



FALKLAND ISLANDS.

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ANNUAL

MEDICAL AND SANITARY REPORT

FOR THE

YEAR ENDED 31ST DECEMBER, 1928.

Published by Command of His Excellency the Governor.

PORT STANLEY:

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1929.

KING EDWARD MEMORIAL HOSPITAL,
STANLEY, FALKLAND ISLANDS,
31st March, 1929.

Sir,

I have the honour to submit for the information of His Excellency the Governor and for transmission to the Right Honourable the Secretary of State, the Medical Report on the health and sanitary condition of Falklands Colony for the year 1928, together with Returns, etc., appended thereto.

I have the honour to be,

Sir,

Your obedient servant.

J. HOPE REFORD,

(lately) Colonial Surgeon.

THE HONOURABLE.

THE COLONIAL SECRETARY,
STANLEY.

FALKLAND ISLANDS.

ANNUAL MEDICAL REPORT

FOR THE

YEAR ENDED 31ST DECEMBER, 1928.

I. ADMINISTRATION.

(A) Establishment, vacancies and acting appointments.

MEDICAL STAFF

- 1 Colonial Surgeon.
- 1 Assistant Colonial Surgeon.
- 1 Dental Surgeon.

NURSING STAFF

- 1 Matron.
- 1 Nursing Sister.
- 2 Junior Nurses.
- 2 Probationers.

SUBORDINATE MEDICAL AND SANITARY STAFF

- 1 Inspector of Nuisances.
- 1 Clerk.
- 1 Dental Mechanic.

ATTENDANT GARDENER AND DOMESTIC STAFF.

APPOINTMENTS, PROMOTIONS, ETC.

Dr. W. B. R. Jones, acted as Colonial Surgeon from 1st January, 1928, to 2nd May, 1928.

Dr. J. Hope Reford, C.M.G., assumed duty as temporary Colonial Surgeon from 3rd May, 1928, to 31st December, 1928.

Miss E. S. M. Warner, Hospital Matron, resigned her appointment 1st May, 1928.

Miss M. E. Shaw, appointed Matron from 2nd May, 1928.

Miss A. Lehen, Junior Nurse on leave in United Kingdom for special training from 2nd, May, 1928.

Miss M. Hooley, appointed Probationer from 12th May, 1928.

Miss G. Reive, appointed Probationer from 13th June, 1928.

Miss M. Cooper, Nursing Sister, arrived on first appointment 15th October, 1928.

In the absence of a Colonial Surgeon during the first four months of the year, consequent on Dr. Deane's suspension, the department was handicapped through shortage of Staff. During these months Dr. W. B. R. Jones, who had arrived on first appointment in December, 1927, carried out the administrative and executive duties of the department as Acting Colonial Surgeon, and this period of difficulty was successfully tided over by the depleted staff until the arrival of Dr. J. Hope Reford as temporary Colonial Surgeon on 2nd May.

The department is much indebted for the constant assistance rendered from the Colonial Secretary's Office during this period in administrative medical work.

(B) Legislation.

No Ordinances directly affecting the Public Health were enacted during the year.

The following bye-laws were made during the year by the Board of Health under the Public Health Ordinance, 1894, and approved by the Governor-in-Council.

- (1) Board of Health (East Falkland Island) Slaughterhouse and Inspection of Stock Regulations, 1928.
- (2) Board of Health (East Falkland Island) Inspection of Building Bye-laws, 1928.
- (3) Stanley Milk Supply Protection Bye-laws, 1928.
- (4) Extermination of Rats and Mice Bye-laws, 1928.

(C) Financial.

The following table shows the Revenue and Expenditure for the year in respect of Medical and Sanitary Services of the Colony.

REVENUE.				£	s.	d.
Hospital fees and sale of medicines ...	...	...	...	229	8	0
East Falkland Medical Contribution ...	...	...	...	225	0	0
Total				£454	8	0

EXPENDITURE.				£	s.	d.
Personal Emoluments ...	...	...	...	3331	3	2
Other Charges* ...	...	...	...	1851	15	5
Total				£5182	18	7

*These charges include a sum of £350 being unforeseen expenditure in respect of refund of medical fees to patients, and a sum of £225 in respect of outside medical assistance, incurred during the previous year.

II. PUBLIC HEALTH.

(A) General Remarks.

(1) GENERAL DISEASES.

The general health of the community during the year has on the whole been good. The Colony has suffered from no serious epidemics and it has not been found necessary to close schools during the year. Apart from the communicable diseases referred to below the outstanding general diseases that came under treatment were *chest complaints* and *local injuries*. The prevalence of *rheumatism* both acute and chronic, and the relative frequency of *appendicitis* also calls for comment.

Appendicitis. The incidence of appendicitis was lower in 1928 than was recorded for the previous two years. Of 15 cases which came under observation 4 were treated medically and 11 underwent operation; 2 of the latter were suppurative cases, 1 being gangrenous. All made successful recovery. This must be regarded as a high incidence for a population of 2313. 17 cases were recorded in 1926, and 32 cases in 1927. It is difficult to account for so high an incidence of appendicitis in the Colony unless it can be explained by the unusual dietary which is prevalent containing an excess of meat, chiefly mutton, and a deficiency of fruit and wholesome vegetables, together with the prevailing defective condition of teeth. Some cases are known to be associated with tubercle, and others with thread worm.

The *Dental condition* of the population generally is bad, though improvement in the condition of the children's teeth and mouths is noted this year, as recorded under the Dental Report, which is attached in Appendix I. This unhealthy state of the teeth is undoubtedly

responsible for much ill-health among the community both directly and remotely. Digestive troubles and rheumatoid affections, tonsillitis, enlarged glands, adenoids and stomatitis are prevalent.

As recorded in the dental reports the inherent softness and consequent diseased condition of the teeth is attributed to the deficiency of lime in the soft peaty water. An attempt to remedy this defect has been made by treating the water in the new reservoir with fortnightly doses of lime, and the results appear to be promising as the Dental Surgeon reports an appreciable increase in the hardness of the children's teeth already. Increased efforts have also been made to encourage the local stores to stock apples and other fruit for the benefit of the children and the community generally. The stores have made praiseworthy efforts to comply, but are handicapped by the irregular service of supply ships. Systematic dental inspection and free treatment of the school children has been carried out during the year. Tooth brushes and dentifrice have been issued free by Government, and children and parents have been instructed as to the necessity for the care of the teeth and early dental treatment. These benefits have now been extended to the children of the camp, as far as the dental surgeon's tours permit.

Eye diseases are rare but errors of refraction are common. Many school children and adults were found affected and unprovided with glasses. During the year a set of test lenses was procured together with a stock of glasses, which have been prescribed and provided for a considerable number both of children and adults.

GOVERNMENT OFFICIALS. No deaths and only one invaliding occurred among Government Officials during the year. Their physical health generally has been good. Most of them suffered from the prevalent bronchial affections during the winter months which were exceptionally severe and persistent, and considerable neurasthenia was in evidence attributable largely to the severity of the climate and the consequent difficulty of obtaining healthy outdoor recreation. Prolonged residence in the Colony with its rigorous climatic conditions and limited social and sporting amenities imposes a severe strain on the health and mental outlook of those among the official community who have not been brought up in the Colony. The new leave and passage regulations which came into force during the year, and the improved facilities for local leave and for healthy outdoor recreation which have recently been initiated will go far to alleviate these depressing climatic influences, which are inherent to the Colony. The shortening of the length of tour cannot fail to be of value in counteracting these influences, apart from the actual physical benefit derived from more frequent recuperative leave.

(2) COMMUNICABLE DISEASES.

Tuberculosis. Tuberculosis under various manifestations, chiefly joint affections, cervical and thoracic glands, pleurisy and pulmonary affections, and peritonitis, is undoubtedly widely distributed throughout the Colony. The incidence in Stanley is higher and the progress of the disease more rapid than in the camp where the children and the community generally are more robust and more resistant. 19 cases of infection came under observation at the hospital during the year, apart from others visited outside. Out of 140 children inspected at the Government School 6 showed tubercular manifestations.

It is not to be supposed that tuberculosis is a new development or a recent importation into the Colony. It is reported that the old American Native Mission who had their main station at Keppel Island from 1850 onwards had to close down in 1876 partly owing to the ravages of disease among their natives, chiefly consumption, measles and syphilis. The most prevalent of these appears to have been consumption and a number of the victims of this disease died finally in Stanley.

Again it is known that a number of consumptive families emigrated from Scotland two generations ago and the disease has been communicated to their descendants and disseminated through inter-marriage. These families are for the most part living in certain camps where they tend to outgrow the disease. Whenever they migrate to Stanley however the balance of resistance becomes upset under the more unfavourable environment and conditions of living, and latent disease tends again to light up.

The contributory factors which influence the incidence and spread of Tuberculosis in Stanley and in the camp will be referred to more particularly under Hygiene and Sanitation.

Bronchial Catarrh, Bronchitis and Broncho-pneumonia. During the long winter months bronchial catarrh is widely prevalent and for some months during 1928 the majority of the population of Stanley were affected. Slight fever, intractable catarrh with a tendency to inflamed throat and glands with violent coughing, are the usual symptoms. Much disability and discomfort resulted. The Government School children were nearly all affected, but the school was not closed down as the outbreak was already widely distributed and no benefit would have accrued to the children from home conditions.

Bronchitis frequently followed and a few cases of broncho-pneumonia. Some of these were severe, one case fatal. No cases of lobar pneumonia occurred during the year, and this disease is reported to be rare in the Colony.

Septic Throat. As recorded in previous reports epidemics of septic sore throat have recently become prevalent during the winter months both in Stanley and the camp. 1928 was no exception though the incidence and severity of the disease appears to have been less pronounced than in the epidemics reported for the past two years.

Characterised by inflamed throat and tonsils, swollen glands which tend to become septic, and fever, many of these cases present the usual features of suppurative tonsillitis as seen elsewhere. Most of the cases clear up at this stage; others however progress further, developing skin rashes of a scarlatinaform type followed by desquamation, and accompanied by jaundice of a pronounced character. The latter stage presents the features of scarlet fever but is of less severity, with lower pyrexia, is of shorter duration, and is associated with jaundice. Complications are rarer though adenitis is the rule with tendency to suppuration, and otitis media has followed in several cases. The disease is highly infectious, different members of the same household frequently being attacked.

Whether these are two separate entities or stages of the same disease is uncertain. The causal agent is unknown and the aetiology of the disease affords an interesting field for investigation.

Grave Epidemic Diseases. None were encountered during the year either in the Colony or in connection with shipping, though frequently reported from the coast. *Small-Pox* would present a serious menace if it were introduced to the Colony, as might readily happen through shipping communications. A high percentage of the children and the community generally were until recently unprotected by vaccination, but this is now being rectified by a vaccination campaign as referred to under hygiene. *Plague* has never been reported in the Falklands but might be introduced through shipping. Rats, which were very numerous, have to a great extent been exterminated during the year. *Cholera* is precluded by the climatic conditions, and *Yellow Fever* by the absence of mosquitos.

Influenza. In view of the world epidemic during the year special precautions have been taken in connection with ship inspections to prevent its introduction into this Colony, and provisional arrangements have been made to deal with any cases of infection that might be brought in. The Colony suffered severely from the ravages of the epidemic in 1926, and the community rather dread its re-introduction.

Malaria and other insect-borne diseases are unknown in the Colony.

Scarlatina, Measles, Diphtheria, Chicken Pox and German Measles. No cases of these diseases occurred during the year. An invasion of scarlatina, diphtheria, or measles would be a serious event owing to the susceptibility of the community.

Venereal Diseases are fortunately absent. A few cases have been treated from the ships under rigid precautionary measures to preclude any chance of conveyance. In the event of a case being introduced to the Colony authority would be asked for the employment of the most rigorous measures of segregation and control to preclude the possibility of spread of infection.

(B) Vital Statistics.

(1) *General Population.* Practically all the permanent residents of the Colony as well as the Government Officials are Europeans or of European descent.

Based on the last census, taken in 1921, the estimated population of the Colony, apart from the Dependencies, on the 31st of December, 1928, was 2313.

During the year under review 62 births, 34 deaths, and 4 deaths of infants under 12 months are recorded, giving the following rates:-

Population	...	...	2313
Birth Rate	...	...	26.80 per 1000
Death Rate	...	...	14.70 per 1000
Infantile Mortality Rate	...	...	64.50 per 1000 births.

Registration of Births, Deaths, and Marriages is compulsory under Ordinance No. 12 of 1853.

9 deaths were reported from the Dependencies, 6 being from South Georgia and 3 from South Shetlands, out of a moving population, almost entirely male, estimated in the summer months at 1500.

(2) *Health of Government Officials.* The total number of Government Officials in 1928 was 90. All are of European descent, and their physical health was generally good during the year. There was one case of invaliding from neurasthenia, and no deaths.

It is regretted that figures are not available to show the average sick rates for officials during the year, or for the tables of general diseases and deaths among out-patients in Stanley. Steps are being taken to rectify these omissions in future reports.

III. HYGIENE AND SANITATION.

(1) PREVENTIVE MEASURES.

(a) *Insect borne diseases* are absent. The only preventive measures undertaken against insect pests are the screening of meat against the attacks of bluebottle and other flies. This is in force in the hanging sheds of slaughter houses under the new bye-laws.

(b) *Epidemic Diseases.* In the past the Colony has enjoyed relative immunity from serious epidemic diseases. The climate is healthy, though so rigorous, but the conditions of living are highly unhygienic, particularly in Stanley, owing to overcrowding, damp ill-ventilated houses, and defective sanitation and drainage. There were no serious epidemics in 1928 though the winter was exceptionally severe. Influenza and scarlatina have been the outstanding and practically the only visitations in recent years. It is not to be expected that the Colony will always be favoured with this relative immunity and it will be realised that the existing congestion and insanitary conditions of living are highly conducive to the spread of such diseases as influenza or tuberculosis, and would constitute a serious menace in the event of a visitation of other epidemics, such as small-pox, diphtheria, measles, scarlatina, or enteric.

Small-Pox and vaccination. The menace of small-pox, from which disease the Colony has hitherto been free, is by no means remote or improbable in view of its prevalence on the coast and our shipping communications. Such an outbreak would prove difficult to control and would present a grave danger, in life and disfigurement, especially to the children owing to the high percentage of the community unprotected by vaccination. Compulsory vaccination is in force in the Colony under the Vaccination Ordinance (1868), but this Ordinance has fallen largely into abeyance. Inspections of school children in Stanley during the year showed that only 44 out of 192, or 23% have been vaccinated. A series of consecutive patients, children and adults, showed that the percentage of persons in Stanley unprotected by vaccination is 62%. The percentage of unvaccinated among the community in the camp is undoubtedly still higher.

To remove this danger a vaccination campaign has been inaugurated during the year and steps have been taken to enforce the Vaccination Ordinance. Government notices have been published explaining the danger and asking for the co-operation of parents, and Public Vaccinators have been appointed for Stanley and the camp. The response has been satisfactory, and it is hoped that during the coming year all the children and most of the adult population will be protected by vaccination or re-vaccination.

Plague and Rats. Despite the history of old time plague in England this disease may be regarded as a remote contingency in so cold a climate, but the associated favouring conditions of shipping, numerous rats, and insanitary dwellings and rubbish dumps justify some consideration of the rat problem in relation to disease. Rats are reported to have multiplied exceedingly in recent years and early in the year under review were to be seen in swarms particularly about the stores, slaughterhouses and rubbish dumps on the foreshore.

An organised rat campaign has been undertaken by the Government by the systematic laying of poison. "Rodine" has been used throughout and has proved most efficacious, nearly all the rats having already disappeared. Private firms have been invited to co-operate and it is proposed to continue the laying of this poison from time to time to complete the extermination of rats.

(c) *Water borne diseases.* None in the Colony.

(d) *Tuberculosis*, is widely distributed both in Stanley and in the camp. The recorded incidence hitherto has not been high though it shows signs of increasing in Stanley. The tendency of the disease is towards cure or a quiescent condition in the camp whereas in Stanley latent disease tend to light up and become active. As indicated under General Remarks tuberculosis has been present in the Colony for generations and is doubtless latent in considerable percentage of the community. The high proportion of gland, bone, and joint manifestations suggest conveyance from infected milk or meat; dissemination through infected sputum and inhalation in pulmonary cases probably occurs freely in Stanley where conditions of living and environment are so favourable for such transmission.

Hence the chief *sources of infection* in Stanley appear to be: (1) From infected persons through inhalation, which is favoured by overcrowding and deficient light and ventilation. (2) From infected cattle through the ingestion of infected milk and meat coming from dairies and slaughterhouses where traffic in diseased cattle and cows is possible.

The predisposing and *contributory factors* in Stanley are chiefly:-

(1) *Climate*, being damp and cold, and tending to keep the less robust confined indoors in unhygienic houses.

(2) *Insanitary Dwellings*. Many of the poorer houses in Stanley are grossly overcrowded and deficient in ventilation, and are damp through defective construction, leaking roofs and lack of drainage.

(3) *Limitation of healthy outdoor recreation*.

(4) *Alcoholism* plays a part in certain cases.

Steps have been taken during the year to put the following preventive measures into operation to combat these causes of tuberculosis:

(1) *Inspection and control of dairies and slaughterhouses* as referred to below, in order to prevent fresh cases of infection through diseased meat and milk from tuberculous cattle. Bye-laws under the Public Health Ordinance have been passed providing for the future control of dairies and slaughterhouses and their supervision and inspection by the Stock Inspector.

(2) *Provision for better dwelling houses*. This is by far the most important single measure that could be undertaken to combat tuberculosis, to prevent other infectious diseases, and to improve the general health of the working community. An improved housing scheme has been under careful consideration by Government, as referred to below under Housing and it is to be hoped that an adequate and liberal policy will be undertaken.

(3) *Improved Drainage* to limit the present dampness of houses and their insanitary surroundings. Under the Stanley Improvement Scheme improved cement drains are being extended towards the poorer districts to the great benefit of the houses and their surroundings.

(4) *Healthy outdoor recreation*. Most of the working population have ample outdoor labours throughout the day; their problem is a social one towards brighter and healthier homes and gardens after the day's work. For indoor workers and children facilities for healthy recreation have recently been extended to hockey, football, golf, new volunteer drill hall and improved school recreations and exercises.

(5) *Reduction of Alcoholism*. Government are endeavouring to combat alcoholism through the wise policy of improving social conditions, initiating healthy recreations as above, placing habitual offenders or juveniles on the black list, and placing spirituous liquors (as compared with beers) out of easy reach through an increase in the Spirit Tax which is under contemplation.

(e) *Helminthic Diseases.* Intestinal parasites are rare with the exception of *Ascaris* and *Oxyuris*, the latter been prevalent especially among children.

(f) *Venereal Disease.* Practically absent, apart from occasional cases seen on ships. It is rare to-day to find a community so free from Venereal Disease. The danger of introduction is kept in mind by the authorities who are prepared to enforce the most stringent measures of segregation and control in the event of a local case occurring.

(2) GENERAL MEASURES OF SANITATION.

(a) *Sewage Disposal.* Most of the better class and newer houses have taken advantage of the water system for water closets and baths, 21 baths and W.C.'s having been fitted to houses during the year. Its use is gradually being extended to the smaller houses but the great majority of these still use earth closets with a single pail system of removal. Sanitary carts are employed for the removal of night soil under the control of the Public Works Department. The pails are emptied twice a week, their contents being discharged into the sea from a sanitary jetty at the east end of the town. The system is well organised and is run with efficiency. A dual pail system would be preferable to provide for cleansing of the pails, but in view of the increased cost and the policy of extending the water system this improved pail system has not been urged.

(b) *Scavenging.* House refuse and ashes are stored in covered ashbins, and removed by the householder himself to authorised refuse dumps on the foreshore. These ashbins are frequent sources of nuisance through failure to empty them with sufficient frequency, the lids are often broken or kept open and the overflowing contents are blown far and wide by the constant winds, causing much inconvenience and detriment to the health of the community.

A new standard type of metal ashbin is under consideration by the Public Works Department, for cost price issue and compulsory use by householders. Such sanitary ashbins would be a great improvement on the present haphazard system, and it would be a further advantage towards cleanliness and health if the removal of household ashes and refuse could be undertaken by Government instead of by the individual, with a small addition to the rates for this service.

The possibility of undertaking this extended scavenging service, which has been advocated by the Board of Health, is receiving the consideration of Government.

(c) *New roads and drainage.* Much benefit has already accrued from the new metalled and tarred roads and their accompanying cement drains which have been constructed on the main thoroughfares of the Town under the Stanley Improvement Scheme. Their final extension to the outskirts of the town and particularly to the poorer districts of the upper town will be of great benefit, as many of these congested areas are well-nigh impassible in winter and the lack of drainage adds greatly to the dampness and unhealthiness of the dwellings.

A scheme for a limited extension of roads to the neighbouring camp which is at present receiving the consideration of Government would be of the greatest benefit both to the residents of Stanley and to the camp in facilitating the transport from the camp of fresh vegetables, poultry, butter and eggs, so badly needed to supplement the Stanley dietary. Apart from the broader economic possibilities of such road transport the opportunity thus afforded for Stanley residents getting out of the station occasionally by car, cycle, or horse, would be of great value from a health standpoint.

(d) *Water Supply.* The new pipe-borne water supply, constructed in 1927, is doing excellent service both for domestic and municipal purposes. Eighty houses were connected to the water mains during 1928. The gathering grounds consisting of some 61 acres of clean moorland are situated three miles west of Stanley, and provide an ample supply of excellent water, though soft and deficient in lime. The character of this water is shown in the Chemical Analysis appearing in Appendix II. The reservoir, situated close to Stanley, has a layer of 2 feet of limestone in its filter beds and the water is further treated with monthly doses of 75 lbs of hydrated lime to correct this deficiency. The volume of water available is 30,000 gallons daily which is ample for the present population and sufficient for reasonable future requirements.

(e) *Slaughterhouses and meat inspection.* Under the new bye-laws, Slaughterhouse and Inspection of Meat Regulations (1928), slaughterhouses for the first time require to be licensed and supervised, and meat inspected. The sanitary condition of both of the two

existing slaughterhouses in Stanley have debarred them from the grant of licences until certain specified improvements have been carried out. Model plans for the simplest slaughterhouse requirements are in course of preparation by Government for the guidance of private firms.

Failing a municipal slaughterhouse, which would be the best arrangement, Government have under consideration the granting of a licence for one small modern slaughterhouse under Government supervision and control, which would be sufficient for the needs of Stanley. This plan would facilitate regular inspection of stock and carcasses, methods of hanging and distribution, and the sanitary condition of the slaughterhouse, all of which are essential for health considerations. The methods of slaughter could also be supervised from humane considerations.

(f) *Dairies.* Milk in Stanley is difficult to procure and there are technically no proper dairies as such. A number of persons own a few cows which graze on the common and are milked in sheds or byres with adjoining premises for the storage and subsequent distribution of milk. It has been found that cows generally are in poor condition, some have been found diseased with tuberculous udders, and the milk in some cases is not properly strained, stored, or distributed to protect it from dust or contamination by other agencies.

In view of these obvious dangers and the inference, based on clinical evidence of bone, joint, and gland manifestations, that some at least of the fresh infections of human tuberculosis are bovine in origin and probable derived from milk or meat, the new milk regulations (Stanley Milk Supply Protection Bye-laws, 1928) have been made to provide for the inspection of cows and supervision of dairies with a view to securing a purer milk supply.

(3) SCHOOL HYGIENE.

There are two schools in Stanley, the Government School with 173 children on the books, and St. Mary's School with 65 children. St. Mary's is run by the Catholic Church, but both schools are undenominational. Systematic inspections of the Government School have been carried out during the year by the Colonial Surgeon and the Colonial Dentist, and arrangements have also been made for routine inspections of St. Mary's next year.

Annual medical inspections of all children have been commenced, the record being kept on new School Medical Inspection Forms, serving for five consecutive yearly inspections as shown in the specimen form in Appendix III.

The results of the 1928 inspections were on the whole satisfactory, the children generally being clean, well nourished and well clothed, and a high average of attendance being reported.

Noteworthy features of the medical inspection were:- (a) Average physical development. (b) The low percentage of children protected by vaccination (only 15% at the Government School and 44% at St. Mary's School) This is being rectified by the vaccination campaign. (c) A considerable number of cases of defective vision through errors in refraction which were uncorrected by glasses. Eye-testing is now available and glasses have been provided. (d) Many enlarged tonsils and adenoids, the worst of which have been removed. (e) A few tubercular manifestations, chiefly glandular. (f) Defective condition of many of the children's teeth.

As referred to under General Remarks the dental condition of the community both adult and juvenile is bad and much ill health is undoubtedly caused either directly or remotely by this defect.

Many adults are reconciled with their lot and are unwilling to undergo treatment, but the problem with children is easier as they can be dealt with in time if parents are reasonable, to the great benefit of their own health and comfort, and the promise of improved general health for the rising generation. The number of school children is so small that it should be possible to deal with them all effectively within a year or two. For the past two years facilities have been granted by Government to encourage the care of the teeth. Free dental treatment is available for all children in Stanley, now extended to the camp, and free issues of tooth brushes and dentifrice with dental advice. Frequent dental inspections are made at the Government School and weekly dental clinics for children are held at the hospital by the Dental Surgeon.

Though useful results are being obtained by these measures the attendances are not so high as might be hoped for and a certain amount of apathy is displayed in the response of

some of the parents which is regrettable but will doubtless pass when they fully realise the benefits. It will be seen from the Annual Dental Report which is appended for reference (Appendix I) that the Dental Surgeon reports a decided improvement both in the condition of the mouths and the hardness of the teeth of the children as compared with previous years. This is satisfactory, and it is hoped that the improvement will not only be maintained but will be expedited by every means. As already mentioned lime deficiency in drinking water is being corrected by lime treatment of the reservoir water, with a view to improving the condition of teeth. Fruit, which is very deficient in this Colony, is also being stocked by some of the stores as often as shipping permits.

The school premises are satisfactory and well kept as regards class-room accommodation, floor space, lighting, heating, ventilation, desks and equipment. W.C. accommodation both for boys and girls was provided during the year, the old E.C. system having been found inadequate and unsatisfactory.

The recreation ground was found to be unsatisfactory, only a small area being cemented and the remainder rough and wet. Provision has been made for the complete cementing of the recreation ground at considerable cost and this work is to be undertaken early in 1929.

Improved school exercises have lately been introduced, and additional outdoor games including hockey for the girls and football for the boys.

Near the school is a hostel for the accommodation of children from the camp. It was found to be clean and well kept and to have ample accommodation for the 11 children living there. Efficient devices are provided for escape in case of fire. Recommendations were made after an inspection in June for the installation of a hot water system to heat the upper rooms and provide water for baths; also the provision of a second bath and a second W.C., only one of these conveniences having hitherto been available for children, superintendant, and staff. All these recommendations were approved and the improvements were completed with commendable promptitude during the year.

The care of the children at the school and the hostel and the efficient management of both these institutions were evidenced at all inspections.

(4) HOUSING.

It can safely be stated that insanitary housing and defective teeth are the prime causes of much of the ill-health in Stanley. Both factors admit of being remedied to the great amelioration of the health and social well-being of the community. Their neglect means the perpetuation of existing disease and the menace of other serious diseases from which this Colony has hitherto been free.

While many of the better class houses are satisfactory and comfortable the general sanitary condition of housing for the working population in Stanley with the exception of some of the more recently erected houses, can only be described as deplorable.

The dangerous condition of overcrowding and squalor and defective sanitation which are found in many of the older houses in the upper section of the town, have been brought about by various contributory factors, chiefly:-

(a) *Inadequacy of accommodation*, with consequent overcrowding, through there not being nearly enough houses to accommodate the working population.

(b) *The type and condition of existing houses*. Mostly constructed as frame wooden houses with iron roofs, and loose stone foundations, these dwellings are cold, damp, and ill-ventilated. Rooms without fireplaces, unventilated and overcrowded, are frequently papered over and kept completely shut up, during the long cold nights or in cases of sickness.

(c) *Defective Sanitary provision*. Earth closets are frequently too close to the dwellings, are insufficient for the congested houses, and the pails are not emptied with sufficient frequency. The advantages of the pipe-borne water supply are not yet available for most of these small houses for domestic or sewage purposes. They have no baths. Rubbish is stored in bins at the back frequently uncovered and overflowing and blown about by the constant winds. Leaking roofs, gutters, and barrels which serve as tanks all add to the dampness and discomfort of the dwellings. No surface or other drainage is provided in many cases for overflow or slop water.

(d) *Compounds and Gardens.* Many of the small houses do not possess fenced in gardens, with the result that their immediate surroundings and approaches cannot be kept clean and tidy, there is lack of privacy, and no facilities for gardening or growing vegetables which are so badly needed and difficult to procure.

(e) *Roads and Drains.* The valuable road extension scheme is a great boon but has not yet reached all these small dwellings in the upper section of the town. Their existing approaches become mud tracks in the winter, undrained and well nigh impassable.

The obvious dangers and evils both from medical and social standpoints inseparable from such unhygienic conditions of housing require no comment. It is surprising that a community consigned to such unhealthy conditions of living should have suffered so little in the past from serious epidemic diseases or should not have deteriorated more in physique and mental outlook. The Falklands' climate, though so rigorous, is clearly not conducive to the spread of disease, but the continued disregard of ordinary sanitary precautions must nevertheless be a gratuitous invitation for trouble.

The obvious course elsewhere in slum dwellings of this description would be to condemn the worst houses to be pulled down as unfit for human habitation. In view of the acute shortage of housing accommodation however this course is not open in Stanley until further accommodation is provided for the present occupiers. It is manifestly essential that in order to deal effectively with the problem new houses must first be built to relieve the existing congestion of population. The present houses can then be dealt with by demolishing those unfit for habitation and abating nuisances in others. No amount of reconstruction, sanitary improvements, or drainage could rectify many of these houses, and would not relieve the overcrowding.

Improved housing in Stanley has engaged the attention of Government for some years, and special consideration was given during 1928 to a scheme for the building of workmen's houses to relieve the congestion and improve the sanitary condition of the town. The following particular aspects of the problem which have received special consideration may briefly be referred to: (a) the number of houses required, (b) the best type of house to be built, (c) financial provision and the terms of occupation.

(a) *Number of houses required.* Precise information as to the number of houses required to replace those condemned and to relieve the congestion can be obtained only by a systematic survey of all houses in Stanley to ascertain their sanitary condition and the number of occupants. All arrangements have been made for this survey by a Sub-Committee of the Board of Health, the appointment of which has entailed the making of new Bye-laws (Board of Health (East Falkland Island) Inspection of Buildings Bye-laws (1928) to provide for its constitution, duties, powers of entry and penalties. All houses are to be graded as (1) good, (2) defective and requiring sanitary improvements, or (3) condemned. The duties of this Sub-Committee further comprise the inspection of plans for new buildings, supervision of buildings under construction, and inspection prior to occupation, in which functions the committee has already rendered useful service during the year.

The complete survey of all houses will be a prolonged undertaking, and much useful data is anticipated. It is to be hoped however that the housing scheme will not be held up pending its completion, as it is safe to assume that at least twenty five houses will be required which would presumably be undertaken by yearly instalments if the scheme materialises.

(b) *Type of house.* Plans have been prepared by the Public Works Department for a suitable type of workman's house of wood and iron containing six rooms, with water laid on, bath and W.C. An experimental house of cement construction is also under consideration to compare with the wood and iron buildings which have many defects and constitute a danger in case of fire.

(c) *Financial Provision, and terms of occupation.* The scheme if approved would involve considerable outlay of public funds. Building is costly in Falklands and each house would cost in the neighbourhood of £900. It would be a great boon to selected tenants if arrangements could be made whereby, under a reasonable rental to cover interest and sinking fund, they might become owners of their houses after a period of say twenty years.

Considerable building of houses by private individuals is in progress and a scheme for the advancing of loans by Government for building purposes, has received approval during the year.

Two houses of good design for Government Officials have been completed during the year and a third is in progress.

If this scheme for improved housing in Stanley is approved and can be carried out it would undoubtedly result in far-reaching benefits to the health and social well-being of the labouring classes and indirectly of the whole community.

(5) FOOD IN RELATION TO HEALTH AND DISEASE.

The range of food produced in Falklands is strictly limited particularly in fruit and garden produce. Mutton is plentiful and cheap and forms the staple dietary of the Colony. Excessive quantities are often consumed three or four times a day which is undoubtedly detrimental to health especially for children and those who are not engaged in active outdoor work. Fish, poultry, milk, butter and vegetables are scarce. Cereals, potatoes and vegetables are little grown though the soil appears suitable. There are no indigenous fruits, which is a serious drawback, especially as regards children's food.

Most of the articles of diet which are not produced in the Colony are replaced by tinned or preserved stuffs from Europe or South America thus precluding the likelihood of deficiency diseases. In the case of fruit the supply is very intermittent and costly owing to the irregularity of ships, and the deficiency is serious especially for children and invalids. Drinking water is pure and plentiful, but is soft and deficient in lime which is prejudicial to children's teeth; as already stated this deficiency is being corrected by treating the reservoir water supply with lime imported from England.

(6) RECOMMENDATIONS FOR FUTURE WORK.

- (1) Completion of the vaccination campaign.
- (2) Continuance of the rat campaign to complete their extermination.
- (3) Close supervision of dairies and milk supply by enforcing the new dairies regulations.
- (4) Enforcing the new Slaughterhouse regulations for the license and control of slaughterhouses and the inspection of meat.
- (5) A liberal housing scheme and improved drainage to relieve congested and insanitary areas.
- (6) Supply of covered metal ash-bins. Removal of house refuse by Government.
- (7) Extension of roads and drains to the outskirts and upper section of the town.
- (8) Schools: Persevering with, and expediting the dental campaign, aiming at clean healthy mouths for all children.

IV. PORT HEALTH WORK AND ADMINISTRATION.

45 vessels with a registered tonnage of 86,716 and with crews totalling 2,189 were given pratique during the year. No quarantinable diseases were reported.

V. MATERNITY AND CHILD WELFARE WORK.

29 maternity cases were treated in the hospital and 7 in the district during the year. These cases included one miscarriage, one threatened abortion, and one induction of labour at seven months for contracted pelvis.

It is gratifying that relatively more cases are seeking treatment in hospital instead of their own homes as compared with previous years as district work is less satisfactory not only from the point of view of patients and the hospital staff but in efficiency of treatment. The inclusive charge for hospital treatment for a maternity case up to a fortnight is only two pounds.

Expectant and nursing mothers receive free advice and instruction from the medical and certified nursing staff of the hospital in maternity hygiene and the care and feeding of their infants.

VI. HOSPITAL.

The King Edward Memorial Hospital, built in 1914, has three general and two

private wards with 12 beds, outpatient department and dispensary, theatre, offices and stores, kitchen, and quarters for two nursing sisters.

Two outside buildings comprise clerk's office and store, and Rock cottage with dental rooms, accommodation for 2 or 3 pensioners, and upstairs hostel for domestic staff.

93 inpatients were admitted during the year of whom 81 were cured, 10 relieved, and 2 died. The deaths were due to chronic heart disease and chronic Bright. 66 operations were performed (in and out patients) 14 of which were major operations, all with satisfactory results. Anaesthetics were efficiently administered by the Dental Surgeon throughout the year. The recorded number of outpatient treated was 331, the total attendances approximating 1500. Many patients were treated at their homes, a number of whom were visited by the nursing staff. General anaesthetics for teeth extractions were administered in 28 cases by the Assistant Colonial Surgeon.

The hospital has not been fully re-conditioned since it was built and a number of alterations were required. The following renovations and additions were carried out during the year :—

- (1) Re-conditioning of theatre and new flooring.
- (2) New Store (converted).
- (3) Extension to one bath room with provision of lavatory and W.C. for maternity patients.
- (4) Installation of electric bells.
- (5) Lining and re-conditioning of 2 nurses' rooms, and two private wards.
- (6) Furnishing of nurses' rooms.
- (7) New equipment, bedside lockers, examination couches, shelvings, etc.

The new hospital equipment and instruments procured in 1928 include microscope, case of lenses for eye-testing, and glasses, and new X-Ray apparatus (on order). Arrangements and provision have been made for the re-conditioning of the general wards and the rest of the hospital in 1929. Also the laying of linoleum on corridors, dispensary, and lavatories, which are now bare and noisy. Additional hospital equipment and instruments will also be required.

The outpatient department is small, cold, and uncomfortable and its extension is under consideration. It is a great drawback to the hospital having the sisters' quarters within the building and unsatisfactory for the nursing staff. Outside quarters would add greatly to comfort of the sisters and would provide much-needed accommodation in the hospital.

VII. PRISONS AND ASYLUMS.

The prison was regularly inspected and was found clean and well kept. It was generally cold and damp however being unprovided with any heating arrangements. This has been rectified during the year by the installation of a water heating system, which is a satisfactory addition.

The prison has accommodation for 15, but only one prisoner was confined during the year, for a term of three months. His health during custody was good.

No mental hospital is provided in the Colony and there were no lunatics under supervision during the year.

VIII. METEOROLOGY.

Situated in the S. Atlantic 300 miles East of Straits of Magellan in Latitude 51°42' S. and Longitude 57°51' W. (Stanley), the climate of the Falkland Islands has frequently been compared with that of the north of Scotland, but the comparison is flattering to Falklands. The constant winds which frequently attain gale force are exceedingly trying and add to the inclemency of rain, snow, and sleet. Only 7 calm days were recorded in 1927, and 15 in 1928. Though the rainfall is low there is almost constant humidity which intensifies the cold. Wind and temperature are subject to rapid fluctuations within a wide range. All

these conditions render the climate more rigorous than is indicated by the meteorological records.

The meteorological returns are appended (Table II). The mean temperature for the year in Stanley was 48.8° F., the maximum was 66° (Jan.), and the minimum 17° (June). The total rainfall was 21.92 ins ; 241 days being wet, and clear sky being recorded on 11 days. The mean force of the wind was 4, the prevailing winds being N.W., and 15 calm days being recorded.

IX. SCIENTIFIC.

X-Ray diagnosis and therapy are in frequent demand in the Colony for many conditions, both surgical and medical. The old apparatus which is of obsolete pattern was in frequent use during the early part of the year but it was found to be unsafe, two X-Ray ulcerations having actually occurred, and its use has been discontinued since September. Provision has been made for the installation of a new up-to-date X-ray plant early next year and arrangements have been made for the newly appointed P.M.O. to be consulted as to its selection before he comes out in January. Great benefits are anticipated from its use both for diagnosis and treatment.

The Chemical analysis of Stanley water is shown in Appendix II.

B. Dependencies.

The dependencies include South Georgia, South Shetlands and South Orkney Islands, distributed over a wide area of the South Atlantic. These islands form the bases of whaling fleets, chiefly Norwegian, and have a floating population composed largely of whalers and factory hands. South Georgia has an estimated population of 1500 during the summer months including a magistrate and a few other permanent British Officials. There is no medical station or staff in the dependencies, the whaling companies maintaining their own medical men and equipment. Health conditions, though rigorous, are not unfavourable but no detailed reports are available as to the medical and sanitary condition of the dependencies.

J. HOPE REFORM.

TABLE I.
MEDICAL AND SUBORDINATE STAFF.

OFFICE.	NAME AND QUALIFICATIONS.	REMARKS.
A. MEDICAL STAFF.		
Colonial Surgeon	J. Hope Reford, C.M.G., B.A., M.D., B.Ch., B.A.O., L.M. D.T.M., D.P.H.	Temporary appointment. Arrived 3/5/28.
Assistant Colonial Surgeon ...	W. B. R. Jones, M.R.C.S., L.R.C.P.	Acting Colonial Surgeon until 2/5/28.
B. NURSING STAFF.		
Matron	Miss E. S. M. Warner, C.M.B.	Resigned 2/5/28.
	Miss M. E. Shaw, C.M.B.	Promoted 2/5/28.
Nursing Sister	Miss M. Cooper, C.M.B.	Arrived on first appointment 15/10/28.
Junior Nurses	Miss. A. Lehen	On leave from 3/5/28.
	Miss A. O'Sullivan	
Probationers	Miss W. Bonner	Resigned 4/5/28.
	Miss M. Hooley	Appointed 12/5/28.
	Miss G. Reive	Appointed 13/6/28.
C. DENTAL STAFF.		
Dental Surgeon	J. M. Coutts, M.M., L.D.S.	
Dental Mechanic	J. Turner	
D. SANITARY STAFF.		
Inspector of Nuisances ...	D. J. O'Sullivan	Chief Constable.
E. CLERICAL STAFF.		
Clerk	F. O'Sullivan	

TABLE II.
Meteorological Returns for the year 1928.

STANLEY.

Latitude 51° 43' 45" S. Longitude 57° 51' 25" W.

MONTH.	TEMPERATURE.			RAINFALL. Amount in inches.	WINDS.	
	Maximum.	Minimum.	Mean.		General Direction.	Mean Force.
January	66°F.	33°F.	56°F.	2.73	W.	4.0
February	61	30	46.8	1.47	W.	4.8
March	60	31	49	2.79	N.W.	3.8
April	56	23	45	2.16	N.W.	3.4
May	56	24	44	1.22	W.	4.3
June	49	17	40.5	1.13	W.	2.6
July	49	23	36.3	1.43	W.	3.3
August	51	22	39.7	.40	W.	3.6
September	52	25	43.2	.37	W.	5.1
October	57	29	44.1	1.77	W.	4.4
November	62	30	45.2	2.71	W.	4.0
December	61	32	47	3.74	S.W.	4.3
	66	17	44.8	21.92	—	4.0

TABLE III.
RETURN OF IN PATIENTS TREATED AT THE HOSPITAL
DURING 1928.

SURGICAL OPERATIONS.				MALES	FEMALES.
Appendisectomy	...	...		5	6
Amputation of thumb	...	...		1	—
„ „ finger	...	...		2	—
Cervical abscess, drainage	...	...		2	2
Foreign body in cheek. Removal	...	...		1	—
„ „ „ abdomen	...	...		—	1
Tonsillectomy & Adenoids	...	...		3	1
Herniotomy	...	...		1	1
Circumcision	...	...		1	—
Induction of labour (Contracted pelvis)	...	...		—	1
				16	12

NOTE. Outpatients and dental operations not included.

MEDICAL CASES.					
Appendicitis	...	...		3	—
Gastritis	...	...		3	1
Scalds and Burns	...	...		1	1
Cirrhosis of liver	...	...		2	—
Pulmonary tuberculosis	...	...		1	1
Otitis Media	...	...		1	0
Cardiac disease	...	...		3	1
Chronic Brights' Disease	...	...		1	—
Patellar bursitis	...	...		—	2
Subinvolution of uterus	...	...		—	1
Acute Rheumatism	...	...		1	—
Septic throat	...	...		—	2
Cellulitis of legs	...	...		1	1
				17	10

SURGICAL CASES.					
Abscess of mouth & throat	...	...		2	—
Fracture of Olecranon	...	...		1	—
„ „ tibia	...	...		1	—
„ „ fibula	...	...		1	1
„ „ femur	...	...		1	—
Dislocation of elbow	...	...		1	—
Crushed foot	...	...		1	—
				8	1

MATERNITY CASES.					
Child Birth	...	...	...	...	27
Threatened abortion	...	...	...	...	1
Premature labour	...	...	...	...	1
					29

TOTAL ADMISSIONS ... 93.

APPENDIX I.

Dental Report for 1928.

During the year it was found advisable to provide free dental treatment for all children at the Government School with free issues of tooth brushes and dentifrice. These concessions have now been extended to all children both in Camp and in Stanley.

During the year I was absent from Stanley for three months on tour in West and East Falklands.

The following table shows the dental work done for the children during 1928.

	Attendances.	Extractions.		Fillings.	Other Operations.	Total.
		Temporary.	Permanent.			
Government School ...	211	227	73	111	40	451
Others ...	72	81	27	42	9	159
	283	308	100	153	49	610

The attendances are 100% better than last year and the amount of work done is correspondingly high. In fact it is the highest in the history of the Colony. 63% of the children at the Government School have now good clean mouths. This may be considered very encouraging considering the condition in previous years. I hope for much better results in the future and considerably more attendances.

The following table shows the dental work done on the West Falklands during my tours in July, October and November.

	Extractions.	Fillings.	Dentures.	Other Operations.	Total.
Hill Cove ...	40	4	2	6	98
Roy Cove ...	40	2	—	7	49
Fox Bay, East ...	82	8	1	4	95
.. .. West ...	17	—	—	—	17
Port Stephens ...	127	8	9	5	149
Chartres ...	15	25	3	2	45
Port Howard ...	142	11	3	7	163
Pebble ...	10	1	—	—	11
Saunders ...	35	—	—	—	35
	554	59	18	32	663

35 children were examined and treated during tour.

Extractions.		Fillings.	Other Operations.	Total.
Temporary.	Permanent.			
38	8	1	2	49

"Other Operations" refer to scaling and cleaning, and treatment for gingivitis, pyorrhoea, dressings, etc.

The following work was done at Darwin Station on returning from West Falkland tour:

Extractions.		Fillings.	Other Operations.	Total.
Temporary.	Permanent.			
28	91	16	19	154

16 children received dental treatment in Darwin.

The number of treatments for disease of the gums is very small this year compared with last year. The public are beginning to realize the importance of the mouth in connection with disease and have had fewer teeth extracted and more fillings inserted.

J. M. COURTTS,
Colonial Dental Surgeon.

APPENDIX II.

ANALYSIS OF STANLEY WATER.

From:- Messrs Riley Harboud & Law.

To:- The Crown Agents for the Colonies.

Date:- 12th January, 1925.

PORT STANLEY, FALKLAND ISLANDS.

The following are the results of our analysis of the sample of water received from you on the 31st December marked "Sample of Water from Mount William Stone Run".

Total Solids at 240°F.	Grains per gallon
.. .. after ignition	10.1
	6.4

ANALYSIS OF SOLIDS.

Silica	0.19		
Oxide of iron & alumina	0.32		
Lime	0.48	Equivalent to	Sodium Chloride 4.35
Magnesia	0.52		Potassium Sulphate 0.39
Sulphuric Acid	1.66		Calcium Sulphate 1.17
Chlorine	3.21		Magnesium " 0.60
Sodium	1.71		Magnesium Chloride 0.75
Potash	0.20		

Free Ammonia	0.0182
Albuminoid Ammonia	0.0266

Equivalent to

Free Ammonia parts per million or milligrams per litre	0.26
Albuminoid Ammonia " " " " " "	0.38
Degree of Hardness	2½

This is a very pure sample of water, the solid matter in solution being very low. The undesirable feature is the quantity of ammonia which indicates contamination by organic matter. It is impossible to indicate the derivation of this organic matter without knowing something of the conditions under which it had been collected and stored.

NOTE. The sample of water referred to was sent to England before the gathering ground was fenced off and before any filtering medium was used. The organic contamination indicated by the high Ammonia content was found to be due to carcasses of dead sheep, an accident which has been precluded from repetition through fencing. Since then a sample has been analysed in Capetown through the courtesy of the scientists of the R.R.S. "Discovery" and the water was reported to be of a very pure quality.

J.H.R.

APPENDIX III.

SCHOOL MEDICAL INSPECTION.

I. Name..... Date of Birth.....

II. Personal History

(a) Previous illnesses of child.

(b) Family Medical History. (if exceptional)

INSPECTION.	I.	II.	III.	IV.	V.
1. Date of Inspection ...					
2. Standard & regularity of attendance					
3. Age of child ...					
4. Vaccination ...					
III. GENERAL CONDITIONS.					
5. Height ...					
6. Weight ...					
7. Nutrition & development ...					
8. Cleanliness & clothing ...					
IV. SPECIAL CONDITIONS.					
9. Teeth ...					
10. Nose & throat Tonsils. Adenoids, Glands ...					
11. External eye Disease ...					
12. Vision ...					
13. Ear Disease ...					
14. Hearing ...					
15. Speech ...					
16. Mental Conditions ...					
V. DISEASE & DEFORMITY.					
17. Heart & Circulation ...					
18. Lungs ...					
19. Nervous System ...					
20. Tuberculosis ...					
21. Rickets ...					
22. Deformities, Spinal etc. ...					
23. Infectious or contagious disease ...					
24. Other Diseases or defects ...					
VI. OBSERVATIONS.					

M. O' Signature.....



FALKLAND ISLANDS.

—:O:—

ANNUAL

MEDICAL AND SANITARY REPORT

FOR THE

YEAR ENDED 31ST DECEMBER, 1929.

Published by Command of His Excellency the Governor.

PORT STANLEY:

PRINTED BY THE GOVERNMENT PRINTER, FALKLAND ISLANDS.

1930.

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FALKLAND ISLANDS.

ANNUAL MEDICAL REPORT

FOR THE

YEAR ENDED 31ST DECEMBER, 1929.

I. ADMINISTRATION.

(A) Establishments, vacancies and acting appointments.

MEDICAL STAFF.

- I Principal Medical Officer.
- 1 Medical Officer.
- 1 Dental Surgeon.

NURSING STAFF.

- 1 Matron.
- 1 Nursing Sister.
- 2 Junior Nurses.
- 2 Probationers.

SUBORDINATE MEDICAL AND SANITARY STAFF.

- 1 Sanitary Inspector.
- 1 Clerk.
- 1 Dental Mechanic.

ATTENDANT GARDENER AND DOMESTIC STAFF.

APPOINTMENTS, PROMOTIONS, ETC.

Dr. J. Hope Reford, C.M.G., completed temporary appointment as Colonial Surgeon 30th April, 1929.

Dr. J. Innes Moir assumed appointment as Principal Medical Officer on 4th February, 1929.

Miss M. E. Shaw, Hospital Matron, resigned appointment 16th October, 1929.

Miss M. Cooper appointed Matron on 16th October, 1929.

Miss M. L. Reeve assumed duty as Nursing Sister on 16th October, 1929.

Miss A. Lehen, Junior Nurse, returned from study leave on 16th October, 1929, having obtained the C.M.B. England.

Miss A. O'Sullivan, Junior Nurse, proceeded on study leave 1st May, 1929.

Miss M. Hooley, resigned appointment as Nurse Probationer on 31st January, 1929.

Miss G. Reive appointed Junior Nurse on 1st October, 1929.

Mrs. I. Smith appointed Probationer on 17th September, 1929.

Miss P. H. Bonner appointed Probationer on 1st November, 1929.

Mr. D. J. O'Sullivan resigned appointment as Sanitary Inspector on 16th October, 1929.

Mr. S. H. Hooley temporary appointment as Sanitary Inspector as from 17th October, 1929.

(B) Legislation.

No Ordinances affecting the Public Health were enacted during the year.

Amendments approved by the Governor in Council to the following bye-laws were made by the Board of Health during 1929:-

- (1) Board of Health (East Falkland Island) Slaughterhouse & Inspection of Stock Regulations, 1928.
- (2) Stanley Milk Supply Protection Bye-laws, 1928.
- (3) Extermination of Rats and Mice Bye-laws, 1928.

(C) Financial.

The following table shows the Revenue and Expenditure during the year 1929 in respect of Medical Services of the Colony:-

REVENUE.		£	s.	d.
Hospital fees and sale of medicines ...	...	419	14	3
East Falkland Farmers Medical Contribution ...	...	451	0	0
Total		£870	14	3
EXPENDITURE.		£	s.	d.
*Personal Emoluments ...	...	3294	4	7
Other Charges ...	...	1232	8	2
Total		£4526	12	9

*This includes £360 : 0 : 0 overlapping salaries of Dr. J. Hope Reford and Dr. J. Innes Moir.

II. PUBLIC HEALTH.

(A) General Remarks.

(1) GENERAL DISEASES.

During the year the general health of the people was good. The southern portion of the East Island in the spring-time was afflicted with a mild epidemic of measles. Apart from the usual colds, muscular rheumatism and appendicitis there is nothing extraordinary of note.

Appendicitis. 21 cases of appendicitis occurred during the year, and were all, except one treated medically, operated on with success. Two cases were gangrenous with abscess formation, one appendix contained threadworm, and others showed marked evidence of chronic, old standing inflammation.

The *Dental condition* of the population is improving markedly due to the activities of the Dental Surgeon in treating all the school children, and the camp populace as well as the people of the town of Stanley. The Dental Report is attached (Appendix I).

Government Officials. One invaliding, and no deaths occurred among the officials in residence during the year. Generally their health was good though there were some cases of minor illness. The severe climate, and the feeling of absolute confinement to Port Stanley, owing to the lack of facilities for leaving the town, even for a short period, give rise to neurasthenia, if it may be so described, among officials resident in Stanley. This is rarely

experienced by those who live in the Camps. The leave and passage regulations, and the shortening of the tour cannot fail to alleviate this condition, and provide a more efficient service.

(2) COMMUNICABLE DISEASES.

Tuberculosis. 12 cases came under treatment during the year. 3 were pulmonary in type and two terminated fatally. The localisation of the disease in other cases was in bone, joints, glands and peritoneum. The incidence in Stanley is undoubtedly very high as compared with the camps. The high proportion of bone, joint, glandular, and peritoneal lesions suggests bovine tubercle as playing no small or unimportant part in the origin of these cases.

Bronchial Catarrh, Bronchitis and Broncho-pneumonia. As in the past, in the dark wet winter months, a succession of colds swept over the inhabitants leaving their usual trail of bronchitis and broncho-pneumonia.

Grave Epidemic Diseases. No cases of grave epidemic disease occurred during the year. Small-pox would not now present a so serious menace, as numbers of the community in Stanley have been recently vaccinated. The Camp Medical Officers have rendered valuable aid in vaccination of people in the districts under their charge.

Influenza. No cases of influenza occurred in the Colony in 1929.

Malaria. Malaria and other insect-born diseases are unknown in the Colony.

Scarlatina, Measles, Diphtheria, Whooping Cough, Chicken Pox, etc. On two occasions cases of whooping cough landed in the Islands, but were promptly segregated and no further cases occurred.

Measles. In October, 1929, a case incubating measles landed in Stanley, and proceeded to south of East Island with the result that a mild epidemic of measles occurred there. There were no deaths. Quarantine measures were instituted all over the Islands immediately the outbreak was notified with the result that the rest of the Islands were not affected, with the exception of a few cases on two stations on the West Island and three cases in Port Stanley.

Diphtheria. It is considered that diphtheria might easily be imported, and the results to the community are as much to be dreaded as would those of small-pox. It is difficult to keep in stock a large quantity of fresh antitoxin, and it is not as yet practicable to immunise the community against diphtheria. This very grave problem is having serious attention.

Venereal Disease. Apart from cases from ships calling at the Islands no case of this disease has occurred. In fact venereal disease does not exist among the Islanders.

(B) Vital Statistics.

(1) *General Population.* Practically all the Islanders as well as the Government Officials are Europeans or are of European descent.

The estimated population of the Colony exclusive of the Dependencies, on the 31st of December, 1929, was 2375.

During the year 57 births and 14 deaths are recorded, giving the following rates:-

Population	...	...	...	2375.
Birth Rate per 1000	...	...	...	24.00.
Death Rate per 1000	...	...	...	5.89.
Infantile Mortality Rate per 1000 births	...	...	...	17.5.

Registration of Births, Deaths, and Marriages is compulsory under Ordinance No. 12 of 1853.

(2) *Health of Government Officials.* The general health of the Government Officials was good throughout the year and there was no case of serious illness. One Official, a female was invalided to the United Kingdom soon after her arrival here as a case of border-line melancholia in no way attributable to her service in the Colony. There were no deaths.

III. HYGIENE AND SANITATION.

(1) PREVENTIVE MEASURES.

(a) *Insect borne diseases* are absent. The only insect pest is the bluebottle, and hanging sheds of slaughter houses are screened against its attack and those of other flies. *Alysia Manducator* are being cultivated in the hope of destroying eventually the bluebottle.

(b) *Epidemic diseases.* From time to time people incubating infectious diseases have landed in the Colony, and this, in spite of all precautions with regard to the inspection of persons landing, ships' books, etc., is liable to happen. About 20 years ago diphtheria broke out in the East Island, fortunately, in an isolated camp house and though those affected died, the disease was limited to one household. It can easily be conceived, that, in spite of great vigilance, diphtheria may be introduced again, and in view of the fact that there are no premises for isolation purposes and but a scant supply of antitoxin in the Colony the results would be very serious indeed. Enquiries have been made with regard to immunisation of the populace with toxin-antitoxin, but it is not practicable, as yet, to ship toxin-antitoxin to the Falkland Islands.

During the past six years there have been epidemics of whooping cough, 1924, measles 1925, scarlet fever, influenza and mumps, glandular fever, 1926, and measles again in 1929. When these diseases arrive in the Colony, many persons are affected as there are often long intervals between epidemics. Whooping Cough had not been in the camps for 40 years prior to 1924, and measles, mumps, etc., had not affected the camp districts for a period of upwards of 15 years. Glandular fever prior to 1926 was unknown in the Colony.

Small-pox and Vaccination. Vaccination is compulsory under the Vaccination Ordinance, 1868, and during the year a large proportion of the community both in Stanley and in the camps was vaccinated or re-vaccinated.

(c) *Water borne diseases.* There are none in the Colony.

(d) *Tuberculosis.* Great efforts are being made to prevent the dissemination of this disease. Under a Government Housing Scheme private individuals are rapidly building suitable houses, and bad housing as a contributory factor will soon cease to exist.

The problem of tuberculous cattle is under consideration, and will be dealt with as rapidly as possible.

Health propaganda in the form of broadcast talks, and articles in the local newspaper "Penguin" on tuberculosis and how to keep healthy and fit, has been undertaken for some time, and by this means it is hoped to achieve much.

Provision has been made this year for increased recreational facilities in the form of a new gymnasium, and baths. The benefit of this measure to the populace is thought to be inestimable.

All manner of outdoor and indoor recreations are encouraged, and those responsible persons in authority set a splendid example by themselves taking a strenuous part in the exercises prescribed for the people. Golf, football, hockey, badminton, etc., are indulged in by many persons as well as local traditional sports such as riding, boating, and shooting. All these things cannot fail to improve the physical and mental condition of the people.

(e) *Helminthic Diseases.* With the exception of *Oxyuris* intestinal parasites do not occur. *Oxyuris* is common in children, and has not infrequently been found in the appendix giving rise to the classical symptoms of chronic appendicitis.

(f) *Venereal Disease.* This disease does not occur among the Islanders and measures for the segregation of any case which might occur would be promptly taken.

(2) GENERAL SANITATION.

(a) *Sewage Disposal.* The new houses are all being built with properly constructed drains to take sewage water, but many have to install earth closets as W.C's are still impracticable. Night soil is removed by special carts under control of the Public Works Department. This is not an entirely satisfactory service, and it is hoped with the contemplated extension of the water system, that gradually the E.C's will become replaced by W.C's. The present system is run as efficiently as possible under the circumstances.

(b) *Scavenging.* Ashes and household refuse are stored in ash-bins all of which are not, unfortunately, covered, nor are they emptied with sufficient frequency. The contents accumulate, and finally, when the bins are overflowing, are blown about by the constant winds. It would be of great public benefit if a standard type of metal ash-bin were introduced, and instead of haphazard emptying of ash-bins by the individual some controlled system were introduced.

(c) *Roads and Drainage.* The roads in the town are gradually improving, and in the lower reaches are very good, but on the higher levels, where the new houses are being built, roads do not exist, but are mere mud tracks, often more than knee deep in the winter. Also the drainage of the lower level of the town is of the highest order, but again, where the new houses are on the higher level, the house drains discharge on to the roads, or in to open ditches where all manner of filth remains stagnant. A further extension of roads would be a great benefit to the community, especially when it is considered that the district, where no proper roads or drains exist, is that in which most of the new houses are being erected.

(d) *Water Supply.* The present water supply is wholesome and satisfactory. It is pipe-borne and was introduced in 1927. This also fails to supply the upper levels of the town, and it would be a great boon to the new housing area if this water could be led to it.

(e) *Slaughterhouses and Meat Inspection.* Under the Slaughterhouse and Meat Inspection Regulations, 1928, slaughterhouses are licensed, and these are under the supervision of the Government Veterinary Officer and the Sanitary Inspector. As the present two slaughterhouses are not very satisfactory their owners are contemplating the erection of model slaughterhouses.

(f) *Dairies.* The milk supply of Stanley is extremely unsatisfactory. In truth, nowhere is milk produced in such filthy environment as the Stanley cow-sheds. It is considered that these milk supplies play no small part in local epidemics of sore throat, accompanied by vomiting, diarrhoea and skin rash, and also in the production of tuberculous lesions of bone glandular and peritoneal type. An endeavour is being made to provide the necessary laboratory facilities for the examination of milk samples under the Stanley Milk Supply Protection Byelaws, 1928. It is evident, however, until milk retailers are obliged to construct proper dairies, and milk stores, this evil will continue to the detriment of the public health.

(3) SCHOOL HYGIENE.

There are two schools in Stanley, the Government School with 148 children on the books, and St. Mary's School with 63 children. St. Mary's School is run by the Catholic Church but both schools are undenominational. Systematic, and frequent inspections of the schools, and school children are made by the Medical Officers, and the Colonial Dentist. Careful records of each child are kept on a special form. Appendix II.

The result of these inspections is satisfactory, and on no occasion in 1929 were any serious defects found. It must be kept in mind that the Medical Officers are also the regular Medical attendants of the Stanley families, and so it is very seldom that any serious or even slight childish ailment is not attended to without the necessity of school examination.

The Dental condition of the children is improving, and the Dental Surgeon sets one morning a week apart entirely for children's service. At all inspections the schools were found to be in a clean, well kept, ventilated and satisfactory condition. At the Government School the playground has been covered with cement to the great benefit of the pupils, and an alteration is to be made in the infants department so as to provide more satisfactory cloak-room accommodation.

(4) HOUSING.

The people of Stanley fully realize the need for improved housing with the result that altogether within the last two years 32 houses have been erected. Most of the building has been done by private individuals with the assistance of Government loans on easy terms. It remains to make provision for the housing of indigent, and unfortunate persons who are not able to assist themselves on a model, hygienic, but plain scale.

It may be said with assurance that the housing problem is reaching rapidly a satisfactory solution. It only remains that satisfactory roads, drains and water supply be provided in the areas where these houses are being erected. All houses erected are under the strict supervision of the Board of Health and consequently are well constructed and of a satisfactory type.

(5) DIET IN HEALTH AND DISEASE.

The diet of the people in Stanley is necessarily strictly limited in variety. Mutton is cheap and plentiful, and bread is always obtainable, thus distress for lack of food is rarely in evidence. There the matter ends, however, for variety, unless procurable in tins, there is none. During the past two summers, owing to the constant cold and wet, vegetable crops have been a complete failure. The soil is not suitable for the cultivation of vegetables unless heavily limed, and the plots sheltered from the incessant summer winds which destroy all vegetation. Fish, butter, poultry and vegetables are on the whole scarce, and very difficult to obtain in Stanley though of course, in the camps conditions are better. There are no satisfactory means of varying the diet of children, and also the lime deficiency in the soil is a matter which seriously hinders the proper growth and development of the children.

(6) ANTI-RAT CAMPAIGN.

A continuous warfare against rats in the various town dumps is waged by the Sanitary Inspector. Also systematic rat weeks have been organised and the public have been invited to co-operate. The number of rats has been considerably reduced. Owners and occupiers of premises are obliged under the Extermination of Rats and Mice Bye-laws, 1929, to take measures to exterminate these pests. The broadcast system, and the daily newspaper "Penguin" have been utilised for propaganda purposes, and organisation of rat weeks. Bi-annual rat weeks are proposed in the future.

(7) RECOMMENDATIONS FOR FUTURE WORK.

- (i) Improved drainage, roads and water supply to the new housing areas.
- (ii) Close supervision of dairies and slaughterhouses, and enforcement of the bye-laws.
- (iii) Continuance of the bi-annual rat week.
- (iv) Continuance of close dental supervision of the school children.
- (v) Continuance of health propaganda by means of broadcasting, and publications in the newspaper "Penguin."
- (vi) An improved system of scavenging.

IV. PORT HEALTH WORK AND ADMINISTRATION.

46 vessels with registered tonnage of 76,791 and with crews totalling 2,119 were given pratique during the year. No quarantinable diseases were reported. Again the ease with which any person incubating an infectious disease may land in the Colony is emphasised.

V. MATERNITY AND CHILD WELFARE.

14 maternity cases were treated in the hospital and nine in the district during the year. All cases were brought to successful issue. One case of abortion was also treated in the hospital. The charge for maternity cases in the hospital is two pounds. This cheap rate is a great boon to the working classes, and maternity patients readily apply for admission to hospital. The outpatient clinic provides all the necessary anti and post natal services of a modern maternity and child welfare clinic.

VI. HOSPITAL.

The King Edward Memorial Hospital, first opened in 1914 to receive the wounded from the battle of the Falkland Islands, has two general, one maternity, and two private wards comprising 12 beds, outpatient department and dispensary, operating theatre, office and stores, and quarters for two nurses.

Two outside buildings provide (1) Rock Cottage, accommodation for the Dental Surgeon's Clinic and necessary offices and accommodation for three pensioners. (2) The drug store, and the former clerk's office is in process of being converted into a laboratory. The Clerk is now accommodated in the hospital office.

107 inpatients were treated during the year. Of these 94 were cured, 7 relieved and 6 were not improved. There were no deaths. 40 operations, exclusive of dental and outpatient operations, were performed, and 35 of these were major operations, and in all cases the results were satisfactory. The people are good surgical subjects, and the cold climate lends itself to the healing of wounds without sepsis of any important degree. The number of dental

inpatient operations under general anaesthesia was 24. The efficient administration of anaesthetics was carried out by the Medical Officer Dr. W. B. R. Jones with the exception of a few cases where the anaesthetic was administered by the Colonial Dental Surgeon, Mr. J. M. Coutts, M.M., L.D.S.

During the year the Hospital was reconditioned and its equipment brought up-to-date. During the reconditioning period the staff contrived to keep one or two wards open all the time. All walls, ceilings and passages were lined and painted a pleasing, restful shade of green, and the hospital generally presents a very smart appearance. Also the roof and outside walls were repainted.

The new improvements are:-

- (i) Installation of electric lighting throughout the hospital.
- (ii) Rearrangement of wards and dispensary which permits of more efficient working.
- (iii) Reorganisation of office methods and equipment.
- (iv) Conversion of Clerk's office into a laboratory.

The new equipment procured for the hospital in 1929 comprises a new operating table, trolley for patients, X-Ray apparatus, artificial sunlight lamp, new electric batteries for the theatre main light, and a rectifier for charging them off the main, thus providing the theatre with a light independent of the main supply, and other sundry instruments. For the laboratory an incubator, centrifuge and sundry glassware articles were obtained. A few instruments and additional articles for the laboratory remain to be provided. To sum up, the hospital is now as a modern hospital, where all manner of medical, surgical, maternity and health work is undertaken, should be.

The provision of quarters for the sisters apart from the main hospital building would be a great advantage and would also release more ward space for patients.

Outpatient Department The recorded number of patients treated in the out-patient department was 1173, and the total number of attendances 2347. The increased number of outpatients is due in part to the large proportion of the population vaccinated at the hospital, and to the popularity of the treatment of varicose veins by the injection method.

VII. PRISONS AND ASYLUMS.

The prison was regularly inspected, and found always in a satisfactory condition.

There is accommodation for 15 prisoners, but at no time during the year have more than two persons been incarcerated at once. One prisoner serving a two years' sentence developed congestion of the lungs and was removed to hospital where he recovered, but otherwise the health of the prisoners was good.

There are no asylums in the Colony and no lunatics were under supervision during the year.

VIII. METEOROLOGY.

The Falkland Islands lie in the South Atlantic 300 miles East of the Straits of Magellan in Latitude 51°43 s. and Longitude 57°51 w. (Stanley.)

The climate of the Falkland Islands has often been likened to that of Scotland, but actually there is little resemblance. The winter of 1929 was comparatively mild, but the summer one of the worst known. The constant cold winds blowing with a mean force of 4.1 renders life in these Islands very trying. Wide ranges of temperature and wind force are met with during the course of every day, and the meteorological records do not give a true index of the climate.

The meteorological returns are appended. (Table II.) The mean temperature at Stanley was 41.5° in 1929, and 48.8° in 1928, the maximum was 65° (January and February) in 1929, and 66° in 1928, and the minimum 17° (July) in 1929, and 17° in 1928. The total rainfall was 33.84 inches in 1929, and 21.92 inches in 1928, 222 days being wet, and a clear sky recorded on 34 days. The mean force of the wind was 4.1 and 8 calm days were recorded. The prevailing winds were W. to N.W.

IX. SCIENTIFIC.

The new Phillips Metalix portable X-Ray has proved a great success, and many excellent results have been obtained, and this apparatus renders invaluable assistance in the diagnosis of tuberculous lesions of bone. Gradually a laboratory on a small scale is being established, and it is hoped that the laboratory will be of great assistance in the control of milk supplies, and also routine clinical pathological examinations will be carried out there.

The chemical analysis of Stanley water is shown in Appendix III.

B. DEPENDENCIES.

The Dependencies include South Georgia, South Shetlands and South Orkney Islands. On these Islands the great whaling fleet has its bases. The population is a floating one of chiefly Norwegian nationality, and is composed of whalers and factory workers. The population of South Georgia during the fishing season is estimated at 1,000. There are also in residence a Magistrate and a few other permanent British Officials. The whaling fleet provides its own Medical Officers and maintains its own drugs and equipment. There is no Medical staff or dispensary under the control of the Government.

The climate is rigorous, but health conditions are good.

There are no detailed Medical or Sanitary reports for that area.

J. INNES MOIR, M.B., Ch.B. D.P.H.

Principal Medical Officer.

STANLEY, FALKLAND ISLANDS,
14TH APRIL, 1930

M.P. 56/30.

T A B L E I .
M E D I C A L A N D S U B O R D I N A T E S T A F F .

OFFICE.				NAME AND QUALIFICATIONS.	REMARKS.
					A. MEDICAL STAFF.
Principal Medical Officer	...	...	...	J. Innes Moir, M.B., Ch.B., D.P.H.	Appointed 4/2/29.
Medical Officer	...	...	...	W. B. R. Jones, M.R.C.S., L.R.C.P.	
					B. NURSING STAFF.
Matron	...	...	...	Miss M. E. Shaw, C.M.B.	Resigned 16/10/29.
				Miss M. Cooper, C.M.B.	Promoted 16/10/29.
Nursing Sister	...	...	...	Miss M. L. Reeve, C.M.B.	Arrived on first ap- pointment 16/10/29.
Junior Nurses	...	...	...	Miss A. O'Sullivan	On leave from 1/5/29.
				Miss G. Reive	Promoted 1/10/29.
Probationers	...	...	...	Mrs. I. Smith	Appointed 17/9/29.
				Miss P. H. Bonner	Appointed 1/11/29.
					C. DENTAL STAFF.
Dental Surgeon	...	...	...	J. M. Coutts, M.M., L.D.S.	
Dental Mechanic	...	...	...	J. Turner	
					D. SANITARY STAFF.
Sanitary Inspector	...	...	...	S. H. Hooley	Chief Constable, appointed 17/10/29.
					E. CLERICAL STAFF.
Clerk	...	...	...	F. O'Sullivan	

T A B L E I I .
M e t e o r o l o g i c a l R e t u r n s f o r t h e y e a r 1 9 2 9 .

S T A N L E Y .

Latitude 51° 43' 45" S. Longitude 57° 51' 25" W.

MONTH.	TEMPERATURE.			RAINFALL.	WINDS.	
	Maximum.	Minimum.	Mean.	Amount in inches.	General Direction.	Mean Force.
January ...	65°F.	34°F.	47.4°F.	3.87	W.	3.4
February ...	64	32	43.5	2.80	W.S.W.	5.1
March ...	65	31	45.7	2.76	W.	4.1
April ...	58	29	44.7	3.15	N.W.	4.3
May ...	52	25	39.8	2.01	W.	3.6
June ...	48	25	37.1	1.93	W.	4.5
July ...	50	23	37.2	1.37	W.	4.4
August ...	49	17	33.6	1.99	S.W.	3.7
September ...	52	27	39.1	2.02	W.	4.3
October ...	56	28	42.1	3.01	W.	4.5
November ...	64	28	44.1	3.09	W.	4.2
December ...	64	29	43.9	5.84	W.	4.1
	65	17	41.5	33.84	—	4.1

TABLE III.
RETURN OF IN-PATIENTS TREATED AT THE HOSPITAL
DURING 1929.

SURGICAL OPERATIONS.					MALES.	FEMALES.
Tuberculous Adenitis	...	...	...	...	1	1
Appendisectomy	...	...	...	...	6	14
Tuberculous Xyphisterum	...	...	...	...	1	—
Radical Cure Inguinal Hernia	...	...	...	...	2	—
Empyema Antrum of Highmore	...	...	...	...	—	1
Tonsillectomy	...	...	...	...	1	1
Amputation of Finger	...	...	...	...	2	1
Circumcision	...	...	...	...	1	—
Cellulitis Neck	...	...	...	...	1	—
Calculus of Ranula	...	...	...	...	1	—
Tuberculous sinus excision	...	...	...	...	—	1
Lacerated wound leg	...	...	...	...	—	1
Polydactylism	...	...	...	...	—	1
Amputation arm for Tuberculosis	...	...	...	...	1	—
Radical cure Ventral Hernia	...	...	...	...	1	—
Tubercular osteomyelitis femur	...	...	...	...	1	—
Total					19	21
SURGICAL CASES.						
Fracture of Fibula	...	...	...	...	1	—
Fracture of Humerus	...	...	...	...	1	—
Tuberculosis of knee joint	...	...	...	...	1	—
Fracture of ribs	...	...	...	...	1	—
Varicose veins	...	...	...	...	1	—
					5	
MATERNITY AND GYNEACOLOGICAL.						
Maternity	...	...	...	...	...	14
Abortion	...	...	...	...	...	1
Carcinoma Uterus	...	...	...	...	...	1
						16
MEDICAL.						
Hepatitis	...	...	...	...	1	—
Morbus Cordis	...	...	...	...	1	—
Haemorrhoids	...	...	...	...	1	—
Epididymitis	...	...	...	...	1	—
Gastritis	...	...	...	...	—	1
Mitral Incompetence & Ascites	...	...	...	...	1	—
Foreign body in Oesophagus	...	...	...	...	—	1
Duodernal Ulcer	...	...	...	...	1	1
Septic Mouth	...	...	...	...	—	1
Tuberculous Peritonitis	...	...	...	...	—	1
Mitral Incompetence & Congestion of lungs	...	...	...	...	1	—
Pleurisy with Effusion	...	...	...	...	1	—
Carried Forward					8	5

<i>Brought Forward</i>	...	...	8	5
Asthma & Alcoholism	...	...	1	—
Observation Pertussis	...	...	1	2
Septic Bubo	...	...	1	—
Tuberculosis of lungs & larynx	...	...	1	—
Appendicitis	...	...	—	1
Musculo Spinal Paralysis	...	...	1	—
Shock	...	...	1	—
Total			14	8
Dental	...	...	24	
Total Admissions	...	...	107	

APPENDIX I.

Colonial Dental Surgery,
Stanley,
27th February, 1930.

Dental Report for 1929.

Sir,

This year shows a decided improvement in the Dental condition of the Colony.

The children both in Stanley and in the Camps are now taking an interest in their mouths, and the number of attendances are 50% better than last year. There are still some children in outlying islands and stations I have been unable to visit.

The following is the work done for children:-

	Attendances.	Extractions.		Fillings.	Other Operations.	Total.
		Temporary.	Permanent.			
Government School	275	212	107	126	48	493
R. C. School	49	72	21	51	12	156
Others	101	131	34	45	21	231
	425	415	162	222	81	880

I toured the West Falklands in September and visited the following stations:-

Hill Cove, Chartres, Saunders Island, Pebble Island, Port Howard, Roy Cove.

The following is the work done for Government servants in the Colony:-

Attendances.	Extractions.	Fillings.	Other Operations.	Total.
430	389	520	135	1044

J. M. COURTTS.

Dental Surgeon.

APPENDIX II.

SCHOOL MEDICAL INSPECTION.

I. Name..... Date of Birth.....

II. Personal History

(a) Previous illnesses of child.

(b) Family Medical History. (if exceptional)

INSPECTION.	I.	II.	III.	IV.	V.
1. Date of Inspection					
2. Standard & regularity of attendance					
3. Age of child					
4. Vaccination					
III. GENERAL CONDITIONS.					
5. Height					
6. Weight					
7. Nutrition & development					
8. Cleanliness & clothing					
IV. SPECIAL CONDITIONS.					
9. Teeth					
10. Nose & throat Tonsils, Adenoids, Glands					
11. External eye Disease					
12. Vision					
13. Ear Disease					
14. Hearing					
15. Speech					
16. Mental Conditions					
V. DISEASE & DEFORMITY.					
17. Heart & Circulation					
18. Lungs					
19. Nervous System					
20. Tuberculosis					
21. Rickets					
22. Deformities, Spinal etc.					
23. Infectious or contagious disease					
24. Other Diseases or defects					
VI. OBSERVATIONS.					

M. O's Signature.....

APPENDIX III.

ANALYSIS OF STANLEY WATER.

*From:- Messrs Riley Harbord & Lane.**To:- The Crown Agents for the Colonies.**Date:- 12th January, 1925.*

PORT STANLEY. FALKLAND ISLANDS.

The following are the results of our analysis of the sample of water received from you on the 31st December marked "Sample of Water from Mount William Stone Run".

Total Solids at 240°F	Grains per gallon
	10.1
" " after ignition	6.4

ANALYSIS OF SOLIDS.

Silica	0.19		
Oxide of iron & alumina	0.32		
Lime	0.48	Equivalent to	Sodium Chloride 4.35
Magnesia	0.52		Potassium Sulphate 0.39
Sulphuric Acid	1.66		Calcium Sulphate 1.17
Chlorine	3.21		Magnesium " 0.60
Sodium	1.71		Magnesium Chloride 0.75
Potash	0.20		

Free Ammonia	0.0182
Albuminoid Ammonia	0.0266

Equivalent to

Free Ammonia parts per million or milligrams per litre	0.26
Albuminoid Ammonia " " " " " "	0.48
Degree of Hardness	2½

This is a very pure sample of water, the solid matter in solution being very low. The undesirable feature is the quantity of ammonia which indicates contamination by organic matter. It is impossible to indicate the derivation of this organic matter without knowing something of the conditions under which it had been collected and stored.

NOTE. The sample of water referred to was sent to England before the gathering ground was fenced off and before any filtering medium was used. The organic contamination indicated by the high Ammonia content was found to be due to carcasses of dead sheep, an accident which has been precluded from repetition through fencing. Since then a sample has been analysed in Capetown through the courtesy of the scientists of the R.R.S. "Discovery" and the water was reported to be of a very pure quality.