[Report 1957] / Medical Officer of Health, County of Zetland (Shetland Islands).

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COUNTY OF ZETLAND

ANNUAL REPORT

of the

MEDICAL OFFICER OF HEALTH

1957

Public Health Office,

Brentham Place,

LERWICK, August, 1958.

To

The Department of Health for Scotland
The County Council of Zetland
The Town Council of Lerwick
The Education Committee of Zetland County Council

Ladies and Gentlemen,

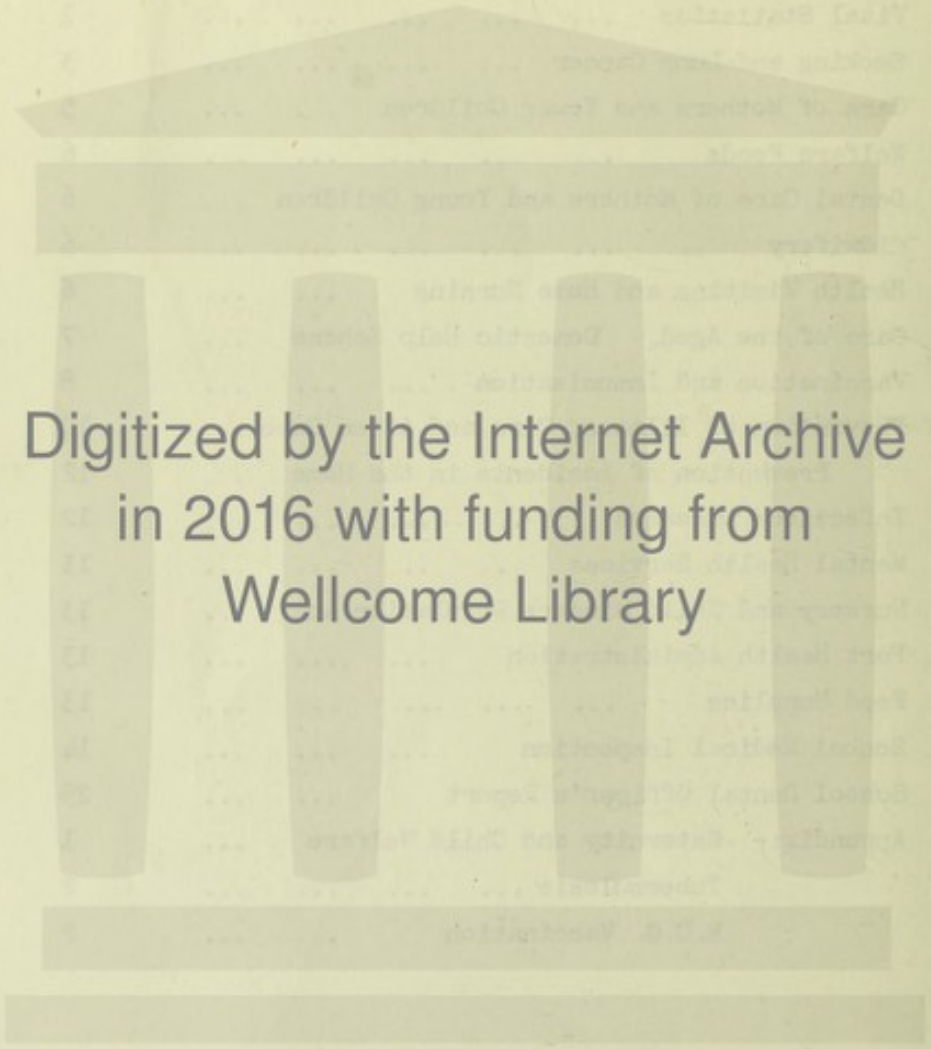
I beg to submit my Annual Report on the Public Health Administration of the County for the year 1957.

I am,
Your obedient Servant,

S.A.B. Black,

Medical Officer of Health.

CONTENTS



VITAL STATISTICS

The following is a summary of the principal statistics for the year 1957. Figures for the years 1955 and 1956 are given for comparison. The figures given are corrected for transfers.

	Zetland			Scotland
	1955	1956	1957	
Population (estimated)	18,656	18,582	18,436	
Crude death rate per 1,000 population	15.0	16.5	16.7	
Death rate adjusted for age and sex distribution	9.8	10.8	10.9	11.9
Live births (including illegitimate)	294	257	270	
Birth rate (per 1,000 population)	15.8	13.8	14.6	19.0
Illegitimate birth rate (per 100 births)	3.1	2.7	4.1	4.1
Infant mortality rate	14	39	41	29
Deaths from tuberculosis (all forms)	5	1	1	
Death rate from tuberculosis (all forms)	0.27	0.05	0.05	0.14
Deaths from pulmonary tuberculosis	3	-	1	
Death rate from pulmonary tuberculosis	0.16	-	0.05	0.13
Deaths from principal epidemic diseases	6	2	4	
Death rate (per 1,000 population) from principal epidemic diseases	0.32	0.11	0.22	0.14

The table on page 1 gives a summary of the principal statistics for the past three years and the rates for the whole country for comparison.

The Registrar General's estimate of the population of the county in the middle of the year 1957 shows a decrease of 146 on the estimated figure for the previous year, and a decrease of 916 in the six years that have elapsed since the census of 1951.

Since 1948 the number of deaths each year have exceeded the number of births. In 1957 there were 308 deaths and 270 births.

There were 13 more births than in 1956, but eleven less than the average number for the previous five years (281).

The drop in population is not only being caused by emigration but also by the fact that not enough people are being born to maintain the population even if there was no such thing as emigration.

The Zetland Executive Council's figures for the number of persons on the country doctors' lists give us a fairly accurate estimate of the drop in the population in various practice areas.

The table below shows the number of persons on the lists of country doctors in six areas compared with the numbers in April of the census year 1951.

	Number on Doctors Lists 1.4.51	Number on Doctors Lists 1.4.58	Decrease
Unst	1,034	959	80
Yell & Fetlar	1,739	1,499	240
Whalsay	1,038	936	102
Northmavine	1,084	925	159
Delting	1,440	1,311	129
Walls	991	875	116
Bixter	1,087	954	133

Other information obtained by studying the transfer of 'doctors cards' shows that emigration from the county to other parts of Britain exceeded immigration to the county from other parts of Britain by more than 100 during the year ending March, 1958. (This figure does not take into account the movements of members of H.M. Forces).

In addition the names of thirty persons who had emigrated overseas were withdrawn from doctors lists.

The table on the following page shows in order of frequency the most common ascribed causes of death:-

Cause/

Cause	Number	Percentage of Total Deaths
Arteriosclerotic and degenerative heart disease	91	29.5
Vascular lesions affecting central nervous system	69	22.4
Malignant neoplasms	42	14.9
Other diseases of the nervous system	11	3.6
Pneumonia (except of newborn)	9	2.9
Other violence	9	2.9

(By 'other violence' the Registrar General means deaths from accidents other than road accidents and suicides).

The table is similar to the equivalent table in the reports for the last few years.

The forty-two deaths from malignant neoplasms included only one death from cancer of the lung; the average for the previous five years was five deaths a year from this disease.

The Department of Health has asked Medical Officers of Health to comment in their reports on any arrangements made to publicise the connection between smoking and cancer of the lung

During 1957 the County Council discussed this subject and the necessity for persuading adolescents to remain non-smokers. A motion was made that in order to set an example members should refrain from smoking at the County Council's meetings. This was debated at length and was only carried by the casting vote of the Chairman. The opposition aroused by this suggestion of a mild restriction in the smoking liberties of members probably counteracted the good that was intended by the motion.

The Medical Research Council has shown that there is good evidence that heavy and prolonged smoking of cigarettes is associated with an increased risk of acquiring cancer of the lung. The British Medical Association has recently issued a publication* supporting the Medical Research Council's report and answering the various objections which are raised whenever this matter is discussed.

Bronchitis, aggravated by smoking, causes much loss of work throughout the country.

The task of persuading young people not to start the habit of smoking is a difficult one. People are usually reluctant to believe what they do not want to believe. Young people in any case are unlikely to be deterred by the risk of acquiring a serious illness at some date twenty to thirty years ahead in the future. The yearly expenditure on advertising tobacco and smokers' requisites is over 2 million pounds and is twenty times as great as the entire expenditure on all non-commercial health publicity.ø

In last year's report the suggestion was made that we could make a start locally by the public agreeing to give up smoking in buses, cinemas, restaurants, and foodshops. This could never be a matter for legislation or enforcement; it is one for the public conscience to settle.

Most/

* Smoking - The Facts, by Harvey Graham, M.D., published by B.M.A.

ø Roy. Soc. of Health Journal 1958, Jan. - Feb. No. 1. 8-17.

Most of the advances in elementary sanitation which the public now accept and demand started by being considered eccentric ideas, and got the same unpopular reception at the start.

In time the public will object to seeing a layer of smoke exhaled from the lungs of others settling over the table in a restaurant or over the food in a baker's shop.

In some countries no smoking in cinemas is the accepted rule. Those who have experienced the pleasures of cinema-going under these conditions know how much the entertainment is improved by the smoke-free atmosphere.

Any campaign designed to scare people is not advisable. In the meantime the Health Department can only make the facts available, try to use cautiously such methods of health education as are at our disposal, and endeavour to avoid antagonising people while doing so.

It is not generally realised that cancer of the lung in Britain in one year now kills more people than tuberculosis and road accidents added together.

The following table shows the number of deaths at various ages from all causes.

1957

Number of Deaths

	Males.	Females.	Total
All ages	140	168	308
- 1	7	4	11
1 - 4	-	1	1
5 - 9	1	-	1
10 - 14	-	-	-
15 - 24	1	1	2
25 - 34	4	1	5
35 - 44	1	4	5
45 - 54	10	6	16
55 - 64	18	17	35
65 - 74	28	40	68
75 - 84	55	62	117
85 and over	15	32	47

The table is very like the equivalent table in last year's report.

CARE OF MOTHERS AND YOUNG CHILDREN/

CARE OF MOTHERS AND YOUNG CHILDREN

The table below shows the figures in recent years for stillbirths, neo-natal deaths and all deaths of infants under one year of age. (By "neo-natal" deaths are meant the deaths of infants during the first month after birth - most infant deaths occur within the first few days after birth, and are caused by birth injuries, malformations, immaturity or other causes, the prevention of which is difficult).

	1952	1953	1954	1955	1956	1957
Births (corrected for transfers)	281	300	273	294	257	270
Total deaths under 1 year	7	1	12	4	10	11
Neo-natal deaths	6	1	11	4	8	7
Infant mortality rate	25	3	44	14	39	41
Stillbirths	8	9	11	4	10	4

As we are dealing with a small total number of births our infant mortality rate can show big variations from year to year. If one takes a five year view of the situation one can see that in the period 1953 - 1957 there have been 1,394 births and 38 deaths of infants, which would give a rate of 27.

This rate has shown little sign of getting any lower during the past two decades - (from 1940 to 1945 the rate varied between 29 and 33). The infant mortality rate for Scotland in 1957 was 29.

The report for 1955 contained a graph showing that twenty five years ago Shetland's infant mortality rate was less than half the rate for Scotland and for the big cities of Glasgow and Aberdeen. The graph showed the considerable improvement in the course of the last twenty years in the figures for the cities compared with the slight improvement in our own figures.

We now have much the same infant mortality rate as the cities and the rest of the country. Any natural advantages which we once possessed have apparently been matched by the efficiency with which public health authorities in the south have overcome the disadvantages for infants of city life.

An interesting diagram in the report of the Medical Officer of Health of Aberdeen shows that industrial cities such as Sheffield, Liverpool, Sunderland and several others now have lower infant mortality rates than our (five year) figure of 27.

In the last five years all but seven of the thirty-eight infant deaths have been neo-natal deaths.

There were four stillbirths during 1957.

The Child Welfare Clinic at Hillhead was attended by 319 different infants who made a total of 1,223 attendances.

In the whole county, including the town of Lerwick, 5,323 visits were made by District Nurses and by the Health Visitor to 1,342 children of pre-school age.

WELFARE FOODS/

WELFARE FOODS

The Local Authority's office situated in the Welfare Centre at Hillhead continues to issue vitamin preparations and to post National Dried Milk to country districts.

In country districts the district nurses help in the distribution of vitamin preparations to mothers.

DENTAL CARE OF MOTHERS AND YOUNG CHILDREN

Local authorities are responsible for providing dental care for nursing and expectant mothers and for children of pre-school age. The shortage of dental officers throughout the country makes it difficult to give an adequate service, but there has been an increase in the numbers of expectant mothers and nursing mothers treated. The table below gives figures for work among such patients by the School Dental Officer:-

	No. inspected.	No. requiring treatment.	No. accepting treatment.	No. actually treated.
Expectant Mothers	95	86	86	68
Nursing Mothers	20	18	18	18
Pre-school Children	89	85	85	51

MIDWIFERY

There were 217 confinements in hospitals during the year and 51 domiciliary births. The proportion of hospital confinements (77 per cent) is almost exactly the same as in the past three years.

Twenty midwives notified their intention to practise midwifery in the county.

Ten of our District-Nurse-Midwives are qualified to administer gas and oxygen analgesia.

There were no cases of puerperal pyrexia or puerperal fever notified during the year.

HEALTH VISITING AND HOME NURSING

In recent reports the public health duties of district nurse-health visitors have been described to show how dependent we are on the nursing staff if we are to carry out our functions as a health authority.

Further extension of public health work and health education largely depends on the availability of district nurses and health visitors with adequate training for the responsibilities of this work. There is a shortage of nurses trained for such posts throughout the country. We cannot, therefore, plan much expansion of our work at present, as it continues to be difficult to recruit and retain our staff at its present strength.

We are fortunate that more than half of our staff of twenty one nurses have been with us for several years. During 1957 four new nurses were recruited to the permanent staff and three nurses left the county.

The Public Health Committee have always recognised the importance of comfortable houses and good working conditions for the nursing staff.

During the year new nurses' houses were put in use for the first time at Brae and at Unst, and the nurse's house in Fair Isle was enlarged and improved.

Since the County Council took over the Nursing Service in 1948 new houses have been made available for nurses in eight areas (Unst, Urafirth, Brae/

Brae, Bridge of Walls, Scalloway, Lerwick, Bressay and Dunrossness), and other nurses' houses have undergone various repairs and improvements. Generous help has been given by some of the former Nursing Associations in equipping nurses' houses.

During 1957 two new cars were purchased for the nursing service which makes a total of twenty seven new cars bought since July, 1948 - the fleet of twelve cars having been replaced twice within the past nine years.

CARE OF THE AGED. DOMESTIC HELP SCHEME.

In previous reports it has been explained that the proportion of old persons in the county was higher in Shetland than anywhere else in Scotland and nearly twice as high as the figure for Scotland as a whole. In country areas of the county one person in every five is of pensionable age, and over 200 of these old people in the country districts are living alone.

The problem of looking after these old people during the last few weeks of their lives is in itself difficult, but obviously we owe them more than merely care during their terminal illness.

The willing help of good neighbours and relatives continues to be the means by which most very old persons are enabled to end their days in their own homes.

In the various hospitals and in Viewforth Home there are a total of about eighty institutional beds of different kinds which are kept filled by old people. Any further extension of hospital accommodation would leave us with too few beds for treatment of the acutely ill.

Fortunately in this county the same persons (both lay and medical) are responsible for carrying out the Hospital Board's duties and the Local Authority's duties, so we are able to use the institutional beds to the best advantage without the need for any liaison committees to settle disputes between different sections of the health service. This fact is a great help in handling our difficulties in caring for the aged.

Medical practitioners in this county have had more than the usual experience of geriatric work and fully appreciate the size of the problem of caring for our old persons. They are experienced in choosing the most suitable cases for the limited number of institutional beds available.

Only a small proportion of the 2,000 people over seventy years of age in the county will ever be cared for in any institution, and any extension in our services for the aged will have to be improvements in the domiciliary services.

The "home help" scheme continues to be most useful. During the year twenty three different cases were helped by the domestic help scheme, and the largest number receiving help at any one time was eleven. The numbers may be small but these cases nearly all presented problems which would have been difficult to solve without our limited home help scheme.

For the domestic help scheme our welfare officers usually recruit temporarily a person in the area to help with any particularly difficult case. One whole time domestic help is employed in Lerwick.

Lerwick Old People's Welfare Committee continues to do good work. Loneliness has been shown to be one of the factors leading to deterioration in the mental and physical condition of old people. It is important to keep them in touch with the community they live among. Members of voluntary societies and of church guilds do good work by merely visiting old persons regularly and overcoming some of the loneliness that leads to mental/

mental deterioration. In many parts of the county such activities could be extended.

We should be able to manage despite the size of the task so long as the public continue to help, and do not decide that the problem of helping the old is solely the duty of some public body.

I think we could cautiously claim that the standard of care given to the elderly has improved slightly, despite the increasing nature of the problem in this county.

VACCINATION and IMMUNISATION

Vaccination against Smallpox

The proportion of children who are vaccinated in infancy against smallpox is probably lower in this county than anywhere in Scotland. However, the numbers have shown some improvement in the last few years. In 1957 thirty children were known to have been vaccinated; some others were no doubt vaccinated without the Public Health Office having any record of the fact.

It is doubtful if as many as one child in every six in this county is vaccinated against smallpox during infancy. Vaccination in infancy is advisable as it makes subsequent re-vaccination against smallpox safer and easier.

Diphtheria Immunisation

Practitioners have held immunising sessions at country schools and the Medical Officer of Health arranges immunising sessions at the Lerwick schools and at the Welfare Clinic. There has been a drop in the numbers immunised against diphtheria. This has not been due to any reluctance on the part of parents, but is the result of the efforts made to meet the demand for immunisation against poliomyelitis.

There has been no diphtheria in the county for the past twelve years.

The numbers immunised are shown in the table below:-

	Primary Immunisation.	Re-inforcing Doses
By practitioners	190	160
By Medical Officer of Health	80	-
	270	160

Immunisation against Whooping Cough

The County Council in August, 1957, extended their scheme under section 26 of the National Health Services (Scotland) Act, 1947, so as to include provision of immunisation against whooping cough. Combined antigens are not yet supplied by the Local Authority; in the meantime, in accordance with the Department's advice (in Circular 51/1957) practitioners are being supplied with a plain whooping cough vaccine. The use of combined diphtheria and whooping cough antigens under the County Council's scheme is under consideration.

Poliomyelitis Vaccine

During the period 1st December, 1956 to end of 1957, 254 children were given two injections of poliomyelitis vaccine.

This work has progressed at a better pace since the end of 1957, and/

and we hope to be able to complete the work as more vaccine becomes available.

The programme of immunisation of children against infectious diseases is now becoming rather formidable. For the interest of parents the table below shows a possible way of fitting in the full programme. There would be no great disadvantage (in this county) in running through the programme at a slightly older age, nor is it essential to follow the order given, but this scheme is the one our District Nurse-Health Visitors are asked to advise.

A Possible Programme for Immunisation in Childhood.

Age.		Booster Dose.
2 months	1st dose Pertussis (whooping cough) vaccine.	2 years old.
3 months	2nd dose Pertussis vaccine	
4 months	3rd dose Pertussis vaccine	
4 months or 5 months	Convenient time for Smallpox vaccination, or give it any time in the first 4 years of life	
6 months	1st dose Poliomyelitis vaccine.	Booster dose 1 year later.
7 months	2nd dose Poliomyelitis vaccine.	
8 months	1st dose Diphtheria prophylactic	Booster dose on going to school at 5 or 6 years old.
9 months	2nd dose Diphtheria prophylactic (The Diphtheria and Pertussis vaccine can be given together as a combined injection usually with protective inoculation against tetanus as well).	
13 years to 15 years.	B.C.G. vaccine (will be given at school)	

PREVENTION OF ILLNESS, CARE AND AFTER CARE/

PREVENTION OF ILLNESS, CARE AND AFTER CARE

Tuberculosis.

There was one death from pulmonary tuberculosis during the year, and no deaths from other forms of tuberculosis.

The table below shows the average number of notifications and deaths each year during five year periods:-

	NOTIFICATIONS			DEATHS		
Year	Pulmonary.	Non-Pulmonary.	Total.	Pulmonary.	Non-Pulmonary.	Total.
1931-35 (Average)	31	30	61	22	11	33
1936-40 (Average)	27	17	44	12	8	20
1941-45 (Average)	31	10	41	13	4	17
1946-50 (Average)	22	8	30	10	1	11
1951-55 (Average)	12	5	17	3	2	5

The table below shows the numbers of notifications and deaths for each of the last five years:-

	NOTIFICATIONS			DEATHS		
Year.	Pulmonary.	Non-Pulmonary.	Total.	Pulmonary.	Non-Pulmonary.	Total.
1953	8	4	12	2	1	3
1954	8	10	18	2	1	3
1955	11	3	14	3	2	5
1956	5	1	6	-	1	1
1957	9	7	16	1	-	1

In the past five years there have been thirteen deaths in this county from tuberculosis; in the five years just before the war there were over 100 deaths.

There have been 66 new cases notified in the past five years· in the five years before the war there were over 200 notifications (despite the fact that at that time the methods of detecting new cases were less effective). It is encouraging that this disease is on the decline throughout the country, but this is no reason for slacking our efforts to reduce the incidence still further.

We still encounter new cases of tuberculosis in young people who have never left the county and therefore must have acquired their infection from some source in Shetland. There were three such young women among the nine pulmonary cases notified in 1957.

Treatment of the disease has become more effective in recent years, and notification of tuberculosis is more complete. For these reasons the mortality figures and the numbers of notifications are no longer so useful as an index of change in the prevalence of the disease in a community. Tuberculin skin tests are better for this purpose.

During the school year 1952-53 two thousand school children of all ages (72% of the school population) were given tuberculin skin tests. It was found that only eleven per cent of school children aged fourteen years were reactors to the test. This is a far lower figure than was at that time usual in such surveys, and was evidence that there was unlikely to be many reservoirs of undetected tuberculosis in the county; however, the proportion/

proportion of non-reactors does not seem to have changed much since then. In recent years approximately 80 per cent of all children of 13 and 14 years of age have been given intradermal tests (P.P.D. - 10.I.T.U) and the negative reactors have been offered protection with B.C.G. vaccine. The table below shows the proportion of negative reactors each year:-

	Children 13-14 years Tuberculin Tested.	Negative Reactors.	Percentage Negative.	Percentage School Leavers Negative in Scotland.
1954	319	282	88	63
1955	186	175	94	68
1956	235	219	93	72
1957	220	202	92	-

The table shows that nine out of ten children in this county leave school without having the chance to acquire any naturally developed resistance to the disease. For this reason it is important that these young adolescents should be protected by B.C.G. vaccine before they go south for technical training, national service, or employment.

During 1957 200 school children were given B.C.G. vaccine.

Under the conditions existing in this county mass X-ray examination of the population would be far less rewarding than it is in the industrial areas further south. Our best means of seeking out any unknown foci of infection are by examining contacts of known cases and by making full use of the chest clinic to detect any possible new cases.

The Senior Tuberculosis Consultant of the North-Eastern Regional Hospital Board visits the county to advise on the treatment of patients.

The Medical Officer of Health acts as tuberculosis physician for the county.

The chest clinic at the Sanatorium was attended by 437 different patients during the year, and 484 out-patient chest X-ray plates were made.

District Nurses during 1957 made a total of 435 visits to 109 persons on the tuberculosis register.

(Other information about tuberculosis is given on page 2 of the Appendix).

Chiropody

The County Branch of the British Red Cross Society continues to run a Chiropody Scheme for old age pensioners.

A visiting Chiropodist holds sessions under this scheme in Viewforth Home and in the Brevik Hospital, and also treats patients at the Red Cross Chiropody Clinic in Mounthooly Street.

The Chiropodist's services are only available for a few days every two months, but the scheme is becoming increasingly popular among old people. Unfortunately it is not possible to extend the scheme to country areas.

Health Education

District Nurses have taken the opportunity to give lectures and talks on matters of health to women's societies in their areas. The Public Health Office keeps a stock of film strips to issue for this purpose. Pamphlets are issued to parents explaining the need for B.C.G. vaccine for school leavers. Pamphlets are also used by the nurses in the course of their child welfare work.

Informal conversation by the patient's practitioner or by a nurse known to the household is found to be far more effective than any other methods of health instruction. The various pamphlets and posters issued by the societies interested in health education can at times be misunderstood by the public in this county. Care must be taken in deciding which pamphlets are likely to be helpful.

Prevention of Accidents in the Home./

Prevention of Accidents in the Home.

During the year a display of over forty large posters on the subject of 'home safety' was acquired for the use of the nurses who get an opportunity of addressing meetings of parents, and this material has been in use.

Accident prevention pamphlets are also issued to nurses for distribution.

Accidents in the home caused seven deaths in the county during the year. The very old and children at the 'toddler' stage are the age groups who suffer most risk from home accidents.

(The education of the public on the dangers of excessive tobacco smoking has been discussed on page 3).

INFECTIOUS DISEASES

The table below shows the number of cases of notifiable infectious disease (excluding tuberculosis) in the county during 1957.

Disease	At All ages	-1	1-	5-	15-	25-	45-	Received hospital treatment.
Lerwick Burgh								
Salmonella Gastro-Enteritis	84	2	6	16	9	20	31	1
County								
Cerebro-Spinal Fever	1	1	-	-	-	-	-	1
Pneumonia, Acute Influenzal	5	-	-	-	-	-	5	-
Salmonella Gastro-Enteritis	25	2	7	1	2	5	8	-
Scarlet Fever	1	-	-	1	-	-	-	-

A sudden outbreak of gastro-enteritis occurred in Lerwick and Bressay during the last half of October.

Milk from one dairy farm was the vehicle of infection and it was probable that the milk sold to the public on two or possibly three days (October 16th - 18th) was infected. The organism responsible was Salmonella typhi-murium.

By the time cases of gastro-enteritis had been recognised and reported (October 21st) this milk supply was no longer infected and subsequent tests confirmed that the infecting cause had been removed.

During the weekend of October 19th to 21st 76 cases of gastro-enteritis were notified. In the next four days there were 15 further cases among home contacts of the original cases, and in the course of the next two weeks a further 13 cases occurred among other household contacts. Two elderly patients died.

At the end of November and in the beginning of December three sporadic cases of Salmonella infection occurred in Scalloway. No direct connection could be discovered between these cases and the Lerwick outbreak which had occurred five weeks earlier.

The Public Health Committee has already obtained a more detailed report of the investigations made and precautions taken at the time of this outbreak.

Certain/

Certain of the dairy workers were found to be suffering from the infection and one dairy cow recently bought from the south died of the infection. The veterinary authorities, however, consider that this animal acquired its infection in Shetland and was not the source from which the organism was introduced to the farm. We were unable to discover how the Salmonella infection originally came to this dairy.

Influenza

At the time when this milk borne epidemic of gastro-enteritis was present in Lerwick the influenza epidemic which had been widespread further south in Scotland was appearing in Shetland.

During the last half of October and for the next three months cases of influenza occurred, but fortunately though there were many cases they were spread over a number of weeks so that at no time was the normal life of the community unduly hampered. There were very few cases among the hospital and local authority nursing staff who had been protected with influenza vaccine. Five cases of influenzal pneumonia were notified and there were three deaths from influenza in persons over 75 years of age.

The table below shows, for the last four months of each year, the total monthly number of new claims for sickness benefits received by the Ministry of Pensions and National Insurance in recent years. It can be seen from the table that influenza caused the total for November, 1957, to be about three times the number recorded for that month in previous years.

Monthly Total - New Claims for Sickness Benefit

	1952	1953	1954	1955	1956	1957
September	97	123	86	99	93	107
October	70	78	93	84	156	241
November	104	97	131	149	149	487
December	83	98	94	60	164	238

MENTAL HEALTH SERVICES

There are 20 certified mental defectives in the county. Nearly all these people are in the care of relatives. They are visited by practitioners and by welfare officers.

The local authority's proposals under Section 27 of the National Health Service (Scotland) Act, 1947, are working satisfactorily. The welfare officers in each district act as "duly authorised officers."

A consultant in mental diseases from Kingseat Hospital, Aberdeenshire, visits the county every two months and holds clinics for a few days each month.

There were 8 certified patients sent to mental hospitals in the south during 1957. It is not known how many cases were admitted to hospital as voluntary patients.

NURSERY AND CHILD MINDERS REGULATION ACT.

There are no persons in this county known to be paid for acting as "child minders."

PORT HEALTH ADMINISTRATION

During the year there were 493 occasions on which vessels made a port in Shetland their first port of call after leaving a foreign country. In each case satisfactory Declaration of Health statements were received by Customs Officers.

FOOD SUPPLIES

Particulars of the administration of Acts and Orders dealing with milk, ice cream, meat and other foods are given in the report of the County Sanitary Inspector.

REPORT ON SCHOOL MEDICAL INSPECTION

Year ended 31st July, 1957

School Medical Officer (part-time)

S. A. B. Black, M.D., D.P.H., D.T.M.&H.

School Dental Officers:-

H. Levison, L.D.S., F.D.S., R.C.S.
Miss J. G. Campbell, L.D.S.

School Nurses (part-time)

Lerwick - One.
Other Areas - 20 District Nurses in 20 areas in the County.

Specialist Medical Officers:-

The various consultants of the North-Eastern Regional Hospital Board to whom cases from this county are referred.

Clerks:-

2 (part-time)

GENERAL STATISTICS

Population of Area - 18,582(at start of school year).

Number of Schools:-

Primary	-	41
Senior Secondary	-	1
Junior Secondary	-	11
Side Schools	-	1

Number of children on register	-	2,980
Number of children in average attendance	-	50
Percentage attendance for year	-	90.5

REPORT ON SCHOOL MEDICAL INSPECTION

During the school year ending July, 1957, all schools were visited for medical inspection of the pupils except for the schools at Foula and Trondra.

Pupils in the following age groups were given routine school medical inspection:-

(I) All entrants and pupils not previously given routine school medical inspection.
(II) Pupils born in 1949 (examined for visual acuity and hearing only).
(III) Pupils born in 1947.
(IV) Pupils born in 1943.
(V) Pupils born in 1940.

Table 1 of this report shows that 1,124 children were given systematic examination. This is 38 more than in the previous year. 174 children not in the age groups for examination were re-examined on account of some defect noted or suspected at a previous examination.

63 children missed routine examination through being absent on the day of the examination and a few additional children in the schools not visited also missed examination. Altogether 95 per cent of those due for examination were actually examined.

Attendance of Parents at Inspections

Parents or other relatives attended with 277 of the children receiving routine inspection. Parents attended with 64 per cent of all children examined in the entrants group.

THE FINDINGS OF MEDICAL INSPECTION

Table II shows in detail under separate headings the number of defects found at systematic examinations. There are no figures that are unusual or differ much from the same table in the reports for the last few years, with the exception of eye defects among children in the second age group (age 7 - 8 years).

Ascertainment of Defects of Vision.

Defective vision is the commonest defect found at routine school examinations. 90 children were recommended for refraction compared with 80 in the previous year.

We have rather a higher rate of children with defective vision than the general figure for the whole country.

	1956-57	
Visual Acuity (Snellen)	Shetland	Scotland
Fair (6/9 or 6/12 in the better eye with or without glasses)	10.5%	8.5%
Bad (6/18 or worse in the better eye with or without glasses)	6.3%	2.4%

Our figures for all other diseases or defects mentioned in Table II are lower than the average for the country, and our percentage of children free from defects - (Table III) - compares favourably with elsewhere.

It/

Children generally have their vision tested for the first time in the second age group. Thirty seven children in this age group out of a total of 263 were recommended for refraction (14% compared with 8.4% in the previous year).

The Department of Health have suggested that school health services should consider the possibility of testing the vision of children at the age of five.

Under conditions existing in this county it would be difficult to attempt this. Testing the vision of five year old children before they know their letters is not a simple matter. To attempt it would greatly increase the proportion of his time which the Medical Officer of Health would have to devote to school inspections. It would be difficult to delegate this task to District Nurses, although whole-time school nurses in large centres have apparently used the tests with success.

Major defects in vision among school entrants in this county (including almost every case of squint) have almost always received treatment by the time the child is first seen at school. It is doubtful whether much would be gained by testing the vision of all entrants, when a more reliable testing can be achieved as soon as the child can recognise and name letters.

We endeavour to test children as soon as they 'know their letters' and do not wait until they actually reach the second age group ($7\frac{1}{2}$ years old).

During the year Chevasse E testing cards were purchased for use in testing the visual acuity of school entrants when necessary. The reports of work done in Edinburgh in routine testing of children of this age have been noted with interest.

The North Eastern Regional Hospital Board have recently arranged for more frequent visits of the eye specialist to Shetland, and this has now enabled children referred to the specialist to be examined with far less delay.

Other findings of medical inspection.

Table 111 shows little difference from the same table in the reports of the last few years.

The table of weights and heights is similar to last year's table with the exception of the fifth age group - (16 and 17 year olds) - in which for no known reason both boys and girls are heavier by several pounds compared to last year's table.

Table 1V gives particulars about handicapped children. There are nine "educable" mentally defective children at ordinary schools who are, however, receiving a form of special education. Seven children with major physical handicaps are at ordinary schools, and five at special schools.

Visits to School Children in their homes by School Nurses

134 children were visited by District Nurses in their capacity as school nurses and in connection with school medical inspection work.

School Dental Service.

Mr. Levison's report on the work of the school dental service will be found on pages 25 - 29. It gives us plenty to think about.

TABLE 1.

Total number of children examined at:-

(A)		Systematic Examinations:-	Other systematic Examinations:-
Ordinary Schools	Entrants	276	-
	Second Age Group	262	-
	Third Age Group	314	-
	Fourth Age Group	184	-
Secondary Schools	Fourth Age Group	54	-
	Fifth Age Group	34	-
		1124	-

(B) Other examinations:-		
	Special cases	145
	Re-inspections by Medical Officer	29
		174

Number of individual children inspected at systematic examination, who were notified to parents as requiring treatment (excluding uncleanliness and dental caries):-

Entrants	-	9
Second Age Group	-	37
Third Age Group	-	44
Fourth Age Group	-	22
Fifth Age Group	-	6
Other systematic examinations	-	-
		118

Of 174 children given a re-inspection or special examination 24 were notified to parents as requiring treatment and 22 were noted for re-inspection again during the school year 1957-58.

TABLE 11

Return of number and percentage of individual children in each age group suffering from particular defects:-

	Total defective at all ages	Entrants Boys	Entrants Girls	Third Age Group Boys	Third Age Group Girls	Fourth Age Group Boys	Fourth Age Group Girls	Fifth Age Group Boys	Fifth Age Group Girls	All Ages Boys	All Ages Girls
Number examined:		147	129	167	147	129	109	18	16	461	401
1. Clothing unsatisfactory	-	-	-	-	-	-	-	-	-	-	-
2. Footgear unsatisfactory	-	-	-	-	-	-	-	-	-	-	-
3. Cleanliness-											
(a) Head: Dirty,	1	-	1	-	-	-	-	-	-	-	1
nits or vermin	0.1	-	0.8	-	-	-	-	-	-	-	0.2
(b) Body: Dirty or verminous	-	-	-	-	-	-	-	-	-	-	-
4. Skin- Ringworm	-	-	-	-	-	-	-	-	-	-	-
(a) Head:	2	-	-	2	-	-	-	-	-	2	-
Impetigo	0.2	-	-	1.2	-	-	-	-	-	0.4	-
Other diseases	-	-	-	-	-	-	-	-	-	-	-
(b) Body: Ringworm	-	-	-	-	-	-	-	-	-	-	-
Impetigo	-	-	-	-	-	-	-	-	-	-	-
Scabies	-	-	-	-	-	-	-	-	-	-	-
Other diseases	3	-	1	1	-	-	1	-	-	1	2
	0.4	-	0.8	0.6	-	-	0.9	-	-	0.2	0.5
5. Nutritional State-											
Slightly defective	3	1	1	-	1	-	-	-	-	1	2
	0.4	0.7	0.8	-	0.7	-	-	-	-	0.2	0.5
Bad	-	-	-	-	-	-	-	-	-	-	-
6. Mouth and teeth unhealthy	16	2	6	2	3	3	-	-	-	7	9
	1.9	1.4	4.7	1.2	2.0	2.3	-	-	-	1.5	2.2
7. Naso-pharynx-											
(a) Nose:											
(i) Obstruction req.	2	1	1	-	-	-	-	-	-	1	1
observation	0.2	0.7	0.8	-	-	-	-	-	-	0.2	0.2
(ii) Requring operation	-	-	-	-	-	-	-	-	-	-	-
(iii) Other conditions	-	-	-	-	-	-	-	-	-	-	-
(b) Throat:											
(i) Tonsils req.	5	1	3	-	1	-	-	-	-	1	4
observation	0.5	0.7	2.3	-	0.7	-	-	-	-	0.2	1.0
(ii) Requiring operation	-	-	-	-	-	-	-	-	-	-	-
(c) Glands req.	3	1	1	-	-	-	1	-	-	1	2
observation	0.4	0.7	0.8	-	-	-	0.9	-	-	0.2	0.5
(iii) Requring operation	-	-	-	-	-	-	-	-	-	-	-
8. Eyes-											
(a) External diseases:											
Blepharitis	9	2	1	1	2	1	1	1	-	5	4
	1.0	1.4	0.8	0.6	1.4	0.8	0.9	5.6	-	1.1	1.0
Conjunctivitis/											

TABLE 11 (Cont'd.)

Nature of Defect.	Total defective at all ages	Entrants Boys	Entrants Girls	Third Age Group Boys	Third Age Group Girls	Fourth Age Group Boys	Fourth Age Group Girls	Fifth Age Group Boys	Fifth Age Group Girls	All Ages Boys	All Ages Girls
Conjunctivitis	-	-	-	-	-	-	-	-	-	-	-
Corneal opacities	-	-	-	-	-	-	-	-	-	-	-
Strabismus	2	-	1	1	-	-	-	-	-	1	1
	0.2	-	0.8	0.6	-	-	-	-	-	0.2	0.2
Other diseases	-	-	-	-	-	-	-	-	-	-	-
(b) Visual acuity		See end of Table 11									
9. Ears-											
(a) Diseases:											
Otorrhoea	1	-	-	-	1	-	-	-	-	-	1
	0.1	-	-	-	0.7	-	-	-	-	-	0.2
Other diseases	10	2	-	2	4	-	-	2	-	6	4
	1.2	1.4	-	1.2	2.7	-	-	11.1	-	1.3	1.0
(b) Defective hearing-											
Grade 1	1	-	-	-	1	-	-	-	-	-	1
	0.1	-	-	-	0.7	-	-	-	-	-	0.2
" 11(a)	2	-	1	-	-	1	-	-	-	1	1
	0.2	-	0.8	-	-	0.8	-	-	-	0.2	0.2
" 11(b)	-	-	-	-	-	-	-	-	-	-	-
" 111	-	-	-	-	-	-	-	-	-	-	-
10. Speech-											
Defective articulation	1	1	-	-	-	-	-	-	-	1	-
	0.1	0.7	-	-	-	-	-	-	-	0.2	-
Stammering	1	-	-	-	-	1	-	-	-	1	-
	0.1	-	-	-	-	0.8	-	-	-	0.2	-
11. Mental and Nervous Condition-											
(a) Backward (due to irregular attendance, etc.)	-	-	-	-	-	-	-	-	-	-	-
(b) Dull (intrinsically)	3	-	1	-	-	2	-	-	-	2	1
	0.4	-	0.8	-	-	1.5	-	-	-	0.1	0.2
(c) Mentally defective (educable)	2	-	-	1	-	1	-	-	-	2	-
	0.2	-	-	0.6	-	0.8	-	-	-	0.4	-
(d) Mentally defective (ineducable)	-	-	-	-	-	-	-	-	-	-	-
(e) Highly nervous or unstable	-	-	-	-	-	-	-	-	-	-	-
(f) Difficult in behaviour	-	-	-	-	-	-	-	-	-	-	-
12. Circulatory system-											
(a) Organic heart disease:											
(1) Congenital	3	-	1	-	-	1	1	-	-	1	2
	0.4	-	0.8	-	-	0.8	0.9	-	-	0.2	0.5
(11) Acquired	1	-	-	-	-	-	1	-	-	-	1
	0.1	-	-	-	-	-	0.9	-	-	-	0.2
(b) Functional conditions	4	2	-	-	1	1	-	-	-	3	1
	0.5	1.4	-	-	0.7	0.8	-	-	-	0.7	0.2
13. Lungs-											
Chronic bronchitis	2	1	-	-	1	-	-	-	-	1	1
	0.2	0.7	-	-	0.7	-	-	-	-	0.2	0.2
Suspected tuberculosis	-	-	-	-	-	-	-	-	-	-	-
Other diseases	3	-	-	2	1	-	-	-	-	2	1
	0.4	-	-	1.2	0.7	-	-	-	-	0.4	0.2

14./

TABLE 11 (Cont'd.)

Nature of Defect.	Total defective at all ages	Entrants Boys	Entrants Girls	Second Age Group Boys	Second Age Group Girls	Third Age Group Boys	Third Age Group Girls	Fourth Age Group Boys	Fourth Age Group Girls	Fifth Age Group Boys	Fifth Age Group Girls	All Ages Boys	All Ages Girls
14. Deformities-													
(a) Congenital	4	2	-	1	-	1	-	-	-	4	-		
	0.5	1.4	-	0.6	-	0.8	-	-	-	0.9	-		
(b) Acquired (Infantile Paralysis)	-	-	-	-	-	-	-	-	-	-	-		
(c) Acquired (probable rickets)	2	-	1	-	1	-	-	-	-	-	2		
	0.2	-	0.8	-	0.7	-	-	-	-	-	0.5		
(d) Acquired (Other causes)	-	-	-	-	-	-	-	-	-	-	-		
15. Infectious diseases	2	1	-	-	1	-	-	-	-	1	1		
	0.2	0.7	-	-	0.7	-	-	-	-	0.2	0.2		
16. Other diseases or defects	6	-	-	1	1	2	1	-	1	3	3		
	0.7	-	-	0.6	0.7	1.5	0.9	-	6.3	0.7	0.7		

8. (b) Visual acuity:

Nature of Defect.	Total defective at all ages	Entrants Boys	Entrants Girls	Second Age Group Boys	Second Age Group Girls	Third Age Group Boys	Third Age Group Girls	Fourth Age Group Boys	Fourth Age Group Girls	Fifth Age Group Boys	Fifth Age Group Girls	All Ages Boys	All Ages Girls
Total number subjected to routine vision testing:		1	3	124	139	162	141	128	108	18	16	433	407
Visual acuity:													
Fair	88	-	-	15	15	14	18	10	10	4	2	43	45
	10.5	-	-	12.1	10.8	8.6	12.8	7.8	9.3	22.2	12.5	9.9	11.1
Bad	53	-	-	14	5	8	9	9	7	-	1	31	22
	6.3	-	-	11.3	3.6	4.9	6.4	7.0	6.5	-	6.3	7.2	5.4
Number recommended for refraction	90	-	-	19	18	14	17	10	9	3	-	46	44
	10.7	-	-	15.3	12.9	8.6	12.1	7.8	8.3	16.7	-	10.6	10.8

Table of Average Age, Weight and Height of Children examined at Systematic School Medical Inspection During the Year Ended 31st July, 1957.

Group	Average Age Years	Months	Average Weight in lbs	Average Height in inches
Entrants:-				
Males	5	5.2	47.0	44.8
Females	5	5.4	45.1	43.6
Third Age Group:-				
Males	9	6.0	70.9	53.0
Females	9	5.7	70.1	53.6
Fourth Age Group:-				
Males	13	7.0	109.4	61.2
Females	13	7.5	107.2	61.5
Fifth Age Group:-				
Males	16	7.7	154.6	67.6
Females	16	3.6	120.9	63.0

TABLE 111

Systematic Medical Examinations

* Classification	Entrants		3rd age group		4th age group		5th age group		Total	
	No. of children	% of the children exd. in this group	No. of children	% of the children exd. in this group	No. of children	% of the children exd. in this group	No. of children	% of the children exd. in this group	No. of children	% of the children exd. at systematic medical exams.
Group 1	257	93.12	268	85.35	202	84.88	27	79.41	754	87.47
" 11(a)	-	-	21	6.68	15	6.30	4	11.77	40	4.64
" 11(b)	6	2.17	1	0.31	3	1.26	-	-	10	1.16
" 11(c)	-	-	1	0.31	-	-	-	-	1	0.11
Total	6	2.17	23	7.33	18	7.56	4	11.77	51	5.92
" 111	6	2.17	16	5.09	9	3.78	2	5.88	33	3.83
" 1V(a)	7	2.54	6	1.91	7	2.94	1	2.94	21	2.43
" 1V(b)	-	-	1	0.31	2	0.84	-	-	3	0.34
Total	7	2.54	7	2.23	9	3.78	1	2.94	24	2.78
Total No. of children examined	276	100.00	314	100.00	238	100.00	34	100.00	862	100.00

* Definitions of each group:- 1. Children free from defects. 11(a) Defective vision not worse than 6/12 in the better eye with or without glasses. 11(b) Condition of the mouth and teeth requiring treatment. 11(c) Both (a) and (b). 111. Children suffering from ailments (other than those mentioned in (11) from which a complete recovery is anticipated within a few weeks. 1V(a) Where complete cure or restoration of function (in case of eye defect, full correction) is considered possible. 1V(b) Where improvement only is considered possible, e.g. without complete restoration of function.
Children in the 2nd Age Group are examined for visual acuity only and are therefore not classified into groups.

TABLE IV

Return of ALL Exceptional Children of School Age in the Area

Disability	At ordinary schools	At special schools or classes	At no school or institution	Total
1. Blind	-	1	-	1
2. Partially sighted:				
(a) Refractive errors in which the curriculum of an ordinary school would adversely affect the eye condition	-	-	-	-
(b) Other conditions of the eye, e.g. cataract, ulceration, etc., which render the child unable to read ordinary school books or to see well enough to be taught in an ordinary school	-	-	-	-
3. Deaf:				
Grade 1	1	-	-	1
" 11(a)	2	-	-	2
" 11(b)	-	-	-	-
" 111	-	1	-	1
4. Defective speech:				
(a) Defects of articulation requiring special educational measures	-	-	-	-
(b) Stammering requiring special educational measures	-	-	-	-
5. Mentally defective: (Children between 5 and 16 years)				
(a) Educable	9	1	-	*10
(b) Ineducable	1	-	7	8(+1)
6. Epilepsy				
(a) Mild and occasional ...	2	-	-	2
(b) Severe (suitable for care in a residential school)	-	-	-	-
7. Physically Defective: (Children between 5 and 16 yrs.)				
(a) Non-pulmonary tuberculosis (excluding cervical glands)	-	-	-	-
(b) General orthopaedic conditions	-	2	1	3
(c) Organic heart disease	1	-	-	1
(d) Other causes of ill health	4	-	-	4
8. Multiple defects	-	-	-	-

* One additional mentally defective child of school age is in an institution for mental defectives in the south.

TABLE V

DENTAL INSPECTION AND TREATMENT

Number of children who were:-

(1) Inspected by the dental officer:-

Age.	Systematic examinations.
5	220
6	264
7	231
8	265
9	275
10	259
11	219
12	184
13	178
14	206
15	33
	2,334

		Systematic examinations
(2)	Found to require treatment	2,031
(3)	Actually treated by the school dental officer.	846
(4)	Number of attendances made by children for treatment	1,641
(5)	Fillings (a) Permanent teeth	1,029
	(b) Temporary teeth	174
(6)	Extractions:-	
	(a) Permanent teeth	687
	(b) Temporary teeth	1,181
(7)	Number of administrations of a general anaesthetic for extractions.	575
(8)	Other operations:-	
	(a) Permanent teeth	480
	(b) Temporary teeth	77
(9)	Half-days devoted to inspection	44
	Half-days devoted to treatment	767
(10)	Number treated under private arrangement	418

REPORT ON THE SCHOOL DENTAL SERVICE - 1957

by

H. LEVISON, SENIOR SCHOOL DENTAL OFFICER.

DENTAL HEALTH IN SHETLAND.

Table V is a depressing statement of the amount of dental disease in Shetland. For a county which is proud of its good health and longevity, dental health is an outstanding exception. The ratio of fillings to extractions shows no improvement over previous years and unless drastic preventive measures are undertaken this trend will continue.

The appalling dental condition of Shetland children is not due, as so many parents believe, to lack of calcium or anything else in their water supply or food but simply to the complete failure to practise oral hygiene. The state of oral hygiene in a substantial percentage of children can only be described as disgraceful. At school inspections their teeth are found to be covered with a thick film of stagnating food debris. This alone is the cause of caries. People wash their feet before visiting a chiropodist but an equivalent courtesy is not often afforded the school dental officer. Far too many children attend for treatment with filthy teeth and register profound surprise at being sent home to clean them before treatment can be undertaken. Such an unhygienic condition of any other part of the body would never be tolerated by parents, yet they are apparently quite indifferent to oral hygiene.

Dental treatment in Shetland is probably more expensive per child than anywhere else in Britain because of the additional cost of travel and accommodation entailed in treating the scattered mainland and island schools. But until such time as oral hygiene is practised regularly every day, the high cost of providing comprehensive treatment in this county is being wasted to a disturbing extent. The amount of caries, and consequently the cost of treating it, could possibly be halved by proper oral hygiene. Ways of achieving this are discussed later in the section on prevention of dental disease and the Education Committee have a great opportunity in this connection.

REVIEW OF 1957.

Faced with the prospect since January 1957 of again being without an assistant dental officer, it was apparent that treatment could not be provided for all schools in the county during the year. Priority was therefore given to those areas where transport facilities do not allow a day return trip to Lerwick for emergency treatment. Accordingly treatment was provided on the islands of Whalsay, Fetlar, Yell, Unst, Fair Isle and Foula; and as far as working conditions would allow, treatment was aimed at complete dental fitness. At every school visited, the unstinted help given by the teachers concerned was a major factor in overcoming the many difficulties encountered. No treatment was given at the Out Skerries as accommodation could not be obtained for the time allotted.

It was anticipated that these island visits might result in the already overworked general dental practitioners in Lerwick being inundated with requests for treatment from mainland children. To help reduce these demands, Lerwick Central and Bressay schools were inspected and, before embarking on the prolonged tour of the islands, most of the urgent treatment arising was completed. In addition full treatment was provided at some of the other heavily populated areas such as Sandwick and Scalloway.

The/

The urgent treatment in Lerwick entailed several large general anaesthetic sessions and Miss Williamson, the Nursing Superintendent, was most co-operative in arranging additional nursing help for these sessions. Throughout the year, the general medical practitioners have always been ready to give anaesthetics at short notice and their supreme skill as dental anaesthetists is of the greatest benefit to the school dental service.

A great loss was suffered in August, 1957, when Miss Joyce Campbell resigned after four years as School Dental Officer. In that period her enthusiasm and perseverance stimulated a new demand for conservative treatment and gained her the deep affection of children and parents in every part of the county.

The clinic nurse, Miss Isbister, was successful in the British Dental Nurses and Assistants examination held in Edinburgh. She is the first dental nurse from Shetland to take this examination and her success is all the more creditable as there are no special courses of instruction available here.

The Sanitary Inspector obtained figures for the fluoride content of the public water supplies throughout the county and nowhere does it exceed half the optimum value. Whilst it will be of enormous benefit to rectify this fluoride deficiency, it cannot be stressed too emphatically that fluoridation alone will not solve the problem of dental caries. Oral hygiene will always remain the most important means at our disposal.

During the year the clinic was transferred to the New Infant School and re-equipped with more modern apparatus. The spacious new premises are a vast improvement on the old clinic, which had no recovery room or facilities for plaster work. Throughout the school dental service, staff changes are frequent and this raises a problem of providing equipment suitably positioned for any dental officer, right or left-handed, standing or sitting. The Education Committee solved this problem by wisely agreeing to the provision of new mobile equipment. Miss Campbell stated, in last year's report on her Scandinavian tour, that their clinics were generally far better equipped than the British counterparts and it is pleasing to note that she considers our new clinic as good as any in Scandinavia. X-ray facilities are now available in both the Lerwick clinic and caravan and there is no further need for referring patients to hospital for radiographs.

With only one dental officer available for most of the year it has not always been possible to give immediate treatment for the relief of pain or satisfy the increasing demand for conservative treatment. Only when an assistant dental officer is available again will it be possible to staff the Lerwick clinic full time. Immediate treatment could then be provided for cases of toothache from any part of the county, and conservative treatment for Lerwick children; whilst the other dental officer would be touring the mainland and islands making conservative treatment available for all schools in turn. However, the dental officers can never cope with the overwhelming quantity of treatment required without the help of parents and children themselves. To complain of the lack of regular comprehensive treatment is unrealistic; parents must play their part in assisting the dental officers by enforcing strict oral hygiene at home. Only then can dental disease be restricted to an amount which two dental officers can keep under control.

AIMS OF THE SCHOOL DENTAL SERVICE IN SHETLAND.

The school dental service is successfully achieving its primary aim of improving the general health of schoolchildren by the relief of pain and eradication of sepsis. It is now striving for the prevention of dental disease by early conservative treatment to ensure that school leavers are dentally fit, educated in oral hygiene and keen to maintain their dental health throughout life. They will only do so, however, if they/

they and their parents are satisfied that conservative dentistry is worthwhile; that permanent fillings really are permanent and do conserve the teeth. If they believe that a filling is merely a delaying measure involving an uncomfortable session in the dental chair, until a year or so later when the tooth aches and has to be removed, they will justifiably have little confidence or interest in conservative dentistry. Treatment will be sought only as an extraction service for the relief of pain, and the sooner that all the teeth are out and dentures fitted, the better.

To obtain the desired faith in conservative dentistry and the realisation that a healthy natural dentition is in all respects preferable to an artificial one, a high standard of conservative dentistry must be available. Only this can ensure that permanent fillings are permanently successful. With this object in mind, the possibility of providing such treatment in various parts of the county may now be discussed.

LERWICK.

The county can be proud of possessing one of the best equipped school dental clinics in Britain, in which treatment of the highest standard can be provided.

MOBILE DENTAL UNIT.

The dental caravan is also well equipped and, when electricity is available, satisfactory conservative treatment can be given. In areas with no electricity the children are at a disadvantage as electricity is essential for perfect illumination of the mouth and high speed drilling; without these, treatment cannot be of the same quality as that obtainable in Lerwick.

To prevent recurrence of caries, not only must the decayed part be removed but also the sound tissue likely to decay later. This prophylactic removal of sound tissue can easily be done with an electric drill; but with a foot engine, the time involved is usually more than the limited endurance of children will allow. Generally speaking, the best that can be achieved without electricity is a delaying action: removal of decay and insertion of a filling which will probably need replacement a few years later. Children in these areas are therefore liable to lose confidence in the efficacy of conservative treatment.

UNST.

Treatment is provided in the caravan and electricity is available. Unst is therefore fortunate in being the only island in which complete dental fitness can be achieved. An additional advantage of having both the caravan and electricity is that it was possible to take dental X-rays. Unst is the first island to have the benefit of this essential diagnostic aid.

YELL.

Treatment is again provided in the caravan but there is no electricity. Consequently it is not possible to provide such complete treatment as in Unst. The difference is apparent from the 1957 treatment figures: 63 fillings for 45 children at Mid Yell school; 171 fillings for 44 children at Baltasound school. The difference is not due to more caries in Unst. It is due to the fact that far more teeth can be filled prophylactically, in the very earliest stages of caries, with an electric drill than with a foot engine.

FETLAR, WHALSAY, OUT SKERRIES, BURRA ISLE, PAPA STOUR, FOULA and FAIR ISLE.

The caravan cannot be landed on these islands. Treatment is performed under extremely difficult conditions with portable equipment set up in the school/

school classroom. As there is insufficient space in these schools to set apart a suitable room as a surgery for one or more weeks, treatment can only be given during school holidays. Because of the limited holiday time available it is impossible to treat all these schools every year unless alternative surgery premises, such as a hall, can be economically provided during term time. This is especially necessary in Whalsay and Burra Isle which both require several weeks of treatment.

The problem of surgery accommodation on these islands could be overcome, and treatment provided during school terms, if the caravan could be landed. Although this does not appear feasible at present it is interesting to note that the R.A.F. transported heavy lorries and equipment to St. Kilda in a landing craft. The use of portable equipment, with no electricity and grossly inadequate lighting, makes it very difficult to achieve a desirable standard of conservative treatment. However, the solution is simple --- a portable generator and electric engine. The cost of obtaining these will be far outweighed by the tremendous advantage of being able to give fully effective conservative treatment on all the islands and in those mainland areas which are still without electricity. Another possibility is the use of a small boat fitted out with a dental surgery, as employed in the Western Isles. Nearly every island has a pier or sheltered anchorage where treatment could be provided under most weather conditions. Electricity could be generated aboard; whilst difficulties of accommodation in schools and transporting heavy, bulky items of "portable" equipment would be avoided.

PREVENTION OF DENTAL DISEASE.

Dental treatment provided by the School and National Health Services is expensive, not only financially but in the vast amount of productive time lost during attendance. It has been said that half a million man-hours are lost each year in this way. Dental disease being to a large extent preventable it would clearly be in the national interest, as well as that of local ratepayers, to take all possible steps to reduce it. Yet it is surprising just how little is being done. Although fluoridation is already under way in a few places in Britain, some years will elapse before it can be extended as a national public health measure. Meanwhile unrestricted consumption of refined carbohydrates and neglect of oral hygiene is causing an overwhelming amount of dental disease; and this deteriorating situation is being even further aggravated by the chronic shortage of dentists.

Only oral hygiene can at present be effective in reducing the problem to manageable proportions, but the active co-operation of local education authorities is essential if instruction in oral hygiene is to be of any use. Occasional talks on this subject by dentists or teachers have only a temporary effect. Children soon forget; neglect is much easier. Whereas oral hygiene cannot be enforced in every home it could be at school. Compulsory daily routine is possible at school and offers a perfect opportunity of solving the problem. The Education Committee could give a lead in this way by supplying toothbrushes for use at school. Teachers could then supervise toothbrushing every morning and after school meals. This would ensure that home neglect does not result in teeth being exposed to acid attack all morning. After school dinners food debris would be removed immediately; though this would be unnecessary if school meals were finished with a cleansing food, such as a raw fruit or vegetable, instead of the customary sticky sweet which is such a menace to dental health. Equally dangerous is the widespread habit of taking a snack in addition to milk during break. In such cases there should also be compulsory brushing after break. As an immediate step teachers should discourage these snacks. Given an adequate breakfast and dinner, starvation will not occur if mid-morning snacks are banned.

Compulsory daily toothbrushing at school may seem a drastic measure but appears to be the only way of overcoming the widespread ignorance and lack/

lack of interest in oral hygiene. Similar measures were recently carried out at a United States school and resulted in a 50% reduction of caries. The promotion of a vigorous dental health campaign in our schools would necessitate a short course of instruction in dental health for schoolteachers and this could profitably be extended to include school meals organisers and health visitors. The latter have ideal opportunities of instructing expectant and nursing mothers at a time when they are most receptive to health education.

With such isolated communities as Foula, Fair Isle, Skerries and Fetlar, it is especially necessary for Shetland to start this programme of preventive dentistry without delay. Fair Isle serves as a typical example. When dental treatment is completed, at least a year passes before it can be provided again. If a child is unfortunate enough to develop toothache between these annual visits there is not even a resident doctor to extract the tooth, and parents are faced with the prospect of a long and uncomfortable journey to Lerwick for treatment, followed by at least a few days stay on the mainland before they can return. In order to avoid such contingencies, the dental officer devotes a very generous amount of his time to restoring every child in need of treatment to complete dental fitness. But this alone is not sufficient. The only way in which toothache can be prevented with certainty in the ensuing year is by meticulous care over oral hygiene. As parents and children cannot be relied upon to maintain this discipline it is left for the schoolteacher to undertake the preventive measures advocated.

Measures which could be applied immediately in every school are the banning of mid-morning snacks; and the provision with school dinners of raw carrots, to be eaten as a detergent food after the sweet course. The support of the Education Committee and teaching staffs in initiating these steps, together with compulsory toothbrushing, would go a long way towards restoring child dental health. It would enable the dental officers to give a more frequent, comprehensive and economical service, free of the frustration and despair engendered by the present deplorable state of oral hygiene and dental health throughout the county. Dental disease causes much unnecessary suffering and it is earnestly hoped that responsibility for preventing it will be accepted.

APPENDIX

MATERNITY AND CHILD WELFARE

District Nurses employed as Health Visitors and Health Visitor in Lerwick.

Number of Expectant Mothers visited	- 153
Total visits made	- 997
Number of Children under 1 year of age visited	- 308
Total visits made	- 2,229
Number of Children between age of 1 - 5 years visited	- 1,034
Total visits made	- 3,094
No. of Tuberculosis Cases visited	- 109
Total visits made	- 435
No. of other cases visited	- 27
Total visits made	- 128

Attendances at Lerwick Child Welfare Centre.

Number of Expectant Mothers attending	- 9
Total attendances	- 27
Number of Children under 1 year attending	- 154
Total attendances	- 723
Number of Children 1 - 5 years attending	- 165
Total attendances	- 500

Births During 1957

(1)	Total number of live births during year (before correction for mother's residence)	- 265
	Total number of Stillbirths	- 3
(11)	Total number of births in (1) occurring in institutions	- 217
(111)	Total number of births occurring at home:-	
	Doctor present	- 39
	Doctor not present	- 12

TUBERCULOSIS

Number of Cases Diagnosed as suffering from Tuberculosis

	Males	Females	Total
Respiratory	5	4	9
Non-Respiratory	2	5	7
	7	9	16

Number of Cases of Respiratory Tuberculosis with their Home Residence in the Area who received Treatment in Sanatoria or other Institutions

	Males	Females
In Institutions on Jan. 1st:		
Adults	-	4
Children	-	-
Admitted during the year:		
Adults	7	4
Children	-	1
Discharged during the year:		
Adults	1	5
Children	-	1
Died in Institutions:		
Adults	-	-
Children	-	-
In Institutions on December 31st:		
Adults	6	3
Children	-	-

Number of Persons resident in the Area at 31st December, 1957 who were known to be suffering from Tuberculosis

Respiratory:	Males -	58
	Females -	43
Non-Respiratory:	Males -	20
	Females -	25

B.C.G. VACCINATION

	Tuberculin Tested.		Negative Re-actors.		Vaccinated during 1957	
	Males.	Females.	Males.	Females.	Males.	Females.
Contacts	1	2	1	2	1	2
School Leavers	110	110	101	101	101	102