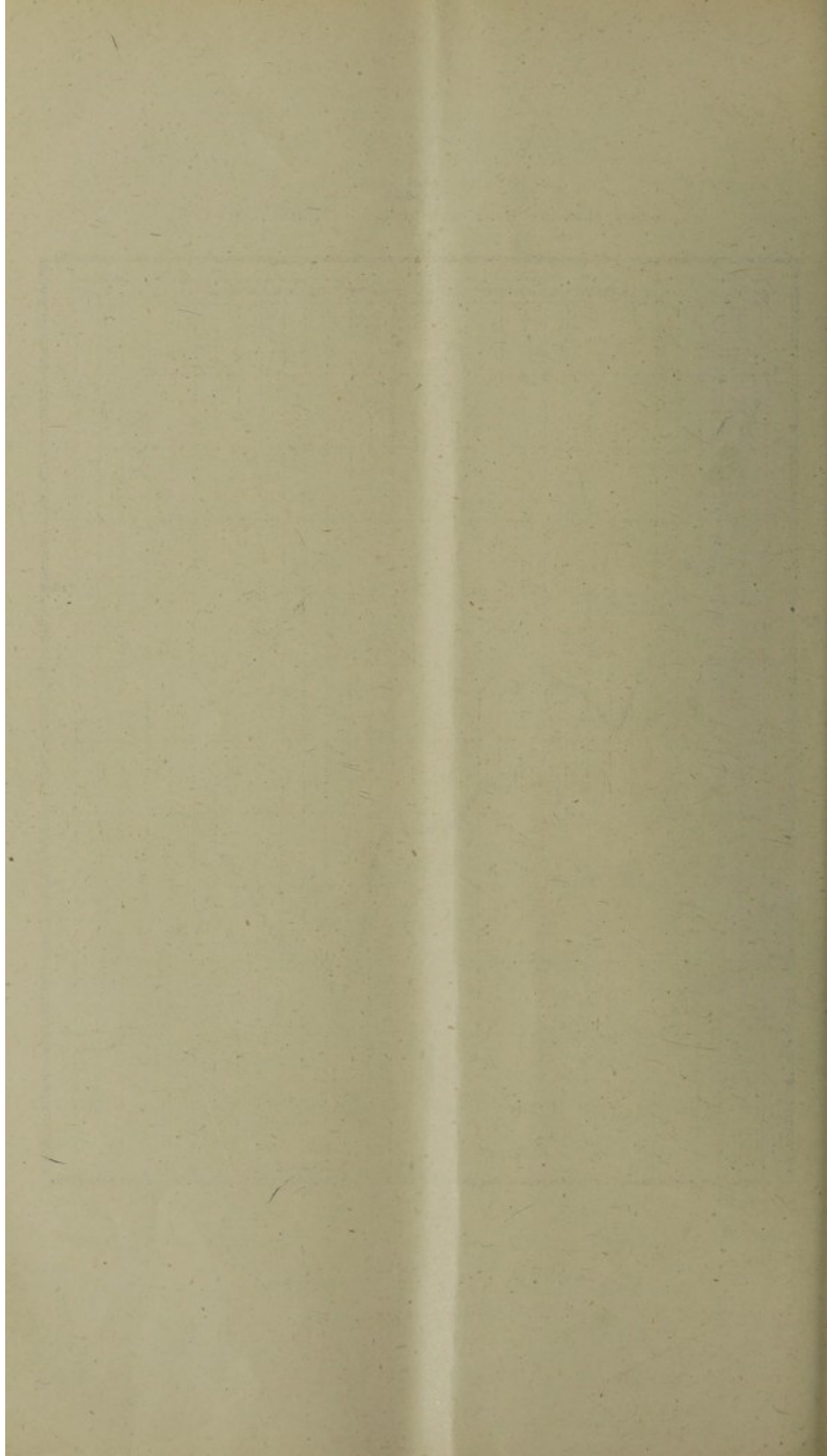
Duration of Life	No. of Infants	Percentage of total deaths under 1 year	Corresponding percentage 1946
Under 1 day	52	22.51	14.52
1 day and under 2 weeks	73	31.60	36.93
2 weeks and under 1 month	8	3.46	4.98
Total under 1 month	133	57.58	56.43
1 month to 3 months	37	16.02	15.77
Over 3 to 5 months	17	7.36	7.05
Over 5 to 7 months	15	6.49	8.30
Over 7 to 9 months	17	7.36	4.56
Over 9 to 11 months	12	5.19	7.88
Over 11 and under 1 year	—	—	—
Total	231	—	—



Chart C  
Port-of-Spain  
Infant Mortality Rates—per 1,000 Live Births, 1917-1947







## Neo-Natal Mortality (Deaths under 1 month), 1930-1947

Period	No. of Deaths under 1 month	Percentage of total deaths under 1 year	Neo-Natal Mortality Rate per 1,000 Births
Yearly Average : 1930-34	9.06	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

## Still Births

The still birth rate of 53.49 per 1,000 live births is the lowest rate recorded for the past ten years but this figure is still too high and represents a wastage of human life that could easily be avoided if expectant mothers were brought more under ante-natal and intra-natal care and control. Diseases, accidents, and deformities of pregnancy and the lack of skilled care and attention during confinement are the main causes.

## Still Births

Year	Total Still Births	Rate per 1,000 Live Births
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

## The Pre-School Child

This veritable no man's land in the life of the child needs urgent care and attention by those who are in anyway responsible.

But as things are, it would appear that only the parents have any direct responsibility in this critical period. Public opinion has not yet awakened to the fact that valuable lives are being lost, and the State has not yet appreciated that potential wealth in the way of man-power and very likely brain-power, is being thrown away, at this period.

Very often the care and treatment given to the infant seems to be completely wasted when, at the beginning of school life, the child is discovered to possess a variety of lesions which developed during this pre-school period of its life, and which could easily have been prevented. I have repeatedly drawn attention to the need for the establishment of more toddlers' clinics with medical supervision where these cases could be seen at an early stage, given appropriate treatment, and dangerous complications thereby avoided.

Forty-nine (49) deaths occurred at this period of life during the year under review, the lowest number for ten years.

## Causes of Death at Ages 1-5

Groups	Group Total	Percentage of Total Mortality at ages 1-5
<i>Diseases, &amp;c., attributable to Ante-Natal Causes :</i>		
Congenital Syphilis 2, Marasmus 4	6	12.24
<i>Communicable Diseases :</i>		
Pneumonia 10, Tuberculosis 8, Diphtheria 1, Typhoid Fever 1	20	40.82
<i>Diseases of the Nervous System :</i>		
Convulsions 1, Encephalitis 1, Meningitis 1	3	6.12
<i>Diseases of the Respiratory System :</i>		
Bronchitis 4, Pleurisy 1	5	10.20
<i>Diseases of the Digestive System :</i>		
Gastro-Enteritis 11, Hepatitis 1, Intussusception 1	13	26.53
<i>Other Causes :</i>		
Sarcoma of Kidney 1, Leukaemia 1	2	4.08
Total	*49	—

\* M. 21, F. 28.



### Maternal Mortality

Deaths associated with pregnancy and child bearing should be of particular importance to public health workers because they give some indication of the ready availability and the efficiency of the maternity and child welfare services. Good and prompt care in the pregnancy and child bearing period considerably reduces the risk of bearing children and should be at the disposal of all expectant mothers.

It is not sufficiently appreciated that child bearing is a physiological function and theoretically there should be no mortality associated with it. It should be possible by proper supervision and skilled ante-natal care, by efficient and readily available maternity services, to prevent all the diseases that usually cause the death of so many mothers with the possible exception of criminal abortion and even here proper education and a better social order can undoubtedly have a bettering influence.

### Causes of Maternal Deaths

Causes of Maternal Deaths	Under 16	16 to 25	26 to 35	36 and upwards	Total All Ages	Rate per 1,000 Births	
						1947	Average 1942-46
Puerperal Sepsis ...	—	2	—	1	3	0.73	0.58
Eclampsia ...	—	3	1	—	4	0.97	0.53
Haemorrhage ...	—	1	1	—	2	0.49	0.47
Pernicious Vomiting ...	—	—	—	—	—	—	—
*Other Causes ...	—	1	2	2	5	1.22	1.25
Total ...	—	7	4	3	14	3.40	2.83

\* "Other Causes" include Abortion, Difficult Labour, Ectopic Gestation.

## PREVALENCE OF AND CONTROL OVER INFECTIOUS DISEASES

### Notifiable Infectious Diseases

Four hundred and sixty-nine (469) cases of infectious diseases were notified during the year under report, eighty-one (81) fewer than in the previous year 1946, and much below the average, 552.6, for the five-year period 1942-46.

Of the notifications, pulmonary tuberculosis, as usual, claimed the largest number, 222, with pneumonia in the second place with 75, enteric fever third with 68, and chicken pox fourth with 57.

Deaths certified to notifiable infectious diseases totalled 254 as compared with 247 in 1946 and again pulmonary tuberculosis claimed the largest number of victims, 167, with pneumonia next, 64.

As has already been pointed out, taken as a whole, notifiable infectious diseases were responsible for the largest number of deaths, 254, with cardiac and vascular diseases next with 217 deaths, in the year under report.

With the determined effort now being made to uncover cases of pulmonary tuberculosis and to bring them up for treatment, it is not to be wondered at that more and more notifications are being received but, in spite of this, the writer is of the opinion that a general increase in the number of cases attributable to pulmonary tuberculosis is taking place.

Last year was one of the worst as far as enteric fever is concerned, the number of cases, 68, being the largest since 1940, though the number of deaths shewed a welcome decline, only 7 being reported.

As a matter of fact, the death rate from this disease, .07 per 1,000 population, was the lowest on record since 1932 when a death rate of .06 per 1,000 was registered.

I have drawn attention repeatedly to the fact that the East Dry River and Belmont Districts are the most unhealthy and insanitary of the subdistricts of the City and that this state of affairs is reflected in the number of cases notified and deaths certified to infectious diseases in these subdistricts.

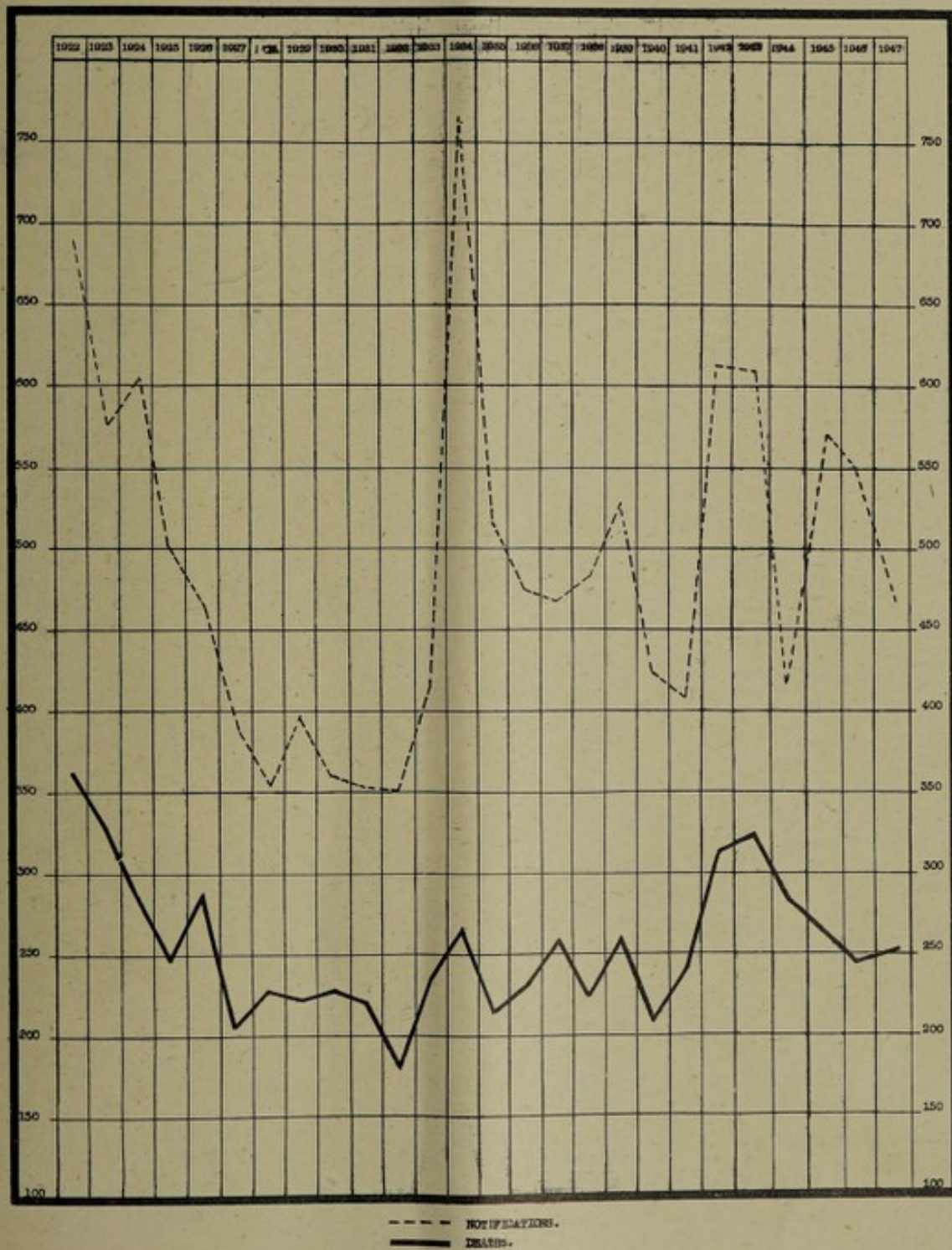
This fact is again amply demonstrated by the figures listed hereunder in tabular form, the East Dry River District furnishing a morbidity rate of 6.85 and a mortality rate of 3.24 per 1,000 population, and the Belmont District 6.26 and 2.95 per 1,000 population, respectively.

### Infectious Diseases—Notification and Deaths—1937 to 1947

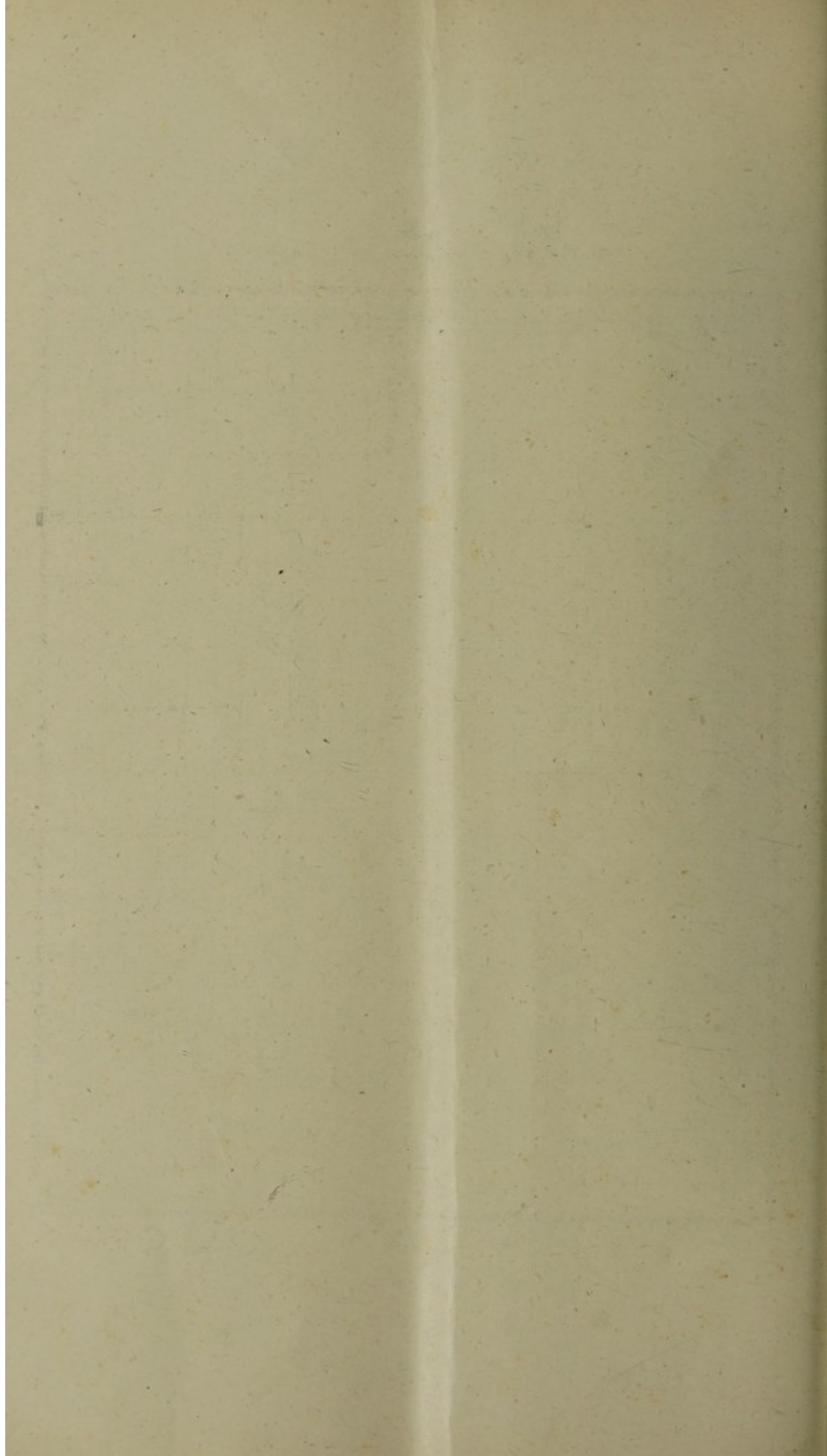
INFECTIOUS DISEASES	NOTIFICATIONS				DEATHS			
	Average 1937-41	Average 1942-46	1946	1947	Average 1937-41	Average 1942-46	1946	1947
Diphtheria ...	34.8	23.8	22	23	2.6	3.4	2	2
Enteric Fever ...	61.4	39.8	37	68	12.6	10.2	8	7
Pulmonary Tuberculosis ...	141.6	180.8	173	222	135.8	150	158	167
Tuberculosis (Other forms) ...	7.8	12.2	7	12	12.6	10	14	11
Pneumonia (All forms) ...	108	179.4	87	75	73	107.6	61	64
Ophthalmia Neonatorum ...	26.4	12.6	11	6	0.2	—	—	—
Chicken Pox ...	75.2	82.8	196	57	—	—	—	—
Encephalitis Lethargica ...	0.2	—	—	—	—	—	—	—
Acute Ant. Poliomyelitis ...	5.6	5.4	1	1	—	1	1	—
Puerperal Fever ...	0.8	14.6	14	4	1.2	2.2	1	3
Cerebro-Spinal Fever ...	—	1.2	2	1	—	1	2	—
TOTAL ...	461.8	552.6	550	469	239	286.4	247	254
Rate per 1,000 population ...	5.28	5.41	5.46	4.88	2.73	2.80	2.45	2.64



Chart B  
Port-of-Spain  
Infectious Diseases—Notifications and Deaths, 1922-1947







## Distribution of Cases and Deaths from Notifiable Infectious Disease

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 ...	4	—	—	—	3	—	4	1	3	—	9	1
Enteric Fever ...	14	3	—	—	24	3	18	—	4	1	8	—
Pulmonary Tuberculosis ...	68	56	—	—	69	49	41	27	17	14	27	21
Tuberculosis (Other forms) ...	3	3	—	—	5	4	2	2	1	2	1	—
Pneumonia (All forms) ...	22	19	—	1	25	12	21	19	1	4	6	9
Ophthalmia Neonatorum ...	1	—	—	—	2	—	2	—	1	—	—	—
Chicken Pox ...	12	—	—	—	18	—	15	—	5	—	7	—
Cerebro-Spinal Fever ...	—	—	—	—	—	—	—	—	1	—	—	—
Acute Poliomyelitis ...	—	—	—	—	—	—	—	—	1	—	—	—
Puerperal Fever ...	1	1	—	—	—	1	1	—	1	1	1	—
Encephalitis Lethargica ...	—	—	—	—	—	—	—	—	—	—	—	—
<b>TOTAL ...</b>	<b>125</b>	<b>82</b>	<b>—</b>	<b>1</b>	<b>146</b>	<b>69</b>	<b>104</b>	<b>49</b>	<b>35</b>	<b>22</b>	<b>59</b>	<b>31</b>
Rate per 1,000 population in each Sub-district ...	3.78	2.48	—	0.62	6.85	3.24	6.26	2.95	2.87	1.80	5.23	2.75

## Notifiable Infectious Diseases—Home and Hospital Deaths

DISEASES	DEATHS			Hospital Deaths per cent. of Total Deaths	Corresponding percentage for the year 1946
	At Home	At Hospital	Total		
Diphtheria ...	1	1	2	50.00	100.00
Enteric Fever ...	1	6	7	85.71	100.00
Pulmonary Tuberculosis ...	79	88	167	52.69	46.20
Tuberculosis (Other forms) ...	3	8	11	72.72	71.43
Pneumonia (All forms) ...	38	26	64	40.63	52.46
Puerperal Fever ...	—	3	3	100.00	100.00
Cerebro-Spinal Fever ...	—	—	—	—	100.00
<b>TOTAL ...</b>	<b>122</b>	<b>132</b>	<b>254</b>	<b>51.97</b>	<b>—</b>

## Tuberculosis

## PULMONARY TUBERCULOSIS

At long last, a ray of light and hope is shining for the unfortunate victims of pulmonary tuberculosis.

The position during the past ten years has been so unsatisfactory and so little real progress was being made that, even though the way is still long and the journey tedious, what has so far been achieved is a commendable effort on the part of the Central Government to tackle this vast scourge with all its intricate ramifications.

At long last all cases of pulmonary tuberculosis have now been removed from the Colonial Hospital, Port-of-Spain, to Camp Ogden on the Long Circular Road, an army camp built and formerly occupied by the Americans on the outskirts of the City, and the Colonial Hospital is now free of those "open" advanced cases of pulmonary tuberculosis who, by their wanderings, constituted such a great potential danger to the hospital itself and its immediate environs.

This is an advance of the first magnitude and an achievement worth recording, considering that several attempts were made before to attain this end but without much success, due to objections put up by various interested parties in regard to the various localities proposed from time to time.

Camp Ogden is able, when fully commissioned, to accommodate at least 200 cases and is being gradually opened up to full accommodation.

This good piece of news, however, is offset by the unfavourable news that work on the Caura Sanatorium is likely to cease altogether through lack of funds and scarcity of materials.

This would be tragic in the extreme, if it were true, and it is sincerely to be hoped that means and ways will be found to continue the erection of this institution which should take first place among all the major works that are likely to engage the attention of Government.

I cannot for one moment conceive of any cessation of effort to bring this piece of humanitarian work to a successful conclusion after all the vicissitudes that it has had to undergo, and I feel confident that the Sanatorium-Hospital at Caura will be concluded in the near future.

The appointment of the Chief Tuberculosis Officer which I recorded in my last report, has also served to stimulate the interest and enthusiasm of those interested in this field of work and already the help, hope, and encouragement which has thus been brought to a large number of sufferers are indeed gratifying.

No longer can it be said with reproach that the unfortunate victim of tuberculosis is doomed, and increasing numbers of sufferers are coming to the Public Health Department for advice as to how best they can help themselves and cease being a danger to others.



Unfortunately, the economic position is such that what is being done in the medical field is to a large extent being vitiated by the lack of means to purchase adequate nourishment, by the relative scarcity of essential foodstuffs, and by the deplorable housing conditions, and as a direct result the returns seem to indicate that a general increase in the incidence of tuberculosis is taking place.

#### Pulmonary Tuberculosis—Notifications and Deaths, 1918-47

Period	Notifications	Deaths	Death Rate per 1,000 population
Year 1918	299	233	3.43
Yearly Averages:			
1919-23	207	173.2	2.65
1924-28	167.6	154.6	2.38
1929-33	133.6	129	1.85
1934-38	147.4	124.6	1.62
Average 1919-38	163.9	143.4	2.13
Year 1939	175	167	1.85
1940	155	118	1.28
1941	113	124	1.27
1942	157	136	1.37
1943	182	148	1.45
1944	186	158	1.52
1945	206	150	1.41
1946	173	158	1.57
1947	222	167	1.74

#### NON-PULMONARY TUBERCULOSIS

The number of cases of this type of tuberculosis notified during the year under report totalled 12 and the deaths certified 11.

I have in previous reports referred to the fact that the incidence of tuberculosis among cattle seems to be on the up-grade and tuberculin testing of cattle by the new method recommended by the Ministry of Agriculture and Fisheries with a new tuberculin is yielding a larger percentage of tuberculous infections.

Certain it is that water buffaloes (bison) on estates are showing a larger number of positive reactors which must be ruthlessly eradicated if widespread disease among cattle is to be averted.

Hitherto the problem of the possibility of acquiring tuberculosis from milk did not appear to be one of major importance, because of the low percentage of infected cattle and the almost universal practice of boiling milk before consumption, but now that large quantities of raw unpasteurized or unboiled milk are being regularly consumed in shops, parlours, cafes, milk and ice-cream bars, and more and more cattle are becoming infected with tuberculosis, the situation is beginning to cause a certain degree of anxiety.

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

Forms	Notifications	Deaths
Miliary Tuberculosis	3	4
Tuberculosis of Cervical Glands	1	—
Do. Hip Joint	1	—
Do. Larynx	1	1
Do. Meninges	3	6
Do. Peritoneum	2	—
Do. Testis and Epididymus	1	—
Total	12	11

#### Deaths from Non-Pulmonary Tuberculosis 1924-47

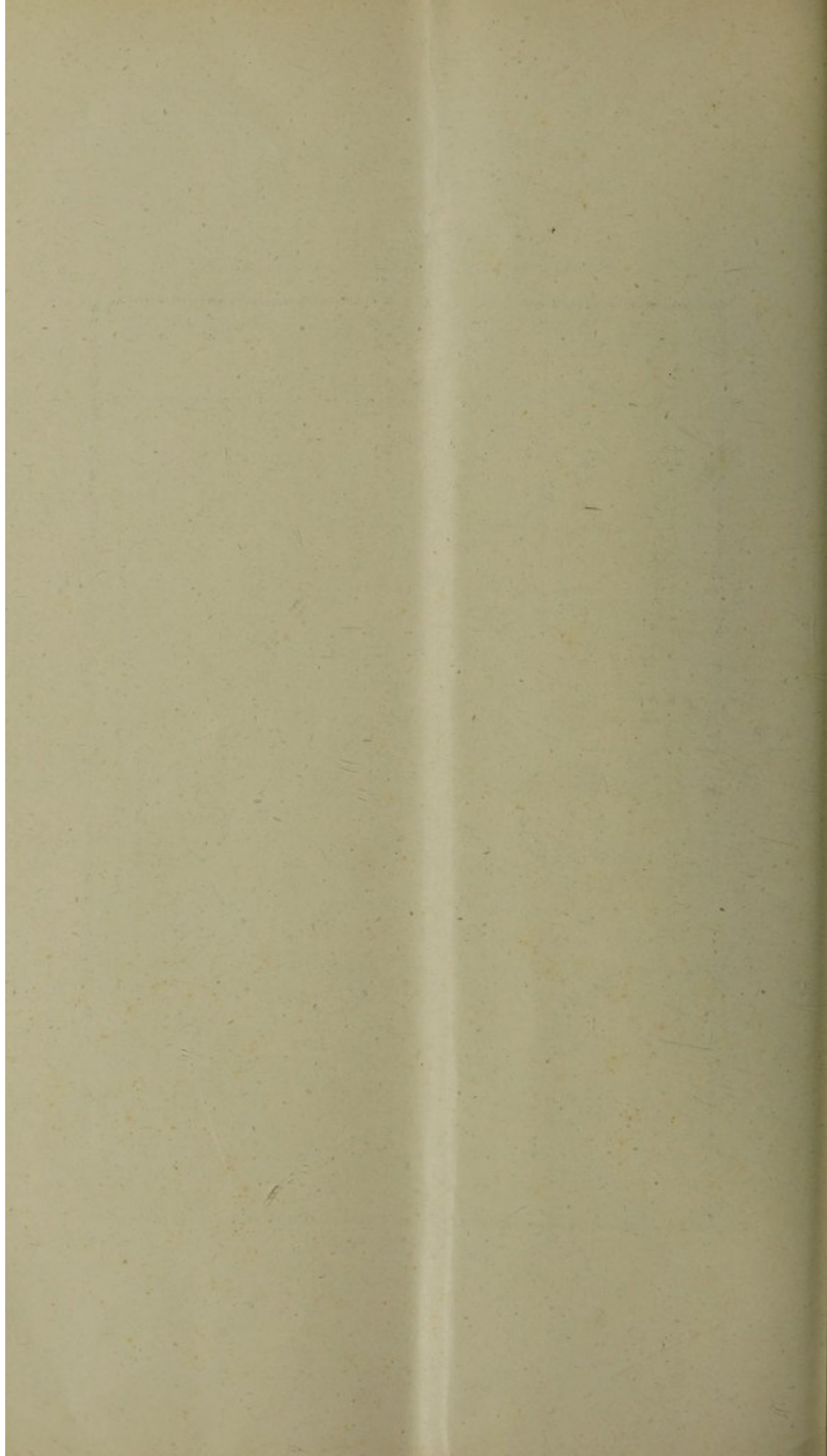
Period	Deaths	Rate per 1,000 population
Yearly Averages:		
1924-28	15	0.23
1929-33	15.2	0.22
1934-38	10	0.13
Average 1924-38	13.4	0.19
Year 1939	15	0.17
1940	14	0.15
1941	6	0.06
1942	4	0.04
1943	9	0.09
1944	10	0.10
1945	13	0.12
1946	14	0.14
1947	11	0.11



Chart E  
Port of Spain  
Pulmonary Tuberculosis—Notifications and Deaths, 1918-1947







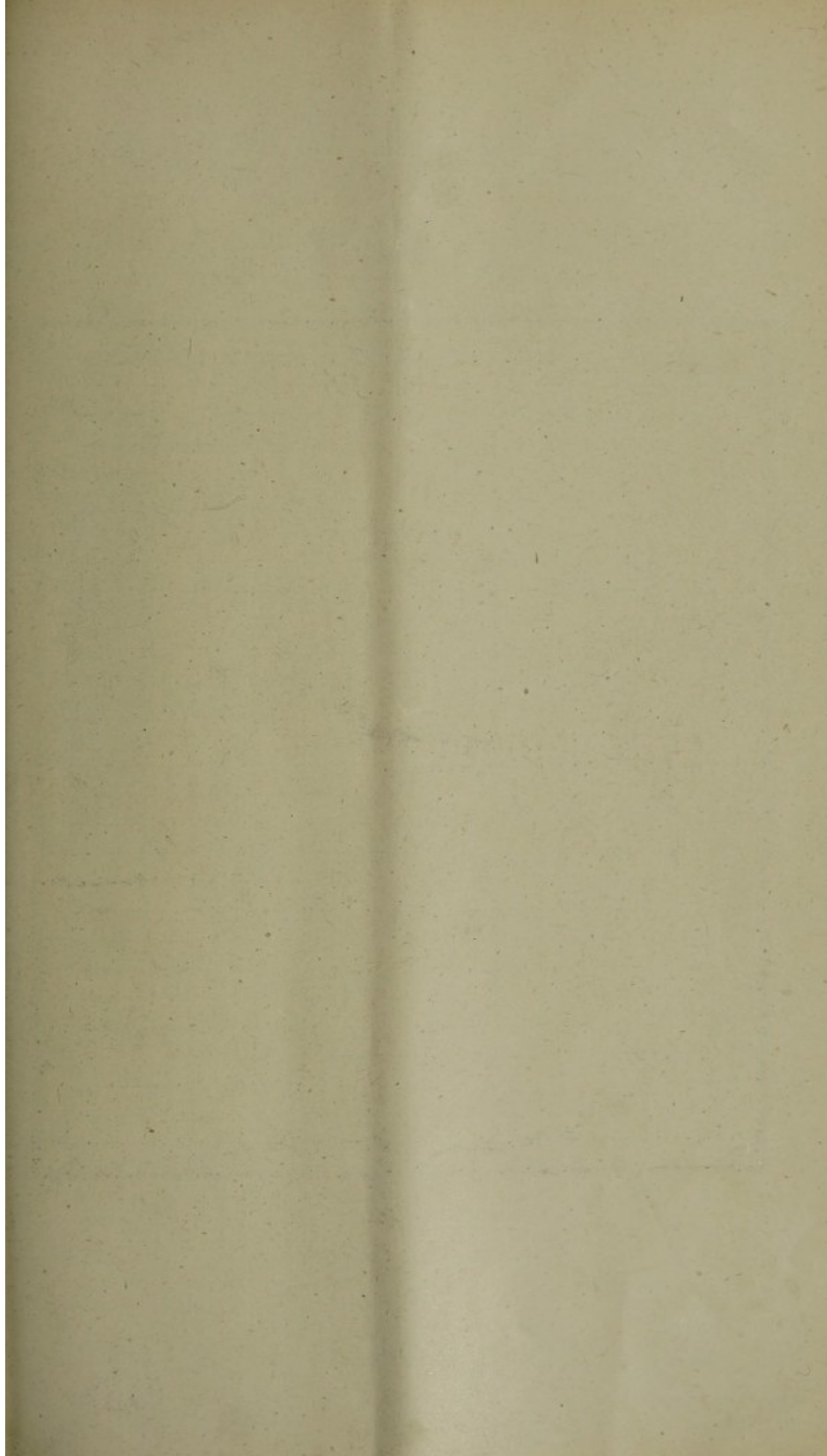




Chart F  
Port-of-Spain  
Enteric Fever—Notifications and Deaths, 1918-1947





### Enteric Fever

Among the first questions asked by visitors to the Public Health Department relate to the number of cases of enteric fever which occurs in the Urban Sanitary District and that for a very good reason; for, to anyone interested in the public health of a community the incidence of and mortality from enteric fever furnish a very sensitive index of the prevailing state of health and sanitation.

Where the system of disposal of excreta is efficient, where scavenging is of a high order, where drainage is good, where overcrowding and congestion are at a minimum, in other words where the state of environmental hygiene is satisfactory, there you would invariably find a low incidence of enteric fever.

If, coupled with this, the water supply is good and is in addition adequately chlorinated, and the food supply, particularly that portion of the food supply which is usually eaten raw like green vegetables, fruit, &c., is satisfactorily protected from contamination, then conditions for the propagation of enteric fever are unfavourable and the incidence of and mortality from enteric fever are at its lowest.

In this City enteric fever is endemic, but there has been a steady and progressive decline in its incidence starting from the year 1924 when the chlorination of the City's water supply was first effected and continuing from year to year with varying success to the year under report, as can be seen from a study of the figures hereunder set out in tabular form.

It is my opinion that there are very few, if any, cases of typhoid fever occurring within the limits of the City which have a water-borne origin, and I believe that the cases which occur are due in large measure to contaminated foodstuffs and to "contact cases" the result of missed or neglected cases.

This points to intensified efforts in the campaign to secure good, clean and wholesome food, free from contamination and adequately protected from the usual vehicles by which typhoid fever is transmitted, efforts which must include measures directed to the detection of the chronic carrier and to the elimination of pathogenic bacteria from his excreta.

Whenever a case of typhoid fever is notified to the Public Health Department, a very close and minute investigation is undertaken with a view to detecting the source and place of origin of the case, the means whereby the infection was acquired, the vehicle of transmission and the immediate and remote contacts, and there are immediately set on foot the standard routine measures for proper isolation of the case, the disinfection of premises and fomites, the oiling of cesspits on the premises and in the immediate vicinity and last, but not least, the inoculation of contacts.

#### ENTERIC FEVER Notification and Deaths, 1918-47

Period				Notifications	Deaths	Death Rate per 1,000 population
Year 1918	...	...	...	495	104	1.52
Yearly Averages:						
1919-23	...	...	...	301.8	67.8	1.03
1924-28	...	...	...	162.4	25.2	0.39
1929-33	...	...	...	37	10.8	0.16
1934	...	...	...	59.8	14.6	0.19
Average 1919-38	...	...	...	140.3	29.6	0.44
Year 1939	...	...	...	75	15	0.17
1940	...	...	...	70	11	0.12
1941	...	...	...	56	14	0.14
1942	...	...	...	37	12	0.12
1943	...	...	...	38	12	0.12
1944	...	...	...	32	9	0.09
1945	...	...	...	55	10	0.09
1946	...	...	...	37	8	0.08
1947	...	...	...	68	7	0.07

#### Inoculation of Enteric Fever Contacts T.A. B. Infections

Number Receiving one Injection				Number Receiving two Injections		Total
Year 1945	...	...	137	90		227
Year 1946	...	...	74	29		103
Year 1947	...	...	250	222		472



### Pneumonia

It cannot be said that pneumonia is a "well notified" disease. Examination of the returns for the last five years will demonstrate the outstanding fact that the deaths certified are in the vicinity of 60 per cent. to 70 per cent. of the cases notified, and this in spite of the free use of the drugs of the sulfonamide group which have almost a specific effect on the pneumococcus and streptococcus—the causative organisms of this disease.

The only possible explanation is that far and away the larger number of cases of pneumonia remain unnotified with the consequent increased facilities for spread of the disease through lack of proper isolation and of current disinfection of infected sputa.

In the year under review 75 cases were notified and 64 deaths certified, giving a death rate of .67 per 1,000 population. These returns include both forms of the disease, lobar and broncho-pneumonia, but cases of broncho-pneumonia are in excess of those of lobar pneumonia.

#### PNEUMONIA—(All Forms) Notifications and Deaths, 1922-47

Period					Notifications	Deaths	Death Rate per 1,000 population
Yearly Averages:							
1922-26	...	...	...	...	111.8	78	1.23
1927-31	...	...	...	...	69.8	53.4	0.79
1932-36	...	...	...	...	155.4	80.6	1.10
Average 1922-36					112.3	70.7	1.04
Year 1937					125	85	1.10
1938					101	70	0.83
1939					107	59	0.65
1940					69	63	0.68
1941					138	88	0.90
Average 1937-41					108	73	0.83
Year 1942					332	152	1.53
1943					251	149	1.46
1944					109	97	0.93
1945					118	79	0.74
1946					87	61	0.61
1947					75	64	0.67

### Diphtheria

Under this heading there is really nothing new to report. Nothing of an untoward nature occurred in the year under report, though in the early part of the year there was a "bit of a scare" because of the detection of a case of diphtheria in a well-known secondary school within the limits of the City.

The usual precaution was taken—the whole class was "swabbed and cultured", &c.—but no further case occurred in that particular school, though other cases cropped up in different parts of the City in the usual endemic way.

Twenty-three (23) cases were notified and two deaths certified to this disease in the year 1947, giving a death rate of .02 per 1,000 population.

#### DIPHTHERIA Notifications and Deaths, 1917-47

Period					Notifications	Deaths	Death Rate per 1,000 population
Yearly Averages:							
1917-21	...	...	...	...	11.8	1.4	0.02
1922-26	...	...	...	...	14.8	2	0.03
1927-31	...	...	...	...	23.8	1.6	0.02
1932-36	...	...	...	...	29.8	2.2	0.03
Average 1917-36					20	1.8	0.03
Year 1937					30	4	0.05
1938					16	3	0.04
1939					61	2	0.02
1940					37	2	0.02
1941					30	2	0.02
Average 1937-41					34.8	2.6	0.03
Year 1942					18	3	0.03
1943					40	4	0.04
1944					19	3	0.03
1945					20	5	0.05
1946					22	2	0.02
1947					23	2	0.02



### Chicken Pox

Chicken pox has been made a notifiable disease because of the superficial resemblance it occasionally bears to cases of alastrim or mild smallpox.

No death has ever, as far as I know, been certified to chicken pox, and this in spite of the fact that the disease has been known to occur in epidemic form from time to time.

#### Chicken Pox—Notifications, 1924-47

Period	Notifications	Period	Notifications
Yearly Averages:		Year 1944	33
1924-28 ... ..	19.8	1945	122
1929-33 ... ..	41	1946	196
1934-38 ... ..	110.4	1947	57
1939-43 ... ..	42.6		

### Other Notifiable Infectious Diseases

No case of acute anterior poliomyelitis was notified in the year under report, though one death was recorded, the diagnosis having been established, I understand, after post mortem examination.

There was no notification of or death from, encephalitis lethargica or acute paralytic rabies.

None of the dangerous infectious diseases: plague, small pox or alastrim, cholera, typhus or yellow fever was reported as having occurred in the Colony or of having been admitted from abroad in the course of the year 1947.

### ACUTE ANTERIOR POLIOMYELITIS

#### Notifications and Deaths, 1927-47

Year	No. of Cases reported	Deaths	Year	No. of Cases reported	Deaths	Year	No. of Cases reported	Deaths
1927-29 ...	—	—	1936 ...	3	—	1941 ...	15	4
1930 ...	5	1	1937 ...	10	1	1942 ...	26	3
1931 ...	—	2	1938 ...	2	—	1943-44 ...	—	—
1932 ...	3	—	1939 ...	1	—	1945 ...	—	1
1933-35 ...	—	—	1940 ...	—	—	1946 ...	1	—
						1947 ...	—	1

### Non-Notifiable Infectious Diseases

These diseases are usually reported on in a way that gives the impression that they are of comparatively very little importance. This is far from being the case, as under this heading are listed diseases which sap the very vitals of the community and some of them are highly infectious.

I need only mention syphilis, malaria, dysentery, ankylostomiasis as examples of the former and influenza, whooping cough, and measles as examples of the latter.

It is, therefore, a matter of great importance that some idea of the prevalence of and mortality from these diseases be gleaned, but so far there is no reliable evidence as to the incidence rate and even the mortality figures are not as accurate as they could be, seeing that many deaths certified in returns to well-known complications of these diseases are, of course, really attributable to these infectious diseases themselves. For example, aneurysm, arterio-sclerosis, coronary thrombosis, cerebral thrombosis, paraplegia, &c., are very often the manifestations of syphilis; liver abscess is nearly always caused by dysentery; and anaemia very often due to ankylostomiasis.

It is therefore clear that under this heading are included a number of chronic diseases with high mortality as well as many acute conditions which are dangerous because of their high infectivity.

Twenty-nine (29) deaths were certified to non-notifiable infectious diseases in the year under report. Of this number twenty-one (21) were attributable to syphilis and five to malaria.

#### Non-Notifiable Infectious Diseases—Home and Hospital Deaths

DISEASES	DEATHS			Hospital Deaths per cent. of Total Deaths	Corresponding percentage for the year 1946
	At Home	At Hospital	Total		
Malaria ... ..	3	2	5	40.00	58.33
Whooping Cough ... ..	—	—	—	—	—
Influenza ... ..	1	—	1	—	66.67
Dysentery ... ..	—	1	1	100.00	80.00
Ankylostomiasis ... ..	1	—	1	—	—
Syphilis ... ..	20	1	21	4.76	25.00
TOTAL ... ..	25	4	29	13.79	45.00



## MALARIA

As I have often stated in previous reports, it cannot be stated that malaria is a problem of any importance within the limits of the City. This is an undisputed fact and every survey undertaken with a view to determining the possibility of acquiring malaria within the limits of the City—and there have been two such within the last 13 years—has proved beyond the shadow of a doubt that anophelene breeding is infinitesimal, only a few larvae and an occasional adult anopheles being met with, and that only in the extreme eastern, northern, and western areas where these boundaries are in contact with highly malarious areas. The writer himself has been successful in finding anophelene larvae in pools on the eastern dump, in the extensive swampy area which now exists at the back of the Abattoir and Sea Lots, the result of reclamation which has been taking place at this point but which, unfortunately, has had to be stopped with the consequent production of a large brackish-water swamp where mosquito breeding is only kept down by large scale oiling; and in that part of the St. James Area which adjoins the Cocorite Swamp, a fact which is not at all surprising in view of the incidence of malaria in the areas outside the City that are immediately contiguous.

This position cannot but be considered satisfactory and is undoubtedly the result of the long continued and persistent efforts of the Public Health Department directed towards the elimination of possible breeding places, and the oiling of those breeding places which cannot very well be eliminated like the Maraval River.

Year in, year out, the work of filling in depressed places capable of holding water, the oiling of pools, the trimming of the edges of the Maraval River, the canalising of its bed and the oiling of stagnant pools, continue with the result that very few potential breeding places are kept unattended to and very little actual breeding does take place.

Once again, I deem it my duty to record that the Malaria Division of Government have been sparing no effort to tackle the big problem of malaria in the Colony in general and in those areas immediately adjoining the City in particular, and these efforts are bearing rich fruit in that there has been a definite fall in the incidence of, and mortality from, malaria in all areas.

The situation in Morvant has shown definite improvement though Success Village continues to be badly infested due to the prolific breeding grounds of the Caroni swamp.

The Cocorite Area, at one time a highly malarious area, is now almost completely free of anophelene mosquitoes, the direct result of those temporary works of drainage, oiling, and canalising of stagnant pools which have been undertaken by Government and in which the Corporation, who are owners of the lands in question, has rendered some measure of assistance.

Malaria—Local Distribution of Deaths

Sub-districts								Deaths
City Proper	...	...	...	...	...	...	...	—
St. Clair	...	...	...	...	...	...	...	—
East Dry River	...	...	...	...	...	...	...	—
Belmont	...	...	...	...	...	...	...	2
Woodbrook	...	...	...	...	...	...	...	1
St. James	...	...	...	...	...	...	...	2
Total	...	...	...	...	...	...	...	5

## SYPHILIS

Syphilis makes such widespread and serious incursions on all tissues of the human body that its importance as a public health problem of the first order cannot be overestimated, and whilst it is true that it is only within the last five years that a proper central organisation with adequate up-to-date equipment and trained personnel has been established—and I refer to the Caribbean Medical Centre established by Colonel O. C. Wenger, that "aggressive syphilis fighter" as Kahn describes him, and run jointly by the Health Department of Government and the Colonial Development and Welfare—the results which have been achieved in the way of detection and treatment of venereal disease, in the awakening of the public conscience to the dangers and ravages of this class of diseases, in the re-education and rehabilitation of the known members of the "prostitute" class, who are largely responsible for the ready spread of the disease, are indeed gratifying.

Starting practically from scratch, an organisation has been built up at Ariapita Avenue which is unique in the West Indies and by means of subsidiary clinics and mobile units the rural areas are slowly but surely being combed with a view to detecting cases, providing the necessary treatment, and eradicating foci of infection by a co-ordinated and well directed educational programme.

In addition, the centre provides a sorting and clearing house for the allied and closely related diseases which, when detected, are referred to the appropriate clinics for treatment.

It is sincerely to be hoped that no question of "available funds" will be permitted to stand in the way of the functioning of this Institution and a determined effort will be made by the powers that be to secure its continuous operation.

Already it is becoming clear that whilst the number of cases of primary syphilis and acute gonorrhoea is certainly diminishing, the tertiary manifestations of syphilis and cases of chronic gonorrhoea and stricture are unduly prevalent, undoubtedly the legacy of a period when treatment of these diseases was perfunctory and fell short of the requirements necessary to establish clinical and serological cure.



It is an unfortunate fact, and one that calls for close scrutiny of all forms of treatment that are being carried out, that the late manifestations of these diseases exercise their lethal effects on the most delicate tissues of the human body like the heart and blood vessels, central nervous system, and the kidneys, and of the deaths certified to diseases of the heart and blood vessels, central nervous system, and kidney, venereal disease claims more than its fair share.

In the year under report, the returns show that syphilis was the cause of 21 deaths, giving a death rate of .22 per 1,000 population. This does not compare unfavourably with the returns of the two previous years of 20 and 22 deaths, giving a death rate of .20 and .21 per 1,000 population, respectively, when it is remembered that the estimated mean population on which these figures are based was about 4,500 souls less than in the previous year.

#### Deaths from Syphilis—1918-47

Period	Deaths	Rate per 1,000 population
Yearly Averages:		
1918-22	16.2	0.24
1923-27	56.8	0.88
1928-32	28.2	0.41
1933-37	21.8	0.29
Average 1918-37	24.6	0.37
Yearly Average 1938-42	24.6	0.27
1943	29	0.28
1944	36	0.35
1945	22	0.21
1946	20	0.20
1947	21	0.22

#### DYSENTERY, DIARRHOEA AND ENTERITIS

If only more accurate and precise information were available as regards the exact aetiology of the diseases classified under this heading, it would be possible to place the numerous cases of so-called dysentery and diarrhoea and enteritis in their correct categories but, as things are, they constitute a mixed bag exhibiting the common feature of looseness of the bowels with the passage, in some cases, of blood and mucus.

They are usually classified as "bowel filth diseases" and in a sense this is a useful name indicating as it does that the cause of this group of diseases is infected faecal matter contaminating foodstuffs, particularly those that are consumed raw or partially cooked like green vegetables, watercress, lettuce, cabbage, various fruits, milk, ice-cream, ices, made-up dishes, &c., and so reaching the alimentary tract where the germs multiply and reproduce the disease.

But there can be no doubt that many and varied diseases are often included under this heading. Some of these are true dysenteries, others are cases of tuberculosis of the bowels, of cancer, of cirrhosis of the liver, &c., and others again are cases of food poisoning and, corresponding with this varied aetiology, is the fact that the age incidence also varies considerably, many cases occurring in infants and a fair number in the aged.

Preventive measures are, therefore, not easy of application especially when it is remembered that the information that reaches us is usually through the agency of death returns, but intensive measures to secure good, clean and wholesome food free from contamination by dust and flies must of necessity be among the first to be undertaken.

Again, these diseases are invariably associated with dirt, squalor, the inadequate disposal of excreta, overcrowding and poor nutrition, and the figures listed in the table below show, as can be confidently predicted, that the East Dry River District furnished, as it has always done, the largest number of cases in the year under report.

#### Deaths from the Dysenteries, 1918-47

Period	Deaths	Death Rates
Year 1918	43	0.63
Yearly Averages:		
1919-23	38.2	0.58
1924-28	32	0.49
1929-33	14.8	0.21
1934-38	5.4	0.07
Average 1919-38	22.6	0.34
Year:		
1939	2	0.02
1940	9	0.10
1941	11	0.11
1942	9	0.09
1943	6	0.06
1944	3	0.03
1945	5	0.05
1946	5	0.05
1947	1	0.01



## DIARRHOEA AND ENTERITIS

Deaths from Diarrhoea and Enteritis, 1918-47

Period						Deaths	Death Rates
Year 1918	...	...	...	...	...	193	2.84
Yearly Averages:							
1919-23	...	...	...	...	...	143.6	2.18
1924-28	...	...	...	...	...	72.8	1.12
1929-33	...	...	...	...	...	52.8	0.76
1934-38	...	...	...	...	...	40	0.52
Average 1919-38	...	...	...	...	...	77.3	1.15
Year:							
1939	...	...	...	...	...	45	0.50
1940	...	...	...	...	...	73	0.79
1941	...	...	...	...	...	104	1.07
1942	...	...	...	...	...	83	0.84
1943	...	...	...	...	...	87	0.85
1944	...	...	...	...	...	57	0.55
1945	...	...	...	...	...	42	0.39
1946	...	...	...	...	...	51	0.51
1947	...	...	...	...	...	39	0.41

## Diarrhoea and Enteritis—Deaths in Sub-districts

Sub-districts						Deaths
City Proper	...	...	...	...	...	7
St. Clair	...	...	...	...	...	—
East Dry River	...	...	...	...	...	18
Belmont	...	...	...	...	...	5
Woodbrook	...	...	...	...	...	2
St. James	...	...	...	...	...	7
Total	...	...	...	...	...	39

## Other Principal Causes of Death

## CARDIAC AND VASCULAR DISEASES

Second only to the large group of notifiable infectious diseases, in the list of causes of death, is the mortality caused by diseases of the heart and vascular system.

In every annual report the same state of affairs is referred to, viz.: that these diseases are exacting a heavier and heavier toll of human life, that more and more these delicate tissues are breaking down under the stress and strain of chronic system disease which has only partially been treated or sometimes not treated at all.

To be reminded of the fact that these diseases are exhibiting the same feature in all the large centres of the civilized world, tropical as well as temperate, offers little consolation and certainly leads nowhere. The only hope lies in a campaign of health education to bring home to the general public the appreciation of the dangers when once the tissues have been attacked, the importance of avoiding undue stresses and strains, of having regular medical attention at the earliest indication of any trouble, and in the detection of the cause of every case of heart disease and its eradication by appropriate treatment.

Critical analysis of the specific pathological conditions listed below points to syphilis as the basic underlying cause in a large number of these cases and thorough, efficient, and continuous treatment of syphilis in its early stages would certainly go a long way in preventing the disease from spreading to the delicate tissues of the heart and blood vessels.

## Deaths from Cardiac and Vascular Diseases in Age Groups

Forms	0-20 years	21-40 years	41-60 years	Over 60 years	Total
<i>Diseases of Arteries and Valves:</i>					
Aneurism	—	10	9	7	26
Arterio-Sclerosis and Atheroma	—	—	2	5	7
Coronary Thrombosis	—	1	4	8	13
Mitral and Aortic Incompetence	—	1	3	1	5
Other Diseases of Arteries and Valves	—	2	5	7	14
<i>Diseases of the Heart:</i>					
Auricular Fibrillation	—	—	—	1	1
Endocarditis	1	1	2	—	4
Myocarditis	2	3	12	18	35
Myocardial Degeneration	—	2	15	36	53
Angina Pectoris	—	—	—	1	1
Other Cardiac Diseases	1	6	21	25	53
Total	4	26	73	109	212



## CANCER AND OTHER MALIGNANT DISEASES

It is true to say that cancer and other malignant diseases continue to claim a gradually increasing mortality as the years pass by. With few exceptions there has been a slowly but steadily increasing mortality attributable to these diseases ever since the establishment of the Local Authority in 1917 enabled accurate statistics to be compiled. When asked the question what is being done about it there comes the unpleasant answer, hardly anything at all. True it is that without accurate knowledge as to the cause of a disease very little in the way of preventive measures can be undertaken, but certainly much more propaganda is necessary to enable the public to benefit by the few facts known about cancer, viz.: the possibility of eradication by surgery in the early stages, the part that radium plays in the arresting of the disease, the importance of seeking medical aid in the early stages of any doubtful "lump" or tumour anywhere in the body, the possibility of an innocent ulcer becoming malignant, &c., &c.

Such a campaign is overdue, and now that the general public is becoming health conscious and is being educated in the dangers of syphilis, tuberculosis, malaria, &c., opportunity should be taken to start a drive against the ravages of cancer.

## Deaths from Cancer and Other Malignant Diseases 1918-47

Period	Deaths	Rate per 1,000 population
Yearly Averages:		
1918-22 ... ..	44.4	0.67
1923-27 ... ..	45.6	0.71
1928-32 ... ..	44.6	0.65
1933-37 ... ..	556.8	0.76
Average 1918-37 ... ..	47.9	0.70
Yearly Average 1938-42 ... ..	75.4	0.82
1943 ... ..	88	0.86
1944 ... ..	84	0.81
1945 ... ..	80	0.75
1946 ... ..	79	0.78
1947 ... ..	75	0.78

## Cancer and other Malignant Diseases—Forms, Sites and Deaths

Forms and Sites	DEATHS	
	Males	Females
<b>Carcinoma:</b>		
Larynx, Bronchi, Lungs ... ..	3	2
Oesophagus, Stomach, Liver, Pancreas, Intestines, Colon, Rectum ... ..	16	22
Breast ... ..	—	6
Ovaries and Uterus ... ..	—	18
Urinary Bladder ... ..	1	—
Penis and Prostate ... ..	3	—
<b>Sarcoma:</b>		
Kidney ... ..	1	—
Leg ... ..	1	—
Peritoneum ... ..	—	1
<b>Underlined Malignant Neoplasms:</b>		
Urinary Bladder ... ..	1	—
Total ... ..	26	49

## SANITARY ADMINISTRATION

## Staff

The number of workers attached to the Public Health Department now total 144, made up of 27 on the pensionable staff, and 117 on the non-pensionable outdoor staff.

Sanitary Inspectors comprise 21, including the Chief Sanitary Inspector and the Chief Clerk, one short of the regular staff of 22 due to the inability to find suitable young men to take the place of those old stalwarts who have attained the age-limit and have retired on pension. As a matter of fact, at the time I write it has been found necessary still to retain the services of one of the older men, Mr. W. G. Williams, who was re-employed immediately on retirement, because, among other things, of his special knowledge and experience in one particular line, viz.: the drafting and preparation of Statutory Notices under the Public Health Ordinance, Ch. 12. No. 4, and just recently another of the older men, Mr. J. W. Parris, has been recalled to substitute for Sanitary Inspectors on sick and vacation leave.

Apart altogether from the difficulty in finding suitable young men, I have represented to the Local Authority that it is imperative that the thirteen sanitary districts into which the City is now divided be further subdivided to number eighteen with a view to greater efficiency and more concentrated work because, with the increasing population, these districts have been found to be too large and too dense for any one Sanitary Inspector.

I have in the Estimates for the year 1948 asked for seven additional Sanitary Inspectors and this has been agreed to in principle, but no action can yet be taken to meet this particular need because, unfortunately, our Estimates have not yet been approved at the time I write, and suitable qualified men are not yet forthcoming.



All workers with the exception of the Chief Clerk, three Sanitary Inspectors, one clerical assistant, and one additional clerical assistant, one messenger and one office hand, who comprise the indoor office staff, are engaged in different kinds of public health work in the various sub-districts of the City.

One Sanitary Inspector is in charge of the anti-bat and water sampling work and does also some district work when not engaged in other duties. He is expected to substitute for Sanitary Inspectors who may be on leave. Another Sanitary Inspector does the investigation of infectious diseases which are notified by practitioners and is responsible for all preventive measures for checking the spread of these diseases, e.g., the disinfection of premises, the bringing in of contacts for inoculation, the oiling of cesspits, in addition to the disinfection of theatres, common lodging houses, hotels, &c.; in fact he is in charge of all disinfection work. Another Sanitary Inspector is the Building Inspector and he devotes his attention to building notices, plans, and completion certificates, the preparation of charts, layouts, diagrams almost exclusively, when not engaged in other duties which may be imposed upon him; in fact he is the Draughtsman of the Department. Because of shortage of staff it has been found necessary to combine the last two posts, that of Sanitary Inspector in charge of infectious diseases and that of Sanitary Inspector in charge of buildings into one during the year under report.

As has been mentioned before, 13 Sanitary Inspectors, when available, look after the 13 Sanitary Districts into which the City is divided. They do house to house inspection, detect nuisances and take steps to abate them. They are in charge of the various groups working in their district and on their shoulders lie the responsibility for keeping these districts in good sanitary condition.

The Anti-Rat Unit comprises 1 timekeeper, 2 checkers, 8 drivers and 26 men under the control of the Anti-Rat Overseer.

The Anti-Mosquito Unit comprises 2 checkers, 16 "aedes specials", 6 squad drivers and 16 men working under the control of the Anti-Mosquito Overseer whose duty it is to plan and map out, record, direct, supervise and help in the work of the Unit.

The District Sanitary Inspector, who is responsible for the health and sanitary state of the district controls, directs, and supervises, the work of the various sections of these Units when they are working in his district.

The Anti-Bat Unit comprises one driver and five men under the direction and control of the Anti-Rabies Inspector.

The Disinfection Unit consists of one foreman and 6 men; the oiling and anti-mosquito section of this Unit comes under the direct control of the foreman, but they are all supervised, directed and controlled by the Sanitary Inspector in charge of infectious diseases.

The Public Conveniences Unit who operate in the 5 public conveniences provided by the Corporation comprise 7 men, 2 of whom are engaged in doing night duty only.

At the beginning of the year under report, a new service was transferred from the City Engineer's Department to the Public Health Department, viz.: the service of the emptying of cesspits, cesspools, septic tanks, &c.

This Unit comprises a Supervisor of Cesspits, 1 clerical assistant, 1 checker, 3 chauffeurs and 10 cleaners. In addition, 1 cooper, 1 carter, and 3 men who, when not working with the cleaning gang, work on the "Deadman" at Mucurapo Pumping Station, are attached to this Unit, making a total of 21 men engaged in this work which takes place mostly at nights.

#### DISINFECTION

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

Diseases										Premises sprayed
Pneumonia	...	...	...	...	...	...	...	...	...	62
Tuberculosis	...	...	...	...	...	...	...	...	...	161
Enteric Fever	...	...	...	...	...	...	...	...	...	68
Diphtheria	...	...	...	...	...	...	...	...	...	18
Puerperal Fever	...	...	...	...	...	...	...	...	...	4
Ophthalmia Neonatorum	...	...	...	...	...	...	...	...	...	5
Chicken Pox	...	...	...	...	...	...	...	...	...	46
Poliomyelitis	...	...	...	...	...	...	...	...	...	1
Total ...										365
Vermin										362

20,433 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.

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

Average Monthly No. of Visits to Dwellings, Shops and other Premises ... 6,618



## Inspection of Stores, Shops, &amp;c.

	Average Monthly No. of Visits	Average Monthly No. of Visits
Provision and Meat Shops	119	42
Provision Stores	14	39
Restaurants and Cookshops	40	46
Bakehouses	18	63
Bread Depots	6	5
Cake and Ice Cream Shops	173	3
Fry Shops	9	29
Hotels	4	25
Markets	7	7
Spirit Shops	30	30
Ice Cream Carts and Pails	98	3
Cake Trays and Baskets	81	17
Provision Trays and Baskets	173	27
Bread Carts and Baskets	14	7
Fresh Fish Trays	11	4
Oyster Vendors' Baskets	5	19
Plantain Carts	1	
Sweet Drink Carts		
Dairies and Cowsheds		
Stables		
Goat Pens		
Aerated Water Factories		
Soap Factories		
Other Factories		
Schools		
Common Lodging Houses		
Barber Shops		
Dyeworks		
Laundries		
Garages		
Tanneries		
Public Urinals		
Boats		

## Results of Notices and Verbal Directions

	Constructed, installed or provided	Repaired	Cleansed	Painted	Elimi- nated	Lime- washed	Oiled
Yard pavements	42	114	—	—	—	—	—
Depressions in yards	—	—	—	—	95	—	—
Yards	—	—	2,447	—	—	—	—
Drains, sinks, gullies, washing troughs, &c.	291	353	2,680	—	—	—	—
Lavatories, sewer basins, flush-tanks, urinals, bath rooms, &c.	153	169	1,472	—	—	7	—
Privies	155	522	—	—	—	396	—
Cesspits	122	202	1,531	—	—	—	125
Manure Heaps	—	—	—	—	218	—	—
Rat Holes	—	—	—	—	112	—	—
Tree Shade, Overgrowths of bush	—	—	—	—	719	—	—
Dustbins	749	107	306	—	—	—	—
Dustbin covers	273	—	—	—	—	—	—
Shops, Parlours, Restaurants, Bakehouses, Hotels, &c.	—	223	2,439	443	—	414	—
Aerated Water Factories	—	—	33	1	—	9	—
Bread Carts	—	—	—	8	—	—	—
Barracks, Common Lodging Houses	—	65	49	60	—	75	—
Garages, Kitchens, Outhouses	1	139	—	—	—	123	—
Cowsheds, Stables, Goat Pens	—	40	201	—	—	45	—
Tanneries, Soap Factories, &c.	—	—	—	—	—	—	—
Close-boarded, Ventilation of Houses	3	—	—	—	—	—	—
Schools	—	—	—	—	—	—	—
Barber Shops and other Workshops	—	—	96	52	—	—	—

## Reports to Water and Sewerage Department

## Reports.

Leaks, defective taps, chokes, &c.	...	...	...	1,197
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## Anti-Rabies Measures

## TRAPPING, &amp;c., OF BATS

No. of locations inspected for roosts of bats	...	...	15,477
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## BATS CAUGHT

Artibeus	...	...	...	134
Desmodus	...	...	...	—
Hemiderma	...	...	...	8
Molossus	...	...	...	61
Noctilio Leporinus	...	...	...	—
Saccopteryx	...	...	...	—

\*203

\*Besides these, 20 Desmodus and 3 Artibeus were caught in adjacent districts outside the City limits.

## Building Plans, &amp;c.

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

	Number.
On plans, &c., for reconstruction or reconditioning of buildings	944
On applications for leases of land in Woodbrook and Gonzales Place	98
On premises in which building operations were in progress	268
On applications for certificate of completion of buildings	45



Prosecutions			
Offences.	No. of Cases.	Results : Total Fines, &c.	
Failing to comply with nuisance notices	8	Fined \$189.00	
	8	*Nuisance order granted	
	29	Reprimanded	
	3	Withdrawn	
	15	Dismissed	
	63		
Offering foodstuffs for sale without being a registered vendor	3	Fined \$22.50	
	4	Reprimanded	
	1	Withdrawn	
	2	Dismissed	
	10		
Hawking milk for sale without having obtained a licence	4	Fined \$4.80	
	14	Dismissed	
	18		
Failing to register a bakehouse	1	Reprimanded	
		SUMMARY :	
	15	Fined \$216.30	
	8	*Nuisance order granted	
	34	Reprimanded	
	4	Withdrawn	
	31	Dismissed	
	92		

\*"A nuisance order may be an abatement order, a prohibition order, or a closing order, or a combination of such orders".—Public Health Ordinance, Ch. 12. No. 4, Section 73 (2).

#### Financial

	1947	1946
Revenue collected by Public Health Department	\$1,030.30	\$1,499.49
Expenditure (Staff, Labour, Materials, &c.)	\$102,422.08	\$84,569.52

#### Changes in the Staff

##### RESIGNATIONS

G. Ashe—Sanitary Inspector	...Resigned as from 25th February, 1947
H. St. Cyr—do.	...do. 19th July, 1947

##### APPOINTMENTS

R. Boucaud	...Appointed Sanitary Inspector as from 1st August, 1947
O. Carpette	...do. Overseer as from 1st September, 1947
A. Wilson	...do. Clerical Assistant as from 1st September, 1947

##### PROMOTIONS

E. Boxill	...	Sanitary Inspectors— Promoted from Grade II to Grade I as from 1st November, 1947
H. De Four	...	
J. R. Howard	...	
G. Pierre	...	
F. Seon	...	

#### Leave of Absence

	Vacation Leave. No. of days.	Sick Leave. No. of days.
Boucaud, R.—Sanitary Inspector	21	—
Carpette, O.—Overseer	21	—
De Four, H.—Sanitary Inspector	70	11
Forde, G.—Sanitary Inspector	28	—
Holdip, M.—Sanitary Inspector	28	—
Howard, J. R.—Sanitary Inspector	28	—
Marcano, Dr. G. R.—Medical Officer of Health	68	—
Mitchell, T. M.—Chief Clerk	91	—
Parris, J. E.—Overseer	28	—
Rivers, F. B.—Sanitary Inspector	42	7
Seon, F.—Sanitary Inspector	42	—
St. Cyr, H.—Sanitary Inspector	147	—
Wilson, A.—Clerical Assistant	56	—

### Acknowledgment

There can be no doubt that the work of the Public Health Department continues to increase every year with the increasing population of the City and with the intensification of public health activities and, that we have been able to maintain a not unsatisfactory state of health and sanitation is due in no small measure to the devotion to duty of the Sanitary Inspectors as a whole and to their unfailing loyalty and continuous co-operation under the able direction and leadership of these capable and hardworking lieutenants, Mr. O. E. Forde, cert. R.san.I., Chief Sanitary Inspector, and Mr. T. M. Mitchell, cert. R.san.I., Chief Clerk.

There can, however, be no doubt that the work of the Department during the past five years has been carried on under difficult and adverse conditions. There has been a great shortage of Sanitary Inspectors due to a general lack of qualified men, and to the important fact that the scale of salaries paid by the Council does not compare favourably with that obtaining in Government. As a result the great majority of the young qualified men who join us, and whom we take great trouble to train in our methods, leave us after only a few months to enter the more lucrative service of Government.

In addition, the general shortage of material, the lack of major permanent works in the various districts, none of which has been performed now for a few years, and the invariably difficult conditions brought about by the aftermath of war, have all contributed to make the work of the Department more onerous and difficult.

In the year 1947, two of our senior Sanitary Inspectors, Sanitary Inspector G. Ashe and Sanitary Inspector H. St. Cyr, retired after having reached the age limit. They had served long and well in the heat and burden of the day and whilst we miss their genial and stimulating presence, we wish them health and long life in retirement.

I have the honour to record my grateful appreciation of and to express my heartfelt thanks for, a year's work well done under difficult and sometimes trying circumstances.

In this the non-pensionable staff played as great a part as the pensionable, a combination that continues to work well together and must work well together if any success is to be achieved.

I seize this opportunity once more to commend their valuable services to the favourable notice of the Local Authority.









