Annual report of the Medical and Health Department / Colony of Seychelles.

COLONY OF SEYCHELLES

ANNUAL REPORT

OF THE

MEDICAL AND HEALTH DEPARTMENT

FOR THE YEAR

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To :

THE HONOURABLE SECRETARY TO GOVERNMENT
SEYCHELLES.

Sir,

I have the honour to submit for the information of His Excellency the Governor and the Legislative Council and for transmission to the Right Honourable the Secretary of State for the Colonies the Annual Report of the Medical and Health Department of Seychelles for the year 1957.

I have the honour to be,
Sir,
Your obedient Servant,

Medical Headquarters,
Seychelles 31st March, 1958.

P. M. JOSEPH,
Director of Medical Services.

Annual Report of the Medical and Health Department of Seychelles for the Year 1957.

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SECTION I

Administration

1. *Staff.*

(A) The following changes and staff postings took place during the year 1957 :—

1. Mr. François Camille M.B.E. who was posted on duty to this department during the 2nd half 1956 to assist the Director of Medical Services in administrative matters was confirmed here as Administrative Assistant with effect from 1st January, 1957.
2. Surgeon D. D. Boovariwalla and Medical Officer Dr. M. Ferrari arrived in the Colony on 14th February.
3. Medical Officer Dr. B. G. H. Collie assumed duty on 16th March.
4. Medical Officer Dr. R. S. Francis went on overseas leave on 21st April and returned to the Colony for duty on 4th November.
5. Dr. A. G. Penrose, Medical Officer left the Colony on transfer to Uganda on 21st August.
6. On 15th October the part time Medical Officer Dr. R. M. D'Offay left for Kampala on a World Health Organisation Fellowship and Dr. Mrs. E. Collie was appointed to replace him till the end of the year.
7. Dental Surgeon Mr. H. Breslin assumed duty on 21st October.
8. Dr. D. Tavaria, Medical Officer of Health left on overseas leave on 15th December.
9. Dr. K. Edmundson the Director of Medical Services Designate arrived in the Colony on 23rd December, 1957, and he assumed the duties of the Medical Officer of Health.
10. Nursing Sisters D. Mathiot and N. Mathiot were appointed on probation on 16th September.
11. Sister Tutor Mrs. D. Michel left the Colony on leave on 4th November.
12. Nursing Sister Mary McLoughlin was away on overseas leave from 2nd May, to 16th November.
13. Mrs. Changty the Chief Public Health Nurse returned from a World Health Organisation Fellowship in Malaya on 4th March.

14. Changes in the World Health Organisation Staff :—

(a) Miss B. Haugland, the Public Health Nurse left the Colony on 2nd May.

(b) Dr. Spitz Medical Officer and Team Leader left the Colony on 15th June.

(c) Mr. Arnau the Laboratory Technologist left on completion of his assignment 15th October.

(B) The establishment of Senior Staff in 1957 was as follows :—

1 Director of Medical Services
1 Administrative Assistant
1 Medical Officer Surgeon
6 Medical Officers
1 Medical Officer of Health
2 Dental Surgeons
1 Matron
1 Sister Tutor (filled by temporary staff)
5 Nursing Sisters
1 Laboratory Assistant
1 Senior Health Inspector

The establishment was short by 3 Medical Officers till 14th February and by one till 16th March. One Medical Officer was away on oversea leave from 21st April whereas 2 were away from 21st August. Therefore the part time medical officer was retained on the staff. Dr. Mrs. Stevenson-Delhomme was good enough to continue to assist in the Out Patient Clinic till March. The vacancy of one Dental Surgeon was filled only in October.

2. *Legislation.*

(1) Ordinances :— The animals (Control of Experiments) Ordinance, 1957 (Ord. No. 9 of 1957)

The Pharmacy (Amendment) Ordinance, 1957, (Ord. No. 5 of 1957)

(2) Regulations :— The Hospital and Dispensaries (X-Ray Fees) Tariff of Charges 1957 (S. I. No. 5 of 1957)

The Quarantine (Maritime) Regulations, 1957 (S. I. No. 14 of 1957).

3. *Financial.*

The table hereunder shows the Revenue and Expenditure of the Medical and Health Department during 1957. All figures are in Rupees Re. 1 = 1s. 6d.) For the purpose of comparison the corresponding figures for 1955 and 1956 are also given.

	1957	*1956*	*1955*
Revenue	92,326	107,047	105,986
Estimated Expenditure	735,012	804,840	651,509
Actual Expenditure	737,630	723,608.9	652,689
Total Expenditure of Colony	4,466,143	4,986,467	5,354,444
Medical Expenditure per head of the population	17.95	17.64	16.43

4. *Medical Stores.*

Due to the Suez Crisis, the direct steamer by which the bulk of the medical stores for the year was expected, was delayed till the end of May. Due to this and to various other reasons some of the stocks were exhausted. These were however replenished as soon as possible by alternate supplies received from East Africa. These included yellow fever vaccine, penicillin, streptomycin, I. N. Z., Enmetine, Novutox and Kahn Antigen.

Further, noticing the occurrence of 3 cases of Diphtheria in quick succession, with one death during the months of April and May and fearing the possibility of an outbreak of diphtheria, additional supplies of diphtheria antitoxin and diphtheria prophylactic were ordered for the department both from Mombasa and Bombay.

5. *Government Pharmacy.*

With a view to encourage private enterprise, after the opening of a private pharmacy in Victoria by a qualified Pharmacist towards the end of 1956, steps were taken to restrict the sale of medical supplies from the Government Pharmacy. As a result the supplies on sale in the Government Pharmacy were confined to simple household remedies generally used by the poorer section of the population. In addition restrictions were imposed on the sale of patent medicines by general traders.

In spite of this the private pharmacy closed down during the 2nd half of the year and all drugs and materials that could be used in the department were purchased from the owners. So the sale of a wider range of medical supplies was resumed in the Government Pharmacy.

SECTION II

Public Health

With the return of Mrs. Changty from the World Health Organisation Fellowship in Public Health, Nurses became available and therefore Mrs. Green was posted during the same month to the District of Praslin and La Digue. She is now stationed in Grand Anse, Praslin.

The two young men who had been taking the Assistant Health Inspectors' Training Course for 3 years in Kongwa returned in December after obtaining the qualifying certificates. At the moment the establishment of Health Inspectors is complete.

The effect of a cyclone was mildly felt on the southern side of Alphonse Island of the Seychelles Group on 8th November, 1957. The cyclone lasted for about 5 hours and about 120 coconut trees and 60 filao and other trees were destroyed as a result. However no casualties occurred either to human beings or to animals.

This year there was no epidemic of any infectious diseases, though a few sporadic cases of chicken pox were reported from various localities. As a result of stringent quarantine measures taken in time, the epidemic of Asian Influenza which was raging in the neighbouring countries was prevented from gaining entrance here. As a precautionary measure, during the peak of the epidemic one ship from Singapore and another from Bombay with passengers for Seychelles were placed in quarantine. However for the first time in this Colony one case of scrub typhus and 2 cases

of Weil's disease were diagnosed in the Seychelles Hospital during the year. These diagnosis were confirmed later, by Serological tests overseas.

A detailed report on Public Health by the Medical Officer of Health is attached as Appendix A.

SECTION III

Hospitals and Dispensaries

1. *General.*

The principal Hospital of the Colony is the Seychelless Hospital situated in the town of Victoria, the Capital. The majority of the sick which are treated either as outpatients or as inpatients. It can now accommodate 155 patients including 31 beds for tuberculosis patients. Attached to it are a Dental Clinic, an Ophthalmic Clinic and a Surgical Clinic.

Seychelles Hospital has a fully equipped laboratory where all bacteriological, serological, biochemical and pathological examinations can be carried out. There is a portable Watson's X-Ray apparatus which is run by electricity generated by a small Lister engine.

Small hospitals exist at Anse Royale, Bay St. Anne, Praslin and La Digue. Serious cases from the districts requiring further investigation and treatment are referred to the Seychelles hospital by the district Medical Officers.

There is a motor ambulance stationed at Anse Royale and a motor vessel at Praslin for transport of emergency cases.

A Medical Officer was stationed at Bay Anse, Praslin throughout the year. Anse Royale also had a resident Medical Officer this year except for a short peried after the departure of Dr. Penrose of 21st August, 1957. Dr. Fallon was posted to Anse Royale on 1st October.

The following table indicates the number of inpatients and outpatients treated in the various institutions during the year 1957.

Hospitals and Clinics	*Beds*	*Inpatients*	*Outpatients*
Seychelles Hospital	155	3,451	26,497
Cottage Hospital Bay Ste. Anne, Praslin	28	402	1,208
Anse Royale	17	833	7,606
Logan Hospital, La Digue	8	85	1,229
Beoliere Clinic	2	40	2,620
Grand Anse, Clinic, Praslin	—	—	1,476
Takamaka Clinic	—	—	443

2. *Surgical.*

During the year 1505 operations were performed at the Seychelles Hospital, — 463 Major and 1042 minor. Of the 463 major operations, 88 were emergency and 375 elective. The presence of a surgeon in the Colony is reflected in the increase in the number, nature and variety of the major operations performed.

Major Operations.

A. General Surgery

Procedure		*Elective*	*Emergency*	*Total*
Appendicectomy		68	15	83
Acute	15			
Subacute	33			
Recurrent	35			
Abdominal wound, penetrating, repair		1	0	1
Abdominal wound, burst re-suture		1	1	2
Stab wound, abdomen and chest exploration		—	1	1
Exploratory laparotomy (details appended)		11	32	43
Gastrojejunostomy, posterior loop		4	—	5
For ulcer	2			
For pyloric atenosis	2			
Gastrostomy for Post-operative haematemesis		—	1	1
Cholecystectomy and Choledocholthotomy		1	—	1
Lateral Entero-anastomosis (old Enterostomy for strangulated femoral hernia case)		1	—	1
Herniorrhaphy		75	10	85
Inguinal	61			
Strangulated Inguinal	7			
Obstructed Inguinal	2			
Femoral	2			
Stangulated Femoral	2			
Obstructed Femoral	1			
Umbilical and Paraumbilical	7			
Strangulated Epigastric and Umbilical	1			
Ventral (Post Operative)	1			
With Orchidectomy for Torsion Testis	1			
Excision and Ligature Harmorrhoids (2 with fistula-in-ano)		14	—	14
Excision Fistula-in-ano (1 multiple)		4	—	4
Slitting and Scraping Fistula-in-ano		3	—	3
Excision Epithelioma (?) Anus		1	—	1
Excision Prolapsed Tag Rectal Mucous Membrane		1	—	1
Repair of Harelip (associated with cleft palate)		1	—	1
Hemithyroidectomy (Enucleo-resection) non-toxic goitre		4	—	4
Subtotal Thyroidectomy (Enucleo-resection) Secondary toxic goitre		1	—	1
Scalenectomy for Scalane Syndrome		1	—	1
Excision Mesenteric Cyst		1	—	1
Incision and Drainage External Iliac Glands		1	—	1
Excision Inguinal Swelling (?) Myxoma		1	—	1
Exploration sole for foreign body		1	—	1

Procedure	*Elective*	*Emergency*	*Total*
Sliding skin-grafts for raw area perineum (post-operative)	1	—	1
Thiersch's Skin Graft	1	—	1
Excision Naevolipoma Thigh	1	—	1
Excision and Ligature Varicose Veins	1	—	1
Excision scar wrist and suture tendons	1	—	1
Total	201	60	261

B. Ophthamic Surgery

Excision Blind Eye, Secondary glaucoma	1	—	1
Broad Iridectomy for Tumour Iris	1	—	1
Plastic Operation for correction of Traumatic Entropion	1	—	1
Repair injury eyeball and upper eyelid	1	—	1
Elliott's Trephine Operation for glaucoma	1	—	1
Combined Extracapsular Extraction cataract	7	—	7
Capsulotomy after cataract	1	—	1
Cauterisation, Prolapse Iris	1	—	1
Total	14	—	14

C. Gynaecological

Wedge resection uterine cornu and salpingectomy for angular pregnancy	—	1	1
Ectopic Gestation (intraperitoneal Haemorrphage) salpingectomy or salpingo-oophorectomy	3	3	6
Subtotal Hysterectomy (with right or left or bilateral salpingo-oophorectomy in most cases and also appendicectomy in 9 cases)	31	—	31
Total Hysterectomy and bilateral salpingo-oophorectomy	3	—	3
Panhysterectomy	5	—	5
Ca. Servix 2			
Metrorrhagia 1			
Non--malignant (on section) 1			
Myomectomy and salpingo-oophorectomy	1	—	1
Incision and Drainage pyosalpinx	1	—	1
Bilateral salpingectomy	1	—	1
Laparotomy	—	2	2
Pyosalpinx and Adhesions 1			
Tubal pregnancy and overian cyst 1			
Salpingo-oophorectomy	3	1	4
Tubo-ovarian mass (elective) 3			
Broad Ligament Pregnancy (emergency) 1			
Vaginal Excision Cervical stump (malignant) after S-T hystorectomy	1	—	1

Procedure	*Elective*	*Emergency*	*Total*
Radical mastectomy and clearance of Axilla (Ca)	2	—	2
Partial Mastectomy	3	—	3
Excision Lynphogranuloma Vulvae with block dissection inguinal glands	1	—	1
Total	55	7	62

D. OBSTETRICAL

Classical Caesarean Section	2	5	7
Lower Segment Caesarean Section	2	6	8
Repair perineal Tear	1	—	1
Total	5	11	16

E. UROGENITAL

Eversion Sac Hydrocele	15	—	15
Excision Sac Hydrocele	2	—	2
Excision Sac Haematocele and eversion sac Hydrocele	1	—	1
Epidydimectomy	1	—	1
Orchidopexy for Undescended testis	1	—	1
Suprapubic Cystostomy	7	1	8
2 Stone 5 Prostate 1 Stricture with retention			
Suprapubic Cystolithotomy	1	—	1
External urethrotomy	5	—	5
Urethroplasty	3	—	3
Bilateral Orchidectomy, excision of scrotum and herniotomy	1	—	1
Suprapubic Prostatectomy	6	—	6
1 — stage 2 2 — stage 4			
Excision Urethral fistula or perineal sinus and dilatation stricture	1	—	1
Making perineal opening for urethra (Old ampuration penis for (Ca)	1	—	1
Orchidectomy	1	—	1
Orchidectomy with removal of cord and cystic swelling in continuity (old Hæmatocele)	1	—	1
Total	47	1	48

Procedure	*Elective*	*Emergency*	*Total*
F. Bones and Joints — Orthopaedic			
Excision wound and reduction compound fracture	—	3	3
Humerus 1, Tibia 1, Radius 1.			
Excision wound, wiring and cerclage com. trans. frac. patella and repair of Aponeurosis	—	1	1
Wiring and cerclage transverse fracture patella with repair of aponeurosis	1	—	1
Excision fragments old transverse fracture patella repair of aponeurosis	1	—	1
Excision necrosed lower end radius	1	—	1
Sequestrectomy			
Tibia 1, 1st metatarsal 1	3	—	3
(Excision and curettage), Osteoclastoma Illium	1	—	1
Excision wounds and skeletal traction	—	1	1
(Steinmann's Pin), compound fracture tibia and fibula	4	—	4
Amputations.			
Thigh for diabetic gangrene foot	1	—	1
Leg for senile gangrene	1	—	1
below knee for Epithelioma	1	—	1
Great toe and 1st Medatarsal head for gangrene	1		1
Disarticulation, Hip, osteomyelitis	1	—	1
Decompression skull, extra dural haemorrhage	—	1	1
Exploration, depression skull	1	—	1
Partial Excision and curettage			
Dental cyst mandible	2	—	2
Excision sinus and scraping Illium	1	—	1
Excision Popliteus Tendon Bursa	1	—	1
Partial Excision, malignant growth Sacrum	1	—	1
Removal of foreign body knee	1	—	1
Pinning and bridging for fracture mandible (Ext. Splint) (2 others entered as minor operations)	1	—	1
Total	24	6	30
G. E. N. T.			
Tonsillectomy and adenoid curettage	31	—	31
Excision giant post-natal polypus	1	—	1
Total	32	—	32
Grand Total	378	85	463

Minor Operations — 1042

These included such procedures as pinning and bridging (by external splint) fractures of the mandible, Steinmann's Pin Traction for fractures of the lower limbs, reduction of simple fractures, P. O. P. application, dilatation of strictures, dilatation and curetting of uterus, incision and drainage of abscesses, evacuation of retained placenta or products of comception, extraocular eye operations etc.

APPENDIX

Exploratory Laparotomy			*Elective*	*Emergency*	*Total*
Reduction *Acute Intussusception*			—	3	3
Reduction *Subacute Intussusception* and division bands			1	—	1
Hemicolectomy and ileo-transverse colostomy, for *chronic intussusception*			1	—	1
Acute Intestinal Obstruction			—	12	12
Resection gangrene and anastomosis	Emer.	2			
Resection gangrene and enterostomy (Str. Fem. Hernia)	,,	1			
Megacolon, division of bands and reduction	,,	1			
Megacolon, evacuation (same case as above, recurrence)	,,	1			
Resection stricture small intestine	,,	2			
Internal strangulation by bands A. I. O. by roundworms	,,	1			
(enterotomy and suture)	,,	1			
Diverticulitis and perforation — colostomy	,,	1			
Resection and ileo-transverse colostomy mesenteric thrombosis	,,	1			
Resection and anastomosis traumatic rupture small intestine	,,	1			
Subacute Int. Obstruction			—	3	3
Acute dilatation stomach	,,	1			
Ca Sigmoid Colostomy	,,	1			
Dilated bowels, cause ?	,,	1			
Chronic Int. Obstruction (cause not mentioned)			—	1	1
General Peritonitis			—	5	5
Acute Koch's	,,	1			
Sigmoid perforation	,,	1			
Fibrinous Pus L. I. F.	,,	1			
Intraperitoneal rupture liver abscess	,,	2			
Localized Peritonitis			3	2	5
Encysted liver abscess	Emer.	1			
Appendicular abscess	,,	1			
Drainage Encysted Abscess R. I. F. ? Appendicular	Elec.	2			
Diverticulitis and adhesions abscess L. I. F.	,,	1			

Procedure		*Elective*	*Emergency*	*Total*
Laparotomy and closure		4	2	6
Enlarged liver (Biopsy)	Elect 1			
Enlarged liver	Emer. 1			
Pregnancy and fibroids	Elec. 1			
? Abdominal lump	,, 1			
Ca Stomach with secondaries	,, 1			
Excision, umbilical nodule		1	—	1
Gastro-enterostomy (for ulcer) and herniorrhaphy		1	—	1
Division Jackson's membrane		—	1	1
Intra peritoneal Haemorrhage stab, wound, liver		--	1	1
Cholecystectomy, Acute — on chronic cholecystitis (strawberry gall bladder)		—	1	1
Closure gastric ulcer perforation		—	2	2
Total		11	32	43

Anaesthetics — 460 anaesthetics were administered for the major operations performed at the Seychelles Hospital, in addition to those for the minor operations.

Analysed as below :—

Heavy Spinal		268
Heavy Nupercaine	171	
Heavy Stovaine	97	
Light Spinal		
Light Nupercaine	7	7
Heavy Spinal and General (Ethyl chloride † open ether)		9
General		95
Ethyl chloride † open ether or Ethyl chloride † chloroform † open ether		
Local Infiltration or Regional		61
Caudal		8
Local (Surface application)		5
Local Infiltration and General		5
Penthothal		2
		460

Notable among the cases done under local anaesthesia were a case of closure of gastric ulcer perforation and a case of gastrotomy for post-operative haematemesis, both performed *entirely under local anaesthesia.*

3. *Mental Hospital*

As before the Medical Officer in Anse Royale was the Medical Superintendent and Marc Payet continued as the Head Male Attendant of the hospital.

During the year three more cells were built on the male section of this hospital for the solitary confinement of troublesome patients. Otherwise there is no change to report. The following table shows the number of patients who received treatment in the hospital during the year ending 31st December, 1957 :—

	Male	*Female*	*Total*
Number of patients resident in the hospital on 1st January, 1957	18	17	35
Number of patients out on trial	3	9	12
Total number of patients on the register on 1st January, 1957	21	26	47
Number of admissions during 1957	2	1	3
Number of patients discharged during 1957 from cases out on trial	1	—	1
Number resident on 31.12.57	20	18	38
Number out on trial on 31.12.57	2	9	11
Total number of patients on the register on 31.12.57	22	27	49

4. *Leprosy Settlement Curieuse Island*

Dr. R. S. Francis the Medical Officer, Praslin continued to be medical superintendent of the Settlement up to the month of April when he was replaced by Dr. S. C. De who held this post till the end of the year.

Mr. Souyana, a qualified male nurse resided in the Settlement and carried out the day to day treatment and care of patients. He was assisted in his work by a probationer nurse.

There is no change to report in the treatment of patients and their response to treatment.

Three newly discovered infectious cases were admitted to the settlement. One other patient who was out on parole relapsed and was therefore readmitted.

The statistics of the patients in the settlement is included in appendix A.

5. *Dental Department*

As from January 1957 the dental services were extended to South Mahé by holding weekly clinics at Anse Royale Hospital and fortnightly at the clinic of Beolière. The attendances at these clinics indicate that the visits of the dental surgeon to these institutions are fully justified and much needed, although little but emergency work and extractions for relief of pain was possible.

The arrival of Mr. Hugh Breslin, L. D. S., Glasgow in October restored the number of Dental Officers to two and has enabled visits to both Praslin and La Digue to be undertaken. Ten days were spent at the former and four days at the latter island. Here also there was a great demand for treatment.

With two Dental Officers it will be possible to attend to a larger number of school children than before, although, even so, only a fraction of the necessary work can be handled. The large attendances of children at the daily clinics — often for very trivial complaints — is satisfactory as indicating a willingness to have treatment that should in turn lead to a higher dental standard in the coming generation.

Continued economy in the use of materials has resulted in a small reserve being built up during the year which it is hoped to increase further during 1958. There has been no shortage due to shipping delays as occurred in the previous year.

The total number of attendances in Victoria clinic this year remained practically the same as for last year, namely 6169 as against 6263 in 1956. Because sometime was spent for the visits to Anse Royale and Béoliere and because additional work was performed at these centres, the amount of work carried out at Victoria can be considered highly satisfactory. On the whole there was a 20% increase this year over the total number of attendances in 1956.

The summary of work carried out during the year is given below :—

		Children	*Adult*	*Total*
Patients attended at Victoria :		1,828	4,341	6,169
,, ,, ,, Anse Royale and Beoliere Clinic		404	558	962
,, ,, ,, Praslin and La Digue		205	181	386
Total adults	5080			
Total children	2437			
	Grand Total =			7,517

Summary of treatment at Victoria.

	Extractions	*Dressings*	*Fillings*
Pre. school	410	21	20
School (6 — 14)	1,155	178	244
Government	996	84	222
Pauper	452	14	4
Paying	2,908	232	469
	5,921	529	959

General anaesthetic cases	61
Dentures and repairs	125
Orthodontic plates	12
Surgical extractions	49
Fractures	5

Gold inlays and crowns	26
Infected cases treated with penicillin	55

Treatment at other clinics.

Extractions	1,718
Dressings	23
Fillings	12
Scalings	4
Anaesthetics	4

Fees.

Clinic fees paid (excluding fees paid at Anse Royale and other country clinics)	Rs. 3,616
Accounts to paying patients	Rs. 15,583
	Rs. 19,199

6. *Ophthalmological Clinic.*

As before bi-weekly eye clinics were conducted in the Seychelles Hospital throughout the year. Besides in September the Ophthalmic surgeon visited the Praslin district and conducted clinics in the Medical Institutions at Grand Anse and Bay Ste. Anne Praslin and at La Digue. Several eye patients who could not pay a visit to Victoria benefited by the visit. The following table shows the number of attendances, and the various conditions diagnosed at the 1st attendances :—

First attendances	686
Repeat attendances	394
Total	1,080

A. Anomalies of Refraction

Presbyopia	77
Hypermetropia	6
Myopia	15
Hypermetropic astigmatism	41
Myopic Astigmatism	29
Hypermetropia with Hypermetropic astigmatism	30
Myopia with Myopic astigmatism	49
Mixed astigmatism	4
Aphakia	8
Heterophoria	1
Testing acuity vision no glasses	129
Squint — concomitant	3
Squint — paralytic	2

B. Congenital Anomalies

Congenital cataract	2
Nystagmus	3
Occlusio pupili	1

C. Injuries

Injury eye ball	18
Bruises	1
Fractures	1
Subconjunctival haemorrhage	3
Wounds eyelids	2
F. B. conjunctiva	1
Wounds cornea	6
F. B. cornea	5
Insect bite orbital region	1
Burns	1
Dislocated lens	1
Burns cornea	1
Haemorrhage into the vitreous	1

D. Inflammation

Blepharitis	6
Chalazion	17
Simple conjunctivitis	6
Phlyctenular conjunctivitis	12
Mucopurulent ,,	1
Purulent ,,	4
Chronic ,,	8
Granular ,,	14
Angular ,,	12
Follicular ,,	1
Dacryo cystitis	2
Interstitial Keratitis	4
Phlyctenular ,,	1
Superficial punctate ,,	7
Disciform keratitis	1
Dendritic keratitis	2
Corneal ulcers	1
Hypopyon ,,	2
Simple ,,	2
Iritis	7
Iridocyclitis	11
Choroiditis	3
Hypertensive retinopathy	28
Diabetic ,,	4
Chorioretinitis	1

E. Degenerative

Pinguecula	8
Pterygium	12
Corneal dystrophy	2
Cataract	13
Secondary cataract	3
Choroidal atrophy	2
Optic atrophy	2
Cranial Nerve effections — 5th Nerve palsy	1
Tumour lids	3
,, conjunctiva (cysts)	2
,, Iris	1

G. OTHERS

Glaucoma	4
,, Chr. simple	2
,, Secondary	4
Vitreous opacities	3
Amblyopia	1
,, ex-anopsia	1
Corneal opacities	6
Allergic condition of conjunctiva	5
,, eye lids	1
Eye Symptoms due to avitominosis	2
General diseases with eye symptoms	5
Headache due to wearing wrong glasses	1
Fitting artificial eye	1
Muscae Volitantes	2
Exophthalmos	1

7. *X-Ray Department.*

The machine in use is a portable Watson and it is the only X-Ray Plant in the Colony. It is attached to the Seychelles Hospital. The repaired tubehead which was put in service in mid-November 1956 was again out of order at the end of May. The other back from the United Kingdom immediately.

In all 1488 examinations were carried out this year as compared with 883 in 1956. During the year all Tuberculosis cases under treatment were re X-Rayed periodically. The following is the list of X-Ray pictures taken during 1957 :—

Lungs	860
Lower limb	103
Upper limb	41
Arm and hand	134
Vertebrae and Pelvis	135
Ribs, Clavicle and shoulder	46
Skull and Jaw	72
Dental	15
Sinuses	18
Visceral	52
Pregnancy	12

8. *New Constructions.*

During the year the work on the extension of the maternity wing of the Seychelles Hospital was completed. The first floor of the wing now accommodate 12 more maternity beds and the ante-natal and child welfare clinics. The ground floor of the wing contains 2 well ventilated children's wards.

The mortuary for the Bay St. Anne Hospital and the mental patients' detention rooms in the Seychelles Hospital premises were completed and put into use during the year. 3 more cells were constructed in the male section of the mental hospital during the year.

SECTION IV

Maternity, Ante-Natal and Infant Welfare Services.

1. *Maternity.*

Work on the right wing of the hospital having been completed during the month of July, the maternity department was considerably extended. Four rooms were made available for the ante-natal clinics which till then were being held in the Dental and Ophthalmic department. One room became available for 2nd Class Maternity, the old 2nd Class room was refitted and re-equipped for premature babies.

There was a slight decrease in the number of admissions and deliveries conducted in the Seychelles Hospital. There were 775 deliveries compared with 815 in 1956.

2. *Ante-natal Clinic.*

As before, ante-natal clinics were held twice a week on Tuesdays and Wednesdays. Each patient at her first visit has blood taken for a Kahn test and her haemoglobin estimated. A routine medical and obstetrical examination is carried out at the first visit. Anaemia that is, a haemoglobin percentage of between 60 and 75 is treated with oral iron administration. Cases with Haemoglobin below 60% are treated with intravenous or intra-muscular iron. At subsequent visits urine and blood pressure are checked as a routine. All cases of moderate and severe pre-eclamptic toxaemia are admitted for observation and treatment.

A certain number of cases are referred for X-Ray examination and others are asked to report to the Maternity Department for clinical pelvic assessment.

Ante-Natal Clinic, Victoria.

First attendances	819
Repeat attendances	2,497
	3,316
G. C. cervicitis	7
Kahn positive	20
External version	7

3. *Details of work carried out in the maternity department are given below* :—

A. Summary of Work

Number of admissions	889
Number of deliveries	775
Primipara	217
Multipara	558
False labours	59
Normal deliveries	696
Forceps deliveries	5
Breech deliveries	23

Caesarian Sections		15
Babies born before arrival		36
Multiple deliveries		17
Twins		16
Triplets		1
Total babies born		793
Male		410
Female		383
Still births		29
Premature births		45
Neonatal deaths		16
Maternal deaths		4

B. Ante-Partum Complications

Toxaemia of Pregnancy		36
Eclampsia		2
Ante-Partum haemorrhage		9
(a) Accidental	8	
(b) Placenta Praevia	1	
Abnormal presentation		1
Total =		48

C. Analysis of Caesatian Sections

Number of Caesarian Sections	15
(i) Clasical	7
(ii) Lower Segment	8

Indications :

Abnormal presentation	1
Contracted pelvis	4
Hydrocephalus	1
Ante-Partum haemorrhages	8
Foetal distress	1

Undiagnosed hydrocephalus with asynclitic engagement and a deflexed head.

D. Post-Partum Complications

(i)	Retained Placenta with or without haemorrhage, manual removal		2
(ii)	Post-Partum haemorrhage		16
	(a) mild	9	
	(b) Severe	5	
	(c) Secondary	2	

E. Causes of Maternal Mortality

(i)	Concealed accidental haemorrhage	2
(ii)	Concealed and revealed accidental haemorrhage	1
(iii)	Post-Partum haemorrhage delivered in district	1
	Total =	4

F. Analysis of the State of Infants

(a)	Total babies born at full term	775
	Discharged alive	748
	Still born	19
	Neonatal deaths	8
(b)	Total babies born prematurely	45
	Discharges alive	27
	Stillborn	10
	Neonatal deaths	8
(c)	Total foetal loss at all stages	45
	Percentages of total birth	5.67%
	Stillbirths	3.53%
	Neonatal deaths	2.14%
	Survival rate of premature babies born alive	60%

Maternity in other Hospitals :

	Baie St. Anne	*La Digue*	*Anse Royale*	*Beoliere*
Live Births	92	50	253	37
Still Births	4	—	7	—
Premature Births	3	2	2	1
Complicated labour	2	—	3	2

Antenatal clinic in other institutions :

Hospital or clinic	*1st Attendances*	*Repeat Attendances*	*Total*
Baie St. Anne Hospital	73	301	434
La Digue	75	312	387
Grand Anse Clinic	68	109	177
Anse Royale Hospital	276	976	1,252
Beoliere Clinic	46	195	241

SECTION V

Laboratory

The laboratory assistant J. Rault remained in charge of the laboratory throughout the year and laboratory assistant C .Comarmond assisted him. Both of them helped Mr. L. Arnau the W. H. O. laboratory technologist as and when required. Before his departure Mr. Arnau gave them both a course of lectures and practical demonstrations in advanced laboratory work, particularly in the bacteriological analysis of water from rivers, and they derived immense benefit from the course.

At first Mr. France D'Unienville a young Seychellois possessing school certificate was taken in the laboratory. He left after six months and in his place Mr. Collie was appointed but he too left the service before the end of the year. Therefore Mr. E. Westergreen who has only a lower standard of general education was recruited in September 1957 and it is hoped thot he will continue in the service.

Though the total number of examinations performed this year was fewer by 6246 than that of 1956, there was an increase not only in the scope of the examinations but also in the number of time consuming varieties. The decrease was caused by the fewer stool examinations viz 10,699 in 1957 as against 20,767 in 1956 carried out in the laboratory owing to the discontinuation of the intestional clinic this year.

Details of laboratory examinations done during the year ending 31st December, 1957 :—

	Numbers	1957	1956
A. Microscopy	Total	10,699	20,757
Scrapings M. leprae	191		
Fungi	2		
Faeces	7161		
Urines	733		
Sputa			
Concentration	139		
Direct	434		
Positive	76		
Negative	497		
Cervical Smears (Positive)	72		
Cervical Smears (Negative)	1,036		
Urethral Smears (Positive)	30		
Urethral Smears (Negative)	22		
Vaginal Swabs Trichomonas	7		
Serous Fluids	16		
Eye Smears	95		
Conjunctival Smears	2		
Ear Smears	1		
Throat Swabs	80		
Pus	22		
D. G. I. (Sores)	5		
H. Ducrey	29		
Vaginal Smears	44		
D. G. I. (Urine)	2		
Faeces faeces A. F. B.	1		
Urines for A. F. B.	2		
B. Bacteriology	Total	205	70
Eye Swabs	6		
Nasal Swabs	1		
Throat Swabs	70		
Skin Scraping	1		
Auto-Vaccine	14		
Blood cultures	13		
Enteric	12		
Pyogenic	13		
Subcultures	21		
Faeces	8		
Urines	17		
(C. S. F.) Cerebrospinal Fluids	7		
Serous Fluids	8		
Sputum	3		
Pus	10		
Coagulase	14		

	Numbers		1957	1956
C. Haematology		Total	2,714	2,350
Haemoglobins	1,405			
Red cell counts	450			
White cell counts	528			
Differential counts	407			
Reticulocyte counts	8			
Platelet counts	2			
Erythrocyte Sedimentation Rate	732			
Packed cell volume	4			
Bleeding time	18			
Coagulation	18			
Blood Parasitology.				
Malaria Slides	6			
Filaria Slides	3			
Blood Transfusion.				
Blood grouping	71			
Rh Grouping	35			
Crossmatching	25			
Indirect Ciomb's	2			
D. Quantitative Biochemistry		Total	773	547
BLOOD Sugar	118			
Urea	78			
Total Bilirubin	17			
Direct Bilirubin	17			
Indirect Bilirubin	10			
Cholesterol	4			
Acid Phosphatase	1			
Alkaline Phosphatase	13			
Glucose Tolerance Tests	3			
Total Protein	10			
Albumin	10			
Globulin	10			
Thymol Turbidity				
Thymol Floculation	10			
Plasma Amylase	1			
Cerebrospinal Fluids.				
Proteins	53			
Globulin	53			
Chlorides	53			
Glucose	53			
Cell counts	53			
Serous Fluids.				
Protein	8			
Cell count	8			
Urines				
Urea clearance	1			
Chlorides	5			
Proteins	1			

	Numbers		1957	1956
Albumin Percent	72			
Sugar Percent	39			
Stools.				
Fat Analysis	1			
Grastric contents	10			
Bile	10			
Mucus	10			
Starch	10			
Blood	10			
Free HCL	10			
Total Acidity	10			
Gastric Lavage	1			
E. Qualitative Biochemistry		Total	(3,659)	1,652
Urines				
Albumin	1,212			
Sugar	993			
Specific Gravity	135			
Acetone	38			
Reaction	1,212			
Bile Salts	25			
Bile Pigments	25			
Urobilinogen	10			
Faeces				
Occult Blood	9			
F. Medico Legal		Total	2	4
Blood Stains	2			
G. Histology		Total	14	11
Glands	2			
Liver Biopsy	2			
Tumour	1			
Breasts	3			
Lipoma	1			
Lymphogranuloma	1			
Cyst	1			
Growth of Spine	1			
Umbilical Nodule	1			
Growth of Rectum	1			
H. Serology		Total	3,953	4,234
Khan Test				
Positive	197			
Negative	3,153			
Doubtful	108			
Lysed	90			
*V. D. R. L.	361			
Widals				
(Salm Typhi O)	9			

	Numbers		1957	1956
Salm Typhi H	9			
Brucella Abortus	9			
Proteus Ox 19	9			
Proteus Ox 2	4			
Proteus Ox K	4			
I. Veterinary		Total	30	18
Faeces	30			
J. Public Health		Total	325	--
Water				
Confirmatory Test	50			
Presumtive Test	24			
Completed Test	50			
Differentiation of members of coliform Group Citrate Utilization	50			
Methyl Red	50			
Voges-Proskauer Reaction	50			
Indole	50			
Food	1			
K. Spectroscopy		Total	3	—
Urine	2			
Stool (Urobilinogen)	1			

In addition, 2,066 stools were examined and 2,066 Meinicke tests for syphilis were performed in this Laboratory in collaboration with the W. H. O. technologist during this year's morbidity survey.

GENERAL

All inoculations for Cholera, Yellow Fever and Anti-Typhoid (T. A. B.) were done in this laboratory. Also maintenance and preparation of all sterile water, saline, glucose, emetine etc. and Blood Transusion apparatus were carried out in this department.

Total number of examinations done for the year ending 31st December, 1957 = 23,377.

* The above test was done in parallel with Kahn Test during a period of one month as a trial and check up. It is hoped to be able to perform both V. D. R. L. and Kahn Test this year.

SECTION VI

Training of Local Personnel

Overseas.

The two Seychellois young men who have been undergoing a 3 year training course in Kongwa on a W. H. O. Fellowship completed their training in November and obtained the qualifying diplomas for assistant Health Inspector. They returned and assumed their duties in December.

Further another W. H. O. Fellowship, a qualified male Nurse of the department who has been undergoing training in Tuberculosis nursing in England, is expected to secure the British Tuberculosis Association Certificated in the first half of 1958.

Local.

During the year the training of Nurses and Midwives continued as usual. Mrs. Michel acted as Sister Tutor from the beginning of the year till 4th November when she was replaced by Sister D. Mathiot.

The following is the list of officers who gave lectures to the pupils :—

Mr. Boovariwalla	Surgery
Drs. Fallon and Collie	Surgery
Mr. Etienne	Public Health
Dr. Ferrari	Gynaecology and E. N. T.
Dr. Collie and Sister Patrick	Midwifery
Sister Tutor	Anatomy, Physiology and General Nursing.

(a) Nurses

On the whole 28 Nurses were in training during this year. 13 pupil nurses were recruited of whom 8 sat for the P. T. S. examination with 7 passes. The failed candidate left the service ; 3 others left to get married. 9 other nurses attended the course for the Preliminary Examination. 3 of them sat for the examination in June and all of them were successful. The remaining six will appear for the examination early in 1958. 7 senior probationers completed their training during the year. 2 of them sat for the Final Examination in July and passed. The other 5 candidates are getting ready for the Final Examination in February 1958.

(b) Midwives

During the year a total of 13 pupil midwives underwant training — 8 of them sat for the final examination ; only 7 of them passed and were subsequently registered as midwives.

Conclusions.

Though the numbers of both impatients and outpatients were less than those of 1956 the decrease was more marked in the outpatient attendances. This is due to the absence of any epidemic disease during the year.

2. As the request to the W. H. O. for T. B. assessment and B. C. G. vaccination did not materialise, preparation is being made to carry out a small scale T. B. survey with local funds staff. By this means it is hoped that a real picture of the incidence of Pulmonary Tuberculosis will be known during 1958.

3. Attached to this report are 2 appendices. Appendix A is the report of the Medical Officer of Health. Appendix B is the table showing cases of the principal diseases treated during the year 1957 in the Government institutions.

4. Finally, the writer has great pleasure in recording his appreciation and thanks to all the members of this department for their willing cooperation and assistance in the performance of the work recorded in this report.

Medical and Health Department,
Seychelles, 31st March, 1958.

P. M. JOSEPH,
Director of Medical Services.

Total number of cases of individual diseases diagnosed and treated in 1957.

Diseases	*Numbers*
Typhus (Scrub)	1
Cerebrospinal meningitis	6
T. B. meningitis	9
Pyogenic meningitis	1
Whooping cough	1
Diphtheria	5
Tetanus	9
Tuberculosis (pulmonary)	74
(others)	4
Leprosy	3
Dysentery (amoebic)	400
(unspecified)	565
Diarrhoea and Enteritis	818
Malaria (imported)	3
Balantidiasis	46
Giardiasis	370
Amoebiasis	259
Other protozoal diseases	17
Syphilis (early)	50
(late)	28
Gonococcal infection	
(genito urinary)	1,189
(other)	198
Chancroid	59
Rubella	1
Measles	1
Chicken-pox	49
Ankylostomiasis	649
Ascariasis	2,301
Other helminthic diseases	819
Whipworm	774
Filariasis	7
Scabies	413
Ringworm	62
Other skin diseases	585
Other infective or parasitic diseases	465
Infective Hepatitis	35
Amoebic Hepatitis	316
Tumours (malignant)	85
(non-malignant)	121
(unspecified)	25
Rheumatic conditions	702
Diabetes	64
Diseases of endocrine glands	95
Malnutrition	397
Avitaminosis and other deficiency states	312
Beri-beri	1
Anaemias	413
Acute and chronic poisoning	10
Mental diseases	11
Eyes diseases	400
Diseases of the ear, nose and throat	1,780

Diseases	*Numbers*
Vascular disease of the C. N. S.	13
Other diseases of the nervous system	341
Heart diseases	324
Diseases of circulatory system	117
Hypertension	284
Diseases of the blood and blood forming organs	298
Pleurisy	52
Influenza	1,305
Bronchitis (acute)	816
(chronic)	137
Pneumonia (broncho)	238
(lobar)	97
(unspecified)	83
Other diseases of the respiratory system	2,069
Nephritis (acute)	51
(chronic)	17
Non-venereal disease of the genito-urinary system	954
Abortions (threatened)	82
(incomplete)	84
(complete)	56
(inevitable)	1
Breast diseases	17
Obesity	1
Toxaemias of pregnancy	23
Ante partum haemorrhage	9
Post partum haemorrhage	16
Puerperal sepsis	5
Other conditions of the puerperal state	3
Diseases of the bones	123
Diseases of the joints	230
Congenital malformations	9
Diseases of early infancy :—	
(premature birth)	45
(injury at birth)	1
(other conditions of infancy)	30
Senility	200
Dental caries and other diseases connected with teeth	233
Toothache	18
External causes :—	
(wounds)	242
(burns)	110
(accidents)	579
(injuries)	1,198
Ill defined causes	1,078
Other causes	4,563
Other diseases of the digestive system	1,184
Asthma	1,618
Kwashiorkor	20
Appendicitis	188
Cirrhosis of Liver	29
Peptic ulcer	65
Gastritis	230
Mumps	1
Congenital Debility	1
Hyperemesis Gravidarum	1
Leptospirosis	1

ANNEXURE

TO

ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH

1957

I. Introduction

The year 1957 has seen the consolidation of the work begun in the previous year. Even though there may be no outstanding achievements to report, nevertheless the feeling is that the Department is now able to stand on its own feet. Complacency is the greatest enemy of public health and the goal of the Department must be to aim higher, and attempt to achieve more, as each year passes.

The work recorded in the succeeding pages reflects the sum total of the activity of this Department. Close ties have sprung up between the public and the staff of the Department,which have contributed much to the morale of the staff of the Department. It cannot be denied that, generally speaking, the standards of public health are comparatively low in this Colony.

It is gratifying to place on record that the "Aqua Privy Scheme" the forerunner in the programme of improved sanitotion, is due to begin in the not-too-distant future. The Maternal and Infant Welfare and School Health Services provided by the Department are progressing steadily and education in "healthy living" is an important part of the work of the Department.

There is apparent also, a determination on the part of the people themselves to assist the Government and the Department by doing their share of what is required, but in order to achieve any lasting improvement, in public health it is obvious that efforts will have to be made in more than one direction, in improving housing, providing decent sanitary facilities, improving economic conditions, eradicating and preventing communicable diseases.

II. Vital Statistics

Table 1. Comparison of Population Figures and Birth and Death Rates for Past 3 Years.

	1957	*1956*	*1955*
Estimated population at mid-year	41,081	40,417	39.722
Total number of births notified	1,577	1,493	1,338
Live births	1,534	1,458	1,303
Still births	43	35	35
Birth rate per 1,000 of population	38.3	36.9	33.6
Total number of deaths notified	425	468	456
Crude death rate per 1,000 of population	10.3	11.5	11.4
Total number of deaths of infants under the age of 1 year	65	79	97
Infantile mortality rate per 1,000 Live births	42.3	54.2	75.9

Table 2 : Summary of Causes of Death, 1957.

International List Number	*Cause of Death*	*Number*	*Group total*	*Percent of all deaths*	
				1957	1956
	Infectious and parasitic		50	11.7	7.9
001 — 008	Tuberculosis of the respiratory system	24			
010	Tuberculous meningitis	4			
011	Tuberculous peritonitis	1			
012	Tuberculosis of bone and joint	1			
021 — 029	Syphilis and its sequelae	1			
046	Amoebiasis	8			
055	Diphtheria	2			
057	Meningococcal infections	4			
060	Leprosy	1			
061	Tetanus	2			
129	Ankylostomiasis	2			
	Malignant Neoplasms		26	6.1	4.2
151	Stomach	7			
153	Large intestine, except rectum	1			
154	Rectum	1			
155	Biliary passages and liver (primary site)	2			
162	Trachaea, bronchus and lung (primary site)	4			
171	Cervix uteri	6			
172	Corpus uteri	1			
196	Bone	1			
199	Other and unspecified sites	2			
204	Leukaemia and aleukaemia	1			
	Benign Neoplasms		1	.2	
223	Brain	1			
	Metabolism and Nutrition		18	4.2	5.3
241	Asthma	1			
260	Diabetes Mellitus	2			
272	Diseases of the pituitary gland	1			
280 — 289	Avitaminosis, and malnutrition	14			
	Blood Disorders		6	1.4	1.2
291	Iron Deficiency anaemias	5			
299	Other diseases of blood and blood-forming organs	1			
	Central Nervous System		23	5.4	2.9
330 — 334	Vascular lesions affecting central nervous system	8			
340	Meningitis, except meningococcal and tuberculous	4			
342	Intracranial abscess	1			

Table 2 : Summary of Causes of Death, 1957 — (*Contd.*)

International List Number	*Cause of Death*	*Number*	*Group total*	*Percent of all deaths*	
				1957	1956
	Cardio-Vascular System		34	8.	10.0
410	Mitral Stenosis	5			
420	Arterioselerotic heart disease, including coronary disease	15			
421	Aortic incompetence	1			
430 — 434	Other diseases of heart	3			
440 — 443	Hypertensive heart disease	6			
445	Essential malignant hypertension	1			
465	Pulmonary embolism and infarction	3			
	Respiratory System		45	10.5	10.8
490	Lobar pneumonia	6			
491	Broncho-pneumonia	28			
500	Acute bronchitis	5			
502	Chronic bronchitis and emphysema	4			
526	Bronchiectasis	1			
527	Other diseases of lung and pleural cavity	1			
	Digestive System		18	4.2	9.1
541	Ulcer of duodenum	1			
561	Hernia of abdominal cavity with obstruction	3			
570	Intestinal obstruction without mention of hernia	5			
571	Gastro-enteritis (aged 4 weeks and over)	2			
576	Peritonitis	1			
578	Perforation of Intestine	2			
581	Cirrhosis of liver	2			
582	Suppurative hepatitis and liver abscess	2			
	Urinary System (Non-Venereal)		7	1.6	1.7
590	Acute nephritis	1			
592	Chronic nephritis	1			
600	Pyelonephritis	3			
605	Chronic cystitis	1			
610	Hyperplasia of prostate	1			
	Pregnancy and Childbirth		4	.9	.4
670	Accidental haemorrhage	3			
672	Postpartum haemorrhage	1			

Table 2 : SUMMARY OF CAUSES OF DEATH, 1957 — (*Contd.*)

International List Number	*Cause of Death*	*Number*	*Group total*	*Percent of all deaths*	
				1957	1956
	Congenital Malformations		7	1.6	1.2
752	Congenital hydrocephalus	2			
754	Congenital malformations of circulatory system	3			
756	Congenital malformations of digestive system	2			
	Diseases of Early Infancy		34	8.	7.1
760	Intracranial and spinal injury at birth	5			
762	Postnatal asphyxia and atelectasis	10			
764	Diarrhoea of new born	1			
767	Umbilical sepsis	1			
770	Haemolytic disease of new born	1			
776	Immaturity, unqualified	16			
	Senility		115	27.0	30.6
794	Senility, without mention of psychosis	115			
	Ill-defined causes		21	4.9	3.3
795	Ill-defined and unknown causes of morbidity and mortality	21			
	Accidents and Violence		16	3.7	4.0
E910	Accidental injury from falling object	1			
E914	Accident by electric current	1			
E916	Fire and explosion	2			
E929	Accidental drowning and submersion	6			
E954	Therapeutic misadventure in anaesthesia	1			
E955	Therapeutic misadventure secondary haemorrhage	1			
N808	Fracture of pelvis	1			
N854	Extradural haemorrhage	1			
N869	Internal Injuries unspecified	1			
N995	Crush Syndrome	1			
	Total	425			

Table 3 : Causes of Infant Mortality, 1957 — with Comparison of Figures for 1956 and 1955.

International List Number	*Causes of Death*	*1957*	*1956*	*1955*
010	Tuberculous Meningitis	3	—	—
057	Meningococcal infection	1	—	—
085	Measles	—	1	—
129	Helminthiasis	1	—	—
204	Leukaemia aleukaemia	—	—	2
290 — 289	Avitaminoses and malnutrition	4	7	7
291	Iron deficiency anaemias	1	—	—
340	Meningitis (not tuberculous or meningococcal)	2	—	—
490	Lobar Pneumonia	2	1	—
491	Broncho-pneumonia	10	12	21
500	Acute bronchitis	2	2	—
510 — 527	Other diseases of the respiratory system	—	1	—
570	Intestinal obstruction	—	1	—
571	Gastro-Enteritis	—	11	22
600 — 609	Genito-urinary diseases	—	1	—
752	Congenital hydrocephalus	1	1	—
754	Congenital heart disease	3	3	7
756	Congenital malformations of digestive system	2	—	—
760	Birth injuries	5	3	2
762	Postnatal asphyxia and atelectasis	8	6	7
767	Umbilical sepsis	1	—	—
770	Haemolytic disease of newborn	1	2	1
776	Immaturity, unqualified	16	21	15
795	Ill-defined causes	2	6	5
	Miscellaneous	—	—	10
	Totals	65	79	99
	Total live births	1,534	1,458	1,303
	Infantile mortality rate per 1,000 live births	42.3	54.2	75.9

III. Infectious and Parasitic Diseases

(a) *General*

During the year under review there was one small outbreak of infectious disease. This was a sudden incidence of 5 cases of diphtheria within two months, (March and April) with two deaths. Prompt precautions were taken and no further cases were reported thereafter.

The world wide pandemic of Asian Influenza has not affected the Seychelles. At the height of the outbreak of this disease in Asia and Africa stringent precautions were taken to prevent its introduction into the Colony. More details are given in Section IX, Port Health.

Table 4 : Incidence of and Deaths from Infectious Diseases, 1957.

	1957		*1956*	
Diseases	*Cases*	*Deaths*	*Cases*	*Deaths*
Acute Poliomyelitis	—	—	4	—
Chicken-pox	49	—	22	—
Diphtheria	5	2	1	—
Dysentery —				
Amoebic	400	—	659	—
Unspecified	555	—	776	—
Helminthiasis	4,537	—	12,244	—
Leprosy	4	3	1	—
Leptospirosis	1	—	—	—
Measles	1*	—	936	3
Meningococcal Infections	6	—	4	1
Mumps	1*	—	—	—
Tetanus	9	—	7	3
Tuberculosis —				
Respiratory	74	—	16	13
Non-respiratory	15	—	10	1
Typhus (Scrub)	1	—	—	—

* Imported cases

(b) *Tuberculosis.*

There has been an increase in the notifications of this diseases during 1957, 74 new cases being notified. There were 45 males and 29 females, of which 26 males, 24 females were under 45 years of age. The symptoms presented by the majority of these cases are characteristic of a disease of long standing in a closed community having a comparative high immunity.

During the year 79 contacts were radiologically examined. The findings were as follows :—

Positive cases, notified	5
Symptomless primary complex (not confirmed by Mantoux test)	10
Suspicious hilar shadows, under observation	23
Nothing abnormal noted	41

Housing, more especially in the town of Victoria, is poor and overcrowding fairly common, while there is evidence of a certain amount of malnutrition, thus rendering a proportion of the population susceptible to tuberculosis.

The building of the sanatorium to house cases of tuberculosis is unfortunately not yet complete, owing to lack of funds, and cannot as yet be put into use. Meanwhile the small 16-bed isolation block provided for tuberculosis cases has become inadequate and cases urgently in need of hospitalization are admitted to an annexe attached to the general wards of the hospital. Out-patient treatment, which is, in view of poor home conditions, not by any means ideal, has had to be resorted to, and 34 patients were under out-patient treatment at the end of the year, while

there were 21 cases in the isolation block and another 15 cases being treated in annexe referred to above. Of the patients receiving out-patient treatment 14 have previously been treated in hospital.

The exact incidence of tuberculosis in the Colony is not known but an up-to-date tuberculosis register has been prepared and a Tuberculosis Card Index system put into operation. The available information except in respect of cases notified in the past 2 years has been very scanty ; nevertheless the old cases are slowly being followed up, but many are reluctant to report. At the close of the year, there were 128 known cases on the register, excluding those who have died.

Accurate information is lacking on the exact state of the disease in many of these, but a programme is in being for re-checking by the Tuberculosis Officer, these cases and their contacts. It will then be possible to assess the position more definitely. This programme will be commenced at the start of the new year and it is anticipated that a much more sanguine picture will appear.

(c) *Venereal Diseases.*

The situation regarding Venereal Diseases shows little improvement, except in the case of syphilis, of which 65 latent, sero-positive cases were discovered during the year, and only one case of secondary syphilis.

The incidence of gonorrhoea remains high and the major factor is the repeated reinfection of the same individuals. Nearly one third of the cases during the year at the Victoria Venereal Disease Clinic had more than one exposure to infection, and it is a matter of regret to have to record that there were more cases in young boys between the ages of 16 and 18 than ever before. Among the contacts too, there was a noticeable increase in the number of girls in this age group. Contact tracing has remained a difficult problem as the majority of the women traced refused to attend because of the absence of any symptoms of disease. Penicillin remains the drug of choice and as a result of the exclusive use of long-acting penicillin preparation few relapses were noted.

There has been an increase in the incidence of chancroid and prompt tracing and treatment of all contacts has prevented further spread.

Table 5 : Incidence of Venereal Diseases, 1957,

I. Syphilis

(a) Victoria V. D. Clinic

	Male	*Female*	*Total*	
1st Quarter	7	6	13	
2nd Quarter	12	7	19	
3rd Quarter	8	4	12	
4th Quarter	6	10	16	
	33	27	60	
(b) South Mahe	1	4	5	
(c) Praslin — La Digue	—	1	1	
Total, 1957 —	34	32	66	
Total, 1956 —	84	109	196	(including 3 children)

II. Gonorrhoea

(a) Victoria V. D. Clinic

	CASES				CONTACTS	
	Male	*Female*	*Child*	*Total*	*Traced*	*Treated*
1st Quarter	246	22	5	273	83	63
2nd Quarter	190	20	6	216	71	62
3rd Quarter	287	29	9	325	86	71
4th Quarter	139	12	10	161	38	44
	862	83	30*	975	278	240
(b) South Mahe	60	19	—	79	20	29
(c) Praslin — La Digue	43	8	—	51	—	—
Total, 1957 —	965	110	30	1,105	298	259
Total 1956 —	1,059	102	23	1,184	560	430

* Made up as follows : Ophthalmia neonatorum — 23
Vulvo vaginitis — 6
Gonococcal peritonitis — 1
30

III. Chancroid

(a) Victoria V. D. Clinic

	Male	*Female*	*Total*
1st Quarter	4	2	6
2nd Quarter	4	—	4
3rd Quarter	17	6	23
4th Quarter	23	5	28
	48	13*	61
(b) South Mahe	1	—	1
(c) Praslin — La Digue	1	—	1
Total, 1957 —	50	13	63
Total, 1956 —	25	2	27

* Many female contacts were examined, but only the 13 notified were found to have lesions.

LEPROSY

Three new cases, all males, one a son of an inmate of the Curieuse Leper Settlement, were discovered during the year and isolated at the settlement. One male patient, a long standing case, died at the settlement at the age of 90 years. and another, a home isolated non-infectious neural case, died of mitral stenosis. One female patient aged 79, also a long standing case, died of malignant disease of the uterus. One old case was re-admitted.

Table 6. SUMMARY OF CASES OF LEPROSY, 1957

	Male	*Female*	*Total*
Curieuse Leprosy Settlement.			
Inmates at 1.1.57	16	17	33
New Admissions, 1957	4	—	4
	20	17	37
Discharges, 1957	—	—	—
Deaths, 1957	1	1	2
Cases under treatment 31.12.57	19	16	35
Out-patients.			
Previously discharged on parole	20	12	32
Home isolated	5	3	8
	44	31	75
Death — home isolated patients	1	—	1
Number of cases on Register, 31.12.57	43	31	74

INTESTINAL INFESTATIONS

There is no change to report in the situation as regards these infestations. The W. H. O. team completed their samplng morbidity survey by the middle of the year and their stool analyses are summarised in Table 7. These figures speak for themselves and are an index of the unsatisfactory sanitary arrangements in the Colony.

Table 7. ANALYSIS OF STOOL SPECIMENS OF 5,591 PERSONS EXAMINED IN THE MORBIDITY SURVEY

Parasite	*Number*	*Percentage*
Entamoeba histolytica Trophozooites	28	0.5
Cysts	984	17.6
Giardia lamblia	475	8.5
Balantidium coli	117	2.1
Ankylostoma duodenale (Hookworm)	1,431	25.6
Ascaris lumbricoides (Common roundworm)	3,382	60.5
Trichuris trichiura (Whipworm)	4,908	87.8
Strongyloides stercoralis	341	6.1
No parasites seen	375	7.6*

* A large number of these were new-born babies.

The findings of the investigations carried out by the writer through the Intestinal Clinic regarding the treatment of those infestations are now being applied in the treatment of cases both in the wards of the hospital and the out-patient clinics but the rate of reinfection remains high and the same patients report back regularly for treatment for the same

infestations. As stated in the previous report of this Department, (for 1956) it is clear that any attempt to eradicate these infestations by medical treatment must coincide with a suitable sanitation scheme". It is gratifying to record that the "Aqua Privy Scheme" outlined in the 1956 report (page 13) has now been accepted in principle by the Government and it is to be hoped that a nearly start will be made during 1958 to replace the insanitary "bucket" system in Victoria with an aqua privy system.

Table 8 : Summary of Home Visits by Public Healh Nurses in Connection with Infectious Diseases.

	1957	*1956*
Follow-up of tuberculosis cases and contacts	205	58
Follow-up of other infectious diseases	36*	1,941
Venereal diseases contact tracing	298	232
Home Nursing Visits — ‡		
(a) Injections	402	
(b) Dressings	115	441
(c) Others	98	
	1,154	2,672

*This low figure is due to the closing down of the intestinal clinic. The follow-up of foodhandlers is done by the Health Inspectors.
‡As ordered by medical staff for in — and out-patients.

In addition to these, there were 179 visits made by public health nurses where the person/s visited could not be located, and 468 visits to homes in districts in which public health nurses were stationed.

Inoculation Services.

These continue to be in great demand, specially as a programme of immunization of infants with a triple antigen (against diphtheria, wooping cough and tetanus) was commenced in all infant welfare clinics in 1957. A request has been made to UNICEF for assistance with this material and a programme has been planned for a long term scheme of immunisation of all infants, and school children so as to have a child population in about five year's time, which will have a high degree of immunity to these three diseases, which, though not very common, are a constant source of danger.

Table 9 : Summary of Inoculations Performed.

	1957	*1956*
Yellow Fever	520	548
Cholera	68	47
Smallpox —		
Travellers	558	592

Table 9. Summary of Inoculations Performed — (*Contd.*)

	1957	*1956*
Local Population — Adults	—	385
Babies	1,321	1,142
Triple Antigen — (infant welfare clinics)		
Victoria	319	179
Belombre	23	—
Glacis	34	—
Cascade	48	—
Anse aux Pins	45	—
Praslin	57	—

IV. Sanitary Administration

(a) *Excreta Disposal.*

That the sanitary facilities in the Colony are poor has for long been an accepted fact and the findings of the morbidity survey conducted by the W. H. O. team have only served to emphasise this fact. The aqua-privy, which has now passed from the experimental stage to the stage ef being an acknowledge success, can provide the required suitable, practical, easy-to-manage system of excreta disposal.

More aqua-privies were constructed during 1957, and the Government have accepted it as the most suitable latrine for their village settlements. New houses at the Foret Noire Settlement in Victoria are now provided with aqua-privies while at the Mamelles Settlement outside Victoria the existing double-vault privies have been replaced by aqua-privies with great satisfaction to the residents. There are now 18 single, 26 double and 4 communal aqua-privies in the Colony. making up a total of 93 privy seats.

A scheme to replace the insanitary "bucket" system in Victoria by aqua-privies, district by district, is under consideration and will be put into operation as soon as the necessary funds are made available.

A plan has been submitted by this Department in collaboration with the W. H. O. Sanitary Engineer for the use of an Aqua-privy cum-urinal block system for public conveniences as the existing public conveniences in Victoria are unsuitable and create a nuisance in the centre of the town. It is understood that a start on these lines is planned for 1958.

(b) *School Sanitation.*

Two school under reconstruction, at Anse Boileau and Plaisance, have been provided with more modern conveniences, the former having a tip per-flush water-closet system and the latter an aqua-privy system. The aqua-privy block plan mentioned above for use as public conveniences is to be modified for the construction of two new latrine blocks at the St. John Bosco School in Victoria which has over 600 pupils and has a most unsatisfactory and insanitary system of bucket latrines.

It must be stressed once again that if any success is to be achieved in the field of public health in the Colony, a start must be made with the younger school children and the provision of proper sanitary facilities

(not merely latrines, but also toilet paper, soap, water and towels) must be given urgent priority as a principal step towards proper health education.

(c) *Housing.*

The Government has continued with its plans for extending the Village Settlement, scheme and twelve more stone houses have been built at Foret Noire Settlemont. Four houses have been completed for the Agricultural Department and two houses for the lighthouse guardians have been built on Denis Island.

(d) *Refuse Disposal.*

There has been little improvement in the system of refuse disposal, but many householders have cooperated in attempting to dispose of their household refuse properly. Nevertheless, until a strict system of house-to-house refuse collection from garbage bins is introduced, there remains little hope of improvement.

(e) *Mosquito Control.*

An anti-mosquito drive was commenced in March. It consisted of an attack on actual and potential breeding places only and a gang of labourers assisted the Senior Health Inspector who was in charge of operations. The *Aedes* Index for Victoria which was 4.29% in March had, as a result of this drive, dropped to 0.45% by September, but the advent of rains late in October caused the index to rise to 0.75% by November and to 0.69% by December.

Most of the breeding takes place in temporary foci such as empty tins, broken bottles, coconut shells and bamboo stumps and despite the vigilance of the mosquito-control squad improper refuse disposal still leads to these objects being strewn round in backyards and creating more breeding places. It would appear as if the only solution to this problem would be to introduce a house-to-house residual spraying campaign in an effort to eradicate all adult mosquitoes.

Breeding of Culex species has been more difficult to control and it was discovered that quite extensive breeding takes place in aqua-privies and septic tanks. It has therefore, been decided to cover the ventilation pipes of all septic tanks and aqua-privies with mosquito-proof netting. This work is still in its early stages and is not yet possible to assess the results. The efforts of the mosquito-control squad have resulted in eradicating breeding of mosquitoes in the Mont Fleuri cemetery, which formerly provided a prolific breeding ground for mosquitoes.

(f) *Fly Nuisance.*

Once again this year fairly severe fly nuisance was reported during the dry months of July and August and heavy breeding was found in badly kept cattle-pens and pig-sties just beyond the Central Town boundary of Victoria. Immediate improvement resulted when action was taken against the offending owner.

(g) *Water Supplies.*

The annual rainfall in Seychelles is, on an average, 90 inches. It is therefore, rather odd that during the dry season, extending roughly from about June to September, there is always a shortage of water. The principal reasons for this are the lack of substantial reservoirs for storage

and considerable wastage of water. In addition, despite the presence of two water-purification plants (at Le Niol and Anse Royale) all existing water supplies have been found by the W. H. O. team to be polluted.

The W. H. O. Sanitary Engineer, working with the Health Department is at present engaged in a survey of the the water supply situation in the Colony and a separate report will be available when these investigations are completed. It is hope that eventual recommendations will include a resonably inexpensive plan for the purification of all water supplies, as the vast majority of the population do not boil or filter their drinking water.

Table 10 : Analysis of Work of Sanitation Section.

i) *Inspections made :*

	Total Numbers
Dwelling Houses —	
Primary visits	10,615
Return visits	7,566
Latrines —	
Pit latrines	9,506
Bucket latrines	1,168
Sea-front latrines	542
Water closets	307
Double vault latrines	24
Aqua Pries	39
Night soil Disposal ground	8
Public Conveniences	48
Barber shops	16
Public water supplies	115
Schools	160
New sites for distilleries	2

ii) *Nuisances Remedied :*

Latrines improved	5,234
Defective drainage	124
Defective water closets	25
Refuse accumulations	2,741
Premises rat infested	61
Mosquito breeding eliminated	406
Vermin infestations removed (bugs)	40

iii) *Notices Served :*

	Type of Notice	
Offence	*Verbal*	*Written*
Insanitary latrines	2,069	198
Lack of latrine accommonation	85	14
Defective drainage	61	22
Refuse accumulations	1,103	1
Defective pig-sties	188	6
Keeping pigs contrary to Regulations	—	5
Lack of smoke escape apparatus	—	4
Dangerous structures	—	5

iv) *Prosecutions :* Nil

v) *Building Plans Scrutinised :*

New buildings	22
Alterations to existing buildings	47
Repairs to dwellings	77

vi) *New latrine accommodation provided :*

(Supervision of Department only)

Pit latrines	117
Water closets	9
Bucket latrines	10
Aqua-Privies	45

V. Food Hygiene

There has been some improvement in the year under review in respect of food hygiene. A factor of great importance in this improvement was the highly successful Health Exhibition (see section XII) in which inexpensive and easy to construct models of foodsafes and other appliances for protecting food were demonstrated. Filmstrips on food-handling and food hygiene in general were shown and were well received. All employers of food-handlers were asked to send their employees to these demonstrations.

A great deal of attention has been paid to premises selling and preparing food for human consumption and most owners of these premises have cooperated very well with the Departmeut in maintaining a fairly high standard of food hygiene. Unfortunately, the improvements which are so noticeable at the times that licences are due to be issued (when a certificate from this Department is needed) are not always maintained.

Regular stool-testing of all food-handlers was difficult until the last quarter of the year owing to the lack of stool containers, but on the arrival of these all food-handlers were tested and treated.

Table 11 : Analysis of Stool Specimen of 198 Persons on Register of Food-Handlers.

Parasite	*Number*	*Percentage 1957*	*Percentage 1956*
Entamoeba histolytica	30	15.5	23.2
Balantidium coli	1	.5	.5
Giardia lamblia	8	4.	5.5
Ankylostoma duodenale (hookworm)	44	22.2	29.8
Ascaris lumbricoides (common roundworm)	100	50.5	44.3
Strongyloides stercoralis	14	7.	11.6
Trichuris trichiura (whipworm)	144	72.2	88.9
Trichuris trichiura only or no parasites seen	53	26.7	8.2

Stricter control over food-handling personnel and treatment of all those infested with parasites in 1956 has resulted in some improvement during 1957 as shown in Table 11, but nearly 75 percent of food-handlers are infested with one or other (and often many) intestinal parasites, and the rate of reinfection, even after vigorous treatment is high. Only the provision of an adequate sanitary system together with continuous education, of all concerned, public employers, and foodhandling personnel, in the elementary principles of hygiene and the setting of high standards of cleanliness in public premises can reduce this high index of risk of infection in consuming food in these premises.

Table 12. SUMMARY OF WORK IN CONNECTION WITH FOOD HYGIENE.

i) *Inspection of food-handling premises :*

	Number in Colony	*Number of Inspections*
Shops (groceries, etc.)	160	596
Bakehouses	21	551
Markets	6	446
Butchers and fishmongers	32	356
Dairy (Government)	1	6
Aerated water factories	8	51
Restaurants and tea-rooms	15	64
Hotels	8	90
Boarding Houses	2	16
Slaughter Houses	4	208
Liquor selling premises	50	160
Lollipop and Ice Cream factories	2	31

ii) *Licence Application — Food handling premises :*

	Submitted	*Recommended*	*Not recommended*
Bakehouses	49	42	7
Hotels	9	8	1
Restaurants	4	3	1

iii) *Liquor Licence Applications :*

	Second half 1957	*First half 1958*
Submitted	65	62
Recommended	11	10
Conditionally recommended	6	8
Not recommended	48	44

iv) *Slaughtering of animals :*

Number of animals inspected — (ante-mortem & post-mortem)	
Cattle	440
Pigs	1,645
Turtle	531

v) *Unsound food condemned :*

Condensed milk	53 tins
Tinned fish	21 tins
Canned foods	84 tins
Rice	366 kilos
Fruit juices	1 tin
Bird's eggs	63 crates (700 eggs per crate)
Prepared mustard	38 jars

VI. Nutrition

The exact position in the Seychelles regarding the nutritional status of the population is not known, but a small study was undertaken in 1957 with the aid of the Applied Nutrition Unit at the London School of Hygiene and Tropical Medicine of the University of London.

There have been two committees of enquiry into the wages of the labouring classes (in 1955 and 1957) appointed by the Government. An analysis by the Applied Nutrition Unit of the actual budget forms which had been presented to the 1955 Committee and the "model budget" forms prepared by this Committee resulted in this comment :—

> "It seems very unlikely that, in either town or country the families would be able to supplement the model Budgets up to the level required for health".
>
> In a note to the writer, the analyst further states :—
> "I should think that their actual intakes must be of a nature to depress vitality (both mental and physical) and depress also the rate of growth of the children".

In order to discover whether, in fact, this last statement supplied to Seychelles, the height-weight-age records of the schools visited as part of the School Health Services were collected and sent to the Applied Nutrition Unit with a request for an analysis and for the possible calculation of a standard pattern for heights and weights for Seychellois school children.

The Unit very kindly to undertook to analyse the findings submitted which embrace 12 primary schools, four of them in Victoria itself. The Department is highly indebted to the Unit, and in particular to Miss N.W. Grant, for the painstaking analysis and the clear report and graphs submitted, in which the present Seychellois school-children, as a group, are compared with London County Council School-children in the years 1905—12 and 1954.

The graphs clearly indicate that the Seychellois children — both boys and girls — are smaller, lighter and slimmer than a group of London school children of comparable age of 1954, while the nutritional status of these same children corresponded to that of the London County Council School-children of 1905—1912. In this connection, the report states :—

> "While it cannot be ruled out that these difference might be genetic in origin, it is more probable that they indicate inadequate diets during the growing period".

That the enormous improvement in the nutritional status of the London County Council school children is a direct reflection on the care provided for mothers and infants through the Maternal and Child Welfare Services, rather than merely due to improved school feeding, is shown by the fact that each group entering school at the age of 5 years were already taller and heavier than earlier groups.

The report concludes :—

> "It would seem undesirable to use the averages obtained from the present large-scale investigation as a standard for the future as the graphs suggest that they indicate past undernutrition and the height and weight of the present five year olds make it unlikely that the general averages will soon be raised if present trends continue".

It is also significant that a kwashiorkor-like syndrome (protein malnutrition) had been noted among admissions to the Children's Ward, of the Seychelles Hospital in Victoria, presenting the typical picture of a lethargic child with oedema, pot-belly and hair and skin changes. All these cases are in infants who are not being breast-fed. It is fortunate, indeed, that the vast majority of Seychellois mothers are very keen to breast-feed their babies, but in the past two years it has been noted with concern that more and more mothers, despite their desire to breast-feed their babies, are unable to do so. The majority of those mothers are multiparous, averaging 4 to 5 babies or more, and this lack of breast milk is, almost certainly, nutritional in origin.

In addition, cases of generalised malnutrition with loss of weight and accompanied by fairly heavy worm infestations are not uncommon. Thus in 1954 the Annual Report of the Medical and Health Department records 141 cases of deficiency disease with 12 deaths (out of 456) directly attributed to malnutrition, while the figure for 1956 was 355 cases and 22 deaths (out of 468). For 1957 the figures are 397 cases and 14 deaths (out of 425). These figures do not, of course, include the fairly substantial number of cases in which malnutrition, though not the direct cause of the illness of death, plays an important contributory role, in lowering resistance to infections and considerably regarding recovery from disease, even minor ailments.

It is further significant that five adult cases of beri-beri with peripheral neuritis and paralysis of the lower limbs, and accompanied by a generalised malnutrition, were admitted to the Seychelles Hospital, Victoria, from outlying islands, three from outside the Mahe group (Les Soeurs and Coetivy) This points to a possible lack of protective foods in the make-up of the diet of labourers working on these islands.

Of 1,926 school children examined during 1957 (see table 14, School Health Service) the nutritional status of 30 percent was found to be sub-standard, (by Seychelles standards) classed as "fair" or "poor". Fully 5.6 percent of these 1,926 children belong to the group with "poor" nutrition. In assessing the standard of nutrition, the child's height, weight, general appearance, subcutaneous fat, posture and skin health were taken into consideration. As this Service is now a little over 2 years old, it is not possible to make a comparison with a group of children similarly examined in previous years.

School Meals :

There is a supplementary school feeding scheme in operation and twenty percent of the total school population receive a school meal. The menu varies in the Victoria School Meal Centre and in the country schools. In the town school meal centre the menu consists of 120 grams maize, 48 grams spinach, 64 grams vegetables 48 grams fish, 25 grams lentils and 6 grams of salt per child. This menu yields under 700 calories, and considering that most of these children do not have a proper breakfast (except for a cup of black sweet coffee and an occasional biscuit), and probably only one full meal at home, their daily dietary intake must be regarded as inadequate. In the country schools, each child in receipt of a meal receives a bun or biscuit and, when available, a soup of crushed maize and lentils. The ration of maize and lentils is often exhausted during the month and the soup is then omitted for the rest of the month. The question of improving school meals must receive early attention, as all the indications are that the nutritional status of the school-children of the Colony is not likely to improve in the near future.

VII. Maternal and Child Welfare

During the year, the extensions to the Maternity Department were completed and a separate block become available for the holding of the Ante Natal and Infant Welfare Clinics in Victoria.

With the stationing of public health nurses in South Mahe and the Praslin-La Digue districts, increased impetus has been given to this work in these areas. There are also monthly Infant Welfare Clinics at the villages of Bel Ombre, Glacis, Cascade and Anse aux Pins. A programme of immunization of infants against diphteria, whooping cough and tetanus using an easily administerable combined triple antigen has been commenced and is at present limited to regular attenders at these clinics, because of the limited supply available. There have been no deaths in infants from gastro-enteritis in this year, and this is almost certainly the result of improved method of infant feeding which are being taught to the public at these Infant Welfare Clinics.

Post natal home visits bv public health nurses continued throughout the year and it is gratifying to report that with the increased accomodation now available in the Maternity Department, fewer patients have had to be discharged early.

Table 13 : Analysis of Work in Relation to Maternal and Child Welfare (Public Health Nurses)

i) *Ante-Natal Clinics, Victoria :*

	1957	*1956*	*1955*
First visits	839	911	814
Return visits	2,455	2,796	3,018
	3,294	3,707	3,832

Fifteen (15) ante-natal patients who were unable to visit Ante Natal Clinics were visited regularly at their homes.

ii) *Infant Welfare Clinics :*

District	*First Visits*	*Return Visits*
Mahe :		
Victoria	214	561
Bel Ombre	40	93
Glacis	30	153
Cascade	34	161
Anse aux Pins	34	164
Praslin :		
Baie Ste. Anne	49	85
Grand'Anse	35	46
La Digue	12	17
	448	1,280

iii) *Post-Natal Home Visits :*

Maternity Department (early discharges)	41
Follow-up of hospital births	990
Follow-up of births in homes (delivered by district midwives)	115
Repeat visits (where necessary)	151
	1,297

There were also 757 home visits to infants and pre-school children.

VII. School Health Service

This service was extended during 1957 to a further 12 schools and by the end of the year all free primary schools in the Colony were included in the service, which now caters for a total of 4,725 children. Table 14 sets out a summary of the findings of the 1,926 school children examined during 1957, but these findings are not to be used as an index of ill-health among the children examined.

The interest which has been shown by parents and teachers alike and the excellent spirit of team work between them and the staff of the Department which has resulted stamps this service as one of the outstanding achievements in the work of this Department in the past 2 years. Started as a pilot experiment late in 1955 with 2 schools, the service has fully justified itself, but much more needs to be done to ensure its complete success.

On the basis of the experience which has been gained in these 2 years, it is clear that there are three major problems facing the service, upon the solution of which most depend the eventual success of failure of the Service —

(a) the question of nutrition which has been dealt with in Section VI of this report ;

(b) the problem of providing efficient sanitation in all schools which is essential if the high rate of intestinal parasitism in school children (see 1956 report) is to be eradicated ; and

(c) the provision of a school dental service. The present system of treating school children at general dental clinics only when they are in pain will not in any way improve the state of dental health of the children and a proper, conservative dental service is essential. With existing shortage of dental surgeons, such a scheme, (a start of which was attempted late in 1956, but failed) cannot even be considered. No amount of health education will, by itself, improve dental health in school children.

It is clear that, in the interests of maintening this Service to the benefit of the school-going population in the Colony, these points will have to be considered seriously in the very near future.

Table 14 : Analysis of Findings of Examination of School-Children, 1957

	Anse Boileau	*Port Glaud*	*Takamaka*	*Baie Lazare*	*Anse aux Pins*
Total Number interviewed and examined	313	93	193	187	266
Personal History of Asthma	36	29	10	40	28
History of family contact with tuberculosis	10	—	—	—	—
Number of family group involved	6	—	—	1	—
Physical stature —					
Sthenic	284	90	186	182	240
Asthenic	20	2	15	3	17
Obese	9	1	2	2	9
State of Nutrition —					
Good	213	50	120	130	163
Fair	80	36	53	48	88
Poor	20	77	20	9	15
Skin defects	15	12	7	11	3
Pallor of Mucous Membrane —					
Pale	40	28	53	24	39
Very Pale	1	5	3	1	5
State of Dental Health —					
Good	173	45	118	111	137
Fair	101	34	52	52	97
Poor	39	14	23	24	32
Defects of vision of Eye Diseases	7	1	2	3	2
Enlarged, Inflamed Tonsils	11	7	10	3	15
Cardiac murmurs or abnormalities	2	1	3	2	—
School Clinic Follow-ups :					
For treatment of enlarged tensils	—	7	—	—	1
For investigation of cardiac defects	—	1	—	—	—
For eye complaints (referred to opthalmologist)	7	1	2	3	2
For dental care (referred to Government Dental Surgeon)	—	—	—	—	—
For X-Ray screening of tuberculosis contacts	4	—	2	1	1
For active skin diseases	6	12	7	—	2

In addition, school nurses paid 60 visits to homes of children for the purpose of follow-up and health education.

Table 14 : Analysis of Findings of Examination of School-Children — (*Contd.*)

	La Digue	*Grand'Anse R. C.*	*Grand'Anse C. of E.*	*Anse Kerlan*	*Baie Ste. Anne*	*Anse Boudin*	*Consolation*
Total Number interviewed and examined	303	175	82	30	184	62	34
Personal History of Asthma	23	10	8	5	12	2	3
History of family contact with tuberculosis	6	3	—	1	5	1	—
Physical stature —							
Sthenic	293	161	79	—	173	—	—
Asthenic	2	9	2	—	10	—	—
Obese	8	3	1	—	1	—	—
State of nutrition —							
Good	282	132	58	24	122	31	19
Fair	20	35	17	6	51	20	14
Poor	1	6	7	—	11	11	1
Skin defects	3	12	—	1	5	1	11
Pallor of Mucous Membrane —							
Pale	11	9	10	—	43	10	4
Very Pale	2	5	—	1	3	—	—
State of Dental Health —							
Good	239	113	47	20	120	39	27
Fair	54	53	22	6	49	15	6
Poor	10	7	13	4	15	8	1
Defects of vision or Eye Diseases	1	1	3	—	—	—	—
Enlarged, Inflamed Tonsils	16	17	4	3	—	—	—
Cardiac murmurs or abnormalities	—	2	—	—	2	1	2
School Clinic Follow-ups :							
For treatment of enlarged tensils	16	17	4	3	—	—	—
For investigation of cardiac defects	—	2	—	—	—	—	—
For eye complaints (referred to opthalmologist)	1	1	3	—	—	—	—
For X-Ray screening of tuberculosis contacts	—	—	—	—	—	—	—
For active skin diseases	1	3	1	—	—	—	—

During the year 45 school clinics were held and 119 children referred to follow-up and treatment (apart from children attending hospital or district out-patient clinics).

IX. Port Health

During the year 67 ships called at Victoria Harbour. As usual, except for the home-based schooners, all ships anchored in the outer harbour. The home-based schooners, returning from Madagascar, Mauritius and Mombasa were disinsectised prior to being allowed into the inner harbour.

At the height of the pandemic of Asian Inffuenza, stringent precautions were taken to prevent the entry of this disease into the Colony. Restricted pratique only was granted to six ships at that time and on two occasions all landing passengers and stevedores handling cargo were placed in quarantine on Long Island. In addition one passenger, a child not in possession of a certificate of vaccination against yellow fever was isolated in the mosquito-proof quarters at the quarantine station on Long Island.

Among the 67 ships, there was one belonging to Her Majesty's Navy and one to the French Navy. A Royal Fleet Auxiliary called twice to take on Seychellois crew, a Greek tanker called to pick up Archbishop Makarios on his release from exile, another Greek ship called for repairs and three ships (two Japanese fishing vessels and one British) called for medical aid for sick members of the crew. The remaining 59 ships were all commercial vessels.

Table 15 : Analysis of Shipping called at Victoria during 1957

i) *Nationality :*

American	1
British	41
Dutch	4
French	2
Honduran	1
Indian	12
Japanese	5
Liberian	1
	67

ii) *Last Ports of Call :*

Abadan	1	Japanese Ports	5
Bahrein	1	Kuwait	1
Berbera	1	Madagascar	2
Bombay	13	Mauritius	10
Cape Town	2	Mombasa	19
Colombo	3	Port Swettenham	3
Durban	2	Singapore	1
Diego Garcia	2	Zanzibar	1
Djibouti	1		
			67

X. Legislation

In February of this year a meeting was arranged between the Secretary to Government, Attorney-General, Assistant Attorney-General, W. H. O. Team Leader, Director of Medical Services and the Medical Officer of Health, to consider a draft skeleton plan for new public health legislation which had been submitted by the writer. The plan, which provided for one, composite Public Health Ordinance instead of a number of inter-related, but separate, Ordinances, was accepted in principle. It was also agreed that, unlike the practice in the past, public health legislation should be made applicable equally to all parts of the Colony.

XI. Health Education

This aspect of the work of the Department progressed considerably during the year under review, largely due to the presence on the staff of a fully qualified health educator. The highlight of the year's activities was, of course, the Health Exhibition, which is discussed in detail in the next section.

The emphasis, has, as in the previous year, been placed on health education in the schools and among organized groups of young persons and adults. To be effective in years to come, health education must begin with the youngest children in the schools. Investigation revealed that an excellent syllabus for teaching "Healthy Living" in the schools existed, but was not being followed. The syllabus was brought up to date by the Department and a series of 5 lectures was organized for all teachers to prepare them for the task of passing on their knowledge to the children in their care. The series lasted throughout the second school term and the teachers were broken up into easily accessible groups. The talks, which were on "The nature of Health Education", "Emotional Health" "Health needs of the growing child", "Health Teaching" and "Coordination of Health Education in the home and in the community" were very well received, and considerable interest among the teachers in this branch has been aroused. The principal difficulty however has been that in most schools there are no suitable sanitary facilities which would help to follow up this teaching. It must again be stressed that the provision of these facilities is most vital to the success of any health education programme. The series was illustrated with suitable films and film-strips with commentaries. An excellent series of films on the care of the eyes, ears and teeth were also shown to groups of school children.

Many of the teachers showed such keeness that a First Aid course was organized for some of them during the school holidays. The course was regularly attended by nearly 20 teachers. All of these who subsequently took the official Red Cross Society Examination in First Aid were successful.

During the visit of the writer for school examinations talks were given by the Health Educator to the mothers of the children to be examined. These talks were very simple and dealt with elementary physiology and anatomy and it was reported that the mothers generally showed a keen interest to acquire knowledge which would help them to bring up their children.

In the last school term school-leaving girls in the 13—15 year age group were given a series of demonstrations on Mothercraft. These, too,

were generally well attended, but the series was hampared by a lack of sufficient materials for the practical demonstrations. These classes will be continued in coming years.

The Health Club, which was formed in late 1956, continued to meet regulary every fortnight. Despite the departure of a few members the numbers attending remain steadily at about 15 per session. Two teams from the Club took part in a "Health Quiz' as part of the radio broadcast series during the Health Exhibition. Most of the members of the staff of the Medical Department very kindly gave talks to the Club and the talks were followed by free discussion. Considering that all the members of this Club have no contact with medical work, the interest they showed throughout the year was very encouraging.

In addition to these, the activities of the Department in this field include :—

i) the training of two groups of girl guides in preparation for the "Health" and "Child Nurse" badges ;

ii) the continuance of occupational therapy for patients in the Tuberculosis ward, though it has been hampared by inability to obtain suitable materials ;

iii) talks at the Clinic with, and regular visits to, the homes of Tuberculosis patients receiving out-patient treatment for the purpose of ensuring that proper precautions are being taken to prevent the spread of infection ;

iv) the making by the Technical Centre of toys and other implements for the Children's ward of the hospital, especially for those children who have a fairly prolonged stay in hospital ;

v) the visiting at home by the Health Educator of handicapped children.

Though the occasional public cinema shows were held during the year, they were not on the same scale as in the previous year, because the supply of new films was very meagre and, of those received not all were considered suitable. Nevertheless, films shows were held in various parts of Mahe and in Praslin and La Digue and were generally very well attended. All films shows were accompanied by commentaries in Creole by the Health Educator.

Steady progress has been made in this field in the past year. The interest of the public has been aroused and their cooperation assured, but if any success is to attend these efforts, immediate steps will have to be taken to put into effect practical schemes for the improvement of public health. Medical treatment alone wll not eradicate tuberculosis or the intestinal diseases ; neither will health education alone produce any results. A combination of these adequate practical measures will go a long way towards achieving the object of the Department — Good health for everybody.

XII. Health Exhibition

A highly sucessful Health Exhibition was organised by this Department in April 1957 to coincide with World Health Day. The title of the Exhibition was "Health Exhibition — 1957" and the theme "Health is Wealth". The Exhibition, which was held under the distinguished

patronage of, and was opened by, His Excellency the Governor, Sir William Addis, K.B.E., C.M.G., was held at the Carnegie Hall, Victoria and was opened to the public for 6 days, from April 5th to 10th. It was also presented in Grand'Anse Praslin, on April 18th and 29th and in La Digue on May 1st. In Mahe the total attendance far exceeded the anticipated numbers and altogether 6,072 members of the public visited the exhibition. In addition to these, there were 17 organised parties of school-children. The Police Department also sent its members along in organised groups. In Praslin and La Digue the attendance averaged 500 on each day.

In addition to the stalls depicting various aspects of public health problems, there were also numerous film-strips, shows and flannelgraph displays with commentaries by various members of the staff and a very entertaining and educative puppet show by the pupils of the Modern School, Praslin entitled "The Clean and Dirty Family". Poster, essay, papier mache and clay model competitions in the schools aroused much interest and were very keenly contested. There were also night broadcasts on Radio Seychelles by various members of the staff and the W. H. O. team and one of the highlights of the Exhibition was the open air cinema show on World Health Day, Sunday, April 7th at which the W. H. O. team leader Dr. A. J. W. Spitz addressed an audience estimated at over 5,000 persons.

A novel idea which proved extremely popular, was the use of pictorial displays of local interest showing the work of the staff and the many local problems faced by the Department which by drawing attention to everyday events in their midst were appreciated very much better than the otherwise excellent overseas produced posters displayed. A large artistically arranged display board demonstrated "The Structure and Function of the Health Department".

The stalls, five in number dealt with —

i) Environmental Sanitation, featuring an excellent pictorial display of every day sanitation problems in the Seychelles and a model of an aqua-privy ;

ii) Maternal and Child Welfare, in which free use was made of local material with locally produced photographs of the work of the Ante-Natal and Infant Welfare clinics and demonstrating the various aspects of the field work of the public health nurses. Suitable clothing for infants tand pregnant mothers was displayed, and model baby feeding equipment was contrasted with locally improvised equipment which was both equally adequate and inexpensive ;

iii) Infectious diseases, particularly the intestinal parasites and tuberculosis. Prepared microscopic specimens and pictorial charts and flannelgraphs with commentaries illustrated the life cycle of intestinal parasites and chest X-rays were shown of various stages of tuberculosis. A chart illustrating the method of spread of venereal diseases and another showing the increasing incidence of gonorrhoea elicited much comment and questions from the public ;

iv) Food and Nutrition, in which extensive use was made of fresh local foods and a few models to illustrate with the aid of charts the nutritional value of these various foods. Easy-to-construct, inexpensive food-safes and other equipment for protecting from from contamination was also demonstrated ;

v) School Hygiene, with pictures showing the School Health Service in operation and displaying the various posters and models which were prepared for the competitions by the school children themselves ;

The film-stips sessions, of which there were two to three daily,, were very well attended and considerable interest was shown in all of them and many questions were asked of the commentators, who were all members of the staff.

An encouraging sequel to this successful exhibition was a request from the Headmaster, Modern School, Praslin, for the Department's assistance in obtaining materials for the scholars attending woodwork classes to make hygienic food-safes for eventual use in their homes. Such enthusiasm and initiative augers very well for the future.

The Department has to record its thanks to the many persons and firms, too numerous to mention, who so generously assisted with various items required for the exhibition and the prizes for the school competitions.

It is hoped to hold similar exhibitions bi-annually because the interest of the public has been aroused, and it is most important to maintain this interest with periodic exhibitions of this nature.

XIII. The World Health Organization/Seychelles Government Joint Project for Environmental Sanitation and Health Education

During the year under review this project, begun in 1953, entered its final phases. What has begun as a project to improve environmental sanitation has developed into a full-scale operation for the improvement of health services in the Colony.

In all such projects the groundwork has to be the discovery of the facts underlying the problem. Thus, one of the first tasks of the first member of the W. H. O. team to arrive in Seychelles, was to conduct a housing survey, which revealed the unsatisfactory nature of housing and sanitation in the Colony. The training of local personnel was given priority since no project of this nature can possibly succeed if the work initiated by the project cannot be carried on by the local staff. especially as the existing staff in the Colony lacked the necessarybasic training.

With the arrival of the Medical Officer, who was to be the Team Leader, in mid-1955, the Project entered into what might be called its second phase. The accent was now on the organization of the Health Department, and the secondment of the writer to the project as Medical Officer of Health was one of the first steps in this direction. At the same time an intensive study of the prevalent intestinal diseases were undertaken, through the Morbidity Survey and the Intestinal Clinic. The findings of this study will be of inestimable value in planning the future of public health in the Colony.

The acceptance, in principle, of the Aqua-Privy scheme during the year is one other step in the direction towards improved sanitation without which the high incidence of intestinal diseases can never be reduced.

The success of the Public Health Nursing service and the School Health Service has assured continued friendly contact with the general public and the presence of a health educator (trained on a World Health Organization fellowship) has given an added impetus to this most important aspect of the work of the Department.

Public Health legislation, hitherto only spoken about, has now become reality and the passage of the new Ordinance will pave the way to further improvements. Two fully trained Health Inspectors are expected to return to the Colony at the end of the year and their presence of the staff will be most valuable.

While the question of water supplies was not originally a part of the accepted programme of work of W. H. O. team, a great deal of attention has been given to this very importont problem by the W. H. O. Sanitary Engineer during this year. No details are as yet available but there is no doubt that the situation as regards the purity of the water supplied to the public is not compatible with good health. A detailed report on water supplies with recommendations for the future will be probably be available during 1958.

Though there have been no startling or spectacular developments during the year, the Project has forged steadily ahead. The foundations has now been built — it remains for the superstructure to be added on. This will required foresight, courage and planning, coupled with considerable financial resources, to achieve what the Project has set out to do.

XIV. Staff of the Health Department

The staff of the department remains unchanged, except that, as anticipated in the previous report, the services of one probationer health inspector were terminated. No special training courses were held during the year, but practical field work was constantly used as a basis for further training.

This report would not be complete without making mention of the excellent work done by Miss. J. M. E. Dauban, the Health Educator, though she only spent 15 months as a member of the staff of this Department. Her resignation from the staff and her departure from the Colony on her marriage created a gap which will not be easily to fill adequately.

The writer would like to take this opportunity to thank all the members of the staff for their efforts during the year, both in the field and in the gathering of the facts and figures which go to make up this report.

Printed by Government Printer, at the Government Printing Office,
Victoria, Mahé — Seychelles.