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

1959

PRICE Rs. 3/—

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Medical and Health Department,
Seychelles.
March, 31st. 1960.

Sir,

I have the honour to forward for onward transmission to His Excellency the Governor, and to the Secretary of State for the Colonies the Annual Report on the Medical Department for the year 1959.

I have the honour to be,
Sir,
Your obedient servant,
K. EDMUNDSON,
Director of Medical Services.

The Colonial Secretary,
The Secretariat,
Victoria.

Annual Report of the Medical and Health Department of Seychelles for the year 1959.

General Review

The year under review has been one of quiet progress. Although short of one medical officer, the public service was maintained satisfactorily. At one time there was every indication that Anse Royale Hospital might have to be closed, but by transferring a medical officer from Praslin to Mahé and enlisting the services of his wife, who was qualified, as temporary medical officer the danger was averted. But the circumstances giving rise to this deployment, showed clearly the urgency of increasing the strength of medical officers to permit of adequate coverage for leave, sickness etc. Once again it is with satisfaction that it can be recorded that no epidemic occurred during the year.

The Colony was visited by two members of the Commonwealth Parliamentary Association, Messrs. Paul Williams, Conservative, and George Thomas, Labour. They were shown, and took great interest in all activities of the Department.

As the Colony had been without the services of an ophthalmologist for some 18 months, it was considered desirable to employ such a specialist for a short period of three months. He arrived on November 20th. The number of appointments made for this service showed that his presence was very necessary. An interim report showing the work done up to the end of the year appears in this report.

In response to a suggestion from the Deputy Chief Medical Adviser, the Wellcome Trust in Nairobi very kindly sent over a team to investigate the occurrence of anaemia amongst the population of Mahé, Praslin and La Digue. The team consisted of Drs. Foy and Kondi, whose work on the anaemias is well known. They arrived in October and were still deeply engaged at the end of the year. This report will be of the greatest interest to all concerned with the health and well being of the inhabitants of these islands. Present indications are that the cause of the anaemia is helminthic infestation, the chief culprits being *ankylostoma duod nale* and *necator americanus*. The anaemia is hypochromic, and responds readily, except in the face of intercurrent disease to iron therapy.

Another investigation which was completed during the year was one made into the immunity, or otherwise, possessed by children against poliomyelitis. Thanks to the kindly co-operation of the Public Health Laboratory Service in the United Kingdom, 100 samples from school children between the ages of 5—10 years were taken and despatched for examination as to their immunity against virus types I, II and III. The results obtained shewed that 99% had an immunity against either I or III ; 37% has immunity against all three types of virus ; 89% against type 1 ; 83% against type III and 47% against type II. It is intended to extend the investigation in the coming year to the elder children of the 10—15 years group and the 1—4 years group in an endeavour to ascertain at what age immunity develops and if it is maintained after the age of 10 years.

It would seem fitting here to tender the thanks of the Department, and the Colony of Seychelles to the Medical Research branch of the Colonial Office, the Wellcome Trust and the Public Health Laboratory service in the United Kingdom for their interest in our problems and their enthusiastic co-operation in investigating them.

I. STAFF

The general staffing position as regards both medical officers and nursing sisters remained acute until towards the end of the year. However the arrival of Dr. Lloyd on the medical side and Miss M. B. Cahill, M.B.E. as Matron, together with the return of Sister William relieved the tension somewhat. The Colony in general and the Department in particular are fortunate to have been able to acquire the services of Dr. Elgood M.D., F.R.C.P. as Physician. The arrival of two young Seychellois dentists relieved the strain on the sole dental surgeon.

Departures :

S. C. De, Medical Officer — 20 August 1959 on leave
Sister William, Acting Matron — 2 May 1959 on leave
Sister D. Michel, Nursing Sister — 16 November 1959 on leave

Arrivals :

C. L. Elgood, Physician 1 March 1959
H. J. Lloyd, Medical Officer 16 November 1959
E. J. Lefevre, Dental Surgeon 1 January 1959
G. L. E. Savy, Dental Surgeon 24 September 1959
Miss M. B. Cahill, M.B.E., Matron 21 December 1959
Sister William returned from leave 16 November 1959
Miss G. Laffey, Radiographer 21 December 1959
Sister J. Mason, 1st November 1959
G. Hoarau, Chief Health Inspector 16 June 1959

The Departmental staff comprises —

1 Director of Medical Services
1 Surgeon
7 Medical Officers (The Physician is included in the Medical Officers)
3 Dental Surgeons (one supernumerary)
1 Matron
7 Nursing Sisters
1 Chief Health Inspector
9 Health Inspectors
6 Public Health Nurses

The arrival of Miss Cahill as Matron will permit the allocation of Sister William to the post of Sister Tutor, a position for which she is trained and qualified. The advent of Miss Laffey the Radiographer although a little in advance of the X-ray installation for the running of which she will be responsible, will mean obtaining better results from the portable machine and will allow the return of the present male radiographer to his substantive post of Dispenser Storekeeper. Miss Laffey's experience will be extremely useful in arranging, and designing the layout of the dark room, stores, records etc. for the new installation.

Owing to the lack of any Medical Officer with Public Health training, the work of Medical Officer of Health and Port Health Officer was once again undertaken by the Director of Medical Services in addition to the normal duties of his post.

Finance	*1959*	*1958*	*1957*
Expenditure (estimated)	856,635	792,622	735,012
Expenditure (actual)	819,486	751,358	737,630
Revenue	92,164	91,370	92,326
Colony Expenditure	5,866,334	5,395,346	4,456,143
Cost of Medical care per head of population	18.99	17.93	17.95

II. TRAINING

The training of nurses continued throughout the year but was handicapped by changes in the Tutorial Staff. Sister Michel who had successfully carried out the work of Sister Tutor since 1953 requested a transfer to the wards for health reasons. She was replaced in February by Sister Ward-Horner who continued in the work until the end of October. The school was then closed temporarily until the return of of Sister William from overseas leave in November. Sister N. Mathiot was successful in obtaining her S. C. M. qualification in England in December and will be rejoining the Nursing Staff early in the new year. She will be posted to the Maternity Department and will be responsible for the training of pupil midwives.

Mr. J. Souyana left for the United Kingdom to study for his S.R.N. and R.M.N. qualifications and Miss Rebuck also left for the United Kingdom to study for her S.R.N., S.C.M. qualifications.

Lectures :

The following Medical Staff helped with lectures —
Dr. Hossen — Surgery, Gynaecology and Paediatrics
Dr. De — Medicine
Dr. Collie — Midwifery
Mr. Etienne — Public Health
Sr. Mary, Sr. Patrick } Theatre technique

Examinations :

Final Examination in General Nursing
5 Candidates presented — 5 passed

Preliminary Examination Part I
5 Candidates presented — 4 passed, 1 failed

Preliminary Examination Part II
3 Candidates presented — 2 passed, 1 failed

P. T. S. Examination
7 Candidates presented — 7 passed

There are 4 sets of Nurses taking lectures at present in preparation for examination to be held next year. They are :—

8 P. T. S. Candidates
7 Preliminary Part I
4 Preliminary Part II
3 Final General Nursing

There are also Pupil Midwives taking lectures in the Maternity department in preparation for the midwifery examination next year.

Midwives qualified in 1959 = 3

The Nursing establishment for the Colony is as follows :—

Matron
Sister Tutor
6 Nursing Sisters
20 Staff Nurses and Midwives
4 Midwives
27 Nurses in training
3 Registered Male Nurses

When it is remembered that the nursing staff is spread over 5 hospitals containing 210 beds, besides providing for ancillary services such as outpatients, operating theatre work, and night duties it will be realised that the need for increased staff both trained and in training is most urgent. It is hoped that the establishment for student nurses will be increased by 20 next year in an attempt to ease the situation. But increase of staff means enlarged buildings in which to train them, and where they can live whilst in training. However it is hoped that these difficulties will be overcome in time.

III. HOSPITAL AND DISPENSARIES

No increase in beddage occurred during the year, the number being as before, viz —

Seychelles Hospital	155 beds
Anse Royale Hospital	17 beds
Baie Ste. Anne Hospital, Praslin	28 beds
Logan Hospital, La Digue	8 beds
Beolière Clinic	2 beds
	210

Two special hospitals are maintained. They are the Mental hospital at Les Cannelles, Anse Royale, Mahé, accomodation for 30 male and 30 female patients, and the Leprosy Hospital on Curieuse Island which has accomodation for 19 male and 12 female patients. The numbers of patients on Curieuse dropped to 8 (5 male and 3 female) during the year and it is intended to close this hospital and transfer the patients to a new hospital to be erected at Anse Louis on Mahé as it is considered that the number of afflicted does not justify the maintenance of so large an establishment. The new hospital will be under the control of the medical officer, Anse Royale, and its surveillance and day to day administration will be far easier than hitherto, when distance from Praslin entailed a whole day being expended in visiting the Leprosarium.

Seychelles Hospital (155 beds) :— This hospital once again performed, of necessity, the main medical work of the Colony. Once again all the main surgery was done there and most of the obstetric cases were admitted there. The report of the Surgical Specialist (Mr. T. M. J. d'Offay F.R.C.S.) is given below, together with a list of the operations performed :—

An idea of the amount of work done during the year is given by the number of patients who attended for consultation (1315) of whom (803) were new cases; by the number of surgical admissions, and by the number of operations carried out in the operating theatre during the year:— 253 major operations, 357 minor. 639 were performed in the outpatient department.

During the year a waiting list of non-emergency surgical conditions has been built up and during December 1959 operations were being performed on patients who had, perforce, waited about a year. The number on the waiting list at the end of the year stood at 186. The causes of the size of the list are shortage of theatre staff, theatre space, surgical staff and surgical beds, Owing to the general shortage of trained nursing staff, the theatre staff have also to attend to the patients in the paying wards of the Hospital. The establishment of a separate theatre nursing staff is an urgent necessity. The operating theatre is archaic in structure and the sooner it is replaced by a modern theatre suite the better. To obviate the creation of so imposing a waiting list the surgeon needs an assistant, a doctor with knowledge of modern anaesthetic practice, and someone who can act as a deputy on occasion. With regard to surgical diseases in the islands as a whole it is notable that all forms of cancer are rare, with the exception of skin cancer. Another feature is the number of fractures of limbs resulting from accidents whilst under the influence of liquor and from falling from trees.

GENERAL SURGERY INCLUDING GASTRO-INTESTINAL

	Elective	*Emergency*	*Total*
Appendicectomy for			
Acute Appendicitis		6	
Recurrent appendicitis	6		12
*Exploratory Laparotomy	7		7
Cholecystectomy for Cholelithiasis	1		1
Gastro-Jejunostomy for Carc. Ventriculi	1		1
Herniorrhaphy for			
Inguinal Hernia	48		48
Strangulated Inguinal Hernia		5	5
Femoral Hernia	3		3
Umbilical Hernia	6		6
Ventral Hernia	2		2
Haemorrhoidectomy	1		1
Excision Varicose veins	4		4
Excision skin carcinoma and skin graft	1		1
Excision cyst-adenoma Thyroid	9		9
Abdomino-perineal Exc. for carc. rectum	1		1
Abdominal Recto-pexy for complete prolapse of rectum	1		1
Removal stone from submaxillary duct	1		1
Drainage of odd abcesses	4		4
Operations for Intestinal obstruction			
Volvulus of pelvic colon		5	5
Intussusseption		4	4
Ascaris Obstruction		1	1
Intestinal adhesions		1	1
Carcinoma of Colon		1	1
Mesenteric Thrombosis		1	1
Resection of rib for empyema	1		1
Total	97	24	121

*For the following conditions: chronic pancreatitis, malignant ovarian cyst, congenital pyloric stenosis, carcinoma pancreas, intestinal adhesions, bladder myoma, and spasm of large bowel.

Genito-Urinary System

	Elective	*Emergency*	*Total*
Excision of Hydrocele	6		6
Orchidopexy for partially descended testicle	1		1
Dilatation of Stricture Urethra	5		5
Suprapubic Cystostomy for			
Stricture of Urethra	10	2	12
Calculus	2		2
Rupture Urethra		3	3
Suprapubic Prostatectomy	5		5
Exploration of kidney	1		1
Exc. of scrotum for elephantiasis	1		1
Total	31	5	36

Gynaecological and Obstetrical

	Elective	*Emergency*	*Total*
Salpingectomy for Ectopic Gestation		3	3
Total Hysterectomy for Fibroids	36		36
" " " Hydatidiform Mole	1		1
" " " suspected carcinoma of cervix	4		4
Ovariectomy for Ovarian Cyst	4		4
Correction of retroverted Uterus	1		1
Fothergill's op. for Uterine prolapse	6		6
Vaginal Hysterectomy Uterine prolapse	1		1
D & C for Incomplete abortion		1	1
Radical Mastectomy for carcinoma	4		4
Excision of Mammary Cyst	1		1
Caesarean Section	2	14	16
Drainage of pelvic abcess	2		2
Total	62	18	80

Orthopaedic

	Elective	*Emergency*	*Total*
Plating of forearm fracture	4		4
Open reduction of fractures —			
Colles	2		2
Pott's		1	1
Tibia and Fibula		3	3
Amputation below knee for disorganised foot (Charcot)	1		1
Total	7	4	11

Ear, Nose, Throat and Eyes

	Elective	*Emergency*	*Total*
Tonsillectomy	2		2
Enucleation of eye for injury		1	1
Lens extraction for senile cataract	2		2
Grand Total	201	52	253

During the year 24,477 outpatients and 3,266 inpatients were treated at the Hospital. Four cases of Beri-Beri were admitted. They all came from outlying islands and one case developed flaccid paralysis.

The Maternity department was very busy all year. The figures given below show the extent to which this department was patronised.

Antenatal Clinic

First attendances	948
Repeat attendances	2,645
G. C. cervicitis	58
Khan positive	19
External version	8

Maternity

No. of admissions	944
No. of deliveries	821
Primipara	185
Multipara	686
False labour	55
Normal deliveries	753
Forceps deliveries	5
Breech deliveries	16
Caesarean	21
Born before arrival	44
Multiple deliveries (twins)	16
Total babies born	837
Male	448
Female	389
Stillbirths	27
Premature births	54
Neonatal deaths	9
Maternal deaths	2

Analysis of State of Infants

Total babies born at full term	767
Discharged alive	740
Still born	27
Total babies born prematurely	54
Discharged alive	34
Still born	20

Post-Partum Complications

Retained placenta	4
Post Partum Haemorrhage	15
Mild	14
Severe	1

Causes of maternal mortality

Accidental Haemorrhage	1
Severe toxaemia	1

Ante-Partum Complications

Toxaemia of Pregnancy	28
Eclampsia	2
Ante partum Haemorrhage	15
Accidental ,,	6
Placenta praevia	6
Abnormal presentation	11

Analysis of Caesarean Section

Number of Caesarean sections	21
Classical	18
Lower Segment	3
Contracted Pelvis	2
Abnormal presentation	7
A. P. H.	9
Hydrocephalus	1
Foetal distress	2

The visiting Ophthalmologist, Dr. R. J. Harley-Mason submitted the following figures for the period 21 November 1959 to 31 December 1959.

Total No. of cases seen consisting of –	344
Refraction tests	304
Miscellaneous	40

In addition to the above the No. of re-attendances was 26.

Of the above 304 refraction tests, 245 patients were issued with prescriptions for 329 pairs of spectacles, some patients requiring two pairs.

Operations were performed as follows :–

Cataract	2
Pterigium	4
Needling	1
Cyst	1
Orbital cellulitis	1
Probing lacrimal duct	1
	10

Ear Nose and Throat Clinic :— This work was conducted in Victoria by the Medical Officer of South Mahé. A weekly afternoon clinic combined with Theatre work started in the middle of March 1959 and was later increased to two afternoon sessions weekly. Altogether 242 patients made use of the clinic which was held in the Dental and Ophthalmic Building.

Of these 74 attended for ear complaints mostly otitis media and externa. 38 attended for nasal complaints mostly sinusitis, allergic rhinitis and nasal polypi.

130 attended for throat complaints mostly caused by diseased tonsils and adenoids.

Operations :—

Tonsillectomy and removal of adenoids	65
Antral Punctures	12
Cauterisation of infectious turbinates	8
Nasal polypectomy	7
Reduction of fractured nose	2

At the end of the year there were 31 cases on the Ear, Nose and Throat waiting list for Tonsillectomy and removal of adenoids.

IV. DENTAL DIVISION

General

(a) The attendances again rose considerably during 1959 as in 1958. Fortunately, 2 dental surgeons have been available for the whole year for the first time since 1954, and this rise in demand for treatment could be met more adequately.

(b) There was a distinct rise in the amount of conservative work done, which, although it is encouraging, does not change the general picture of too many patients with advanced dental decay requiring extractions.

(c) From Victoria, regular visits were paid to Anse Royale Clinic (once a week) to Beolière (once a fortnight) and to the Mental Hospital (once a month).

(d) By a new Regulation, which came into force on December 1st free treatment became available to all children under 18 years (instead of only to children under 14 as hitherto). This means that a larger proportion of the population is now entitled to free treatment at the ages when dental care is very important. It is hoped that this will encourage more young people to seek conservative rather than emergency treatment.

(e) The number of dental surgeons was increased to 3 by the arrival of Mr. Gilbert Savy B.D.S. (London) L.D.S.R.C.S. (England) in September.

(f) A large amount of denture work had to be postponed in September and October due to delay in the despatch of an essential impression material. This affected the revenue of the department for these months.

(g) Summary of treatment at Victoria Clinic.

	Under 14 years	*Over 14 years*	*Total*
Attendances	1954	6521	8475
Extractions	1427	5203	6630 (26 under General Anaesthesia)
Fillings	730	1576	2297
Dressings (tooth and socket)	296	675	971

Other Conservative Work

Gold and Plastic crowns	22
Gold inlays	6
Plastic inlays	1
Root fillings	7
Scaling and Gum treatment	73

Prosthetic Work

Full and partial dentures	119
Repairs	48
Orthodontic work	12

Special Minor Surgery

Surgical extractions (including 6 impacted wisdom)	87
Socket syringe or curettage	13
Alveolar abscess drainage	8
Alveolectomy	5
Gingivectomy	1
Apicectomy	3
Cysts excised	2
Fractures mandibles wired	5
Fractured mandibles splinted	1
Fibrous epulis excised	3
Papilloma of tongue excised	1

Other Work

Penicillin injections of badly infected cases	104
No. of Dental X-ray taken	85
Oro-antral fistulae treated	2
Vincent's stomatitis	3
Socket haemorrhages arrested by packing and suturing or by Vitamin injection	9
Vitamin C. deficiency treated	2
Herpes Simple treated	1

V. LABORATORY DIVISION

The laboratory, as usual was kept at full throttle throughout the year. The greatest credit is due to the Laboratory Technician, and the staff for the way the work was carried out. The figures showing the work done are given below :—

A. *Bacteriology*

	Numbers	
		Total 110
Auto-vaccine	6	
Blood culture		
Enteric	8	
Pyogenic	8	
Faeces	10	
Urines	9	
Pleural fluid	3	
Throat swabs	12	
Pus organisms	10	
Coagulation test	3	
Subcultures	41	

		Numbers
B.	*Quantitative Biochemistry*	
		Total 586
	Blood sugar	94
	Blood calcium	1
	Blood urea	116
	Total bilirubin	7
	Direct bilirubin	7
	Indirect bilirubin	7
	Sodium	2
	Uric acid	3
	Cholestrol	4
	Acid phosphotase	2
	Alkaline phosphotase	3
	Total protein	10
	Albumen	10
	Globulin	10
	Thymol turbidity	10
	,, Flocculation	10
	Non-protein nitrogen	1
	Cerebrospinal Fluids	
	Protein	38
	Globulin	38
	Chlorides	38
	Glucose	38
	Cell count	38
	Lange's test	3
	Serous fluids	
	Protein	2
	Cell count	2
	Faeces	
	Fat Analysis	2
	Gastric contents	
	Bile	15
	Mucus	15
	Starch	15
	Blood	15
	Free H. C. L.	15
	Total acidity	15
C.	*Qualitative Biochemistry*	
		Total 1,859
	Urines	
	Albumin	448
	Percentage	14
	Sugar	444
	Percentage	10
	Acetone	5
	Bile salts	25
	Bile pigments	25
	Urobilinogen	6
	Reaction	448
	Specific gravity	403
	Faeces	
	Occult blood	31

		Numbers	
D.	*Haematology*		
			Total 3,256
	Haemoglobin	1,138	
	Red cell count	322	
	White cell count	446	
	Differential count	473	
	Platelet counts	6	
	Erythrocyte sedimentation rate	377	
	Pack cell volume	103	
	Prothrombin time	3	
	Bleeding time	3	
	Coagulation time	3	
	Fragility test	1	
	Blood parasitology		
	Malaria slides	8	
	Filaria slides	1	
	Blood transfusion		
	Blood grouping	156	
	Rh grouping	156	
	Cross matching	55	
E.	*Microscopy*		
			Total 7,520
	Scraping M. Leprae	108	
	Faeces	4,259	
	Urines	55	
	Sputa Direct	360	
	Cervical smears	1,328	
	Urethral smears	939	
	Vaginal swabs trichomonas	12	
	Serous fluid	2	
	Eye smears	47	
	Throat swabs	11	
	C. S. F.	29	
	Pus Organisms	9	
	Pus ? A. F. B.	3	
	D. C. I.	37	
	Vaginal smear	12	
	Urine D. G. I.	11	
F.	*Serology*		
			Total 3,631
	Khan test		
	Positive	253	
	Negative	3,316	
	Doubtful	20	
	Lysed	14	
	Widals		
	Salm Typhi O	7	
	Salm Typhi E	7	
	Brucella abortus	7	
	Proteus OX 19	7	

	Numbers	
G. *Public Health*		
	Total	180
Bacteriological water analysis		
Presumptive test	20	
Confirmatory test	20	
Completed test	20	
Differentiation	20	
Coliform group	20	
Citrate utilization	20	
Methylated	20	
Voges-Proskauer Reaction	20	
Indole	20	
H. *Veterinary*		
	Total	26
Faeces	20	
Blood smear	6	
I. *Medico Legal*		
	Total	7
Blood stains	7	

J. *General*

Maintenance and preparation of all sterile water, saline, glucose, glucose saline, emetine etc. and blood transfusions apparatus were carried out by this department.

Total number of examinations done for the year ending 31st December, 1959 = 17,135

VI. X-RAY DIVISION

The X-Ray machine, a portable Watson, is the same that has performed so faithfully for many years. However the new X-ray block was started just before the end of the year and it is anticipated that the new machine of 500 mA will be in use soon after the completion of the building. It is intended to continue to use the old machine as a mobile type in the wards. The building and cost of the new machine has been financed from C. D. & W. funds. The department was strengthened by the advent in December of a fully qualified Radiographer whose skill and experience will enable the fullest use to be made of the new installation especially in tomography and abdominal work.

The following examinations were carried out during the year. The figures in brackets are the comparable figures for 1958.

Chest	1061	(982)
Lower limb and foot	129	(107)
Upper limb	87	(95)
Arm and hand	315	(185)
Pelvis and Vertebrae	87	(92)
Ribs, clavicle and shoulders	49	(45)
Skull and jaw	39	(48)
Dental	97	(22)
Sinuses	22	(5)
Viscera	7	(29)
Pregnancy	19	(21)

VII. STORES DIVISION

Unfortunately there was some delay in the arrival of stores, largely due to the transhipment difficulties in Mombasa. Where possible stores were despatched by direct ship from England but the uncertainty of the sailing date and therefore of arrival does not make this method a good one when dealing with medicines the need for which can and does fluctuate. A reserve of 3 months is carried but at times even that was strained. It is anticipated that the sailings of the direct ships will be increased and regularised more in the coming year, which will make for easier indenting.

Anse Royale Hospital (17 beds) : The Medical Officer, Anse Royale is responsible for the small 2 bedded Clinic at Beolière, and the Clinic at Takamaka. He is also Superintendent of the Mental Hospital at Les Cannelles. The hospital at Anse Royale is 12 miles from Victoria and a tar macadam road connects the two places. Thus all major surgical conditions or difficult obstetrical cases requiring additional assistance can be, and are, transported rapidly to Victoria by the ambulance kept for that purpose at Anse Royale. It is hoped to be able to acquire and station an additional ambulance next year at Beolière. At present the whole of the West side of Mahé is unprovided with medical transport, and the good offices of the Agricultural Department vehicles have to be enlisted for the transport of cases from Beolière and the district it serves, to Anse Royale or Victoria. When the La Misère road is completed and an ambulance stationed at Beolière it will be possible to transport patients requiring surgical assistance to Victoria in 30 minutes. The following figures indicate the work done at the South Mahé medical institutions during the year. A short report on the Anaemia Clinic started last year at Anse Royale and continued this year is also given together with a short report on investigation done into the incidence of Asthma.

Out Patient

First attendances	:	6463	Repeat cases	:	1,707
Minor Operations	:	158			
Ante Natal Clinic	:				
First Attendances	:	334	Repeat attendances	:	1,410
Births in district					
Alive	:	68	Still born	:	Nil

In Patient

No. of in patients during the year	:	668
No. of patients died	:	7
Minor Operations	:	47

Maternity

No. of births alive	:	203
Still born	:	6
Complications of pregnancy	:	26
Complications of labour	:	10
Complications of puerperium	:	6
Premature births	:	5
Congenital malformations	:	1

OUT PATIENT

Beoliere Clinic

First attendances	:	1785	Repeat cases	:	328
Minor operations	:	31			
Ante Natal Clinic					
First attendances	:	74	Repeat attendances	:	195

IN PATIENT

No. of births alive	:	57
Still born	:	Nil
Complications of pregnancy	:	1
Complications of labour	:	Nil
Complications of pueperium	:	Nil
Premature births	:	4
Congenital malformation	:	Nil

OUT PATIENT

Takamaka Clinic

First attendances	:	775	Repeat cases	:	87

Anaemia Clinic : A small special anaemia clinic was conducted by the Medical Officer at Anse Royale during the year. Later during the year it was known that Drs. Foy and Kondi were coming to Seychelles to investigate anaemia in the Colony. On their arrival the Medical Officer was advised to continue his clinic and he obtained valuable help and advice from them. Over 100 cases were investigated and all were found to be of the iron deficiency type.

All patients investigated came from the poorer classes of Seychelles society. Although it is thought that their calorie intake is probably adequate, there is reason to believe that their intake of protein is deficient. It is appreciated that a low protein diet is not a cause of iron deficiency anaemia, but there is reason to believe that it contributes to delay in reaching a normal haemoglobin level. This delay is made worse by the amount of protein lost and mal-absorption of iron as a result of various heavy intestinal infestations besides ankylostomiasis.

At the start it was decided to split the patients into three groups after preliminary blood and stool examination.

There were :

GROUP A — Anaemia treated with iron alone
GROUP B — Anaemia treated with anthelmintics alone
GROUP C — Anaemia treated with both iron and anthelmintics

It soon became apparent that all those treated with anthelmintics alone (GROUP B) did not respond as far as a rise in Haemoglobin level is concerned and all but one of these patients were for obvious reasons "lost" to the clinic.

The initial rise in haemoglobin level of say from 4 grams % to 10 grams % was achieved fairly quickly in both A and C and thereafter the response was slow and in some cases no further rise could be achieved. It is interesting to note that 50% of the patients in A and C were lost to the clinic i. e. they failed to attend again after they had reached the 10 to 11 grams % level. Invariably these patients would say that they felt so well at this level that they saw no reason why they should continue to attend.

Of those that remained "faithful" to the clinic (26 cases in all) they could be divided into two groups — one in which there were inter-current infestations (in addition to hookworms which is the predominant factor and which was present in all cases) such as Giardia, E. Histolytica, Balantidium Coli, untreated Filaria, Syphilis etc. These formed the bulk of the cases and when treated with iron alone, they did not make a full response as is to be expected unless the inter-current infection was dealt with. The second group was very small and contained patients that did not have an inter-current infection. Few of those reached full values on iron alone. Of those that did not respond fully there was often doubt as to whether the iron had really been taken and in some cases it was later discovered that they were suffering from untreated Giardia, Balantidum or had E. Histolytica cysts in the stools.

Three types of vermifuge were used to treat Hook worms :—

(i) A combined mixture of chenopodium and tetrachlorethylene
(ii) Tetrachlorethylene capsules
(iii) "Alcopar" a bephenium base.

No matter what vermifuge was used the stools remained positive for hookworms eggs. But if two or three vermifuges were given, although it could not produce egg-negative stools, it so reduced the worm load, the remaining worms were not an important source of blood loss.

Dr. Foy who examined carefully the results obtained has been kind enough to make the following conclusions :—

"My conclusion from going through your book is the same as I draw from our own records namely that the predominant anaemia (the only one according to us and you) is iron deficiency due to Hookworm infestation, and that it responds to iron provided intercurrent infections are dealt with, and that most of the anaemias here have intercurrent infections, many more than in Africa. Failure to respond has always been due to failure to diagnose and treat the intercurrent infections. Another serious cause of response failure is that patients will not continue to take their iron as outpatients once they reach the 10 to 12 grammes level".

It is proposed to publish a joint paper in the Quarterly Journal of Medicine during the coming year.

Asthma :— Another investigation was carried out on asthmatic patients at Anse Royale to determine the value of treating allergic asthma with an organic arsenical compound. The preparation used was "Acetylarsan" (May & Baker). Twelve patients (4 males and 8 females) with recurrent attacks of asthma and eosinophilia were selected. Each of these patients had at least two monthly attacks of asthma. The age distribution was 3 to 67 years.

At the first visit stools were examined for parasites and a differential white cell count was done. The percentage of cosinophils was recorded. Intestinal infestations were then treated, and when the stools became free from parasites, another differential white cell count was done. They were then submitted to a course of acetylarsan (one injection weekly for 8 weeks). The results are shown in the following table :—

No.	Age	Sex	Stool	Eosino-philia	Eosinophilia after treating perasites	Eosinophilia after accetylarsan	Much improved	Improved	Stationary	Worse
1	9	F	N. A. D. ...	9%	9%	16%	—	Yes	—	—
2	3	F	Round/W Hook/W Whip/W Giardia ...	40%	1%	no acetylarsan	Yes	—	—	—
3	6	M	Whip/W Giardia ...	28%	19%	26%	Yes	—	—	—
4	50	F	Whip/W Hook/W ...	10%	8%	7%	Yes	—	—	—
5	5	M	N. A. D. ...	10%	10%	12%	Yes	—	—	—
6	3½	F	Whip/W Round/W Hook/W Giardia E. H. Cysts ...	26%	40%	19%	Yes	—	—	—
7	5	F	Whip/W Round/W Hook/W Giardia E. H. Cysts ...	49%	17%	25%	—	—	Yes	—
8	3	F	N. A. D. ...	18%	18%	10%	—	Yes	—	—
9	32	M	Whip/W E. H. Cysts.	25%	30%	36%	—	Yes	—	—
10	53	F	Whip/W ...	25%	25%	24%	—	Yes	—	—
11	13	F	Whip/W Giardia ...	15%	15%	15%	—	Yes	—	—
12	67	F	Hook/W Whip/W E. H. Cysts ...	25%	23%	7%	—	—	Yes	—

N. B. It is not understood why in some cases the percentage of eosinophils remained high after treatment with acetylarsan and yet there was an improvement. It is suggested that it might be worthwhile repeating the experiment in Victoria where there are more patients suffering from asthma and where the facilities are better.

The Government Dentist continued his weekly visits to Anse Royale and his fortnightly over to Beoliere. The following gives the figures for the three institutions in South Mahe :—

Anse Royale, Beoliere and Mental Hospital

	Under 14 years	*Over 14 years*	*Total*
Attendances	385	906	1291
Extractions	523	1333	1856
Dressings	4	—	4

Mental Hospital :— The Medical Officer of South Mahé is also the Superintendent of the Mental Hospital.

During 1959 the Head Attendant, Mr. Marc Payet retired after 30 years of devoted service He was replaced by Mr. F. Carolus who had long been his second in command.

For the first time a trial of Chlorpromazine "Largactil" was made on 11 patients at the Institution and it is gratifying to put on record the following improvements :—

(1) Two bad cases of puerperal psychosis were cured and were discharged.

(2) Five schizophrenics, all wild and inaccessible, greatly improved.

(3) The remaining four patients showed slight or very slight improvement.

N. B. No cases of jaundice or other side affects of chlorpromazine occurred.

Towards the end of the year a sample of Trifluoroperazine "Stelazine" the latest phenothiazine compound developed to date, was received and prescribed for five patients with very good effect.

The table below shows the admissions, discharges and deaths of patients at the Mental Hospital during the year ending 31st December, 1959.

	Males	*Females*	*Total*
No. of patients resident at 1.1.59	22	21	43
No. of cases out on trial at 1.1.59	1	9	10
Total of Mental Patients at 1.1.59	23	30	53
No. of patients admitted during 1959 including one out on trial re-admitted	4	4	8
No. of patients who died at Mental hospital during 1959	3	1	4
No. of patients resident on 31.12.59	19	21	40
No. of patients out on trial on 31.12.59	5	11	16
Total Mental Patients including those out on trial on 31.12.59	24	32	56

Baie Ste. Anne, Praslin (28 beds) : This small cottage hospital continued to function well throughout the year. The clinic at Grand' Anse continued to be well patronised. The two institutions serve the Island of Praslin (approximate population — 3,500). When the trans-island road is completed next year an ambulance and driver will be stationed on Praslin to take cases requiring hospitalisation from Grand' Anse to Baie Ste. Anne. At present they are either carried by relatives on foot, or taken round by sea in the Medical Officer's boat.

The Logan Hospital, La Digue (8 beds) serving a population of approximately 1300, also continued to give good service throughout the year. The figures of attendances at the institutions for which the Medical Officer Praslin is responsible are given below :—

OUT PATIENT

Attendances at Baie Ste. Anne Hospital —	2,155
Grand'Anse Clinic	1,956
La Digue Hospital	2,135

IN PATIENT

Baie Ste. Anne Hospital	433
La Digue Hospital	104

ANTE-NATAL

	First Attendances	*Repeat Attendances*	*Total*
Baie Ste. Anne	80	337	417
Grand'Anse	79	298	377
La Digue	75	297	372

	Baie Ste Anne	*Grand'Anse*	*La Digue*
Live Births	105	47	68
Premature births	8	—	2
Still births	2	—	—
Complicated labour	4	—	2

MINOR OPERATION

	In Patient	*Out Patient*
Baie Ste. Anne	22	44
Grand'Anse	—	29
La Digue	2	19

2 major operations were performed at Baie Ste. Anne Hospital.

(a) Herniotomy for strangulated hernia

(b) Appendicectomy

Curieuse :— This institution functioned well throughout the year. As has been stated above it is intended to close it in the coming year and transfer the patients to Anse Louis, Mahé. It was visited regularly by the Medical Officer Praslin, who is the statutory Superintendent. The trial of C. I. B. A. 1906 is still continuing, but of necessity the results will not be forthcoming for some time.

The figures of the Hospital are given below :—

Date	No. of Patients M.	F.	Total	Admissions M.	F.	Total	Discharged M.	F.	Total	Death M.	F.	T.	Total No. of patient
Jan.' 59	7	3	10										10
4/7/59							1	1	2				
25/7/59										1	1		
11/12/59				1		1							8
Dec.' 59	5	3	8										8

During the year two patients were discharged on parole and one woman admitted. Dapsone being the drug used in most cases. A clinical trial with CIBA 1906 was started by Dr. Elgood on two patients. The report is not yet available as of necessity the trial must be a lengthy one.

Public Health

Introduction

It is gratifying to be able to record that no large epidemic occurred during the year. There was once again a small epidemic of influenza, but there were no fatalities. The relations between the public and the personnel of the Health Department continued to be as close as heretofore. Two trainee Public Health Nurses were taken on the staff in March and both passed their examination as Public Health Nurses in December. They will be a very welcome addition to the staff which by its close contact with the female side of the population can do so much to improve the hygiene in the home.

It is also gratifying to record that the new Public Health Ordinance passed all its stages in the Legislative Council and it will be come effective on January 18th 1960. The new Ordinance is much wider in its scope than its predecessor and a characteristic of it is that the majority of its various sections are enabling giving the Governor the power to promulgate the various regulations necessary to give full force to the powers contained in the Ordinance. It was considered that this method was preferable to that of endeavouring to include everything in the main ordinance itself.

I. VITAL STATISTICS

	1959	*1958*	*1957*
Estimated population (30.6.59)	43,163	41,901	41,081
Total births notified	1,595	1,553	1,577
Live births	1,557	1,514	1,534
Still births	38	39	43
Birth rate per 1,000 of population	37.09	37.06	38.3
No. of deaths notified	421	448	425
Crude death rate per 1,000 of population	9.8	10.69	10.3
Infant mortality rate per 1,000 live births	50	50	42.3

II. MATERNAL AND CHILD WELFARE

Ante Natal Clinics : These continued to be held at the Hospitals in Mahé, Praslin and La Digue. The figures for the attendances at these clinics will be found under the separate reports of those hospitals. The health talks to mothers were resumed in September when the Public Health Nurses were relieved of assisting with the Mantoux testing and B. C. G. work. All maternity cases from the Hospitals are followed up, postnatally by the Public Health Nurses who visit the mothers and babies in their homes and give them advice on feeding, infant care etc. and advise their attendance at the Infant Welfare Clinics if the children are well, or refer them to the Hospital if they are not. The nurses also follow up home deliveries conducted by District or Private Midwives.

The following figures are an example of the work done by the Public Health Nurses in Victoria :—

Post Natal Visits

Maternity Department

Early discharges	10
Follow up of births	761
„ „ „ home deliveries	66
Repeat visits when necessary	77

There were also 489 home visits made to infant and preschool children.

Infant Welfare Clinics : These continued to be well patronised throughout the Colony. It is gratifying to see the expatriate mothers and their babies coming and making use of these facilities. The figure below show the work done at the various clinics :—

INFANT WELFARE CLINIC ATTENDANCES

District	*New*	*Repeat*	*Total*
Victoria	352	898	1,250
Anse Etoile	17	43	60
Glacis	45	149	194
Bel Ombre	49	203	252
Cascade	69	133	202
Anse aux Pins	30	98	128
Anse Royale	9	10	19
Anse Boileau	48	71	119
	619	1,605	2,224

It is hoped next year to build houses for the Public Health Nurses in their districts. These buildings will have accomodation for holding the Clinics, in addition to living space. At the present many of the Clinics are held in school rooms and even police stations, neither of which sites can be said to be desirable.

Home Nursing : The Public Health Nurses continued their valuable work in looking after the sick in their own homes. The figures are proof of the continued necessity of this service.

Referrals from doctors	162
Dressings done	347
Others — old age etc.	72
Injections (diabetics and domiciled T. B. cases)	899
Home visits (T. B. patients)	916

III. PORT HEALTH

During the year the following ships called at this port. There were no cases of quarantinable disease.

British	53
Indian	12
Dutch	7
French	1
U. S. A.	1.

IV. FOOD

A careful watch was maintained throughout the year over all establishments where food and drink was cooked, manufactured or sold. Unfortunately the new Public Health Ordinance which will close the loop holes mentioned in last year's report was not passed until late in the year and so the gaps still remained open. They will be closed in the coming year.

The remarks in last year's report on the subject of malnutrition still hold good, but Drs. Foy and Kondi, of the Anaemia investigation team were surprised to note the absence of true kwashiokor. The protein lack is still present and it was hoped that UNICEF would be in a position to assist by the provision of dried milk supplies as had been done in other colonies. However that hope was dashed when it was learned that the U. S. Government had decided not to release any more dried milk from its superabundant stocks.

The usual precautions were taken, when food, drink, restaurant or eating house licences were applied for, of ensuring that all food handlers were free from helminthic infestations and contagious or infectious disease. The following is a summary of work done in connection with food hygiene.

Food Handling premises inspected

Shops (groceries etc.)	428	
Bakeries & confectioneries	321	
Markets	70	
Butcheries & Fisheries	63	
Dairy (Government)	4	
Aerated water and ice cream factories	24	
Hotels	50	
Restaurants and snack bars	20	
Boarding houses	3	
Slaughter houses	50	
Liquor shops	86	
		Total 1,119

Unsound Food condemned

Jam (tins)	10
Preserved fruits (tins)	2
Rice (Kgs.)	70
Condensed milk (tins)	8
Tinned fish (tins)	13
Canned foods (cans)	58
Fruit juices (tins)	6
Tomato sauce (bottles)	2

Food Inspection : During the year a total of 1,119 visits were made to the foodhandling premises. This number includes visits made to premises in which a new Restaurant and a new Snack Bar have been established at the end of the year.

Notices, verbal and written, were given to owners and or occupiers. Many of these were outstanding at the end of the year. The following defects were noted during visits paid :—

Dirty conditions of food preparing rooms	14
Accumulation of refuse in or near the premises	4
Smoking in rooms	3
Insufficient and defective sinks	5
Lack of washing facilities	3
Structural defects in floors, walls and ceilings	5
Lack of proper protection for foodstuffs	3
Unsuitable working surfaces	2
Lack of accommodation for clothing	4
Lack of proper facilities for storage of foodstuffs	6
Insufficient sanitary accomodation	4
Insanitary sanitary accommodation	3
Insufficient refuse containers	2
Lack of, or unsuitable, ventilation	3
Other matters (rats, mice) etc.	4
Sleeping on the premises	2

Extraneous matter in Food : The number of complaints from the public of extraneous matter in food is increasing. In two instances, a last and severe warning had been given to the owners of bakehouses. In all other instances which have been brought to the notice of the Department for the first time, suitable action has been taken and the proprietors severely reprimended and told that legal proceedings will be taken against them in future.

During the year the following extraneous matter has been found in food.

Blood-stained first-aid dressing in small loaf of bread
Metal nail in cake
Cigarette end in large loaf of bread
Portion of insect in cakes
Human hair (head) in bread
Strand of jute from gunny bag embedded in loaf of bread
Kerosene in sugar
Sand or gravel in edible rice
Bad rice, with faeces of cockroaches, on sale.

Before the year ended much emphasis was laid on the necessity of hawkers being provided with metal boxes for the transport and sale of bread and cakes to replace the unhygienic contrivances of the past decade or so. The results obtaied were most encouraging, as far as the bakeries were concerned.

There were still some unhygienic containers — mostly mobile ones — belonging to sweetmeat manufacturers who did not require public Health Authority's approval for their licence. This is a great inconvenience and handicap and retards improvements of health measures. Effective control previously could not be adopted. The new Public Health Ordinance however provides for the efficient control of all such products and their sale.

V. WATER SUPPLIES

The water supply in Mahé unfortunately continued in its previous polluted state. During the year Mr. Waterhouse, a representative of the firm of consulting engineers, Messrs. Howard Humphreys and Sons, visited the island and prepared a report on the water supplies available and how best to utilize them. The report was received towards the end of the year and the substance of it was agreed in principle by Government. However owing to the heavy financial commitment involved, it is not expected that the scheme, which it is anticipated will take 5 years to implement, will be started this year. It is however hoped that a commencement will be made next year. The representative of Messrs. Howard Humphrey's and Sons also visited Praslin and examined the water position there.

VI. SANITATION

With the coming into force of the new Public Health Ordinance the sanitary control of the township of Victoria will rest with the Medical Department who will act in an advisory and supervisory capacity. Previously the township of Victoria was exempt from the provisions of the Public Health Ordinance and made their own Sanitary Regulations. The executive powers will remain with the Victoria District Council. The same procedure will obtain in Praslin. In the districts the Local Boards will have executive powers under the supervision and advice of the Department. This change will mean that the same regulations will apply to a village such as Anse Royale, as to a collection of houses such as the de Quincy Settlement. The problem remains the same as was outlined last year, but each year more and more aqua privies are being built and in time it is hoped they will be in the majority as the sanitary convenience. The work of the Inspectors of the Health Department in general sanitation is given in the tables below :—

Analysis of Inspections

1. *Dwelling houses*

Primary visits	12,389	
Return visits	7,923	

2. *Latrines*

Pit latrines	8,362	
Bucket latrines	232	
Sea-front latrines	228	
Water Closets	143	
Aqua Privies	146	
Double vault latrines	Nil	
	Total	9,111

3. *Others*

Public water supplies	128	
Schools	99	
New cemeteries	2	
New distilleries	4	
	Total	223

4. *Nuisances Remedied*

Latrines improved	3,001	
Defective drainage	8	
Defective W. Cs.	Nil	
Refuse accumulation	1,186	
Premises rat-infested	65	
Mosquito breeding	73	
Swine regulations	88	
Bug infestations	26	
	Total	4,447

5. *Notices served (verbal)*

Insanitary latrines	2,585	
Defective drainage system	25	
Refuse accumulation	1,730	
Lack of latrine accommodation	117	
Keeping pigs contrary to Swine Regulations	573	
	Total	5,030

6. *Notices served (written)*

Insanitary latrines	337	
Lack of latrine accommodation	63	
Defective drainage system	20	
Refuse accumulation	28	
Defective W. Cs.	2	
Leaking water supply pipes and taps	7	
River pollution	3	
Keeping pigs contrary to Swine Regulations	56	
Defective structures	1	
Mosquito breeding	30	
Smoke nuisances	2	
	Total	579
Notices complied with	526	
Notices still outstanding	53	

7. *New latrine accommodation provided*

Pit latrines	128	
Bucket latrines	5	
Water Closets	5	
Aqua privies	17	
	Total	155

VII. HOUSING

There is little to add to the remarks appearing in last year's report. It is intended in the coming year to investigate a portion of Victoria with the idea of starting an extensive programme of proper town planning which will do away, it is hoped, with the grosser forms of overcrowding.

Some 172 bu lding applications from the Victoria District Council were also dealt with during the year. Approval were given to all but one. The following list shows the number and types of repairs constructions etc.

Minor repairs to houses	47
Major „ „ „	46
New water closets	2
New aqua privies	7
New houses	32
New office or business buildings	9
Addition to existing buildings	11
Outbuildings	12
Erection of walls	4
New bucket latrine	1
New pit latrine	Not approved

Government buildings and new village settlements are not included in above list.

VIII. COMMUNICABLE DISEASES

Once again the helminthic infestations headed the list of diseases causing the greatest morbidity (5934). It was followed by gastro enteritis and colitis (2157). Gonococcal infection (1773) showed a rise in numbers as did the helminthic infections, but the gastro-enteritides and colitis showed a reduction of cases.

Leprosy : The report on this disease will be found under heading of Curieuse. One case, a middle aged woman with lepromatous leprosy was admitted during the year bringing the number of inmates up to 8.

Tuberculosis : The Mantoux testing of schoolchildren and the inoculation of those found negative with B. C. G. continued unabated until the departure on leave in August of the Tuberculosis Officer. Before he left every school child in Mahé whose Mantoux reaction indicated the necessity and whose parents were agreeable had received B. C. G. inoculation. All contacts from new cases were similarly protected. It is intended next year to extend the service to the school children in Praslin and La Digue. It is also anticipated that there will be a complete Tuberculosis Survey done of all the inhabitants of the large islands by a team provided through the good offices of the World Health Organization. Owing to prior commitments the arrival of the team was delayed and it was found impossible to arrive in the year under review as was hoped in last year's report. The following figures show the Tuberculosis position at the end of the year.

Hospital :

Number of T. B. patients under treatment as inpatient on 31st December 1959. Male = 18 : Female = 15 : Total 33

Inpatient accommodation in Victoria Hospital

Male=18 beds : Female=15 beds : Total beds available 33

Number of T. B. patients treated and discharged under the care of chest clinic from the hospital till 31st December 1959 :—

Male=26 : Female=20 : Total discharges=46

Chest Clinic :

Number of patients having Pneumoperitonium treatment in the Clinic. Male=11 : Female=2 : Total 13

Number of patients having domiciliary treatment under the care of the clinic.

Male=16 : Female=2 : Total 18

Number of new cases detected during the period

	Male	*Female*	*Total*
A. Primary Tuberculosis	4	2	6
B. T. B. Meningitis	1	—	1
C. T. B. Adult Type	11	14	25
	16	16	32

Number of deaths due to T. B. during the period

Male=9 : Female=3 : Total=12

Number of registered T. B. patients persistently remaining absent from attending the clinic

Male=7 : Female=6 : Total=13

Total number of registered T. B. patients in the Colony during reporting period.

Male=91 : Female=71 : Total=162

Helminthic Diseases : The figures for these diseases unfortunately continued to rise, despite the constant endeavour of the Health Inspectorate and the propaganda that they dispense. As was stressed last year the cure lies in improved sanitation, the disuse of the chamber pot at night with the ensuing pollution of the ground round the houses with its matutinal washings, which are thrown there, and the wearing of shoes by everyone when walking outside. The first and last can result from improved living conditions, the second from building lavatory accommodation which does not necessitate leaving the house after dark. Weekly worm clinics are held at Victoria, Anse Royale and Grand'Anse, Praslin. School children were treated quarterly during the school holidays. In all 27,715 adults and children received worm treatment during the year.

Venereal Diseases : The picture here is not a happy one. After three years or complete freedom from Primary Syphilis 26 were reported during the year. The most active measures are being taken and will be pursued during the coming year to trace the source of this recrudescence. Four cases of Penicillin resistant gonoccocal infection were found, but they responded well to Streptomycin. The question of what happens when the gonococcus in Seychelles becomes resistant to all antibodies is not pleasant to contemplate nor easy to answer.

An investigation was carried out at Anse Royale to determine whether the Seychelles (or at least the South Mahé) brand of gonococcus was becoming resistant to Penicillin. The following particulars were recorded in each case.

The name, age, sex, address the number of times they had contracted gonorrhoea, the lapse of time before seeking treatment, the place where they contracted the disease were recorded. Their smear and K. R. were taken, they were all treated with 600,000 units of Distaquaine daily for three days and they returned within 10 days to have their smears checked. It is appreciated that those, or some of those who relapsed might have been reinfected even though they did not admit intercourse between treatment and re-check.

The following are the results obtained :—

No. of patients selected	64 (males 47, females 17)
No. of patients with Gonococal in the smear	51 i.e. 80% (M. 44, F. 8)
No. of patients with negative smear	13 i.e. 29% (M. 4, F. 9)
No. of patients with positive smear cured	43 i.e. 84%
No. of patients with positive smear who relapsed	8 i.e. 10%

Of those who relapsed all had contracted the disease in South Mahé, except one case who contracted it in Central Mahé viz.

Place	*No. of Relapsed cases*
Mont Plaisir (Anse Royale)	3
Anse a la Mouche	1
Anse Boileau	1
Anse Louis	1
Anse Bougainville	1
Anse Dejeuner (Central Mahé)	1

Of those who relapsed 1 had contracted Gonorrhoea for the 1st time
1 ,, ,, ,, ,, ,, 2nd time
2 ,, ,, ,, ,, ,, 3rd time
3 ,, ,, ,, ,, ,, 4th time
and 1 ,, ,, ,, ,, over 6 times

On an average those who relapsed had delayed more than 12 days before seeking treatment.

	Gonorrhoea	*Syphilis*
No. of cases treated at Anse Royale	94	24
No. of cases treated at Beoliere	23	9

Cases from Takamaka were referred to Anse Royale for treatment

Others : During the year the following injections were given at the Health Office, Mahé to travellers —

Yellow Fever	265
Cholera	204
Smallpox vaccinations	388

The number of primary vaccinations was 1402

Mosquito Control : The mosquito breeding picture is disquietening, largely because the present Public Health Ordinance has no specific section dealing with this menace. With the streams, swamps and undrained low lying ground available as breeding places, the mind recoils from the contemplation of the situation that would arise were infected female anopheles mosquitoes ever to obtain lodgement in these islands. Despite constant inspections and visits from the small mosquito squad the Aedes index is anything but satisfactory. However the figure is the average, and it was brought to this high figure by the returns over 2 months when heavy rainfall permitted of additional breeding places. Even so a greater onus of responsibility must rest on individual householders to see that their compounds and yards etc. are kept free of anything that can hold water and thus provide a breeding ground for these pests. The figures of tins and broken bottles are clear

indications of where the responsibility lies. With the coming into force of the new Public Health Ordinance it is hoped that the deterrent sections therein will result in an improvement generally in the mosquito menace in general and the Aedes Index in particular.

Mosquito Control Work

No. of premises inspected	49,094
No. of aedes breeding places	771
No. of culex breeding places	928
Average aedes index	2.18%
Average culex index	2.56%
No. and types of breeding places found :—	
Drums and barrels	496
Tins	48,631
Broken bottles	22,171
Holes and pools	494
Bamboo stumps	313
Others	20,521
Written notices served	24
Notices complied with	24

IX. SCHOOL HEALTH SERVICE

Mahé

Routine visits, were paid by the Public Health Nurses to their respective schools. 1,518 children in Standard I, IV and VI were medically examined by the school medical officer and public health nurses in all free primary schools.

Praslin and La Digue

The Medical Officer of Health, Praslin re-examined all the school children in free primary and secondary modern schools.

Number of children examined —

New=299 : Repeat=621 : Total=920

E. N. T.

La Digue : 10 children were referred to Mahé for Tonsillitis 6 are on the waiting list for operation.

Mahé : 210 children were treated for Tonsillitis in schools
7 children had tonsillectomy performed
12 are still on the operation waiting list.

Ophthalmic

30 children were referred to the Ophthalmic clinic either to change their existing glasses or for investigation.

Chest

72 children were treated in schools for Bronchitis found during medical examination.

Chest Clinic

12 children were referred and 6 were diagnosed as Primary Tuberculosis. They were either given domiciliary treatment or hospitalized. The rest were negative.

X. SCHOOL DENTAL SERVICE

With the advent of a third dental surgeon the opportunity was taken to examine and treat the mouths and teeth of all school children in Mahé, Praslin, La Digue and Silhouette. The dental surgeon was a young Seychellois who had returned after qualification and some post graduate work in England, to his birth place. His report is given below :—

For the first time in the history of Seychelles there has been a properly conducted dental survey and service for the schools. Previously owing to the shortage of dental surgeons the schools were attended in a somewhat irregular fashion, with at times great intervals between visits. For instance, the last time a visit to a large school, like Anse Boileau took place was about 13 years ago. Even then, only the larger schools were visited ; very few fillings done and any child requiring several fillings or multiple extractions had to be referred to the Victoria Dental Clinic.

On October 16th, 1959 I began inspecting the schools of Praslin and La Digue. I stayed at Praslin and La Digue just over three weeks altogether. My colleague, Mr. Lefevre, also spent three weeks in Praslin and La Digue just before I went there. On my return to Mahé I started visiting the country schools starting with the furthest away from Victoria and gradually working my way towards Victoria. The reason for starting as far away from Victoria as possible was because those children have had the least chance of attending the Dental Clinic in Victoria. It is significant that no fillings were seen in the teeth of the children inspected at Port Glaud and Grand'Anse Mahé. Only on arriving at Anse Boileau and Takamaka was it discovered that 5 children out of 476 had had fillings done in Victoria. The dental clinics, held at Beoliere once a fortnight, and weekly at Anse Royale, cater for extractions only.

The present school dental programme will take about 6 months to complete. It must not be assumed, however, that once all the schools of Seychelles have been visited the work will be finished or that the children will be dentally fit for a long time. This type of work is in reality never-ending. By the time the last school is seen, it will be time to start again at the first school because very few people remain dentally fit for longer than 6 months. In the United Kingdom, children especially are advised to visit their dental surgeon at least once every four months.

The figures for the number of teeth extracted appear high at first glance. For instance, the number of attendances at the four schools visited in Mahé was 648, the number of teeth extracted was 682. These children were all under 14 years of age, except 2 who were 15. In other words, the majority of teeth extracted were decidious ones and the extractions figures also included a very high proportion of roots. A small number of permanent teeth had to be extracted either in an attempt to correct orthodontic abnormalities, e.g. overcrowding of the dental arches occurring in a patient with large teeth and small jaws, or because the teeth were beyond conservative treatment. Of the permanent teeth extracted, the first permanent molars especially the lower ones, suffered most.

Filling Material Used : The fiilling material of choice was silver amalgam even in the majority of restoration in anterior teeth. Silver amalgam was also used in fillings of deciduous teeth as it is easier of manipulation then copper amalgam, which is the material usually employed, and is just as good if not better as a filling material.

Very few silicate (synthetic porcelain) fillings were done in anterior teeth. Silver amalgam was used instead because it gives a more durable restoration, a very important consideration if the patient is not likely to be able to see a dental surgeon for a long time.

General and Oral Hygiene: The schools visited in 1959 were all the schools of Praslin (eight in all) two at La Digue and four in Mahé; Grand'Anse, Port Glaud, Anse Boileau and Takamaka. General body cleanliness was markedly best at La Digue and next came Takamaka. The children of La Digue also had the cleanest mouths; those of Praslin came easily second best. The caries rate was also lowest at La Digue then came Baie Ste Anne and Grand'Anse Praslin. In Mahé, the cleanest mouths were seen at Takamaka and the filthiest at Anse Boileau. It is remarkable that at Takamaka the percentage of patients requiring no treatment was high being 51.90% almost equalling Baie Ste Anne, Praslin (53.23%)

Conclusion: Comprehensive treatment can restore order even in the most neglected mouth, but without the co-operation of the individual child, the parents and teachers in maintaining dental health, treatment in the more caries-prone children will break down. Some children undoubtedly with the connivance of their parents absented themselves from school during the whole of my stay at the school; others failed to turn up for the second appointment. Comprehensive treatment must also include the preservation of both dentitions. However the treatment of permanent teeth must have a prior claim in the present day situation of dentist shortage. There should always be a dentist constantly doing the schools and the islands.

School dentistry in Seychelles consists entirely of simple fillings and extractions. The school dental surgeon has no opportunity of doing any type of advanced conservative dentistry, orthodontics, prosthetic work, furthermore he is working under somewhat primitive conditions.

World Health Organisation

The sole representative of the World Health Organization was the Sanitary Engineer. The work of this officer in bringing the basic principles of hygiene to the attention of Student Nurses by his lectures to them on elementary sanitation is much appreciated. The Engineer also maintained his keen interest in the sanitary problems of the Colony, viz. conservancy and water supplies. His work on the latter was publicly acknowledged in the Legislative Council, when the report of the Consulting Water Engineer was mentioned.

Future Developments

1. The top priority in this sphere has now moved to the building of the new Outpatient Block. A site has been found for the new building in the hospital grounds but some little distance from the main buildings. The idea of combining the block with a new Operating Theatre Suite has now been dropped.

2. It is intended to make use of the terrain in the Hospital enclave to construct a three storey building, the lowest floor being the Hospital Store, the second a male ward, and the top floor to house the new Operating suite with all its necessary ancillary services. This latter floor will be connected to the top storey of the main Hospital block by a flying bridge, thus

enabling the rapid transfer of patients from the main hospital building to the Operating Theatre without the necessity of transport in a vertical direction.

3. The construction of the two Tuberculosis wards as mentioned in the report of last year. The exact priority of this construction and that described in the preceding paragraph will of necessity depend upon the findings of the Tuberculosis Survey.

4. The construction of a Training School for Nurses still remains of considerable importance. But until permission to expand the establishment of Nurses is obtained it would patently be unwise to enter upon a large building programme for their training. However it is hoped that this also will be authorised in the not too distant future, and the construction of the necessary buildings to facilitate their training can then be put in hand.

Summary of Dental Treatment at the Schools — 1959

District	Schools	Attendance	Fillings	Extractions	Number of ca es requiring no treatment	% cases requiring no treatment	Patients with existing filling
Mahé	Port Glaud	88	60	108	30	34.09	—
	Grand'Anse	84	46	101	35	41.67	—
	Anse Boileau	297	154	329	120	40.04	4
	Takamaka	179	68	143	93	51.9	1
Praslin	Grand'Anse	389	79	234	226	58.87	The number of patients with fillings already present was not recorded.
	Baie Ste. Anne	263	52	211	130	53.23	
La Digue	La Digue	264	52	151	163	65.23	

Disease	*Inpatient*	*Outpatient*	*Died*
Tuberculosis of respiratory system	57	14	6
Tuberculosis of meninges and central nervous system	3	—	1
Tuberculosis of intestines, peritoneum and mesenteric glands	—	—	—
Tuberculosis of bones joints	—	1	—
Tuberculosis, all other forms	3	—	—
Congenital syphilis	1	—	—
Early syphilis	3	7	—
Tabes dorsalis	—	8	—
General paralysis of insane	—	1	—
All other syphilis	10	182	—
Gonococcal infection	8	1,773	—
Typhoid fever	1	—	—
Paratyphoid fever and other Salmonella infections	—	—	—
Cholera	—	—	—
Brucellosis (undulant fever)	—	26	—
Dysentery all forms	174	1.619	—
Scarlet fever	—	—	—
Streptococcal sore throat	1	428	—
Erysipelas	—	2	—
Septicæmia and pyæmia	—	—	—
Diphtheria	—	—	—
Whooping cough	—	—	—
Meningococcal infections	3	—	—
Plague	—	—	—
Leprosy	—	10	—
Tentanus	2	4	—
Anthrax	—	—	—
Acute poliomyelitis	—	—	—
Acute infectious encephalitis	—	—	—
Late effects of acute poliomyelitis and and acute infectious encephalitis	1	—	—
Smallpox	—	—	—
Measles	—	5	—
Yellow fever	—	—	—
Infectious hepatitis	1	13	—
Rabies	—	—	—
Typhus and other rickettsial diseases	—	—	—
Malaria	2	4	—
Schistosomiasis	—	—	—
Hydatid disease	—	—	—
Filariasis	—	1	—
Ankylostomiasis	12	750	—
Other diseases due to helminths	56	5,934	2
All other diseases classified as infective and parasitic	29	323	1
Malignant neoplasm of buccal cavity and pharynx	—	1	—
Malignant neoplasm of œsophagus	—	—	—
Malignant neoplasm of stomach	3	—	1
Malignant neoplasm of intestine, except rectum	1	1	—

Disease	*Inpatient*	*Outpatient*	*Died*
Malignant neoplasm of rectum	1	—	1
Malignant neoplasm of larynx	—	—	—
Malignant neoplasm of trachea, bronchus and lung, not specified as secondary	2	—	1
Malignant neoplasm of breast	3	2	—
Malignant neoplasm of cervix uteri	8	12	1
Malignant neoplasm of other and unspecified parts of uterus	2	1	—
Malignant neoplasm of prostate	—	—	—
Malignant neoplasm of skin	1	—	—
Malignant neoplasm of bone and connective tissue	—	1	—
Malignant neoplasm of all other and unspecified sites	15	3	4
Leukaemia and aleukaemia	1	—	1
Lymphosarcama and other neoplasms of lymphatic and haematopoietic system	1	—	—
Benign neoplasms and neoplasms of unspecified nature	43	116	—
Non-toxic goitre	—	25	—
Thyrotoxicosis with or without goitre	8	3	—
Diabetes mellitus	15	21	—
Avitaminosis and other deficiency states	57	271	2
Anæmias	85	1,057	1
Allergic disorders ; all other endocrine, metabolic, and blood diseases	49	1,507	1
Psychoses	6	38	—
Psychoneuroses and disorders of personality	71	80	—
Mental deficiency	3	17	—
Vascular lesions affecting central nervous system	28	25	6
Non-meningococcal meningitis	4	—	—
Multiple sclerosis	—	3	—
Epilepsy	13	72	—
Inflammatory diseases of eyes	18	454	—
Cataract	—	21	—
Glaucoma	—	5	—
Otitis media and mastoiditis	10	425	—
All other diseases of the nervous system and sense organs	22	262	—
Rheumatic fever	8	9	—
Chronic rheumatic heart disease	6	34	1
Arteriosclerotic and degenerative heart disease	33	64	4
Other diseases of heart	29	30	5
Hypertension with heart disease	2	63	2
Hypertension without mention of heart	11	203	—
Diseases of arteries	10	15	2
Other diseases of circulatory system	13	149	2

Disease	*Inpatient*	*Outpatient*	*Died*
Acute upper respiratory infections	28	1,888	—
Influenza	36	1,818	—
Lobar pneumonia	24	86	1
Bronchopneumonia	75	223	14
Primary atypical, other, and unspecified pneumonia	45	4	6
Acute bronchitis	20	2,667	—
Bronchitis, chronic and unqualified	76	596	—
Hypertrophy of tonsils and adenoids	79	548	—
Empyema and abscess of lung	1	—	—
Pleurisy	30	38	1
All other respiratory diseases	127	287	—
Diseases of teeth and supporting structures	10	296	—
Ulcer of stomach	3	43	—
Ulcer of duodenum	4	18	—
Gastritis and duodenitis	29	752	—
Appendicitis	25	36	—
Intestinal obstruction and hernia	89	103	6
Gastro-enteritis and colitis, except diarrhoea of the newborn	201	2,157	6
Cirrhosis of liver	6	23	1
Cholelithiasis and cholecystitis	—	12	—
Other diseases of digestive system	79	679	2
Acute nephritis	2	10	1
Chronic, other, and unspecified nephritis	7	18	1
Infections of kidney	18	35	—
Calculi of urinary system	4	21	—
Hyperplasia of prostate	8	18	—
Diseases of breast	12	101	—
Other diseases of genito-urinary system	215	371	4
Sepsis of pregnancy, childbirth and the puerperium	5	261	—
Toxaemia of pregnancy and the puerperium	22	25	—
Haemorrhage of pregnancy and childbirth	3	51	2
Abortion without mention of sepsis or toxaemia	90	100	—
Abortion with sepsis	3	10	—
Other complications of pregnancy, childbirth, and the puerperium	54	4	—
Delivery without mention of complication	1,092	57	—
Infections of skin and subcutaneous tissue	216	1,832	—
Arthritis and spondylitis	42	423	—
Muscular rheumatism and rheumatism unspecified	11	2,094	—
Osteomyelitis and periostitis	19	16	—
Ankylosis and acquired musculoskeletal deformities	3	64	—

Disease	*Inpatient*	*Outpatient*	*Died*
All other diseases of skin and musculoskeletal system	1	548	—
Spina bifida and meningocele	—	—	—
Congenital malformations of circulatory system	—	—	—
All other congenital malformations	5	19	5
Birth injuries	1	1	2
Postnatal asphyxia and atelectasis	—	—	2
Infections of the newborn	1	22	1
Haemolytic disease of the newborn	—	2	—
All other defined diseases of early infancy	2	259	—
Ill-defined diseases peculiar to early infancy, and immaturity unqualified	20	151	8
Senility without mention of psychosis	6	218	—
Ill-defined and unknown causes of morbidity and mortality	567	191	1
Motor vehicle accidents	—	10	—
Other transport accidents	7	9	—
Accidental poisoning	6	8	—
Accidental falls	15	211	—
Accident caused by machinery	—	16	—
Accident caused by fire and explosion of combustible material	1	2	—
Accident caused by hot substance, corrosive liquid, steam, and radiation	—	6	—
Accident caused by firearm	—	—	—
Accidental drowning and submersion	—	1	—
All other accidental causes	42	72	—
Suicide and self-inflicted injury	—	1	—
Homicide and injury purposely inflicted by other persons (not in war)	7	30	—
Injury resulting from operations of war	—	—	—
Fracture of skull	3	2	3
Fracture of spine and trunk	4	7	—
Fracture of limbs	98	164	—
Dislocation without fracture	7	7	—
Sprains and strains of joints and adjacent muscle	18	497	—
Head injury (excluding fracture)	19	31	—
Internal injury of chest, abdomen, and pelvis	14	12	1
Laceration and open wounds	96	1,237	—
Superficial injury, contusion and crushing with intact skin surface	35	817	—
Effects of foreign body entering through office	8	68	—
Burns	29	99	2
Effects of poisons	14	5	—
All other and unspecified effects of external causes	8	195	—

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